DB Mobility Networks Logistics

DB Systel GmbH

Interoperability of EIRENE Networks

IOT Test Specification for EIRENE networks

Functional interoperability tests

- Amendment -

DB Systel GmbH

Author:	DB Systel GmbH
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1 General

1.1 Evolution Sheet

Version	Date	Author	Modification
F016_110601	01.06.2011	DB Systel GmbH	Final version, approved by Notified Bodies (see chapter 1.2)
F017_111014	14.10.2011	DB Systel GmbH	Amendmant of chapters 1, 2, 5.6.15 - 5.6.18, 5.10.13, 5.10.14, 5.10.39 – 5.10.48, 6.1

1.2 Involved Notified Bodies

The Companies listed below represent accredited Notified Bodies according to the European Directives 2008/57/EC.

The following Notified Bodies have been involved in the creation and the approval of this document.

Notified Body	Representatives	Approval (name / date)
Belgorail S.A. Railway Certification Body Notified Body 1615 Rue Ravensteinstraat, 60 B. 7 B-1000 Bruxelles-Brussel	• **Jean-Marc DUPAS**, Managing Director • **Fanny LEFEBVRE**, Project Manager Signalling System • **Francis PARMENTIER**, Quality & Information Manager QMS Auditor • **Vincent CAUDRON** GSM-R Expert	Jean-Marc DUPAS 22/06/2011
Railcert Notified Body 0941 Leidseveer 10 NL-3511 SB Utrecht P.O.Box 2027 NL-3500 GA Utrecht, Nederland	• **P.H.J. (Paul) van de Ven**, MIRSE, Managing Director • **Herman M. Meijsen**, Senior Assessor	P.H.J. (Paul) van de Ven 20/06/2011
RINA Services S.p.A. Certification and Industrial Services Railway Department Notified Body 0474 Via Corsica 12 I-16128 Genova, Italy	• **Berardino Vittorini**, Product Manager - Control-command & Signalling • **Federica Fornari**, Signalling Engineer • **Luca Macchi**, Signalling Engineer	Francesco Manca 17/06/2011
TÜV InterTraffic, filial af TÜV Rheinland Intertraffic GmbH, Tyskland Notified Body 1638 Larsbjørnsstraede 3 DK-1454 København, Denmark	• **Jens Wolff**, Dipl.-Ing., Principal Assessor • **Richard Kubitza**	Florian Steiner, Richard Kubitza 26/07/2011

1.3 References

No.	Document	Title
1	2008/57/EC	DIRECTIVE 2008/57/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 June 2008 on the interoperability of the rail system within the Community
2	TSI	Technical Specification for Interoperability relating to the Control/Command & Signalling subsystem of the trans European High Speed Rail (07.11.2006).
3	TSI	Technical Specification for Interoperability relating to the Control/Command & Signalling subsystem of the trans European Conventional Rail (28.03.2006)
4	EIRENE FRS v7	EIRENE Functional Requirement Specification, version 7
5	EIRENE SRS v15	EIRENE System Requirement Specification, version 15
6	ETSI EN 301515, v2.3.0	Requirements for GSM operation on railways
7	ETSI TR 102 281	Detailed requirements for GSM operation on Railways
8	CENELEC EN 50126	Railway applications - The specification and demonstration of reliability, availability, maintainability and safety (RAMS)
9	MORANE A 01 T 0004 1	ASCI options for interoperability, version 1
10	MORANE P 38 T 9001 3	FFFIS for GSM-R SIM cards version 3
11	MORANE H 22 T 0001 2	Specification on usage of the UUIE in the GSM-R environment version 2
12	MORANE E 10 T 6001 3 version 3	FFFS Functional addressing
13	MORANE E 12 T 6001 4 version 4	FIS Functional addressing
14	MORANE F 10 T 6001 3 version 3	FFFS Location dependent addressing
15	MORANE F 12 T 6001 2 version 2	FIS Location dependent addressing
16	MORANE F 10 T 6002 3 version 3	FFFS Confirmation of high priority calls
17	MORANE F 12 T 6002 3 version 3	FIS Confirmation of high priority calls
18	MORANE F 10 T 6003 3 version 3	FFFS Presentation of functional numbers
19	MORANE F 12 T 6003 3 version 3	FIS Presentation of functional numbers
20	GSMA IR.22	GSM Association, Permanent Reference Document IR.24 SCCP Signalling Aspects for Roaming
21	GSMA IR.23	GSM Association, Permanent Reference Document IR.24 Organisation of GSM International Roaming Tests

No.	Document	Title
22	GSMA IR.24	GSM Association, Permanent Reference Document IR.24 End-to-End Functional Capability, Specification for Inter-PLMN Roaming (Stage 4 Testing).
23	GSMA IR.26	GSM Association, Permanent Reference Document IR.26 End-to-End Functional Capability, Specification for Inter-PLMN Roaming (Stage 4 Testing). Addendum for Phase 2, Supplementary Services and Operator Determined Barring
24	GSMA IR.27	GSM Association, Permanent Reference Document IR.27 Functional Capability Test Specification for Inter-PLMN Roaming (Stage 4 Testing). Phase 1 Data Services, Fax Services
25	GSMA: IR.50	2G/2.5G/3G Roaming
26		DB Systel, "IOT test case overview", version 2011_10_13"

1.4 Abbreviations

3GPP	3rd Generation Partnership Project
AAeM	Automatic Answer for eMLPP Service
ACK	Acknowledgment Center
AIS	Air Interface Simulator
ASCI	Advance Speech Call Items
BSC	Base Station Controller
BSS	Base Station Sub-system
BTS	Base Transceiver Station
CHPC	Confirmation of high priority calls
CLIP	Calling Line Identification Presentation
CLIR	Calling Line Identification Restriction
CoO	Cell of Origin
CT	Call Type or Controller Terminal
DCE	Data Circuit Terminating Equipment
DCH	Dedicated Channel
Dest	Destination Controller
eMLPP	enhanced Multi-Level Precedence and Pre-emption
ERA	European Railway Agency
ERTMS	European Rail Traffic Management System
ETSI	European Telecommunication Standardization Institute
FA	Functional Addressing
FN	Functional Number
GC	Group Call
GCA	Group Call Area
GCCH	Group Call Cannel
GCR	Group Call Register
GCRef	Group Call Reference
GID	Group Identity
GSM-R	Global System for Mobile communication – Railways
HLR	Home Location Register
IF	Interface
IMEI	International Mobile Equipment Identity
IMSI	International Mobile Subscriber Identity

IOT	Interoperability Test
ISDN	Integrated Services Digital Network
ISUP	ISDN User Part
LDA	Location Dependent Addressing
LE	Late Entry
MAP	Mobile Application Part
MOC	Mobile Originated Call (Call from Mobile to Fixed Network)
MS	Mobile Station
MSC	Mobile Switching Centre
MTC	Mobile Terminated Call (Call from Fixed Network to Mobile)
MTM	Mobile To Mobile Call (Call from Mobile to Mobile)
NSS	Network Sub-system
Orig	Originator
PCM	Pulse Code Modulation (Link)
PLMN	Public Land Mobile Network
PRI	ISDN Primary Rate Interface
QoS	Quality of Service
REC	Railway Emergency Call
SCP	Service Control Point
SS	Service Subscriber
TCU	Transcoding Unit
Term	Terminator
TRX	Transceiver (transmitter and receiver)
TSI	Technical Specification for Interoperability
UE	User Equipment
VLR	Visitor Location Register
VBS	Voice Broadcast Service
VGCS	Voice Group Call Service

2 Introduction

Technical interoperability of EIRENE networks is necessary for the interoperability of rail systems, especially in context of the "track – train communication" in terms of the Technical Specification for Interoperability (TSI).

Legal basis for interoperability of rail systems is represented by the "DIRECTIVE 2008/57/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 June 2008 on the interoperability of the rail system within the Community". Secondary the TSI specifies the requirements for interoperability to the subsystems. The EIRENE networks are covered by the Subsystem Control Command and Signalling.

On the other hand, no interoperability test specification, which can be used by any railway or system supplier to verify and to ensure the interoperability of EIRENE networks, is available today.

The European Railway Agency (ERA) has a great interest to provide an approved and generally accepted reference for Interoperability Tests (IOT) to all railways and suppliers.

Therefore ERA supports the creation of this common interoperability test specification for EIRENE networks by an independent test case creator. ERA informed the board of the Notified Bodies (NB Rail) about the project and asked the Notified Bodies to support the document creators with the completion of this IOT test specification.

Following the request of the ERA four interested Notified Bodies from different countries raised their interest in contributing to this work and actively collaborated with the test case creator.

Belgium:	Belgorail S.A.
Netherlands:	Railcert,
Italy:	RINA Services S.p.A.
Germany:	TÜV Rheinland InterTraffic GmbH

To achieve an approved IOT test specification the following approach has been agreed between ERA, the involved Notified Bodies and the test case creator:

- Scope of work is the creation of a specification for functional interoperability tests covering the mandatory requirements of the EIRENE specifications
- Creation of IOT test cases subsequently in four parts based on an agreed list of test cases and test scenarios
- Review of created test cases and approval of the finalized IOT test specification by the involved Notified Bodies
- Issue of IOT test specification to UIC and GSM-R Industry Group for review

It is the common intention to provide an approved IOT test specification for EIRENE networks to ERA. This document will for the first time in Europe allow ERA, Railways and Suppliers to perform interoperability tests for EIRENE Networks.

Finally the IOT test specification could be used in the context of GSM-R network assessment.

3 Overview and basis

Scope of this document is to provide a catalogue of functional interoperability tests cases for EIRENE networks.

Other aspects like verification of radio coverage, Quality of Service and network performance tests are out of scope of this test specification. Such tests scenarios depend on national implementation (i.e. of radio design) and may be covered by a separate test specification dedicated to dynamic performance tests..

The references and legal basis are the EIRENE Functional Requirement Specification (E-FRS), version 7 and the EIRENE System Requirement Specification (E-SRS), version 15. No backwards compatibility to other EIRENE specifications is required for the moment.

The objective is to test the mandatory EIRENE features from a functional aspect in respect of the track – train interface. This requires considering different operational scenarios and different generic network configurations like multivendor environments or interconnection and roaming cases. Optional EIRENE features will not be considered in the IOT test specification.

Basis for this IOT test specification is the document “IOT test case overview” [26].

The IOT test case overview contains

- Test scenarios relevant for IOT of EIRENE networks
- List of IOT test cases (titles with references to E-FRS, E-SRS)
- Traceability matrix to E-FRS
- Traceability matrix to E-SRS

The detailed content of “IOT test case overview” is attached to Annex 6.1.

The following EIRENE main topics will be covered:

- Basic and Supplementary Services
- Functional Addressing, Access Matrix, Location Depending Addressing, Access to external networks
- MLPP, eMLPP
- REC, Late Entry
- VGCS, VBS
- Mobility aspects: Cell reselection, Handover

Chapter 5 of this document “IOT Tests Cases” is structured according to these topics. Chapter 4 supports with prerequisites, aspects of test configuration and explains the nomenclature used in the test cases. The annex chapter 6 contains also additional information about data tests and an example form for documentation of the test configuration.

The IOT test cases have been created subsequently in four thematic parts.

IOT test case overview and the IOT test specification have been reviewed by the involved Notifies Bodies.

The involved Notifies Bodies confirm completeness and consistency of this IOT test specification with regard to the mandatory requirements of the:

- EIRENE specifications E-FRS V7 and
- E-SRS V15 as well as with respect to

- the TSI and the relevant ETSI specifications.

Clarification by ERA to relationship between E-FRS V7 / E-SRS V15 and E-SRS V15.1

To clarify the relationship between the current baseline E-FRS V7 / E-SRS V15 and the latest sub-version E-SRS V15.1, the European Railway Agency represented by GSM-R Project Officer of ERTMS Unit provides the following statement on 2nd March 2011:

"The official GSM-R Requirements in the existing TSI are the EIRENE documents FRS 7 and SRS 15.They will be replaced by the Interoperability Requirements of the Baseline 0 for the next (new) TSI. The EIRENE Version 7.1/15.1 is on the WEB of UIC and describing the changes of options, with one exception "Muting control". For this feature change it was agreed that there is no influence in interoperability, only in quality. The version in 7/15 was never implemented, therefore the status of the EIRENE version 7.1/15.1 is correct. With the new definition of the baseline 0 and the follow up of baseline 1 the situation will be cleaned up and only the "Muting function" described in 7.1/15.1 will be the valid one."

Decision of the Notifies Bodies regarding E-FRS V7 / E-SRS V15 vs. E-SRS V15.1

Based on the ERA statement the involved Notified Bodies decided to keep the IOT baseline „E FRS V7 / E-SRS V15" with the exception „Muting Control (E-SRS V15.1)".

The involved Notified Bodies agreed to finalize and to approve the IOT test catalogue based on that decision. Later only the delta between E-SRS V15 and E-SRS V15.1 will be certified.

In consequence the EIRENE feature ***muting and unmuting for VGCS calls*** is considered in this IOT test catalogue for the relevant test cases according to EIRENE specification SRS 15.1:

"3.8 Muting and unmuting for VGCS calls

3.8.1 The muting and unmuting for VGCS shall be in line with [EN 301 515, Index [4]]. (M)

3.8.2 The network shall send the SET-PARAMETER message with the attribute "D-ATT = T"1 [EN 301 515, Index [6]] to the mobile station of the talking subscriber if it receives the 3-digit sequence "###" transmitted via DTMF from a controller terminal. However, receiving the 3-digit sequence "###"from any additional controller terminal while the controller mentioned above is still talking shall not result in sending another SETPARAMETER message with the attribute "D-ATT = T". (M)

3.8.3 When the network has detected the 3-digit DTMF sequence "###"from a controller terminal and if the controller was not previously talking it should indicate its recognition by playing a single DTMF grant tone "#" of duration of 100ms ± 5ms to be sent to that controller terminal only. (O)

*3.8.4 The network shall send the SET-PARAMETER message with the attribute "D-ATT = F"2 [EN 301 515, Index [6]] to the mobile of the talking subscriber only if it has received the 3-digit sequence "#**" transmitted via DTMF from all the talking controllers. (M)"*

4 Prerequisites and Test configuration

This chapter deals with the prerequisites for interoperability tests on EIRENE networks, aspects of the network and test configuration as well as a description of test equipment based for the IOT test cases.

4.1 Prerequisites for IOT testing on EIRENE networks

As general prerequisite for IOT is that the EIRENE network shall be

- designed,
- planned,
- built and
- configured

fully compliant to the current valid EIRENE specifications. This compliancy is not sufficient to ensure the EIRENE functionalities, but it is an absolute necessary precondition and must be verified before testing interoperability.

In particular that means to verify:

- System architecture and conditions for system functionality meets the EIRENE functional and system requirement specifications (E-FRS and E-SRS) in the current valid version.
- Traffic model of EIRENE network and configuration of network capacity according to the traffic model, no resource limitations.
- Network configuration (e. g. NSS, BSS, subscribers) meets planning.
- Interface to other (EIRENE) networks for interconnections and roaming are configured correctly and verified according to relevant specification e.g. IREG tests.
- Radio design meets the EIRENE specifications implicitly ETSI / 3GPP (see ETSI EN 301515).

The radio coverage meets the requirements of the EIRENE Specifications (E-SRS, chapter 3.2.2) and has been verified. The air interface of EIRENE network should be optimized in terms of speed, frequency and interferences generated by other mobile networks. Verification of radio coverage and network optimization is a precondition for IOT testing but not scope of this document.

Basic requirements regarding Quality of Service (QoS) (e.g. call setup time or handover success rate) and network performances (e.g. handover duration), specified in the EIRENE functional and system requirement specifications, have to be fulfilled. The verification is part of QoS and performances testing and not covered by this document. For QoS testing can be used for example UIC OG O-2575 (ERTMS/GSM-R Quality of Service, Test Specification (ETCS), version 3.0) and UIC OG O-2875 (ERTMS/GSM-R Quality of Service, Test Specification, Voice and non-ETCS data, version 0.21).

Furthermore the EIRENE network(s) have to fulfil the RAMS (reliability, availability, maintainability and safety) requirements according to CENELEC EN 50126.

The EIRENE network(s) under test are in real operation and working trouble-free (no active alarms, no defect components); all network resources are available and working correctly.

Access to the management systems of the EIRENE network will be needed to provide specific network configurations defined in the IOT test cases.

Before start of IOT testing it shall be ensured and documented that the EIRENE network fulfils the preconditions mentioned above.

Furthermore, environmental parameters such as temperature and humidity of the test environment should be recorded.

Hardware and software of the EIRENE network under test shall not be changed or modified during IOT testing.

4.2 Reference configuration of EIRENE network

Based on GSM-R architecture, the following figure shows the reference configuration and the interfaces of an EIRENE network and the terminals relevant for IOT testing.

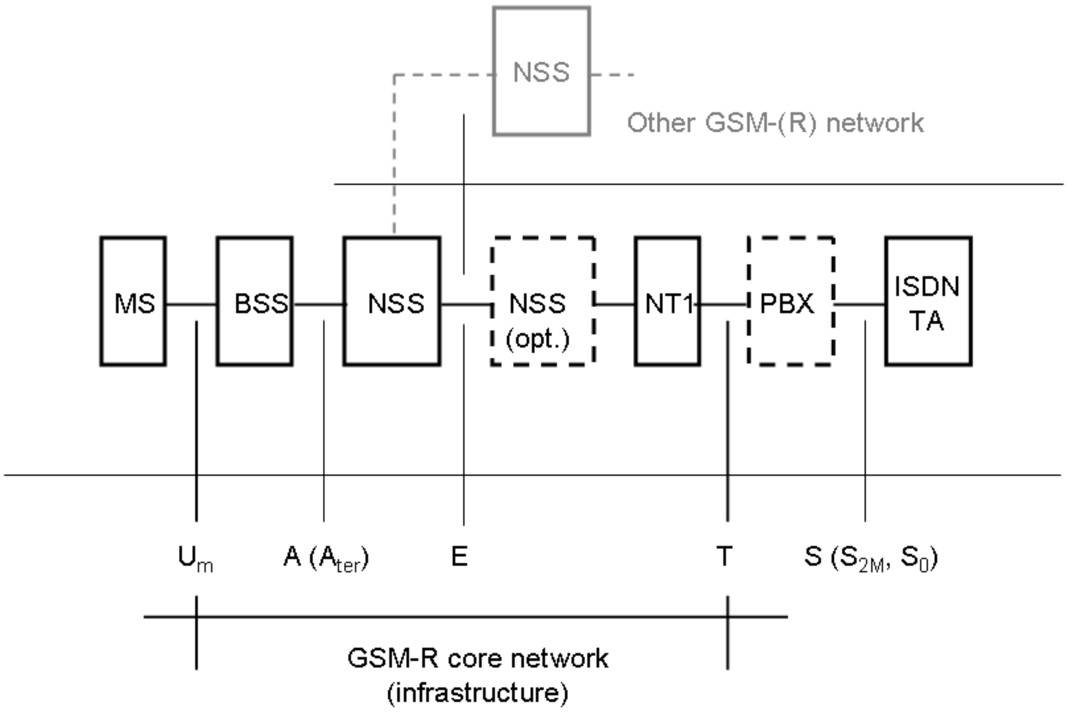


Figure 4.1: Reference configuration and the interfaces of an EIRENE network

With respect of the track – train relation the U_m-interfaces are most relevant for functional end-to-end IOT testing. The E-interface represents the connection to other networks in case of interconnection and roaming. In a multivendor environment (BSS, NSS) the A-interface has to be considered. Communication equipment connected to GSM-R core network via T-interface and respectively S-interface is to regard as part of the GSM-R network in respect of functional end-to-end IOT testing.

Interoperability of EIRENE networks

The next figure gives an overview about typical interconnections of EIRENE and non EIRENE networks.

Interoperability implies interconnection and roaming of two EIRENE networks to allow the safe and uninterrupted movement of trains at the relevant lines of a rail system as the core requirement of interoperability.

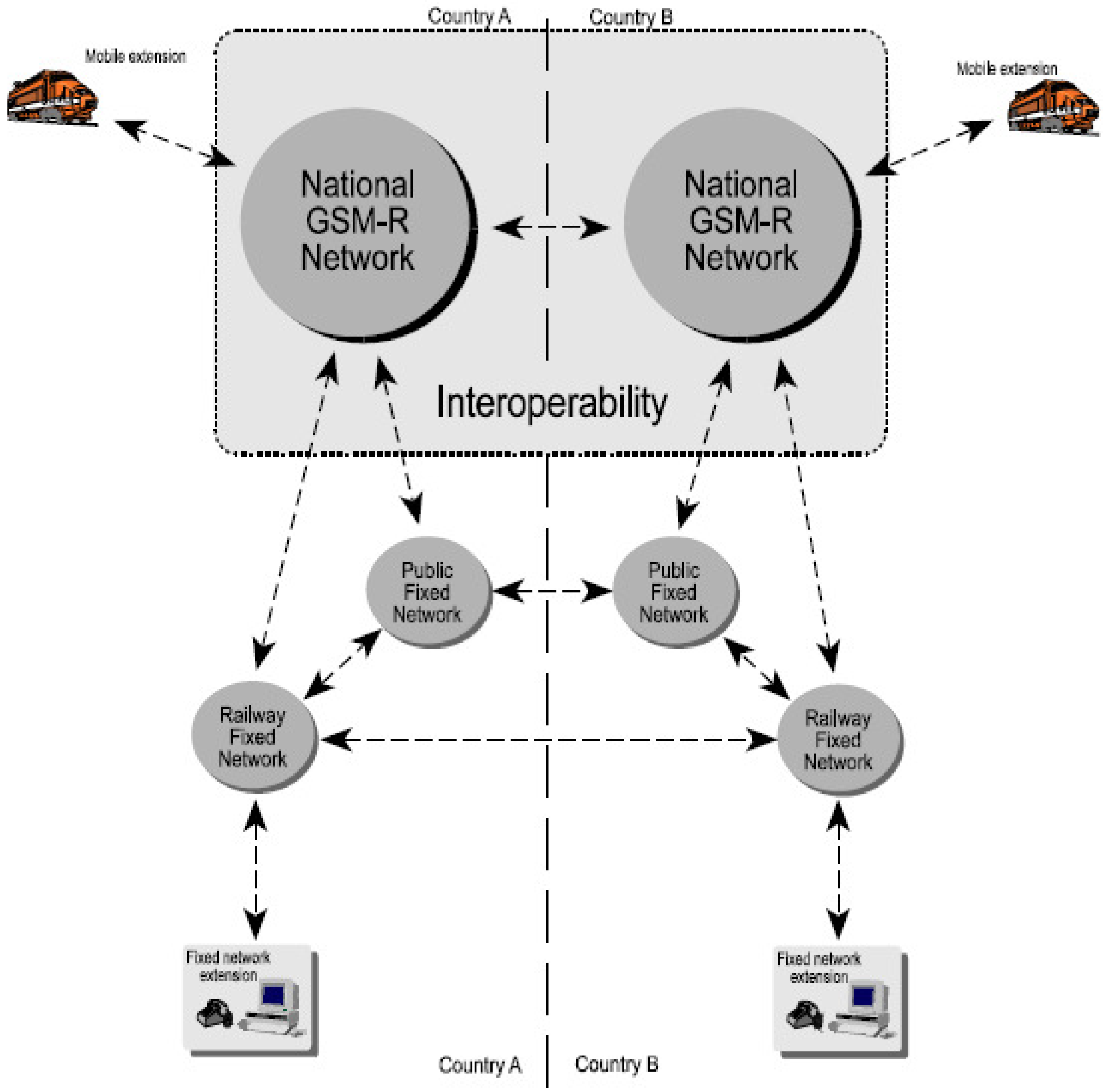


Figure 4.2: Overview of possible interconnections of EIRENE and non EIRENE networks *(source: UIC, Draft GSM-R Procurement & Implementation Guide)*

In generic cases of the interoperability tests one network is the EIRENE network under test and the other shall be a certified EIRENE network.

4.3 IOT Test scenarios

To test the interoperability of one or, in case of roaming, of more than one EIRENE network, there are three generic relevant test scenarios. These generic scenarios are applicable for single as well as for multivendor network environments.

These test scenarios are applicable to different single test cases. The test case overview (Annex 6.1) shows the relationship between single test cases and test scenarios.

Test scenario I:

The first scenario represents the typical and generic situation: Two EIRENE networks (network A and network B) are connected. This includes interconnection as well as roaming in national and international cases.

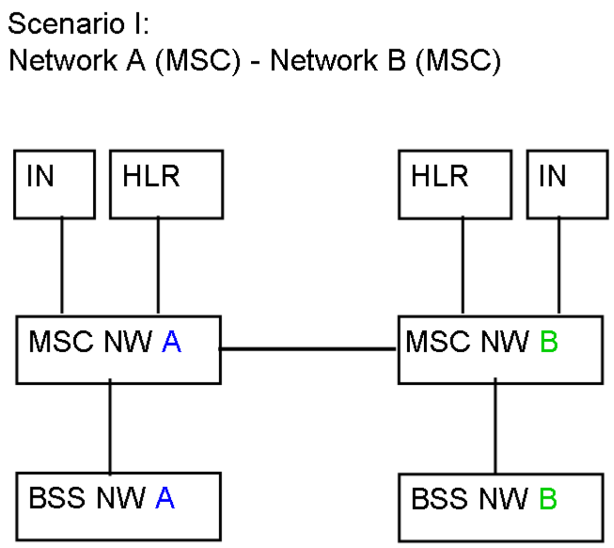


Figure 4.3: Test scenario I – Interconnection of two EIRENE networks

Focus of this scenario is to test features that are relevant when two networks are connected via E interface and subscribers are roaming in both networks, as well as moving from one network to the other.

The scope of the tests is to check the interfaces between EIRENE users and the EIRENE network(s) as well as the correct interworking of both EIRENE networks.

Basically this generic scenario does not exclude network configurations described in test scenarios II and III, but in terms of the test focus this is not considered in this test scenario.

Test scenario II:

This test scenario represents the generic configuration of a single EIRENE network.

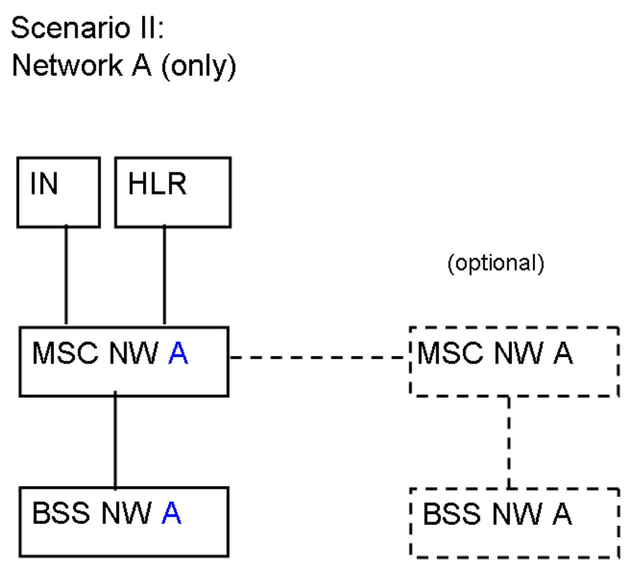


Figure 4.4: Test scenario II – configuration of a single EIRENE networks

Scope of this scenario is to test all EIRENE relevant functionalities without interconnection and roaming aspects and with no respect to specific BSS configurations described in test scenario III.

Test scenario II covers also network configurations with more than one MSC, as well as multi vendor NSS configurations.

Test Scenario III:

Test scenario III considers EIRENE network configurations with two or more different BSS.

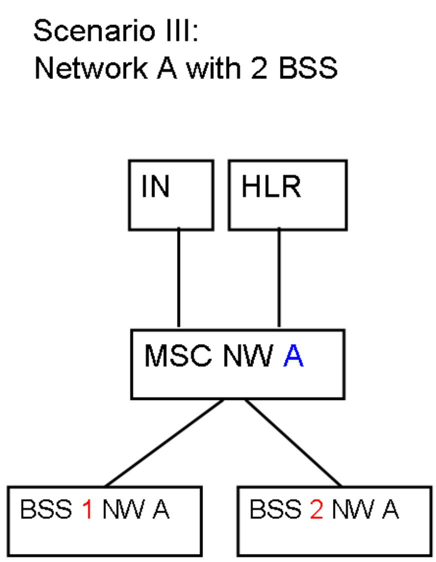


Figure 4.5: Test scenario III – focus to EIRENE networks with different BSS

Focus of scenario III is to test functionalities only relevant in case of more than one BSS, as well as cases of multivendor BSS configurations.

4.4 Nomenclature

In this document a nomenclature is applied to describe the specific test configuration of the EIRENE networks and the role of the network elements including the terminals.

The following table gives an overview of the nomenclature used for the test cases. In addition the abbreviations listed in section 1.4 have to be considered. These definitions are essential to read the IOT test specification.

Object	Nomenclature	Example
Mobile Subscriber	MS_(Network and running number)	MS_A1, MS_A2 (Mobile Subscribers of network A). MS_B1 (Mobile Subscriber of network B).
Cells	Cell_(Network and running number)	cell_A1, cell_A2 (cells of network A). cell_B1 (cell of network B).
BSC	BSC_(Network and running number)	BSC_A1, BSC_A2 (BSC´s of network A). BSC_B1 (BSC of network B).
MSC A-MSC (Anchor MSC) R-MSC (Relay MSC)	MSC_(Network and running number). A-MSC (Network and running number). R-MSC (Network and running number).	MSC_A1, MSC_A2 (MSC´s of network A). MSC_B1 (MSC of network B). A-MSC_A1 (MSC of network A, configured as anchor). R-MSC_A1 (MSC of network A, configured as relay). A-MSC_B1 (MSC of network B, configured as anchor).
VLR	VLR_(Network and running number)	VLR_A1, VLR_A2 (VLR´s of network A). VLR_B1 (VLR of network B)
HLR	HLR_(Network and running number)	HLR_A1, HLR_A2 (HLR´s of network A). HLR_B1 (HLR of network B)
SIM card	SIM	
controller terminal (CT)	CT_(Network and running number)	CT_A1, CT_A2 (CT connected to

Object	Nomenclature	Example
		network A). CT_B1 (CT connected to network B).
Group Call Area	GCA _(Network and running number)	GCA_A1 (GCA including cells of network A). GCA_B1 (GCA including cells of network B). GCA_AB1 (GCA including cells of network A and B).
Priority number	Prio (number)	Prio 1 (call priority 1). Prio 2 (call priority 2).
point to point call	PTP	
mobile to mobile call	MMC	
mobile terminated call	MTC	
mobile originated call	MOC	
Cell of Origin	CoO	CoO=cell_A1 means REC, VGCS or VBS calls can be established in cell_A1.
International Code	IC_(Network)	IC_A, IC_B
Functional Number	FN_(running number)	FN_1, FN_2
FollowMe Functional Node (e.g. IN / SCP)	FFN_(Network)	FFN_A, FFN_B

Table 4.1: Overview of used nomenclature

Following description of network behaviours and configurations are also important to have a better understanding of the test cases respectively test steps.

Uplink on the dedicated channel

When a REC or a VGCS call is originated, a dedicated channel (DCH) is allocated in the cell of origin. The originator can take the uplink on the DCH only if he requests this during the first 5 seconds after the connect message on DCH is sent. After these 5 seconds (timer implemented EIRENE in mobile station), the DCH will be released and it is only possible to take the uplink on the group call channel (GCCH).

Note: The message flow for group calls and the interfaces, where the different messages (e.g. “Uplink Free”) can be monitored are described in ETSI TS 100 933 (GSM 03.68, VGCS) and ETSI TS 100 934 (GSM 03.69, VBS).

Uplink control

This IOT test specification considers the implememtation of uplink control for VGCS calls in the EIRENE networks according to MORANE ASCI Options for Interoperability [9]:

	Required for interoperability		
	NSS	BSS	MS
Uplink control (only VGCS):			
originator channel release procedure	-	Yes	Yes
Uplink on the common channel	Yes	Yes	Yes
transition by handover procedure	-	No	No
transition by assignment procedure	-	No	No
transition by channel mode modify	-	No	No
use of the UIC for RACH coding	-	No	No
uplink reply procedure	-	No	No

From point of view of interoperability there is no requirement for transition of the uplink of VGCS calls, neither by a channel assignment procedure nor by a handover procedure nor by a channel mode modify procedure. This means that during a handover procedure the uplink can be handed over from DCH to DCH or from DCH to GCH in the case of a VGCS call originator as a first talker.

This document considers uplink handover procedures from DCH to DCH.

If the EIRENE network under test supports e. g. handover from DCH to GCH then the system behaviour may different from the behaviour expected in some IOT test cases. In this case it is to evaluate if the test case can be executed reasonable with regard to the test case purpose. Otherwise the test case can not be executed. This refers mainly to test cases dealing with handover or pre-emption scenarios for VGCS calls during the uplink on DCH. Examples for this are the test cases 5.5.11 or 5.6.18.

See in addition the clarification for “Uplink on the dedicated channel” in the section above.

Muting and un-muting for VGCS calls

In the test cases dealing with muting control the expected behaviour is described in such a way:

“The controller (CT) has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT. To un-mute the downlink to the talking mobile subscriber the un-mute sequence (###) has to be dialled by CT. After un-mute the DL, the talking SS will listen its own echo”

TRX (Transmitter and receiver of a base station)

One TRX provides 8 time slots (TS) used for signalling and traffic. For configuration of the TRX time slots see “available channels” below.

TRX Failure

To originate a TRX failure, the TRX is disconnected physically.

PCM Failure

To originate a PCM failure, the Abis PCM is disconnected physically.

Lock and unlock of resources

To lock the resources means to put resources out of service using the operation and maintenance terminal.

To unlock the resources means to put resources into service using the operation and maintenance terminal.

Available channels and time slots - resources limitation for pre-emption tests

Pre-emption tests Air interface (Um):

Only one TRX is available.

Following configuration is assumed:

TS0 Main BCCH,

TS1 SDCCH/8,

TS2 up to TS7 Traffic channel full rate.

Therefore, each cell has only 6 traffic channels available. For the pre-emption tests regarding the air interface, the number of channels available was reduced either by performing several PTP calls that use the resources or by putting them out of service using the operation and maintenance terminal.

Pre-emption tests A and E interface:

For the pre-emption tests regarding the A and E interface, it was decided to reduce the number of tine slots available by putting them out of service using the operation and maintenance terminal.

Note: A description of pre-emption can be found in ITU-T Q.735-3 (MLPP stage 3), ETSI EN 300 924 (GSM 02.67, eMLPP stage 1), ETSI TS 100 932 (3GPP TS 03.67, eMLPP stage 2) and ETSI EN 300 947 (GSM 04.67, eMLPP stage 3)

Network attachment

If not described in another way in the test case, it is assumed that the mobiles are attached to the network shown in the test configuration picture and therefore they have correct subscriber information in VLR. The mobiles are in status idle updated.

Minimal configuration

All tests cases consider the minimal resources needed to be able to perform the test case. For example, the test scenarios for cell reselection and handover always involve just two BCCH. The group call areas include only one or two cells.

Subscription to VGCS/VBS calls

Type of mobile subscriber needed according to test description

It is specified in each test case the kind of mobiles needed to be able to perform the regarding test.

For some cases it is absolutely necessary that the subscriber is able to perform VBS / VGCS calls with a specific GID. For example:
MS_B2 (VBS GID: 202)

For some cases it is absolutely necessary that the subscriber is not able to perform VBS / VGCS calls. For example:
MS_A3 (no VGCS / VBS subscriber)

For other cases it has no influence for the test case if the mobile is able to perform any VBS and VGCS calls or not. For example:
MS_B2

When a test case needs subscriber with other specific configuration different from the default configuration, then it is described in the test case.

Type of controller needed according to test description

It is specified in each test case the kind of controller needed to be able to perform the regarding test.

For some cases it is absolutely necessary that the controller is able to originate, receive and kill VBS / VGCS calls with a specific GID for the regarding GCA. For example:
CT_A1 (GCA_AB1, VGCS GID: 200)
CT_A2 (GCA_AB1, REC GID: 299)

For other cases the controller is not entitled to originate, receive and kill any VGCS / VBS calls. For example:
CT_B1.

For specific test cases where it is needed that the controller receives VGCS / VBS calls but it is not entitled to originate and kill them, this will be explicitly indicated in the test case.

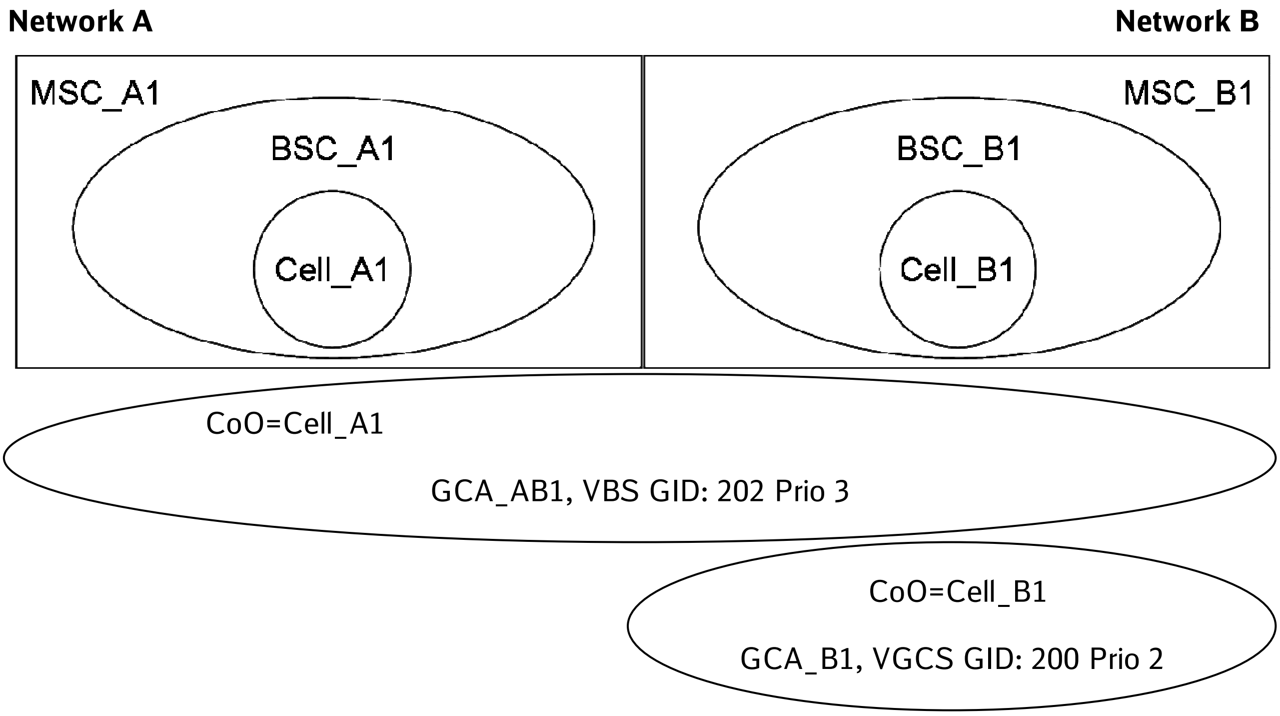
Subscription for roaming

Subscribers have roaming per default. When a test case needs subscriber without roaming, then it is described in the test case.

The roaming test cases check the correct interworking of both EIRENE networks and the interfaces between EIRENE users and both EIRENE networks. Especially in case of group calls it is necessary to test the behaviour of the networks from both sites (MSC anchor -relay relationship). This is the reason for so many different test steps within a single group call roaming test case. Nevertheless the scope of test is mainly the home network.

Example for the description of test configuration

The following example should explain the description of typical test configuration within this document.



A-MSC_A1	**R-MSC_B1**
MS_A1 (VBS GID: 202)	MS_B1 (VGCS GID: 200)
MS_B2 (VBS GID: 202)	MS_A2 (VBS GID: 202)
MS_A3 (no VGCS / VBS subscriber)	MS_B3 (no VGCS / VBS subscriber)
MS_A4	
CT_A1 (GCA_AB1, VGCS GID: 200)	
CT_A2	

Figure 4.6: Example description of test configuration used in the IOT test specification

This figure means:

Section picture:

MSC_A1 belongs to network A and is configured as anchor MSC, MSC_B1 belongs to network B and is configured as relay MSC.

BSC_A1 belongs to network A, BSC_B1, belongs to network B.

Cell_A1 belongs to network A, cell_B1, belongs to network B.

The group call area GCA_AB1 includes cells cell_A1 and cell_B1. Cell_A1 is cell of origin for this group call area.

VBS calls can be established in GCA_AB1 using GID 202 with priority 3.

The group call area GCA_B1 includes only cell_B1. Cell_B1 is cell of origin for this group call area.

VGCS calls can be established in GCA_B1 using GID 200 with priority 2.

Section table:

MS_A1, MS_A2, MS_A3 and MS_A4 are subscribers of network A.

MS_B1, MS_B2 and MS_B3 are subscribers of network B.

MS_A1, MS_B2, MS_A3 and MS_A4 are located in cell_A1, therefore they have correct subscriber information in VLR_A1 and are attached to network A.

MS_A2, MS_B3 and MS_B1 are located in cell_B1, therefore they have correct subscriber information in VLR_B1 and are attached to network B.

CT_A1 is connected to network A and can originate, receive and kill VGCS calls GID 200 with priority 2 in GCA_AB1

HLR settings of MS_A1, MS_A2 and MS_A3 allow them to perform roaming in network B.

HLR settings of MS_B1, MS_B2 and MS_B3 allow them to perform roaming in network A.

MS_A1, MS_A2 and MS_B2 have subscription to VBS GID 202. VBS GID 202 is available and activated on the SIM cards.

MS_B1 has subscription to VGCS GID 200. VGCS GID 200 is available and activated on the SIM card.

For MS_A3 and MS_B3 it is absolutely necessary that the mobiles are not able to perform VBS and VGCS calls.

For MS_A4 it has no influence for the test case if the mobile is able to perform any VBS and VGCS calls or not.

Controller terminal CT_A1 can originate, receive and kill VGCS calls with GID 200 on the regarding GCA_AB1.

CT_A2 is not entitled to originate, receive and kill any VGCS / VBS call.

4.5 Test environment and test conditions

The IOT test specifications can be applied to all EIRENE compliant GSM-R networks. The GSM-R network can be either a test lab environment or a live GSM-R network.

Nevertheless the execution of the full set of the IOT test specifications is recommended to be done in a test lab environment.

The IOT tests should be done under normal conditions.

Furthermore the IOT tests should be performed with speed profiles described in EIRENE SRS, chapter 3.2. In addition speed and area profiles for radio propagation specified in the ETSI specification TS 100 911 (3GPP TS 05.05 - annex C) should be considered.

In case of test lab environment an Air Interface Simulator (realtime RF switching matrix) is recommended to simulate radio propagation and to force handover and cell resection.

4.6 Test configuration

In general not less than the following network elements are needed to ensure a GSM-R test network that is able to realize the IOT test specification.

Network elements per network (Network A and Network B)

- NSS (MSC, VLR, HLR, AUC, GCR, SMSC, OMC)
- BSS (BSC, TCU, 3 BTS, OMC)
- IN (Intelligent Network)
- ACK Center (Acknowledgment Center with CHPC recorder)

In practical each live GSM-R network has an individual configuration. Hence it would be absurd to define or to force a specific IOT test configuration or specific GSM-R network parameters. In fact the purpose of IOT is to test the GSM-R networks as they are.

Therefore only the minimum test configuration is described that is needed to perform the IOT test cases. In any case the EIRENE networks shall be configured according to requirements described in chapter 2 and 3 of the EIRENE FRS and SRS.

4.6.1 Test configuration GSM-R Network

The generic test configuration is simplified shown in the figure below.

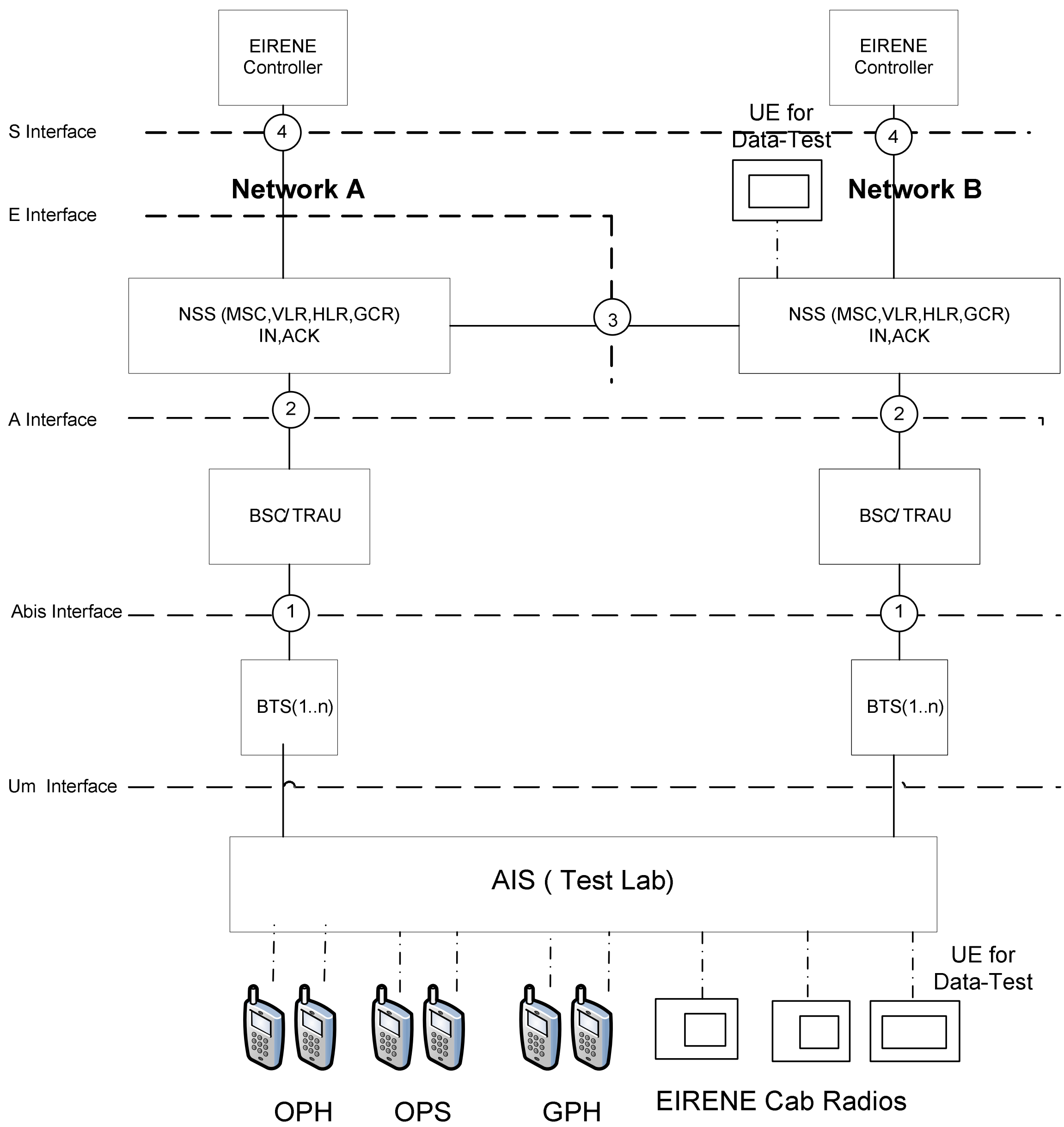


Figure 4.7: Generic IOT test configuration for GSM-R networks

The figure shows also the measurement points for protocols on the different interfaces, drawn by a circle and numbers.

During IOT testing the protocols listed below should be monitored and analyzed at the relevant interfaces.

Interface	Um	(1): Abis	(2): A	(3): E		(4): S
Protocol	Layer 3 (by trace mobile only)	RR	CM	MAP	ISUP	DSS1
		BTSM	MM	TCAP	SCCP	
		Lapd	BSSMAP	SCCP	MTP	
		Layer 1	SCCP	MTP		
			MTP			

Table 4.2: Relevant interfaces of GSM-R network and protocols

The message flow between the different interfaces is described in the relevant ETSI specifications and will not be described in this document.

The configuration of BTS for IOT testing is assumed with

Only one TRX is available.

TS0 Main BCCH,

TS1 SDCCH/8,

TS2 up to TS7 Traffic channel full rate.

The mapping of MLPP and eMLPP priorities is configured in a one-to-one relation. This means for example MLPP priority 1 is matched to eMLPP priority 1 and vice versa. EMLPP priorities A and B are not used. Default priority is 4 within the GSM-R network.

	Priority						
MLPP	---	---	0	1	2	3	4
eMLPP	A	B	0	1	2	3	4

Table 4.3: Mapping of MLPP and eMLPP priorities

Additional information about data test configuration and an example form for documentation of the test configuration is described in annex 6.2.

4.6.2 Test configuration for Functional Addressing

Configuration of FN database

There are two possible options of configuration of FN database.

Pre-provisioning of FN

Prior to the registration of a FN, the FFN database should include all FN to register by a MS. In this case the FFN is checking if the FN has been data filled in the functional number table before allowing the registration attempt to proceed. Only if the FN is data filled (preconfigured) the FFN accepts the registration attempt.

Dynamic FN Creation

FFN does not reject the registration if no FN is found. Instead it will check the FN for consistency by applying certain criteria like the length of Train Number, number format etc.

If all conditions are met the FFN will create a record for the requested FN and inform the user via USSD response about the successful registration. This is known as dynamic FN creation.

Optionally FN record is deleted when deregistered.

Configuration of International Codes, Functional Numbers and Controller Functional Numbers

The following tables represent an example configuration may use for test cases. The values have to be changes according the specific configuration of the EIRENE networks under test.

International Codes (IC):

IC_A	e.g. 049
IC_B	e.g. 043

Functional Numbers (FN: CT2, 3, 4, 6):

FN_1	CT2, 5digits UIN, FC01 (e.g. 2 12345 01)
FN_2	CT3, FC01 (e.g. 3 80123456 01)
FN_3	CT4, FC01 (e.g. 801234567 01)
FN_4	CT6, FC5yxx (e.g. 6 12345 5101)
FN_5	CT2, 5 digits UIN, FC02 (e.g. 2 12345 02)
FN_6	CT2, 5 digits UIN, FC08 (e.g. 2 12345 08)
FN_7	CT2, 5 digits UIN, FC10 (e.g. 2 12345 10)
FN_8	CT2, 6 digits UIN FC01 (e.g. 2 123456 01)
FN_9	CT2, 7 digits UIN, FC01 (e.g. 2 1234567 01)
FN_10	CT2, 8 digits UIN, FC01 (e.g. 2 12345678 01)

Controller Function Numbers (FN: CT7):

FN_11	CT7, FC01 (e.g. 7 85001 01)
FN_12	CT7, FC01 (e.g. 7 85002 01)
FN_13	CT7, FC02 (e.g. 7 85005 02)
FN_14	CT7, FC02 (e.g. 7 85008 02)
FN_15	CT7, FC01 (e.g. 7 86001 01)
FN_16	CT7, FC02 (e.g. 7 86001 02)
FN_17	CT7, FC01 (e.g. 7 86003 01)
FN_18	CT7, FC02 (e.g. 7 86003 02)

Configuation of EIRENE Subcribers:

The test cases for Functional Addressing are based on the following subscriber configuration.

MS	Follow Me Subscription on HLR_A (Class Of Registration)	Supervisor Subscription on HLR_A (Class Of Registration)
MS_A1	ABCD	ABCD
MS_A2	ABCD	Not given
MS_A3	Not given	Not given

MS	Follow Me Subscription on HLR_B (Class Of Registration)	Supervisor Subscription on HLR_B (Class Of Registration)
MS_B1	ABCD	ABCD
MS_B2	ABCD	Not given
MS_B3	Not given	Not given

4.6.3 Test configuration of Location Depending Addressing (LDA)

The table below shows the test configuration of LDA.

Network A

Cell Of Origin	Short Code	Destination
Cell_A1	1200	FN_11
	1300	FN_13
Cell_A2	1200	FN_12
	1300	FN_14

Network B

Cell Of Origin	Short Code	Destination
Cell_B1	1200	FN_15
	1300	FN_16
Cell_B2	1200	FN_17
	1300	FN_18

4.6.4 Check of GSM-R network parameters

In preparation of IOT testing the following configurations of parameters and data of the GSM-R network should be checked regarding the general requirements for EIRENE networks according to EIRENE FRS and SRS as well as the national railway specific configuration aspects.

<u>BSS:</u>

- Logical Chanel Configuration on the air interface, e.g.
  - Not combined
  - TS0 (BCCH, RACH, PCH AGCH)
  - TS1 (SDCCH/8 (0...7))
  - TS2 ...TS7 (TCH)
- Handover and Cell Selection / Reselection
  - Handover Types (Intra cell, Inter cell, Intra BSS, Inter BSS, Intra MSC, Inter MSC)
  - Handover Parameters: (Margin, Quality, Level, Distance, Better cell, Power Budget, also considering high speed)
- Power Control
- Transfer Mode: Discontinuous Transmission (*DTX*)

<u>MSC:</u>

- Parameter to Control of the registry query (Registration, Authentification, Encryption)
- Parameter to Control the Handover
- Parameters for call control (VGCS, VBS, PTP)
- Mapping of MLPP and eMLPP levels, default priority
- Parameters for interconnection of networks (routing)
- Parameter for Roaming (national, international)

<u>AuC / HLR:</u>

- Subscribers activation
- Subscribed services

<u>GCR:</u>

The group call register contains attributes of voice group and broadcast call configuration.

- Group ID
- Group area ID
- Croup call reference (Group ID + Group area ID)
- Priority levels
- Controllers configuration for group calls

<u>EIRENE data:</u>

- Group call service areas
- UIC group addresses
- Access matrix (Call type, Function code combination / IN)
- EIRENE numbering plan (Functional Addressing / IN), see chapter 4.6.2
- Location dependent addressing-/ routing schema (IN)
- Private numbering plan

Note: If no Network Destination Code (NDC) is available the EIRENE numbering format should be used.

4.7 Test equipment

The test equipment listed below represents a minimum set that is needed for two networks (A and B) in order to be able to execute the complete IOT test specification. The test equipment shall be to be compliant to ETSI GSM-R phase 2+ (release 1999).

- 10 EIRENE mobile stations, at least two different manufactures, with EIRENE SIM
- 4 EIRENE Controller Terminals
- 2 ISDN terminals with application for data tests (user equipment for data tests, see annex 6.2)
- Protocol analyzer for tracing the full set of messages of A, A-bis, E and S interfaces
- Air interface simulator (AIS) for test in lab environment (see chapter 4.7.3 AIS)

4.7.1 EIRENE Mobile Stations, EIRENE Controller Terminals

The mobile stations and controller terminals used for IOT testing shall be fully compliant to the EIRENE specifications (EIRENE FRS V7 and SRS V15, see references). For controller terminals there is an exception regarding the implementation of the EIRENE feature “muting and unmuting” according to E-SRS V15.1, as explained in chapter 3.

These EIRENE Mobile Stations and EIRENE Controller Terminals have to be certified by a Notified Body accredited according to the European Directive 2008/57/EC.

Not every EIRENE Mobile Station supports all EIRENE features. EIRENE FRS chapter 4.2 specifies which type of EIRENE mobile station has to support what EIRENE features.

The cab radio supports all EIRENE mandatory features except ETCS train control application. Is it recommended to use cab radios for IOT testing.

Nevertheless other types of EIRENE mobiles can be used for IOT testing if the mobile supports the EIRENE features needed in the single IOT test cases.

EIRENE mobile station shall be configured with EIRENE SIM according to one of the subscriber profiles described in chapter 4.7.2.

For IOT test cases these require mobile stations without VGCS / VBS or REC subscription (see chapter 4.4) it is not recommended to use a cab radio, but other types of mobiles stations. EIRENE cab radio has to support these features as mandatory. Hence some implementations of cab radios will not start up when the GID 299 for REC is not activated on SIM because of safety.

Mobile stations and ISDN data terminal used for data tests should be subscribers that are not able to perform VBS / VGCS calls. This avoids interferences of data transmission during test caused by in-band notification.

Controller terminals and the supported features are specified in EIRENE FRS chapter 8 and SRS chapter 8.3.

The mobile stations and controller terminals used for IOT testing shall be documented with type, IMEI or serial number as well as hardware and software version, see chapter 6.3 Annex – Example for documentation of test configuration.

4.7.2 EIRENE SIM, Subscriber profiles

As explained in chapter 4.4 the IOT test cases requires different subscriber configurations for mobiles station and controller terminals. For the subscriber configuration is only the minimal configuration considered that is needed to be able to perform the test case.

Subscriber profiles listed below shall be configured in the HLR of the GSM-R network and on the SIM, in case of controller also in the GCR.

For EIRENE SIM technical basis profile for GSM-R applications is described in the UIC specification “FFFIS for the GSM-R SIM Cards, Reference P38 T 9001 4“.

Mobile subscriber profile 1 (full EIRENE profile, equivalent with train radio)

This profile supports all mandatory EIRENE features according to E-FRS V7 and E-SRS V15.

Teleservices:

11	Telephony
12	Emergency calls
21	Short message MT/PP
22	Short message MO/PP
23	Short message cell broadcast
91	Voice Group Call Service (VGCS)
92	Voice Broadcast Service (VBS)

Bearer services:

24	Asynchronous 2.4 kbps T
25	Asynchronous 4.8 kbps T
26	Asynchronous 9.6 kbps T

(T - Transparent; NT - Non-transparent)

Supplementary service:

Calling Line Identification Presentation (CLIP)

Connected Line Identification Presentation (CoLP)

Call Forwarding Unconditional (CFU)

Call waiting (CW)

Call hold (HOLD)

Multi Party Service (MPTY)

Closed User Group (CUG)

BOIC except those to Home PLMN Country (BOIC-exHC)

Barring of Incoming Calls when Roaming Outside the Home PLMN Country (BIC-Roam)

Unstructured Supplementary Service Data (USSD)

Sub-addressing*

Enhanced Multi-Level Precedence and Pre-emption (eMLPP)

User-to-User Signalling 1 (UUS1)

EIRENE specific features:

Functional addressing (based on USSD, COR, Supervisor COR), see chapter 4.6.2

Multiple driver communications (based on VGCS GID 200)

Railway Emergency Calls

EIRENE Train Emergency call (based on VGCS GID 299)

EIRENE Shunting Emergency call (based on VGCS GID 599)

For IOT test the subscriber with this profile is able to perform VBS and VGCS calls with the following specific GID used in the IOT test cases.

VGCS:

- GID: 299, Priority 0 (REC train)
- GID: 599, Priority 0 (REC shunting)
- GID: 200, Priority 2
- GID: 203, Priority 3
- GID: 204, Priority 4

VBS:

- GID: 202, Priority 3
- GID: 203, Priority 4

Fast Call Setup is configured for high priority calls (priority 0) on SIM.

This profile is used as default for IOT testing.

Mobile subscriber profile 2 (no VGCS / VBS subscription)

The subscriber supports all services and features of profile 1, but the subscriber is not able to setup or receive VBS / VGCS calls, however it supports eMLPP and AAeM.

Therefore is no subscription for VGCS and VBS on SIM (SIM Service Table) and in HLR and no GID is subscribed.

This profile should be used for subscribers performing data test.

Mobile subscriber profile 3 (no ASCI)

The subscriber supports the GSM standard services.

ASCI features (VGCS, VBS, eMLPP, AAeM) are not supported and not subscribed on SIM and in HLR. This subscriber has no maximum eMLPP priority level 0 and no default eMLPP priority level assigned.

This profile is required in some MLPP / eMLPP test cases.

As described above the mobile subscriber profile 1 is used for IOT testing as default. If a test case requires a different configuration then it the mobile subscriber profile 2 or 3 have to use according to the features required.

All Subscribers (except mobile subscriber profile 3) are configured in HLR and on SIM with maximum eMLPP priority level 0 and default eMLPP priority level 4. This means the priority levels 0, 1, 2, 3 and 4 are allowed.

Subscribers have roaming per default. When a test case needs subscriber without roaming or with other specific configuration different from the default configuration, then it is described in the test case.

Subscriber profile for controller

The EIRENE features that have to be configured for controller are described in general in E-FRS chapter 8 and E-SRS chapter 8.2.

In the GCR it is to configure that the controller is able to originate, receive and kill VBS / VGCS calls with a specific GID for the regarding GCA as specified in each test case.

For specific test cases where a different configuration for the controller is needed, this will be explicitly indicated in the test case.

Before the start of IOT tests, the SIM and controller configuration have to be verified and documented.

4.7.3 Air Interface Simulator

An Air Interface Simulator (AIS) is used in lab environment to simulate drive tests and radio propagation. Without AIS the IOT testing in lab can only be performed under static conditions. IOT test cases covering handover and cell reselection can not be performed reliably without AIS.

The following simulation characteristics should be possible:

- Simulation of topographic areas / events (urban, rural, tunnels, bridges)

- Simulation of different speeds (low speed, high speed)
- Optional: simulation of radio propagation with different fading models (Rician Fading, Rayleigh Fading)

Speed and area profiles applicable for GSM-R are described in the ETSI specification TS 100 911 (3GPP TS 05.05 – annex C). In addition the speed profiles described in EIRENE SRS, chapter 3.2 have to be considered.

The AIS should support simulations at least with four cells (BTS) and at least with four independent radio paths for mobile stations. At all the AIS should provide the capacity to connect the minimum number of Mobile Stations used for IOT testing.

4.7.4 Optional test equipment

Additional measurement equipment is helpful to support the IOT tests.

- Spectrum Analyzer
- Network Analyzer
- RF Power Meter
- Temperature / Humidity Log Tool

This equipment is recommended to measure insertion loss (Air Interface Simulator), output power (Base Stations) and measurement of environmental interference.

The measurement equipment that is used for IOT testing shall be calibrated and should be documented with the test configuration (see chapter 6.3 Annex – Example for documentation of test configuration).

5 IOT Tests Cases

This section contains the IOT test cases covering the following EIRENE features.

Chapter	EIRENE Feature
5.1	Basic and Supplementary Services
5.2	Functional Addressing
5.3	Access Matrix and Access to external networks
5.4	Location Depending Addressing
5.5	MLPP
5.6	REC, Late Entry
5.7	eMLPP
5.8	VGCS
5.9	VBS
5.10	Cell reselection, Handover

5.1 Basic and Supplementary Services

5.1.1 Successful Location Update after MS Power On (non-roaming case)

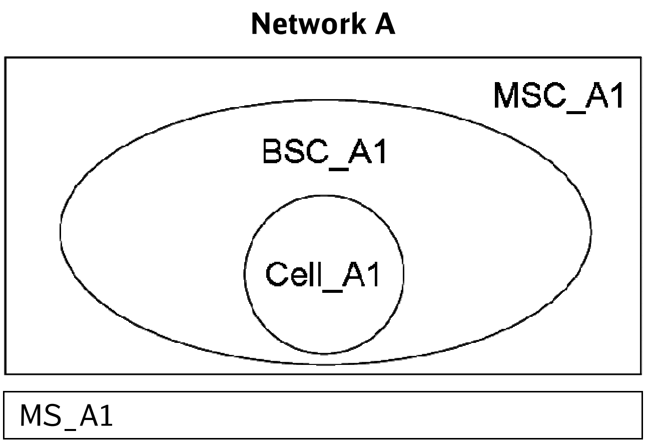
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
			EN 301515

a) Purpose

Verify correct location update after MS is switched on.

b) Test configuration / initial conditions

MS_A1 is switched off.



c) Test procedure

Step	Action	Expected result(s)
1)	Switch on MS_A1 in cell_A1.	A normal location update is performed. Messages seen: 'Location Updating Request' and 'Location Updating Accept'. 'Authentication Request' is transmitted from the MSC to the BSC and from the BSC to the base station. 'Authentication Response' is transmitted from the base station to the BSC and from the BSC to the MSC. 'Cipher Mode Command' is transmitted from the MSC to the BSC and from the BSC to the base station. 'Cipher Mode Complete' is transmitted from the base station to the BSC and from the BSC to the MSC. In 'Cipher Mode Command' message you can find the encryption algorithm supported by the network. In 'Cipher Mode Complete' message you can find the chosen encryption algorithm. MS_A1 has correct subscriber data in the VLR_A and is attached to the network.

d) Success criteria

Location update after MS is switched on is successful.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signatures	

5.1.2 Successful Location Update after change of Location Area (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
			EN 301515

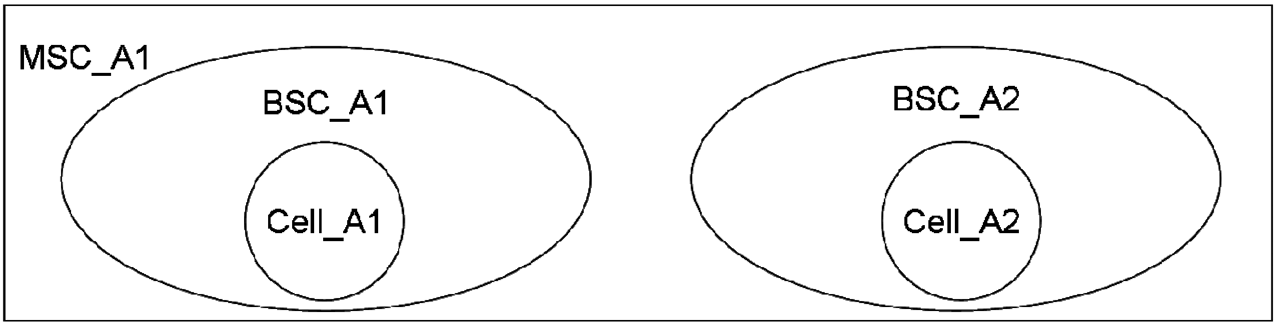
a) Purpose

Verify correct location update after moving to a cell with different location area.

b) Test configuration / initial conditions

Cell_A1 and cell_A2 have different location areas.

Network A



Cell_A1	**Cell_A2**
MS_A1	

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 moves from cell_A1 to cell_A2.	A normal location update is performed. Messages seen: 'Location Updating Request' and 'Location Updating Accept'.
2)	MS_A1 moves back to cell_A1.	A normal location update is performed again. Messages seen: 'Location Updating Request' and 'Location Updating Accept'.

d) Success criteria

Successful location update after moving to a cell with different location areas.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signatures	

5.1.3 Unsuccessful Location Update (subscription in HLR is unknown) (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

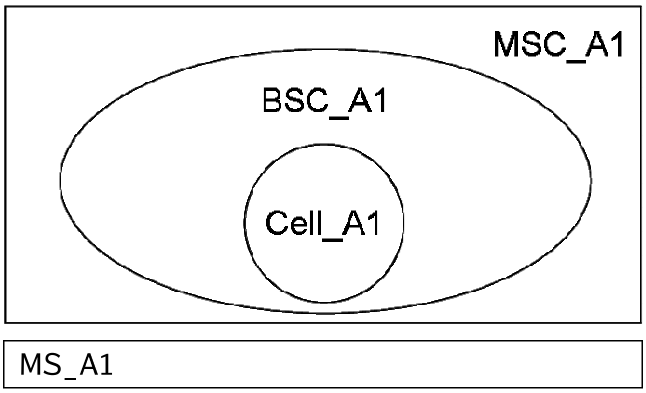
a) Purpose

Verify that location update cannot be performed if the SIM is not known in the HLR.

b) Test configuration / initial conditions

MS_A1 is switched off.

Network A



c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 has a SIM that is not known in HLR_A1. Switch on MS_A1 in cell_A1.	Location update is not performed (initiated but fails). Messages seen: 'Location Updating Request' and 'Location Updating Reject' with reject cause 'IMSI unknown in HLR'.

d) Success criteria

Location update cannot be performed if the SIM is not known in HLR.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signatures	

5.1.4 Unsuccessful Location Update (due to PLMN not allowed) (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

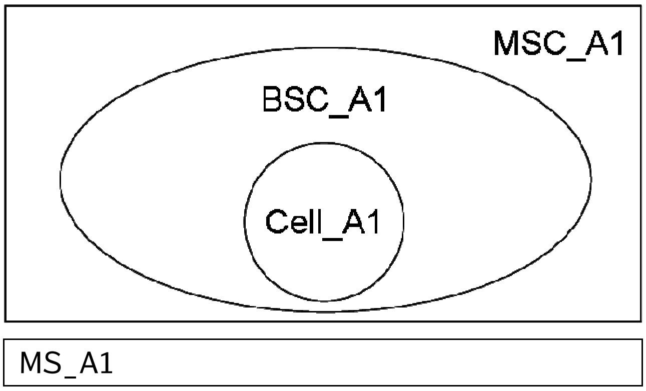
Verify that location update cannot be performed if the PLMN is not allowed.

b) Test configuration / initial conditions

HLR settings of MS_A1 do not allow it to perform roaming in network A.

MS_A1 is switched off.

Network A



c) Test procedure

Step	Action	Expected result(s)
1)	Switch on MS_A1 in cell_A1.	Location update is not performed. Messages seen: ‘Location Updating Request’ and ‘Location Updating Reject’ with reject cause ‘PLMN not allowed’.
2)	Check the subscriber information in the VLR_A1.	There is no subscriber information available in the VLR_A1.

d) Success criteria

Location update failed with cause ‘PLMN not allowed’.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.5 Successful Location Cancellation (non-roaming case)

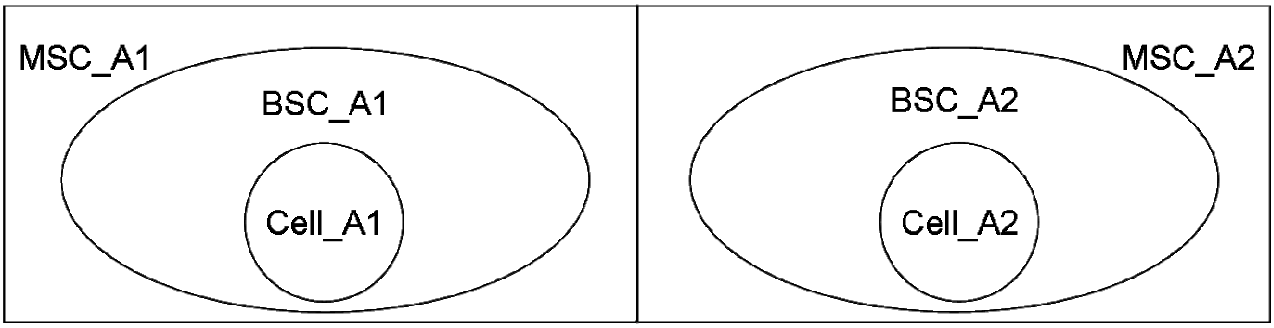
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify location update cancellation when moving from one cell to another (from one VLR to another).

b) Test configuration / initial conditions

Network A



MSC_A1	MSC_A2
MS_A1	

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 moves to cell_A2.	MS_A1 performs a location update in cell_A2. Location cancellation is performed. No VLR_A1 information for MS_A1 is available anymore. MS_A1 has correct subscriber information in VLR_A2.

Step	Action	Expected result(s)
2)	MS_A1 moves back to cell_A1.	MS_A1 performs a location update in cell_A1. Location cancellation is performed. No VLR_A2 information for MS_A1 is available anymore. MS_A1 has correct subscriber data in the VLR_A1.

d) Success criteria

Location cancellation is performed successfully when moving from one cell to another (from one VLR to another).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.6 IMSI Detach by MS Power Off (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

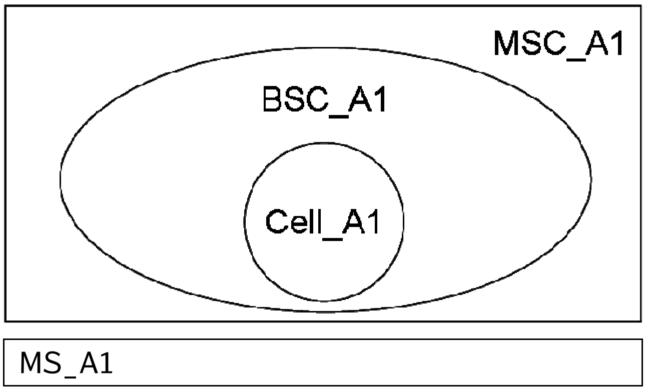
Verify that the IMSI is detached when switching off the MS.

b) Test configuration / initial conditions

IMSI attached/detached must be enabled in the network.

MS_A1 is switched off.

Network A



c) Test procedure

Step	Action	Expected result(s)
1)	Switch on MS_A1 in cell_A1.	A normal location update is performed. Messages seen: “Location Updating Request” and “Location Updating Accept”
2)	Switch off MS_A1.	IMSI is detached. Detachment message is sent from the BTS to the BSC and from the BSC to the MSC.

d) Success criteria

IMSI is detached when switching off the MS.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.7 MTM to detached mobile subscriber (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.2.1 2.2.3 2.2.4	2.2.1	

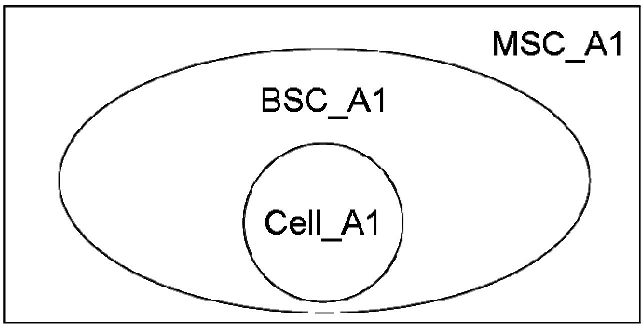
a) Purpose

Verify that no call can be established to a mobile which IMSI has been detached.

b) Test configuration / initial conditions

IMSI attached/detached must be enabled in the network.

Network A



MS_A1
MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	Switch off MS_A2.	IMSI is detached. The detachment message is sent from the BTS to the BSC and from the BSC to the MSC.
2)	MS_A1 calls MS_A2.	A release tone is sent to MS_A1. The MSC does not send the paging message to the BSC. No call can be established.

d) Success criteria

No call can be established to a mobile which IMSI has been detached.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.8 MTM, mobile subscribers are in different location areas (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.2.2 2.2.3 2.2.4 3.2.3	2.2.1 9.7.1 9.7.2 9.7.3 10.7.1i 10.7.3	

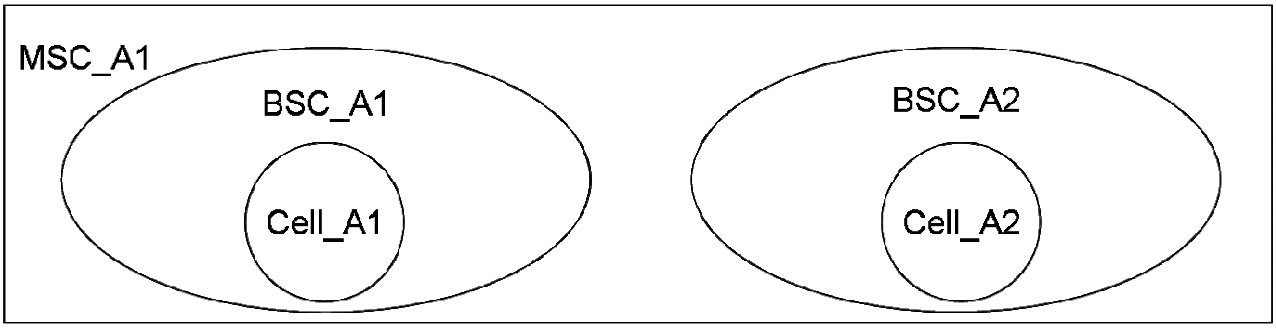
a) Purpose

Check that a mobile to mobile call can be established even if the mobile subscribers are in different location areas.

b) Test configuration / initial conditions

Cell_A1 and cell_A2 belong to different location areas.

Network A



Cell_A1	Cell_A2
MS_A1	MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	‘Authentication Request’ is transmitted from the MSC to the BSC and from the BSC to the base station. ‘Authentication Response’ is transmitted from the base station to the BSC and from the BSC to the MSC. ‘Cipher Mode Command’ is transmitted from the MSC to the BSC and from the BSC to the base station. ‘Cipher Mode Complete’ is transmitted from the base station to the BSC and from the BSC to the MSC. In ‘Cipher Mode Command’ message you can find the encryption algorithm supported by the network. In ‘Cipher Mode Complete’ message you can find the chosen encryption algorithm. The call is established successfully. The subscribers can talk to each other.
2)	MS_A1 releases the call.	Call is correctly released. All related resources are de-allocated.

d) Success criteria

A PTP call could be established between two mobile subscribers located in different location areas.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.9 MTM, radio link failure on A-side, A and B subscriber are in different cell (non-roaming case)

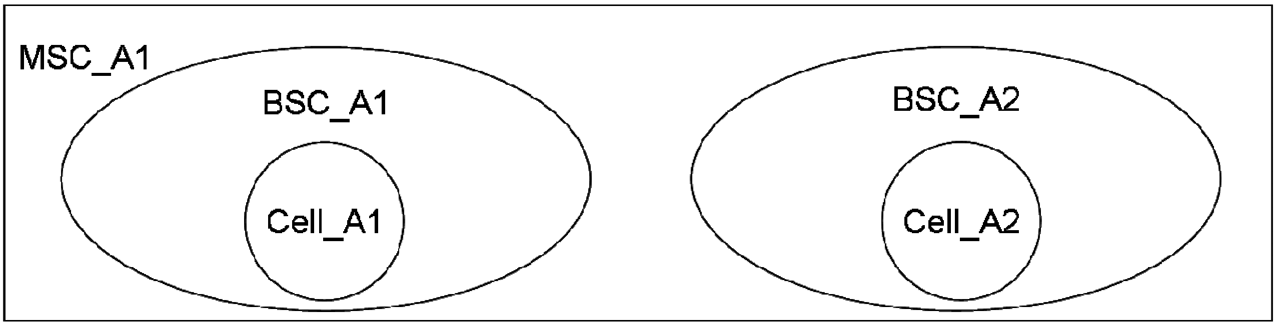
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.2.3 2.2.4	2.2.1	

a) Purpose

Verify that a PTP call is correctly released when the mobile subscriber looses contact with the network.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1	MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	The call is established successfully. The subscribers can talk to each other.
2)	Remove the battery of MS_A1 in order to originate a radio link failure.	The call is correctly released. All related resources are de-allocated.

d) Success criteria

The PTP call is correctly released when the mobile subscriber looses contact with the network due to a radio link failure.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.10 Supplementary Service Call Hold (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.4.1 2.4.13 2.4.14	2.4.1	

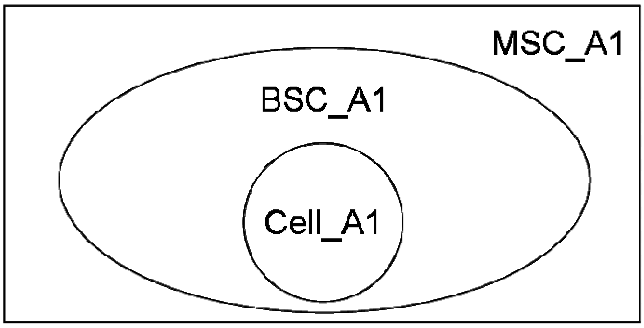
a) Purpose

Verify the Supplementary Service Call Hold.

b) Test configuration / initial conditions

MS_A1 have Supplementary Service Call Hold.

Network A



MS_A1
MS_A2
MS_A3

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	MS_A2 is notified of the incoming call from MS_A1.
2)	MS_A2 takes the call.	PTP call between MS_A1 and MS_A2 is successfully established. MS_A1 has speech path to MS_A2.
3)	MS_A1 puts subscriber MS_A2 on hold.	MS_A2 is on hold, no speech path between MS_A1 and MS_A2 available.

Step	Action	Expected result(s)
4)	MS_A1 establishes a second PTP call to MS_A3.	MS_A3 is notified of the incoming call from MS_A1.
5)	MS_A3 takes the call.	PTP call between MS_A1 and MS_A3 is successfully established. MS_A1 has speech path to MS_A3.
6)	MS_A1 toggles (rejoin) between subscriber MS_A2 and MS_A3 by putting one on hold and retrieving the other one. After that puts MS_A2 on hold.	The subscriber that is on hold has no speech path to MS_A1. The subscriber that is not on hold is able to communicate with MS_A1.
7)	MS_A1 closes the call to MS_A3	Call to MS_A3 is released. All related resources are de-allocated. MS_A1 has again speech path to MS_A2.
8)	MS_A1 closes the call.	Call to MS_A2 is released. All related resources are de-allocated.

d) Success criteria

MS_A1 was able to put subscribers on hold.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.11 Supplementary Service Call Waiting (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.15	2.4.1	

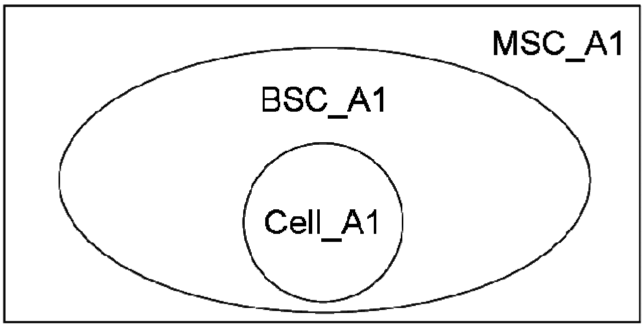
a) Purpose

Verify the Supplementary Service Call Waiting.

b) Test configuration / initial conditions

MS_A1 has Supplementary Service Call Waiting.

Network A



MS_A1
MS_A2
MS_A3

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	MS_A2 is notified of the incoming call from MS_A1.
2)	MS_A2 takes the call.	PTP call between MS_A1 and MS_A2 is successfully established. MS_A1 has speech path to MS_A2.
3)	MS_A3 establishes a PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_A3. MS_A3 gets ringing tone.

Step	Action	Expected result(s)
4)	MS_A1 accepts the call from MS_A3.	MS_A1 puts the call to MS_A2 automatically on hold. PTP call between MS_A1 and MS_A3 is successfully established. MS_A1 has speech path to MS_A3.
5)	MS_A1 closes the call to MS_A3.	Call to MS_A3 is released. All related resources are de-allocated. MS_A1 has again speech path to MS_A2.
6)	MS_A1 closes the call.	Call to MS_A2 is released. All related resources are de-allocated.

d) Success criteria

MS_A1 was successfully notified about the PTP call from MS_A3 during the ongoing PTP call to MS_A2.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.12 Supplementary Service CLIP – MMC with Call Forwarding Unconditional (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.2 2.4.12	2.4.1	

a) Purpose

Verify the Supplementary Service Calling Line Identification Presentation (CLIP) with activated Call Forwarding Unconditional (CFU).

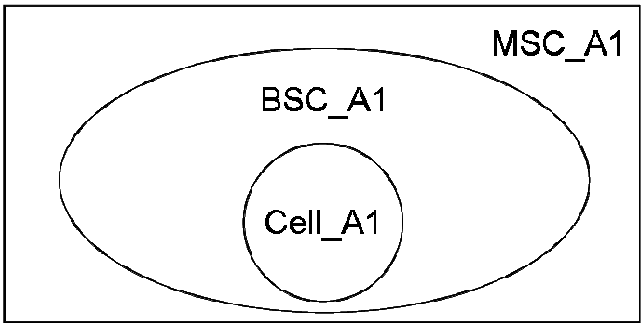
b) Test configuration / initial conditions

MS_A1 has Supplementary Service Calling Line Identification Restriction (CLIR) set to off.

MS_A2 and MS_A3 have Supplementary Service Calling Line Identification Presentation (CLIP).

MS_A2 has activated Call Forwarding Unconditional (CFU) to MS_A3.

Network A



MS_A1
MS_A2
MS_A3

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	MS-A2 is forwarded to MS_A3. MS_A3 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A3. MS_A1 is notified of the call forwarding to MS_A3.
2)	MS_A3 takes the call.	The PTP call between MS_A1 and MS_A3 is successfully established. MS_A1 has speech path to MS_A3.
3)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
4)	MS_A2 deactivates the call forwarding to MS_A3.	Call forwarding to MS_A3 is deactivated.
5)	MS_A1 establishes a PTP call to MS_A2.	MS_A2 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A2.
6)	MS_A2 takes the call.	The PTP call between MS_A1 and MS_A2 is successfully established. MS_A1 has speech path to MS_A2.
7)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.

d) Success criteria

MS_A3 was successfully notified about the PTP call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A3.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.13 Supplementary Service CoLP (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.4.1	

a) Purpose

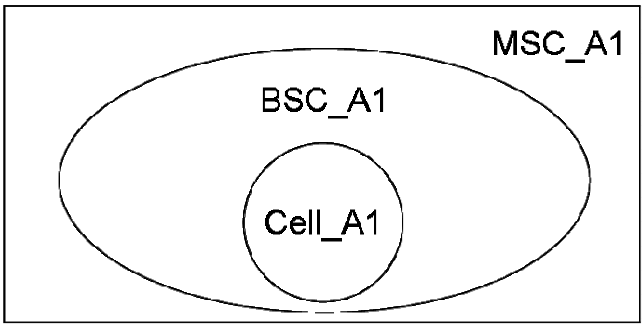
Verify the Supplementary Service Connected Line Identification Presentation (CoLP).

b) Test configuration / initial conditions

MS_A1 have Supplementary Service Connected Line Identification Presentation (CoLP) and Supplementary Service Calling Line Identification Presentation (CLIP) activated.

MS_A2 have Supplementary Service Connected Line Identification Restriction (CoLR) deactivated.

Network A



MS_A1
MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	MS_A2 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A2.
2)	MS_A2 takes the call.	The PTP call between MS_A1 and MS_A2 is successfully established. The MSISDN of MS_A2 is displayed on MS_A1. MS_A1 has speech path to MS_A2.
3)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.

d) Success criteria

MS_A2 was successfully notified about the PTP call from MS_A1. The MSISDN from MS_A2 was displayed on MS_A1.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.14 Supplementary Service MPTY (incl. Multivendor MPTY) (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.2.17 2.2.18	2.4.1 2.5.1	

a) Purpose

Verify the Supplementary Service Multiparty (MPTY).

b) Test configuration / initial conditions

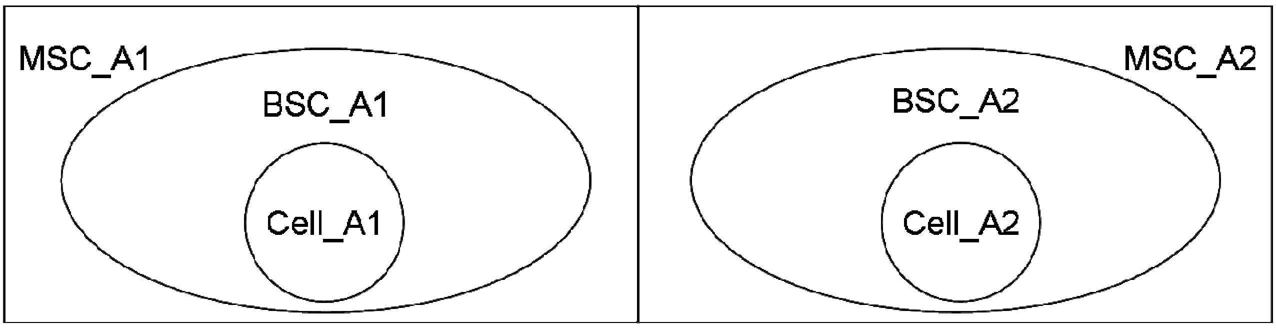
MS_A1 have Supplementary Service Verify Multiparty (MPTY) and Call Hold (HOLD)..

CT_A1 and CT_A2 are connected to Network A.

MSC_A2 and BSC_A2 can be from another vendor as MSC_A1 and BSC_A1.

The 2 cells have different location areas.

Network A



MSC_A1	**MSC_A2**
MS_A1	MS_A3
MS_A2	MS_A4
CT_A1	CT_A2

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	MS_A2 is notified of the incoming call from MS_A1.
2)	MS_A2 takes the call.	The PTP call between MS_A1 and MS_A2 is successfully established. MS_A1 has speech path to MS_A2.
3)	MS_A1 puts MS_A2 on hold. MS_A1 establishes a PTP call to CT_A1.	MS_A2 is put on hold. CT_A1 is notified of the incoming call from MS_A1.
4)	CT_A1 takes the call.	The PTP call between MS_A1 and CT_A1 is successfully established. MS_A1 has speech path to CT_A1.
5)	MS_A1 puts both subscribers together to a multiparty call.	The multiparty call between MS_A1, MS_A2 and CT_A1 is successfully established. All subscribers have speech path and can talk to each other.
6)	MS_A1 puts MS_A2 and CT_A1 on hold. MS_A1 establishes a PTP call to MS_A3.	MS_A2 and CT_A1 are put on hold. MS_A3 is notified of the incoming call from MS_A1.
7)	MS_A3 takes the call.	The PTP call between MS_A1 and MS_A3 is successfully established. MS_A1 has speech path to MS_A3.
8)	MS_A1 puts the three subscribers together to a multiparty call.	The multiparty call between MS_A1, MS_A2, MS_A3 and CT_A1 is successfully established. All subscribers have speech path and can talk to each other.
9)	MS_A1 puts MS_A2, CT_A1 and MS_A3 on hold. MS_A1 establishes a PTP call to MS_A4.	MS_A2, MS_A3 and CT_A1 are put on hold. MS_A4 is notified of the incoming call from MS_A1.
10)	MS_A4 takes the call.	The PTP call between MS_A1 and MS_A4 is successfully established. MS_A1 has speech path to MS_A4.
11)	MS_A1 puts the four subscribers together to a multiparty call.	The multiparty call between MS_A1, MS_A2, MS_A3, MS_A4 and CT_A1 is successfully established. All subscribers have speech path and can talk to each other.
12)	MS_A1 puts MS_A2, CT_A1, MS_A3 and MS_A4 on hold MS_A1 establishes a PTP call to CT_A2.	MS_A2, MS_A3, MS_A4 and CT_A1 are put on hold. CT_A2 is notified of the incoming call from MS_A1.
13)	CT_A2 takes the call.	The PTP call between MS_A1 and CT_A2 is successfully established. MS_A1 has speech path to CT_A2.

Step	Action	Expected result(s)
14)	MS_A1 puts the five subscribers together to a multiparty call.	The multiparty call between MS_A1, MS_A2, MS_A3, MS_A4, CT_A1 and CT_A2 is successfully established. All subscribers have speech path and can talk to each other.
15)	MS_A1 closes the multiparty call.	Multiparty call is released. All related resources are de-allocated.

d) Success criteria

MS_A1 was able to initialize a multiparty call with mobile subscribers and fixed line subscribers.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.15 Notification of Call Forwarding (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.4.1 2.4.12	2.4.1	

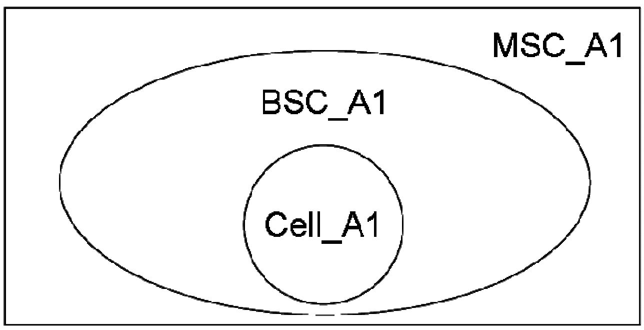
a) Purpose

Verify notification of a forwarded call.

b) Test configuration / initial conditions

MS_A2 have Supplementary Service Call Forwarding Unconditional (CFU) and has forwarded his calls to MS_A3.

Network A



MS_A1
MS_A2
MS_A3

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	MS_A2 has forwarded his calls to MS_A3. MS_A3 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A3.
2)	MS_A3 takes the call.	The PTP call between MS_A1 and MS_A3 is successfully established. MS_A1 has speech path to MS_A3.
3)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.

d) Success criteria

MS_A3 was successfully notified about the forwarded PTP call. The MSISDN from MS_A1 was displayed on MS_A3.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.16 Establishment of several MTM Data calls (Bearer Services) with different eMLPP priorities (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.3.1 2.3.6 2.3.8 2.3.13 2.4.1 2.4.5 9.2.1.2 10.2.1 10.2.2	2.3.1 10.2.1	3GPP TS27.007 3GPP TS22.002 3GPP TS22.003

a) Purpose

Verify the different bearer services.

b) Test configuration / initial conditions

DCE_A1 is connected to network A (Data Circuit Terminating Equipment).

MS_A1 and MS_A2 are terminals with subscriptions to the following bearer services:

Service	EIRENE SRS v15
BS 24 Asynchronous 2,4 Kbit/s T for full-rate channel	M
BS 25 Asynchronous 4,8 Kbit/s T for full-rate channel	M
BS 26 Asynchronous 9,6 Kbit/s T for full-rate channel	M

Terminal application needed to send and receive test data.

To configure the bearer services and to set up a call with the terminal refer to chapter 6.2"Annex - Configuration of User Equipment for Data Calls".

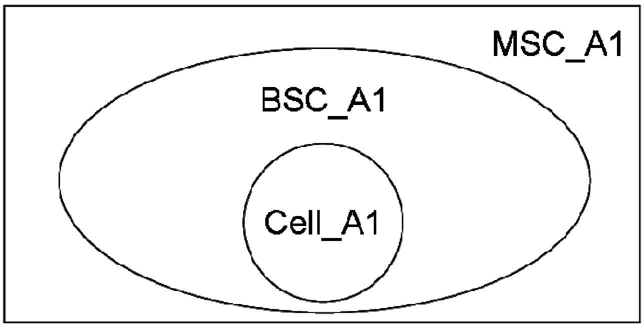
This test case has been divided into the following steps:

Step 1: Mobile to mobile data call

Step 2: Data call between mobile network and fixed network.

Test configuration for step 1 and 2

Network A



DCE_A1
MS_A1 (no VGCS / VBS subscriber)
MS_A2 (no VGCS / VBS subscriber)

c) Test procedure

Case	Data service	Digital interworking (UDI / ISDN) V.110	Analogue interworking (3,1 kHz) V.22bis, V.32	Transparent	eMLPP Priority
1	BS 24 2400 bps	X		X	3
2			X (V.22bis)	X	1
3		X		X	4
4			X (V.22bis)	X	2
5	BS 25 4800 bps	X		X	1
6			X (V.32)	X	3
7		X		X	2
8			X (V.32)	X	4
9	BS 26 9600 bps	X		X	1
10			X (V.32)	X	2
11		X		X	3
12			X (V.32)	X	4

Step 1: Mobile to mobile data call

Step	Action	Expected result(s)
1)	Configure MS_A1 and MS_A2 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”	MS_A1 and MS_A2 are configured with the correct bearer service.
2)	MS_A1 establishes a data call to MS_A2 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_A2 is notified of the incoming data call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A2.
3)	MS_A2 takes the data call.	The data call between MS_A1 and MS_A2 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
4)	MS_A1 sends test data to MS_A2.	The test data is successfully transmitted and received.
5)	MS_A2 sends test data to MS_A1.	The test data is successfully transmitted received.
6)	MS_A1 closes the call.	Call is released. All related resources are deallocated.
7)	Repeat the test using case 2 and 12 from table above.	

Step 2: Data call between mobile network and fixed network

Step	Action	Expected result(s)
1)	Configure MS_A1 and DCE_A1 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”	MS_A1 and DCE_A1 are configured with the correct bearer service.
2)	MS_A1 establishes a data call to DCE_A1 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	DCE_A1 is notified of the incoming data call from MS_A1.
3)	DCE_A1 takes the data call.	The data call between MS_A1 and DCE_A1 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
4)	MS_A1 sends test data to DCE_A1.	The test data is successfully transmitted and received.

Step	Action	Expected result(s)
5)	DCE_A1 sends test data to MS_A1.	The test data is successfully transmitted and received.
6)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
7)	DCE_A1 establishes a data call to MS_A1. ATD *75<Priority>#<MSISDN>	MS_A1 is notified of the incoming data call from DCE_A1.
8)	MS_A1 takes the data call.	DCE_A1 and MS_A1 are successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
9)	MS_A1 sends test data to DCE_A1.	The test data is successfully transmitted and received.
10)	DCE_A1 sends test data to MS_A1.	The test data is successfully transmitted and received.
11)	DCE_A1 closes the call.	Call is released. All related resources are de-allocated.
12)	Repeat the test using case 2 and 12 from table above.	

d) Success criteria

MS_A1, MS_A2 and the Data Circuit Terminating Equipment DCE_A1 are able to setup and receive data calls with different bearer services and line speeds.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.17 Establishment of several PTP calls with different priorities (non-roaming case)

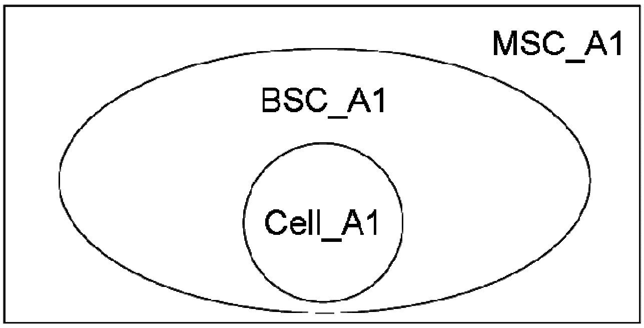
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 10.2.1 10.2.2	10.2.1	

a) Purpose

Verify that a PTP call is established successfully with the correct priority.

b) Test configuration / initial conditions

Network A



MS_A1
MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup' sent to MS_A2.
2)	MS_A1 releases the call.	The call is correctly released. All related re-sources are de-allocated.

Step	Action	Expected result(s)
3)	Repeat step 1 and 2 using priorities 1, 2, 3 and 4.	

d) Success criteria

The PTP call is established successfully with the correct priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.18 Call to busy Mobile – CFBusy to other mobile subscriber (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.12	2.4.1	

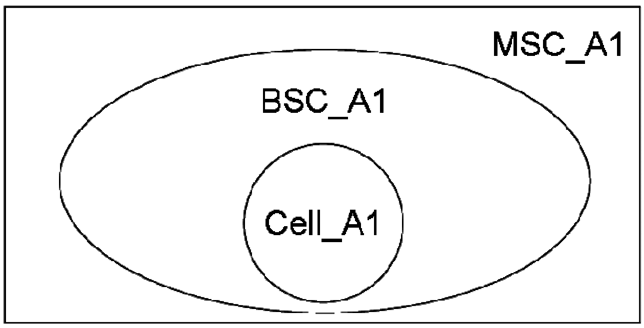
a) Purpose

Verify that a PTP call to a busy mobile subscriber is forwarded when this subscriber has activated Call Forwarding Busy (CFB).

b) Test configuration / initial conditions

MS_A1 has Supplementary Service Call Forwarding Busy (CFB).

Network A



MS_A1
MS_A2
MS_A3
MS_A4

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 activates CFB to MS_A3.	If MS_A1 is busy, incoming calls will be forwarded to MS_A3.
2)	MS_A1 calls MS_A2.	Call is correctly established. There is speech path between MS_A1 and MS_A2.

Step	Action	Expected result(s)
3)	MS_A4 calls MS_A1.	The call is forwarded to MS_A3. The MSISDN number from MS_A4 is displayed on MS_A3. There is speech path between MS_A4 and MS_A3.
4)	MS_A4 releases the call.	The call is correctly released. All related resources are de-allocated.
5)	MS_A1 releases the call.	The call is correctly released. All related resources are de-allocated.
6)	MS_A1 deactivates CFB to MS_A3.	CFB is deactivated.
7)	MS_A1 calls MS_A2.	Call is correctly established. There is speech path between MS_A1 and MS_A2.
8)	MS_A4 calls MS_A1.	The call is not forwarded. MS_A4 gets the busy ring tone and the call is released. All related resources are de-allocated.
9)	MS_A1 releases the call.	The call is correctly released. All related resources are de-allocated.

d) Success criteria

The PTP call to a busy mobile subscriber was correctly forwarded.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.19 MOC call when terminator rejects call (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
			EN 301515

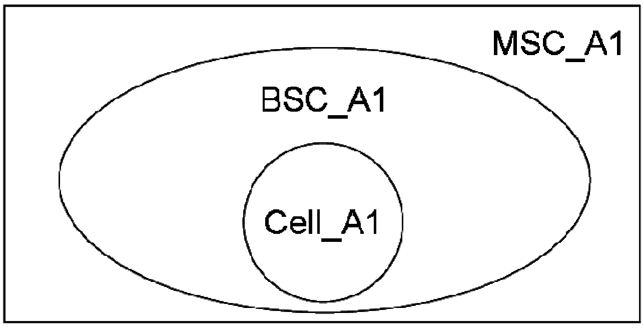
a) Purpose

Verify that a MOC is released when the terminator rejects it.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

Network A



MS_A1
CT_A1

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 calls CT_A1.	CT_A1 is notified of the incoming call.
2)	CT_A1 rejects the call.	The call is correctly released. All related re-sources are de-allocated.

d) Success criteria

The mobile originating call is released when terminating subscriber rejects the call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.20 Unsuccessful MOC call due to unallocated number (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

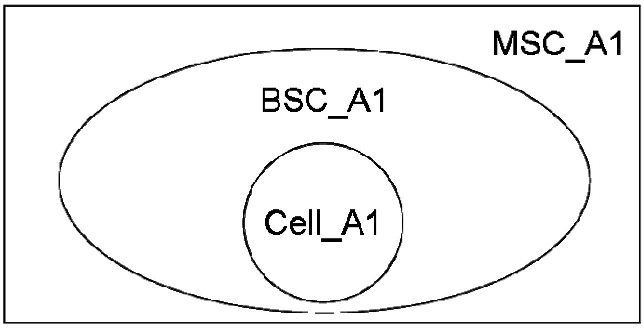
a) Purpose

Verify that no mobile originating call can be established when calling a number that is not assigned.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

Network A



MS_A1
CT_A1

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 calls CT_A1 by dialling a number that is not assigned.	MS_A1 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
2)	MS_A1 closes the call or awaits the network terminates the call.	Call is released. All related resources are deallocated.

d) Success criteria

No mobile originating call can be established when calling a number that is not assigned.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.21 MTC call – Paging Time Out (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		9.7.4	

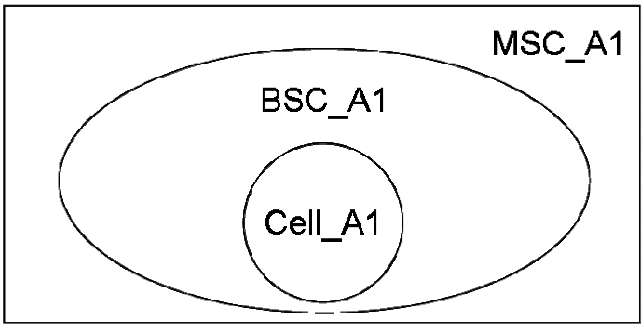
a) Purpose

Verify that a mobile terminated call is released after paging time out when the terminating subscriber does not answer the call.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

Network A



MS_A1
CT_A1

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 leaves the coverage area.	VLR_A1 data still available for MS_A1. It is still attached to network A.
2)	CT_A1 calls MS_A1.	The call is correctly released after paging time out. All related resources are de-allocated.

d) Success criteria

The mobile terminated call is released after paging time out when the terminating subscriber does not answer the call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.22 Unsuccessful MTC, subscriber not in VLR (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

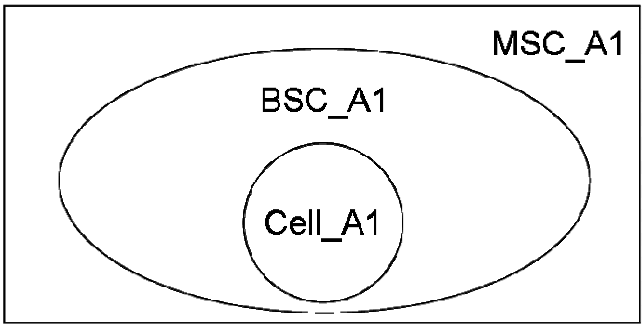
a) Purpose

Verify that a mobile terminating call is released when there is no VLR subscriber information for the terminating subscriber.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

Network A



MS_A1
CT_A1

c) Test procedure

Step	Action	Expected result(s)
1)	Delete the subscriber information for MS_A1 in VLR_A1.	Subscriber information is not available any-more for MS_A1 in VLR_A1.
2)	CT_A1 calls MS_A1.	The call is correctly released. All related re-sources are de-allocated.

d) Success criteria

The MTC is released because there is no VLR subscriber information for the terminating subscriber.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.23 Successful Location update after MS Power On (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
			EN 301515

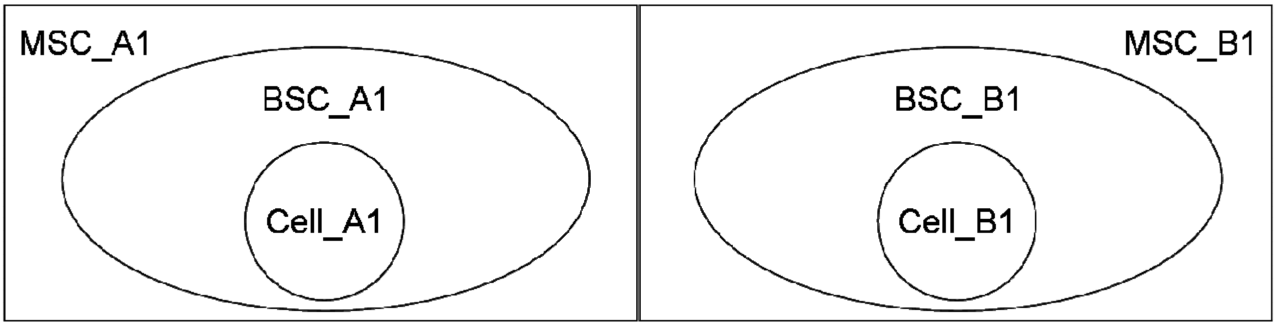
a) Purpose

Verify correct location update after MS is switched on.

b) Test configuration / initial conditions

MS_A1 and MS_B1 are switched off.

Network A **Network B**



MSC_A1	MSC_B1
MS_B1	MS_A1

c) Test procedure

Step	Action	Expected result(s)
1)	Switch on MS_B1 in cell_A1.	A normal location update is performed. Messages seen: “Location Updating Request” and “Location Updating Accept”. ‘Authentication Request’ is transmitted from the MSC to the BSC and from the BSC to the base station. ‘Authentication Response’ is transmitted from the base station to the BSC and from the BSC to the MSC. ‘Cipher Mode Command’ is transmitted from the MSC to the BSC and from the BSC to the base station. ‘Cipher Mode Complete’ is transmitted from the base station to the BSC and from the BSC to the MSC. In ‘Cipher Mode Command’ message you can find the encryption algorithm supported by the network. In ‘Cipher Mode Complete’ message you can find the chosen encryption algorithm. MS_B1 has correct subscriber data in the VLR_A1 and is attached to network A.

Step	Action	Expected result(s)
2)	Switch on MS_A1 in cell_B1.	A normal location update is performed. Messages seen: "Location Updating Request" and "Location Updating Accept". 'Authentication Request' is transmitted from the MSC to the BSC and from the BSC to the base station. 'Authentication Response' is transmitted from the base station to the BSC and from the BSC to the MSC. 'Cipher Mode Command' is transmitted from the MSC to the BSC and from the BSC to the base station. 'Cipher Mode Complete' is transmitted from the base station to the BSC and from the BSC to the MSC. In 'Cipher Mode Command' message you can find the encryption algorithm supported by the network. In 'Cipher Mode Complete' message you can find the chosen encryption algorithm. MS_A1 has correct subscriber data in the VLR_B1 and is attached to network B.

d) Success criteria

Location update after MS is switched on is successful.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.24 Successful Location Update after change of Location Area (roaming case)

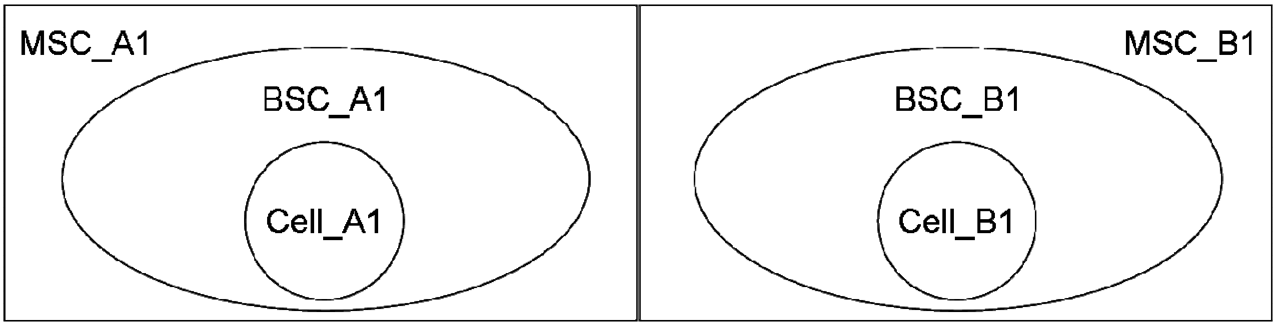
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
			EN 301515

a) Purpose

Verify that location update is correctly performed after moving to a cell with different LAC.

b) Test configuration / initial conditions

Network A **Network B**



MSC_A1	**MSC_B1**
MS_A1	MS_B1

c) Test procedure

Step	Action	Expected result(s)
1)	MS_B1 moves from cell_B1 to cell_A1.	A normal location update is performed. Messages seen: “Location Updating Request” and “Location Updating Accept”.
2)	MS_B1 moves back to cell_A1.	A normal location update is performed again.
3)	MS_A1 moves from cell_A1 to cell_B1.	A normal location update is performed. Messages seen: “Location Updating Request” and “Location Updating Accept”.

Step	Action	Expected result(s)
4)	MS_A1 moves back to cell_A1.	A normal location update is performed again. Messages seen: “Location Updating Request” and “Location Updating Accept”.

d) Success criteria

Successful location update after moving to a cell with different location area.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.25 Unsuccessful Location Update (subscription in HLR is unknown) (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that location update cannot be performed if the SIM is not known in the HLR.

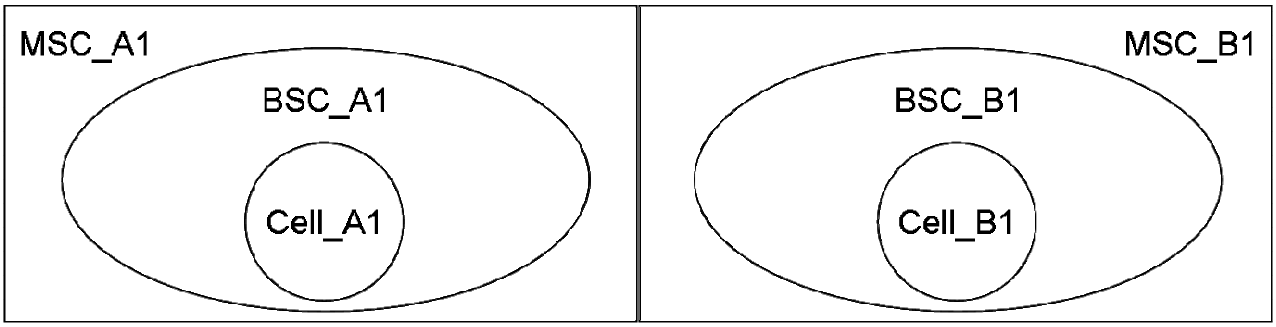
b) Test configuration / initial conditions

MS_B1 has a SIM that is not known in HLR_B1.

MS_A1 has a SIM that is not known in HLR_A1.

MS_A1 and MS_B1 are switched off.

Network A **Network B**



MSC_A1	**MSC_B1**
MS_B1	MS_A1

c) Test procedure

Step	Action	Expected result(s)
1)	Switch on MS_B1 in cell_A1.	Location update is not performed (initiated but fails). Messages seen: “Location Updating Request” and “Location Updating Reject” with reject cause “IMSI unknown in HLR”.
2)	Switch on MS_A1 in cell_B1.	Location update is not performed (initiated but fails). Messages seen: “Location Updating Request” and “Location Updating Reject” with reject cause “IMSI unknown in HLR”.

d) Success criteria

Location update cannot be performed if the SIM is not known in HLR.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.26 Unsuccessful Location Update (due to PLMN not allowed) (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

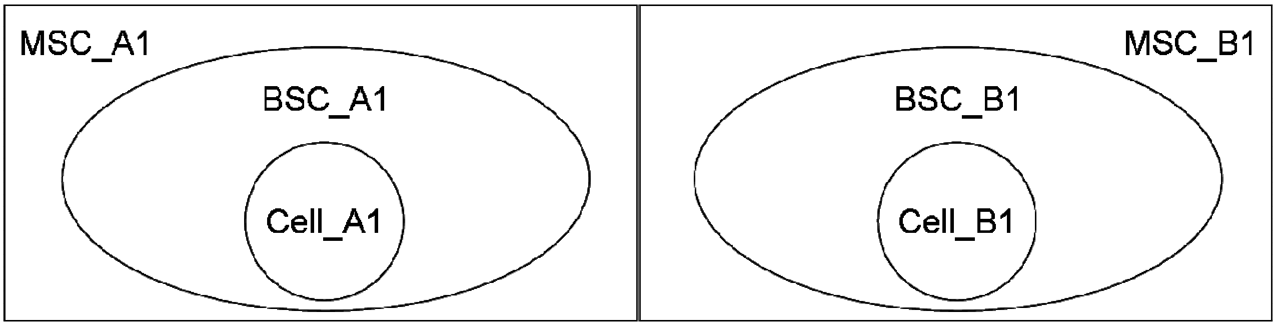
Verify that location update cannot be performed if the PLMN is not allowed.

b) Test configuration / initial conditions

HLR settings of MS_A1 and MS_B1 do not allow them to perform roaming in network B and A respectively.

MS_A1 and MS_B1 are switched off.

Network A **Network B**



MSC_A1	MSC_B1
MS_B1	MS_A1

c) Test procedure

Step	Action	Expected result(s)
1)	Switch on MS_B1 in cell_A1.	Location update is not performed. Messages seen: "Location Updating Request" and "Location Updating Reject" with reject cause "PLMN not allowed".
2)	Check the subscriber information in the VLR_A1.	There is no subscriber information available in the VLR_A1.
3)	Switch on MS_A1 in cell_B1.	Location update is not performed. Messages seen: "Location Updating Request" and "Location Updating Reject" with reject cause "PLMN not allowed".
4)	Check the subscriber information in the VLR_B1.	There is no subscriber information available in the VLR_B1.

d) Success criteria

Location update failed with cause 'PLMN not allowed'.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.27 Successful Location Cancellation (roaming case)

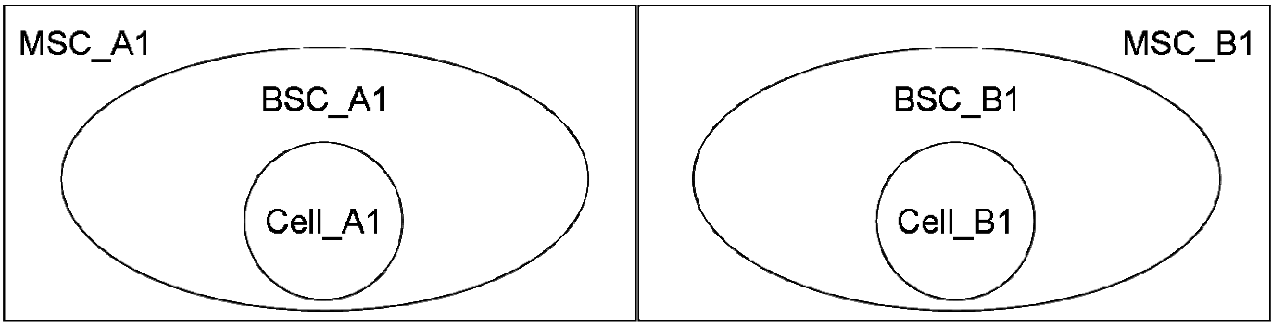
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify location update cancellation when moving from one cell to another (from one VLR to another).

b) Test configuration / initial conditions

Network A **Network B**



MSC_A1	**MSC_B1**
MS_A1	MS_B1

c) Test procedure

Step	Action	Expected result(s)
1)	MS_B1 moves to cell_A1.	MS_B1 performs a location update in cell_A1. Location cancellation is performed. No VLR_B1 information for MS_B1 available. MS_B1 has correct subscriber data in the VLR_A1 and is attached to network A.

Step	Action	Expected result(s)
2)	MS_B1 moves back to cell_B1.	MS_B1 performs a location update in cell_B1. Location cancellation is performed. No VLR_A1 information for MS_B1 is available anymore. MS_B1 has correct subscriber data in the VLR_B1 and is attached to network B.
3)	MS_A1 moves to cell_B1.	MS_A1 performs a location update in cell_B1. Location cancellation is performed. No VLR_A1 information for MS_A1 is available anymore. MS_A1 has correct subscriber data in the VLR_B1 and is attached to network B.
4)	MS_A1 moves back to cell_A1.	MS_A1 performs a location update in cell_A1. Location cancellation is performed. No VLR_B1 information for MS_A1 is available anymore. MS_A1 has correct subscriber data in the VLR_A1 and is attached to network A.

d) Success criteria

Location cancellation is performed successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.28 Successful IMSI Detach by MS Power Off (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

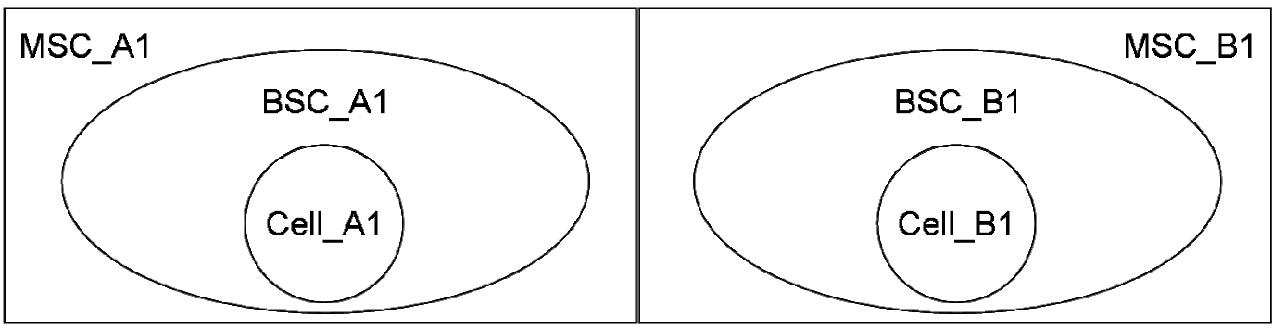
Verify the procedure IMSI detach when switching off the MS.

b) Test configuration / initial conditions

IMSI attached / detached must be enabled in the network.

MS_A1 and MS_B1 are switched off.

Network A **Network B**



MSC_A1	MSC_B1
MS_B1	MS_A1

c) Test procedure

Step	Action	Expected result(s)
1)	Switch on MS_B1 in cell_A1.	MS_B1 has correct subscriber data in the VLR_A1 and is attached to the network. Messages seen: “Location Updating Request” and “Location Updating Accept”.
2)	Switch off MS_B1.	IMSI is detached. Detachment message is sent from the BTS to the BSC and from the BSC to the MSC.

Step	Action	Expected result(s)
3)	Switch on MS_A1 in cell_B1.	MS_A1 has correct subscriber data in the VLR_B1 and is attached to the network. Messages seen: “Location Updating Request” and “Location Updating Accept”.
4)	Switch off MS_A1.	IMSI is detached. Detachment message is sent from the BTS to the BSC and from the BSC to the MSC.

d) Success criteria

IMSI is detached when switching off the MS.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.29 MTM to detached mobile subscriber (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.2.1 2.2.3 2.2.4	2.2.1	

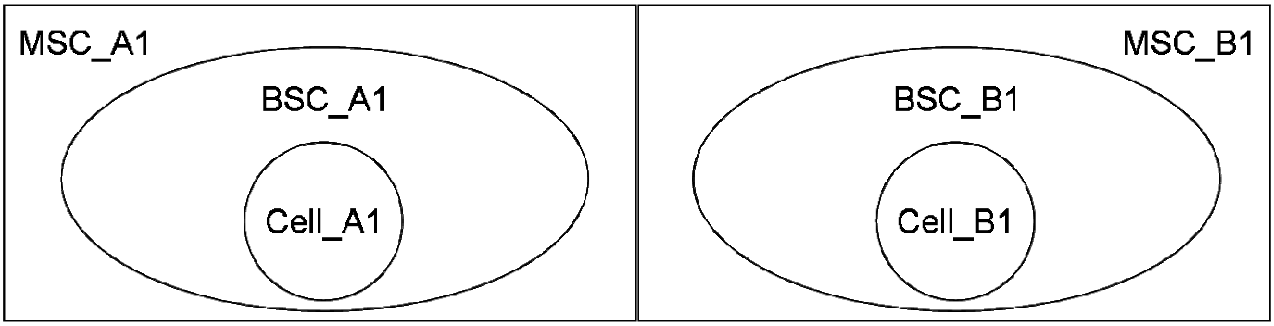
a) Purpose

Verify that no call can be established to a mobile which IMSI has been detached.

b) Test configuration / initial conditions

IMSI attached / detached must be enabled in the network.

Network A **Network B**



MSC_A1	**MSC_B1**
MS_B1	MS_A1
MS_B2	MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	Switch off MS_B2.	IMSI is detached. The detachment message is sent from the BTS to the BSC and from the BSC to the MSC.
2)	MS_B1 calls MS_B2.	A release tone is sent to MS_B1. The MSC does not send the paging message to the BSC. No call can be established.

Step	Action	Expected result(s)
3)	Switch off MS_A2.	IMSI is detached. The detachment message is sent from the BTS to the BSC and from the BSC to the MSC.
4)	MS_A1 calls MS_A2.	A release tone is sent to MS_A1. The MSC does not send the paging message to the BSC. No call can be established.

d) Success criteria

No call can be established to a mobile which IMSI has been detached.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.30 MTM, mobile subscribers are in different Location areas (roaming case)

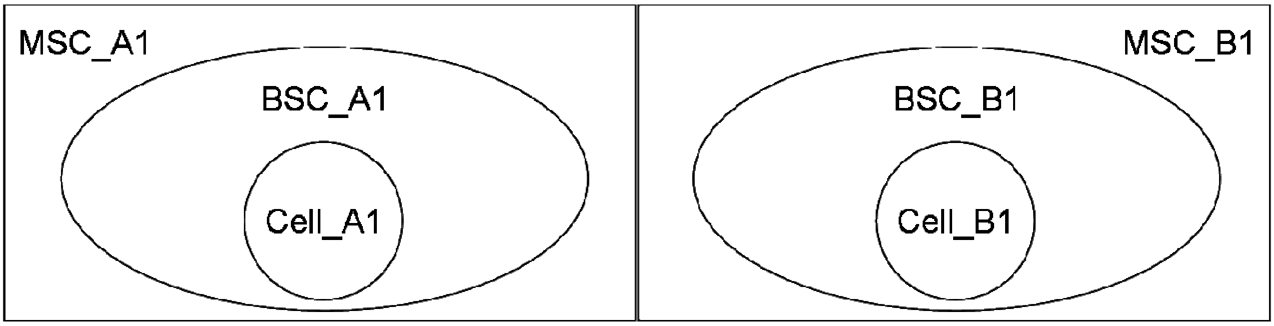
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.2.3 2.2.4	2.2.1 10.7.1i 10.7.3	

a) Purpose

Check that a mobile to mobile call can be established even if the mobile subscribers are in different location areas.

b) Test configuration / initial conditions

Network A **Network B**



MSC_A1	**MSC_B1**
MS_A1	MS_B1
MS_B2	MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_B1.	'Authentication Request' is transmitted from the MSC to the BSC and from the BSC to the base station. 'Authentication Response' is transmitted from the base station to the BSC and from the BSC to the MSC. 'Cipher Mode Command' is transmitted from the MSC to the BSC and from the BSC to the base station. 'Cipher Mode Complete' is transmitted from the base station to the BSC and from the BSC to the MSC. In 'Cipher Mode Command' message you can find the encryption algorithm supported by the network. In 'Cipher Mode Complete' message you can find the chosen encryption algorithm. The call is established successfully. The subscribers can talk to each other.
2)	MS_A1 releases the call.	Call is correctly released. All related resources are de-allocated.
3)	MS_B2 establishes a PTP call to MS_A2.	'Authentication Request' is transmitted from the MSC to the BSC and from the BSC to the base station. 'Authentication Response' is transmitted from the base station to the BSC and from the BSC to the MSC. 'Cipher Mode Command' is transmitted from the MSC to the BSC and from the BSC to the base station. 'Cipher Mode Complete' is transmitted from the base station to the BSC and from the BSC to the MSC. In 'Cipher Mode Command' message you can find the encryption algorithm supported by the network. In 'Cipher Mode Complete' message you can find the chosen encryption algorithm. The call is established successfully. The subscribers can talk to each other.
4)	MS_B2 releases the call.	Call is correctly released. All related resources are de-allocated.

Step	Action	Expected result(s)
5)	MS_A2 establishes a PTP call to MS_B2.	‘Authentication Request’ is transmitted from the MSC to the BSC and from the BSC to the base station. ‘Authentication Response’ is transmitted from the base station to the BSC and from the BSC to the MSC. ‘Cipher Mode Command’ is transmitted from the MSC to the BSC and from the BSC to the base station. ‘Cipher Mode Complete’ is transmitted from the base station to the BSC and from the BSC to the MSC. In ‘Cipher Mode Command’ message you can find the encryption algorithm supported by the network. In ‘Cipher Mode Complete’ message you can find the chosen encryption algorithm. The call is established successfully. The subscribers can talk to each other.
6)	MS_A2 releases the call.	Call is correctly released. All related resources are de-allocated.
7)	MS_B1 establishes a PTP call to MS_A1.	‘Authentication Request’ is transmitted from the MSC to the BSC and from the BSC to the base station. ‘Authentication Response’ is transmitted from the base station to the BSC and from the BSC to the MSC. ‘Cipher Mode Command’ is transmitted from the MSC to the BSC and from the BSC to the base station. ‘Cipher Mode Complete’ is transmitted from the base station to the BSC and from the BSC to the MSC. In ‘Cipher Mode Command’ message you can find the encryption algorithm supported by the network. In ‘Cipher Mode Complete’ message you can find the chosen encryption algorithm. The call is established successfully. The subscribers can talk to each other.
8)	MS_B1 releases the call.	Call is correctly released. All related resources are de-allocated.

Step	Action	Expected result(s)
9)	MS_A1 establishes a PTP call to MS_A2.	‘Authentication Request’ is transmitted from the MSC to the BSC and from the BSC to the base station. ‘Authentication Response’ is transmitted from the base station to the BSC and from the BSC to the MSC. ‘Cipher Mode Command’ is transmitted from the MSC to the BSC and from the BSC to the base station. ‘Cipher Mode Complete’ is transmitted from the base station to the BSC and from the BSC to the MSC. In ‘Cipher Mode Command’ message you can find the encryption algorithm supported by the network. In ‘Cipher Mode Complete’ message you can find the chosen encryption algorithm. The call is established successfully. The subscribers can talk to each other.
10)	MS_A1 releases the call.	Call is correctly released. All related resources are de-allocated.
11)	MS_A2 establishes a PTP call to MS_A1.	‘Authentication Request’ is transmitted from the MSC to the BSC and from the BSC to the base station. ‘Authentication Response’ is transmitted from the base station to the BSC and from the BSC to the MSC. ‘Cipher Mode Command’ is transmitted from the MSC to the BSC and from the BSC to the base station. ‘Cipher Mode Complete’ is transmitted from the base station to the BSC and from the BSC to the MSC. In ‘Cipher Mode Command’ message you can find the encryption algorithm supported by the network. In ‘Cipher Mode Complete’ message you can find the chosen encryption algorithm. The call is established successfully. The subscribers can talk to each other.
12)	MS_A2 releases the call.	Call is correctly released. All related resources are de-allocated.

Step	Action	Expected result(s)
13)	MS_B2 establishes a PTP call to MS_B1.	‘Authentication Request’ is transmitted from the MSC to the BSC and from the BSC to the base station. ‘Authentication Response’ is transmitted from the base station to the BSC and from the BSC to the MSC. ‘Cipher Mode Command’ is transmitted from the MSC to the BSC and from the BSC to the base station. ‘Cipher Mode Complete’ is transmitted from the base station to the BSC and from the BSC to the MSC. In ‘Cipher Mode Command’ message you can find the encryption algorithm supported by the network. In ‘Cipher Mode Complete’ message you can find the chosen encryption algorithm. The call is established successfully. The subscribers can talk to each other.
14)	MS_B2 releases the call.	Call is correctly released. All related resources are de-allocated.
15)	MS_B1 establishes a PTP call to MS_B2.	‘Authentication Request’ is transmitted from the MSC to the BSC and from the BSC to the base station. ‘Authentication Response’ is transmitted from the base station to the BSC and from the BSC to the MSC. ‘Cipher Mode Command’ is transmitted from the MSC to the BSC and from the BSC to the base station. ‘Cipher Mode Complete’ is transmitted from the base station to the BSC and from the BSC to the MSC. In ‘Cipher Mode Command’ message you can find the encryption algorithm supported by the network. In ‘Cipher Mode Complete’ message you can find the chosen encryption algorithm. The call is established successfully. The subscribers can talk to each other.
16)	MS_B1 releases the call.	Call is correctly released. All related resources are de-allocated.

d) Success criteria

A PTP call could be established between two mobile subscribers located in different location areas.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.31 MTM, radio link failure on A-side, A and B subscriber are in different cell (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.2.3 2.2.4	2.2.1	

a) Purpose

Verify that a PTP call is correctly released when the mobile subscriber looses contact with the network.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

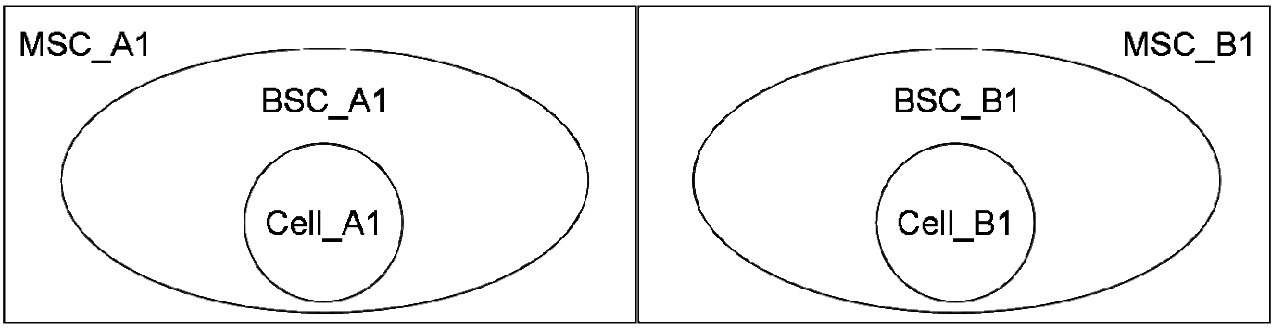
Step 1: Remove the battery of MS_A1 in network A.

Step 2: Remove the battery of MS_B1 in network B.

Step 3: Remove the battery of MS_B2 in network A.

Step 4: Remove the battery of MS_A2 in network B.

Network A **Network B**



MSC_A1	**MSC_B1**
MS_A1	MS_B1
MS_B2	MS_A2

c) Test procedure

Step 1: Remove the battery of MS_A1 in network A.

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_B1.	The call is established successfully. The subscribers can talk to each other.
2)	Remove the battery of MS_A1 in order to originate a radio link failure.	The call is correctly released. All related resources are de-allocated.
3)	Put back the battery and switch on MS_A1.	MS_A1 is attached to network A again.
4)	MS_A1 establishes a PTP call to MS_A2.	The call is established successfully. The subscribers can talk to each other.
5)	Remove the battery of MS_A1 in order to originate a radio link failure.	The call is correctly released. All related resources are de-allocated.
6)	Put back the battery and switch on MS_A1.	MS_A1 is attached to network A again.

Step 2: Remove the battery of MS_B1 in network B.

Step	Action	Expected result(s)
1)	MS_B1 establishes a PTP call to MS_A1.	The call is established successfully. The subscribers can talk to each other.
2)	Remove the battery of MS_B1 in order to originate a radio link failure.	The call is correctly released. All related resources are de-allocated.
3)	Put back the battery and switch on MS_B1.	MS_B1 is attached to network B again.
4)	MS_B1 establishes a PTP call to MS_B2.	The call is established successfully. The subscribers can talk to each other.
5)	Remove the battery of MS_B1 in order to originate a radio link failure.	The call is correctly released. All related resources are de-allocated.
6)	Put back the battery and switch on MS_B1.	MS_B1 is attached to network B again.

Step 3: Remove the battery of MS_B2 in network A.

Step	Action	Expected result(s)
1)	MS_B2 establishes a PTP call to MS_A2.	The call is established successfully. The subscribers can talk to each other.
2)	Remove the battery of MS_B2 in order to originate a radio link failure.	The call is correctly released. All related resources are de-allocated.
3)	Put back the battery and switch on MS_B2.	MS_B2 is attached to network A again.
4)	MS_B2 establishes a PTP call to MS_B1.	The call is established successfully. The subscribers can talk to each other.

Step	Action	Expected result(s)
5)	Remove the battery of MS_B2 in order to originate a radio link failure.	The call is correctly released. All related resources are de-allocated.
6)	Put back the battery and switch on MS_B2.	MS_B2 is attached to network A again.

Step 4: Remove the battery of MS_A2 in network B.

Step	Action	Expected result(s)
1)	MS_A2 establishes a PTP call to MS_B2.	The call is established successfully. The subscribers can talk to each other.
2)	Remove the battery of MS_A2 in order to originate a radio link failure.	The call is correctly released. All related resources are de-allocated.
3)	Put back the battery and switch on MS_A2.	MS_A2 is attached to network B again.
4)	MS_A2 establishes a PTP call to MS_A1.	The call is established successfully. The subscribers can talk to each other.
5)	Remove the battery of MS_A2 in order to originate a radio link failure.	The call is correctly released. All related resources are de-allocated.
6)	Put back the battery and switch on MS_A2.	MS_A2 is attached to network B again.

d) Success criteria

The PTP call is correctly released when the mobile subscriber looses contact with the network due to a radio link failure.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**

5.1.32 Supplementary Service Call Hold (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.13 2.4.14	2.4.1	

a) Purpose

Verify the Supplementary Service Call Hold.

b) Test configuration / initial conditions

MS_A1, MS_A2, MS_B1 and MS_B2 have Supplementary Service Call Hold.

This test case has been divided into the following steps:

Step 1: MS_A1 in network A calls MS_A2 in network B.

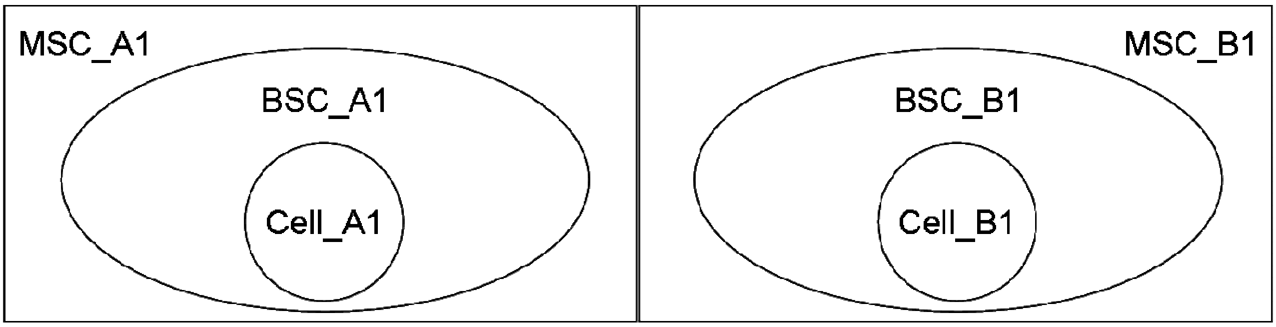
Step 2: MS_B1 in network A calls MS_B2 in network B.

Step 3: MS_B2 in network A calls MS_A1 in network A.

Step 4: MS_A2 in network B calls MS_B1 in network B.

Test configuration for step 1 to 4

Network A **Network B**



MSC_A1	MSC_B1
MS_A1	MS_B1
MS_B2	MS_A2

c) Test procedure

Step 1: MS_A1 in network A calls MS_A2 in network B.

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	MS_A2 is notified of the incoming call from MS_A1.
2)	MS_A2 takes the call.	PTP call between MS_A1 and MS_A2 is successfully established. MS_A1 has speech path to MS_A2.
3)	MS_A1 puts subscriber MS_A2 on hold.	MS_A2 is on hold, no speech path between MS_A1 and MS_A2 available.
4)	MS_A1 establishes a second PTP call to MS_B1.	MS_B1 is notified of the incoming call from MS_A1.
5)	MS_B1 takes the call.	PTP call between MS_A1 and MS_B1 is successfully established. MS_A1 has speech path to MS_B1.
6)	MS_A1 toggles (rejoin) between subscriber MS_A2 and MS_B1 by putting one on hold and retrieving the other one. After that puts MS_A2 on hold.	The subscriber that is on hold has no speech path to MS_A1. The subscriber that is not on hold is able to communicate with MS_A1.
7)	MS_A1 closes the call to MS_B1	Call to MS_B1 is released. All related resources are de-allocated. MS_A1 has again speech path to MS_A2.
8)	MS_A1 closes the call.	Call to MS_A2 is released. All related resources are de-allocated.

Step 2: MS_B1 in network A calls MS_B2 in network B.

Step	Action	Expected result(s)
1)	MS_B1 establishes a PTP call to MS_B2.	MS_B2 is notified of the incoming call from MS_B1.
2)	MS_B2 takes the call.	PTP call between MS_B1 and MS_B2 is successfully established. MS_B1 has speech path to MS_B2.
3)	MS_B1 puts subscriber MS_B2 on hold.	MS_B2 is on hold, no speech path between MS_B1 and MS_B2 available.
4)	MS_B1 establishes a second PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_B1.
5)	MS_A1 takes the call.	PTP call between MS_B1 and MS_A1 is successfully established. MS_B1 has speech path to MS_A1.

Step	Action	Expected result(s)
6)	MS_B1 toggles (rejoin) between subscriber MS_B2 and MS_A1 by putting one on hold and retrieving the other one. After that puts MS_B2 on hold.	The subscriber that is on hold has no speech path to MS_B1. The subscriber that is not on hold is able to communicate with MS_B1.
7)	MS_B1 closes the call to MS_A1.	Call to MS_A1 is released. All related resources are de-allocated. MS_B1 has again speech path to MS_B2.
8)	MS_B1 closes the call.	Call to MS_B2 is released. All related resources are de-allocated.

Step 3: MS_B2 in network A calls MS_A1 in network A.

Step	Action	Expected result(s)
1)	MS_B2 establishes a PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_B2.
2)	MS_A1 takes the call.	PTP call between MS_B2 and MS_A1 is successfully established. MS_B2 has speech path to MS_A1.
3)	MS_B2 puts subscriber MS_A1 on hold.	MS_A1 is on hold, no speech path between MS_B2 and MS_A1 available.
4)	MS_B2 establishes a second PTP call to MS_A2.	MS_A2 is notified of the incoming call from MS_B2.
5)	MS_A2 takes the call.	PTP call between MS_B2 and MS_A2 is successfully established. MS_B2 has speech path to MS_A2.
6)	MS_B2 toggles (rejoin) between subscriber MS_A1 and MS_A2 by putting one on hold and retrieving the other one. After that puts MS_A1 on hold.	The subscriber that is on hold has no speech path to MS_B2. The subscriber that is not on hold is able to communicate with MS_B2.
7)	MS_B2 closes the call to MS_A2	Call to MS_A2 is released. All related resources are de-allocated.
8)	MS_B2 closes the call.	Call to MS_A1 is released. All related resources are de-allocated.

Step 4: MS_A2 in network B calls MS_B1 in network B.

Step	Action	Expected result(s)
1)	MS_A2 establishes a PTP call to MS_B1.	MS_B1 is notified of the incoming call from MS_A2.
2)	MS_B1 takes the call.	PTP call between MS_A2 and MS_B1 is successfully established. MS_A2 has speech path to MS_B1.

Step	Action	Expected result(s)
3)	MS_A2 puts subscriber MS_B1 on hold.	MS_B1 is on hold, no speech path between MS_A2 and MS_B1 available.
4)	MS_A2 establishes a second PTP call to MS_B2.	MS_B2 is notified of the incoming call from MS_A2.
5)	MS_B2 takes the call.	PTP call between MS_A2 and MS_B2 is successfully established. MS_A2 has speech path to MS_B2.
6)	MS_A2 toggles (rejoin) between subscriber MS_B1 and MS_B2 by putting one on hold and retrieving the other one. After that puts MS_B1 on hold.	The subscriber that is on hold has no speech path to MS_A2. The subscriber that is not on hold is able to communicate with MS_A2.
7)	MS_A2 closes the call to MS_B2.	Call to MS_B2 is released. All related resources are de-allocated.
8)	MS_A2 closes the call.	Call to MS_B1 is released. All related resources are de-allocated.

d) Success criteria

MS_A1, MS_A2, MS_B1 and MS_B2 are able to put subscribers on hold.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.33 Supplementary Service Call Waiting (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.15	2.4.1	

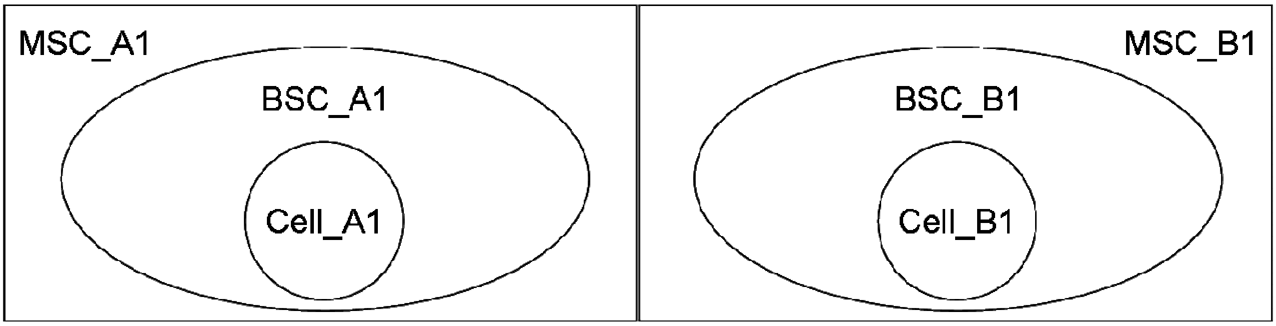
a) Purpose

Verify the Supplementary Service Call Waiting.

b) Test configuration / initial conditions

MS_A1 and MS_B1 have Supplementary Service Call Waiting.

Network A **Network B**



MSC_A1	**MSC_B1**
MS_B1	MS_A1
MS_B2	MS_A2
MS_B3	MS_A3

c) Test procedure

Step	Action	Expected result(s)
1)	MS_B1 establishes a PTP call to MS_B2.	MS_B2 is notified of the incoming call from MS_B1.
2)	MS_B2 takes the call.	PTP call between MS_B1 and MS_B2 is successfully established. MS_B1 has speech path to MS_B2.
3)	MS_B3 establishes a PTP call to MS_B1.	MS_B1 is notified of the incoming call from MS_B3. MS_B3 gets ringing tone.
4)	MS_B1 close the call to MS_B2.	Call is released. All related resources are deallocated.
5)	MS_B1 takes the call from MS_B3.	PTP call between MS_B1 and MS_B3 is successfully established. MS_B1 has speech path to MS_B3.
6)	MS_B1 closes the call.	Call is released. All related resources are deallocated.
7)	MS_A1 establishes a PTP call to MS_A2.	MS_A2 is notified of the incoming call from MS_A1.
8)	MS_A2 takes the call.	PTP call between MS_A1 and MS_A2 is successfully established. MS_A1 has speech path to MS_A2.
9)	MS_A3 establishes a PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_A3. MS_A3 gets ringing tone.
10)	MS_A1 closes the call to MS_A2.	Call is released. All related resources are deallocated.
11)	MS_A1 takes the call from MS_A3.	PTP call between MS_A1 and MS_A3 is successfully established. MS_A1 has speech path to MS_A3.
12)	MS_A1 closes the call.	Call is released. All related resources are deallocated.

d) Success criteria

MS_B1 was successfully notified about the PTP call from MS_B3 during the ongoing PTP call to MS_B2.

MS_A1 was successfully notified about the PTP call from MS_A3 during the ongoing PTP call to MS_A2.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.34 Supplementary Service CLIP – MTM with Call Forwarding Unconditional (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.2 2.4.12	2.4.1	

a) Purpose

Verify the Supplementary Service Calling Line Identification Presentation (CLIP) with activated Call Forwarding Unconditional (CFU).

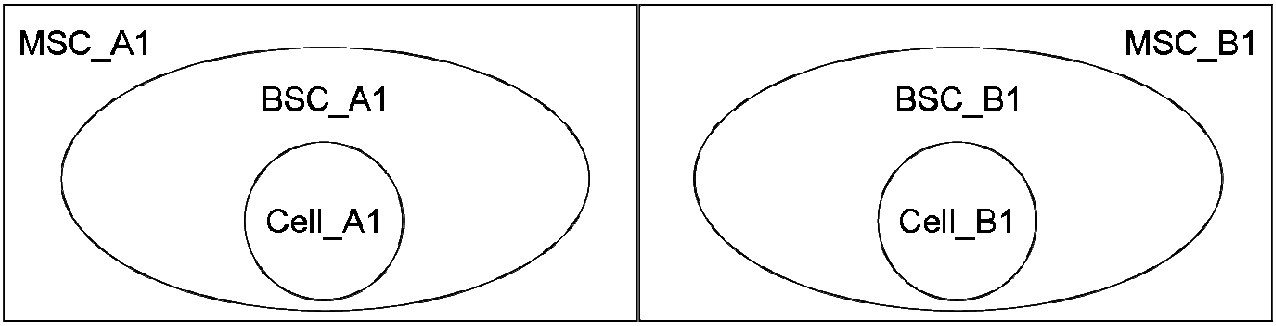
b) Test configuration / initial conditions

MS_A1 and MS_B1 have Supplementary Service Calling Line Identification Restriction (CLIR) set to off.

MS_A2, MS_A3, MS_B2 and MS_B3 have Supplementary Service Calling Line Identification Presentation (CLIP).

MS_A2 have activated Call Forwarding Unconditional (CFU) to MS_A3 and MS_B2 have activated Call Forwarding Unconditional (CFU) to MS_B3.

Network A **Network B**



MSC_A1	MSC_B1
MS_B1	MS_A1
MS_B2	MS_A2
MS_B3	MS_A3

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	MS-A2 is forwarded to MS_A3. MS_A3 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A3. MS_A1 is notified of the call forwarding to MS_A3.
2)	MS_A3 takes the call.	The PTP call between MS_A1 and MS_A3 is successfully established. MS_A1 has speech path to MS_A3.
3)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
4)	MS_B1 establishes a PTP call to MS_B2.	MS-B2 is forwarded to MS_B3. MS_B3 is notified of the incoming call from MS_B1. The MSISDN of MS_B1 is displayed on MS_B3. MS_B1 is notified of the call forwarding to MS_B3.
5)	MS_B3 takes the call.	The PTP call between MS_B1 and MS_B3 is successfully established. MS_B1 has speech path to MS_B3.
6)	MS_B1 closes the call.	Call is released. All related resources are de-allocated.

d) Success criteria

MS_A3 was successfully notified about the PTP call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A3.

MS_B3 was successfully notified about the PTP call from MS_B1. The MSISDN of MS_B1 is displayed on MS_B3.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.35 Supplementary Service CoLP (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.4.1	

a) Purpose

Verify the Supplementary Service Connected Line Identification Presentation (CoLP).

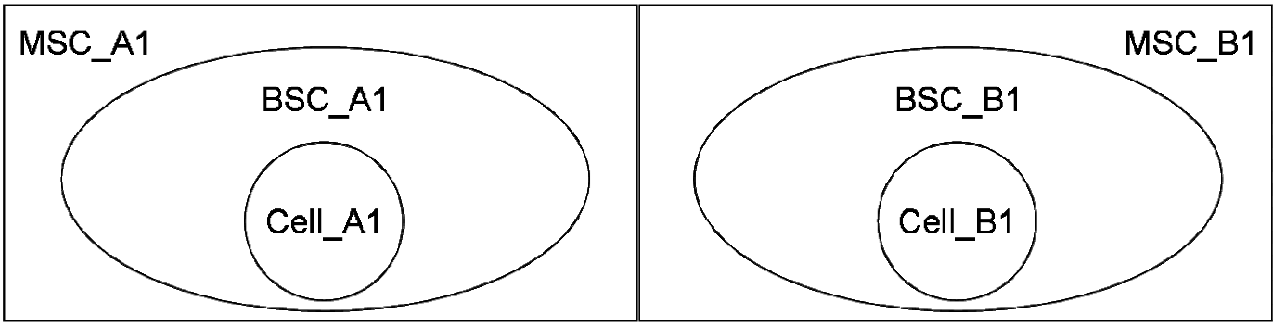
b) Test configuration / initial conditions

All MS have Supplementary Service Calling Line Identification Presentation (CLIP) activated.

All MS have Supplementary Service Connected Line Identification Presentation (CoLP) activated.

All MS have Supplementary Service Connected Line Identification Restriction (CoLR) deactivated.

Network A **Network B**



MSC_A1	MSC_B1
MS_B1	MS_A1
MS_B2	MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	MS_A2 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A2.
2)	MS_A2 takes the call.	The PTP call between MS_A1 and MS_A2 is successfully established. The MSISDN of MS_A2 is displayed on MS_A1. MS_A1 has speech path to MS_A2.
3)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
4)	MS_A1 establishes a PTP call to MS_B1.	MS_B1 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_B1.
5)	MS_B1 takes the call.	The PTP call between MS_A1 and MS_B1 is successfully established. The MSISDN of MS_B1 is displayed on MS_A1. MS_A1 has speech path to MS_B1.
6)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
7)	MS_B1 establishes a PTP call to MS_B2.	MS_B2 is notified of the incoming call from MS_B1. The MSISDN of MS_B1 is displayed on MS_B2.
8)	MS_B2 takes the call.	The PTP call between MS_B1 and MS_B2 is successfully established. The MSISDN of MS_B2 is displayed on MS_B1. MS_B1 has speech path to MS_B2.
9)	MS_B1 closes the call.	Call is released. All related resources are de-allocated.
10)	MS_B1 establishes a PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_B1. The MSISDN of MS_B1 is displayed on MS_A1.
11)	MS_A1 takes the call.	The PTP call between MS_B1 and MS_A1 is successfully established. The MSISDN of MS_A1 is displayed on MS_B1. MS_B1 has speech path to MS_A1.
12)	MS_B1 closes the call.	Call is released. All related resources are de-allocated.

d) Success criteria

MS_A2 and MS_B1 are successfully notified about the PTP call from MS_A1. The MSISDN from MS_A2 and MS_B1 are displayed on MS_A1.

MS_A1 and MS_B2 are successfully notified about the PTP call from MS_B1. The MSISDN from MS_A1 and MS_B2 are displayed on MS_B1.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.36 Supplementary Service MPTY (incl. Multivendor MPTY) (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.2.17 2.2.18	2.4.1 2.5.1	

a) Purpose

Verify the Supplementary Service Multiparty (MPTY).

b) Test configuration / initial conditions

MS_A1 and MS_A2 have Supplementary Service Multiparty (MPTY) and Call Hold (HOLD) activated.

MS_B1 and MS_B3 have Supplementary Service Multiparty (MPTY) and Call Hold (HOLD) activated.

CT_A1 is connected to Network A.

CT_B1 is connected to Network B.

This test case has been divided into the following steps:

Step 1: MS_A1 starts the MPTY call in network A.

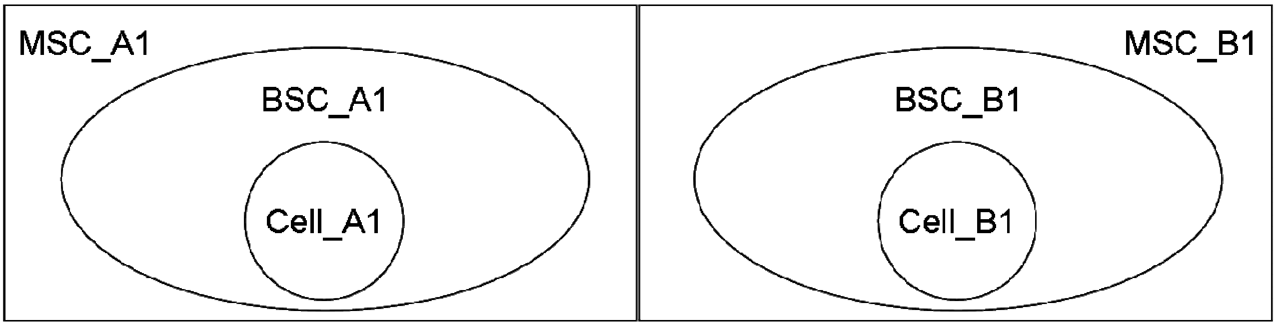
Step 2: MS_B1 starts the MPTY call in network B.

Step 3: MS_B2 starts the MPTY call in network A.

Step 4: MS_A2 starts the MPTY call in network B.

Test configuration for step 1 to 4

Network A **Network B**



MSC_A1	**MSC_B1**
MS_A1	MS_B1
MS_B2	MS_A2
CT_A1	CT_B1

c) Test procedure

Step 1: MS_A1 starts the MPTY call in network A.

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	MS_A2 is notified of the incoming call from MS_A1.
2)	MS_A2 takes the call.	The PTP call between MS_A1 and MS_A2 is successfully established. MS_A1 have speech path to MS_A2.
3)	MS_A1 establishes a PTP call to CT_A1.	MS_A2 is put on hold. CT_A1 is notified of the incoming call from MS_A1.
4)	CT_A1 takes the call.	The PTP call between MS_A1 and CT_A1 is successfully established. MS_A1 have speech path to CT_A1.
5)	MS_A1 puts both subscribers together to a multiparty call.	The multiparty call between MS_A1, MS_A2 and CT_A1 is successfully established. All subscribers have speech path and can talk to each other.
6)	MS_A1 establishes a PTP call to MS_B1.	MS_A2 and CT_A1 are put on hold. MS_B1 is notified of the incoming call from MS_A1.
7)	MS_B1 takes the call.	The PTP call between MS_A1 and MS_B1 is successfully established. MS_A1 have speech path to MS_B1.

Step	Action	Expected result(s)
8)	MS_A1 puts the three subscribers together to a multiparty call.	The multiparty call between MS_A1, MS_A2, CT_A1 and MS_B1 is successfully established. All subscribers have speech path and can talk to each other.
9)	MS_A1 establishes a PTP call to MS_B2.	MS_A2, CT_A1 and MS_B1 are put on hold. MS_B2 is notified of the incoming call from MS_A1.
10)	MS_B2 takes the call.	The PTP call between MS_A1 and MS_B2 is successfully established. MS_A1 have speech path to MS_B2.
11)	MS_A1 puts the four subscribers together to a multiparty call.	The multiparty call between MS_A1, MS_A2, CT_A1, MS_B1 and MS_B2 is successfully established. All subscribers have speech path and can talk to each other.
12)	MS_A1 establishes a PTP call to CT_B1.	MS_A2, CT_A1, MS_B1 and MS_B2 are put on hold. CT_B1 is notified of the incoming call from MS_A1.
13)	CT_B1 takes the call.	The PTP call between MS_A1 and CT_B1 is successfully established. MS_A1 have speech path to CT_B1.
14)	MS_A1 puts the five subscribers together to a multiparty call.	The multiparty call between MS_A1, MS_A2, CT_A1, MS_B1, MS_B2 and CT_B1 is successfully established. All subscribers have speech path and can talk to each other.
15)	MS_A1 closes the multiparty call.	Multiparty call is released. All related resources are de-allocated.

Step 2: MS_B1 starts the MPTY call in network B.

Step	Action	Expected result(s)
1)	MS_B1 establishes a PTP call to MS_B2.	MS_B2 is notified of the incoming call from MS_B1.
2)	MS_B2 takes the call.	The PTP call between MS_B1 and MS_B2 is successfully established. MS_B1 have speech path to MS_B2.
3)	MS_B1 establishes a PTP call to CT_B1.	MS_B2 is put on hold. CT_B1 is notified of the incoming call from MS_B1.
4)	CT_B1 takes the call.	The PTP call between MS_B1 and CT_B1 is successfully established. MS_B1 has speech path to CT_B1.
5)	MS_B1 puts both subscribers together to a multiparty call.	The multiparty call between MS_B1, MS_B2 and CT_B1 is successfully established. All subscribers have speech path and can talk to each other.

Step	Action	Expected result(s)
6)	MS_B1 establishes a PTP call to MS_A1.	MS_B2 and CT_B1 are put on hold. MS_A1 is notified of the incoming call from MS_B1.
7)	MS_A1 takes the call.	The PTP call between MS_B1 and MS_A1 is successfully established. MS_B1 have speech path to MS_A1.
8)	MS_B1 puts the three subscribers together to a multiparty call.	The multiparty call between MS_B1, MS_B2, CT_B1 and MS_A1 is successfully established. All subscribers have speech path and can talk to each other.
9)	MS_B1 establishes a PTP call to MS_A2.	MS_B2, CT_B1 and MS_A1 are put on hold. MS_A2 is notified of the incoming call from MS_B1.
10)	MS_A2 takes the call.	The PTP call between MS_B1 and MS_A2 is successfully established. MS_B1 have speech path to MS_A2.
11)	MS_B1 puts the four subscribers together to a multiparty call.	The multiparty call between MS_B1, MS_B2, CT_B1, MS_A1 and MS_A2 is successfully established. All subscribers have speech path and can talk to each other.
12)	MS_B1 establishes a PTP call to CT_A1.	MS_B2, CT_B1, MS_A1 and MS_A2 are put on hold. CT_A1 is notified of the incoming call from MS_B1.
13)	CT_A1 takes the call.	The PTP call between MS_B1 and CT_A1 is successfully established. MS_B1 have speech path to CT_A1.
14)	MS_B1 puts the five subscribers together to a multiparty call.	The multiparty call between MS_B1, MS_B2, CT_B1, MS_A1, MS_A2 and CT_A1 is successfully established. All subscribers have speech path and can talk to each other.
15)	MS_B1 closes the multiparty call.	Multiparty call is released. All related resources are de-allocated.

Step 3: MS_B2 starts the MPTY call in network A.

Step	Action	Expected result(s)
1)	MS_B2 establishes a PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_B2.
2)	MS_A1 takes the call.	The PTP call between MS_B2 and MS_A1 is successfully established. MS_B2 have speech path to MS_A1.
3)	MS_B2 establishes a PTP call to CT_A1.	MS_A1 is put on hold. CT_A1 is notified of the incoming call from MS_B2.

Step	Action	Expected result(s)
4)	CT_A1 takes the call.	The PTP call between MS_B2 and CT_A1 is successfully established. MS_B2 have speech path to CT_A1.
5)	MS_B2 puts both subscribers together to a multiparty call.	The multiparty call between MS_B2, MS_A1 and CT_A1 is successfully established. All subscribers have speech path and can talk to each other.
6)	MS_B2 establishes a PTP call to MS_A2.	MS_A1 and CT_A1 are put on hold. MS_A2 is notified of the incoming call from MS_B2.
7)	MS_A2 takes the call.	The PTP call between MS_B2 and MS_A2 is successfully established. MS_B2 have speech path to MS_A2.
8)	MS_B2 puts the three subscribers together to a multiparty call.	The multiparty call between MS_B2, MS_A1, CT_A1 and MS_A2 is successfully established. All subscribers have speech path and can talk to each other.
9)	MS_B2 establishes a PTP call to MS_B1.	MS_A1, CT_A1 and MS_A2 are put on hold. MS_B1 is notified of the incoming call from MS_B2.
10)	MS_B1 takes the call.	The PTP call between MS_B2 and MS_B1 is successfully established. MS_B2 have speech path to MS_B1.
11)	MS_B2 puts the four subscribers together to a multiparty call.	The multiparty call between MS_B2, MS_A1, CT_A1, MS_A2 and MS_B1 is successfully established. All subscribers have speech path and can talk to each other.
12)	MS_B2 establishes a PTP call to CT_B1.	MS_A1, CT_A1, MS_A2 and MS_B1 are put on hold. CT_B1 is notified of the incoming call from MS_B2.
13)	CT_B1 takes the call.	The PTP call between MS_B2 and CT_B1 is successfully established. MS_B2 have speech path to CT_B1.
14)	MS_B2 puts the five subscribers together to a multiparty call.	The multiparty call between MS_B2, MS_A1, CT_A1, MS_A2, MS_B1 and CT_B1 is successfully established. All subscribers have speech path and can talk to each other.
15)	MS_B3 closes the multiparty call.	Multiparty call is released. All related resources are de-allocated.

Step 4: MS_A2 starts the MPTY call in network B.

Step	Action	Expected result(s)
1)	MS_A2 establishes a PTP call to MS_B1.	MS_B1 is notified of the incoming call from MS_A2.

Step	Action	Expected result(s)
2)	MS_B1 takes the call.	The PTP call between MS_A2 and MS_B1 is successfully established. MS_A2 have speech path to MS_B1.
3)	MS_A2 establishes a PTP call to CT_B1.	MS_B1 is put on hold. CT_B1 is notified of the incoming call from MS_A2.
4)	CT_B1 takes the call.	The PTP call between MS_A2 and CT_B1 is successfully established. MS_A2 have speech path to CT_B1.
5)	MS_A2 puts both subscribers together to a multiparty call.	The multiparty call between MS_A2, MS_B1 and CT_B1 is successfully established. All subscribers have speech path and can talk to each other.
6)	MS_A2 establishes a PTP call to MS_B2.	MS_B1 and CT_B1 are put on hold. MS_B2 is notified of the incoming call from MS_A2.
7)	MS_B2 takes the call.	The PTP call between MS_A2 and MS_B2 is successfully established. MS_A2 have speech path to MS_B2.
8)	MS_A2 puts the three subscribers together to a multiparty call.	The multiparty call between MS_A2, MS_B1, CT_B1 and MS_B2 is successfully established. All subscribers have speech path and can talk to each other.
9)	MS_A2 establishes a PTP call to MS_A1.	MS_B1, CT_B1 and MS_B2 are put on hold. MS_A1 is notified of the incoming call from MS_A2
10)	MS_A1 takes the call.	The PTP call between MS_A2 and MS_A1 is successfully established. MS_A2 have speech path to MS_A1.
11)	MS_A2 puts the four subscribers together to a multiparty call.	The multiparty call between MS_A2, MS_B1, CT_B1, MS_B2 and MS_A1 is successfully established. All subscribers have speech path and can talk to each other.
12)	MS_A2 establishes a PTP call to CT_A1.	MS_B1, CT_B1, MS_B2 and MS_A1 are put on hold. CT_A1 is notified of the incoming call from MS_A2.
13)	CT_A1 takes the call.	The PTP call between MS_A2 and CT_A1 is successfully established. MS_A2 have speech path to CT_A1.
14)	MS_A2 puts the five subscribers together to a Multiparty call.	The multiparty call between MS_A2, MS_B1, CT_B1, MS_B2, MS_A1 and CT_A1 is successfully established. All subscribers have speech path and can talk to each other.
15)	MS_A3 closes the multiparty call.	Multiparty call is released. All related resources are de-allocated.

d) Success criteria

MS_A1, MS_A2, MS_B1 and MS_B2 are able to initialize a multiparty call with mobile subscribers and fixed line subscribers.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.37 Notification of Call Forwarding (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.2 2.4.12	2.4.1	

a) Purpose

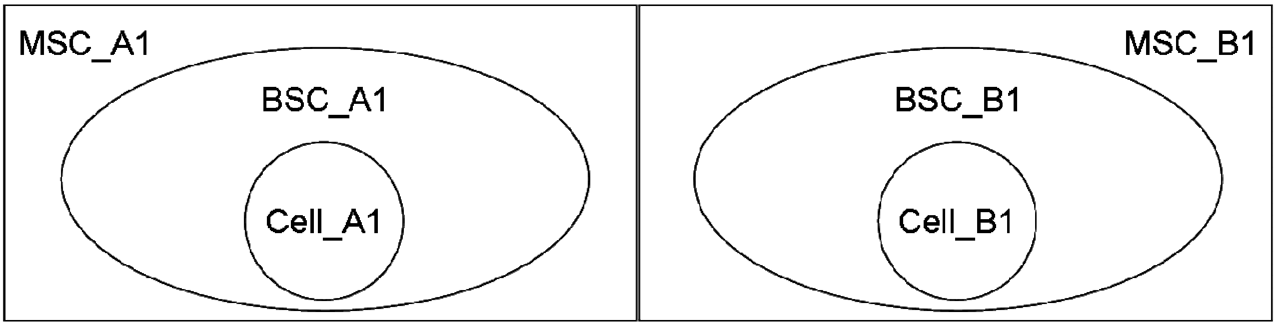
Verify notification of a forwarded call.

b) Test configuration / initial conditions

MS_A2 have Supplementary Service Call Forwarding Unconditional (CFU) and has his calls forwarded to MS_A3.

MS_B2 have Supplementary Service Call Forwarding Unconditional (CFU) and has his calls forwarded to MS_B3.

Network A **Network B**



MSC_A1	**MSC_B1**
MS_A1	MS_B1
MS_A2	MS_B2
MS_B3	MS_A3

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	MS_A2 has forwarded his calls to MS_A3. MS_A3 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A3. MS_A1 is notified of the call forwarding to MS_A3.
2)	MS_A3 takes the call.	The PTP call between MS_A1 and MS_A3 is successfully established. MS_A1 has speech path to MS_A3.
3)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
4)	MS_B1 establishes a PTP call to MS_B2.	MS_B2 has forwarded his calls to MS_B3. MS_B3 is notified of the incoming call from MS_B1. The MSISDN of MS_B1 is displayed on MS_B3. MS_B1 is notified of the call forwarding to MS_B3.
5)	MS_B3 takes the call.	The PTP call between MS_B1 and MS_B3 is successfully established. MS_B1 has speech path to MS_B3.
6)	MS_B1 closes the call.	Call is released. All related resources are de-allocated.
7)	MS_B1 establishes a PTP call to MS_A2.	MS_A2 has forwarded his calls to MS_A3. MS_A3 is notified of the incoming call from MS_B1. The MSISDN of MS_B1 is displayed on MS_A3. MS_B1 is notified of the call forwarding to MS_A3.
8)	MS_A3 takes the call.	The PTP call between MS_B1 and MS_A3 is successfully established. MS_B1 has speech path to MS_A3.
9)	MS_B1 closes the call.	Call is released. All related resources are de-allocated.
10)	MS_A1 establishes a PTP call to MS_B2.	MS_B2 has forwarded his calls to MS_B3. MS_B3 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_B3. MS_A1 is notified of the call forwarding to MS_B3.
11)	MS_B3 takes the call.	The PTP call between MS_A1 and MS_B3 is successfully established. MS_A1 has speech path to MS_B3.
12)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.

d) Success criteria

MS_A3 was successfully notified about the forwarded PTP call. The MSISDN of the originator was displayed on MS_A3.

MS_B3 was successfully notified about the forwarded PTP call. The MSISDN of the originator was displayed on MS_B3.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.38 Establishment of several MTM Data calls (Bearer Services) with different eMLPP priorities (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.3.1 2.3.6 2.3.8 2.3.13 2.4.1 2.4.5 10.2.1 10.2.2	2.3.1 10.2.1	3GPP TS27.007

a) Purpose

Verify the different bearer services in roaming case.

b) Test configuration / initial conditions

DCE_A1 is connected to network A (Data Circuit Terminating Equipment).

DCE_B1 is connected to network B (Data Circuit Terminating Equipment).

MS_A1, MS_A2, MS_B1 and MS_B2 are terminals with subscriptions to the following bearer services:

Service	EIRENE SRS v15
BS 24 Asynchronous 2,4 Kbit/s T for full-rate channel	M
BS 25 Asynchronous 4,8 Kbit/s T for full-rate channel	M
BS 26 Asynchronous 9,6 Kbit/s T for full-rate channel	M

Terminal application needed to send and receive test data.

To configure the bearer services and to set up a call with the terminal, refer to chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”.

This test case has been divided into the following steps:

Step 1: Mobile to mobile data call from MS_A1 in network A to MS_B2 in network A.

Step 2: Mobile to mobile data call from MS_A1 in network A to MS_A2 in network B.

Step 3: Mobile to mobile data call from MS_A1 in network A to MS_B1 in network B.

Step 4: Mobile to mobile data call from MS_B1 in network B to MS_A2 in network B.

Step 5: Mobile to mobile data call from MS_B1 in network B to MS_B2 in network A.

Step 6: Mobile to mobile data call from MS_B1 in network B to MS_A1 in network A.

Step 7: Data call between DCE_A1 in network A to DCE_B1 in network B.

Step 8: Mobile to fixed network data call from MS_A1 in network A to DCE_A1 in network A.

Step 9: Mobile to fixed network data call from MS_B2 in network A to DCE_A1 in network A.

Step 10: Mobile to fixed network data call from MS_B1 in network B to DCE_A1 in network A.

Step 11: Mobile to fixed network data call from MS_A2 in network B to DCE_A1 in network A.

Step 12: Mobile to fixed network data call from MS_B1 in network B to DCE_B1 in network B.

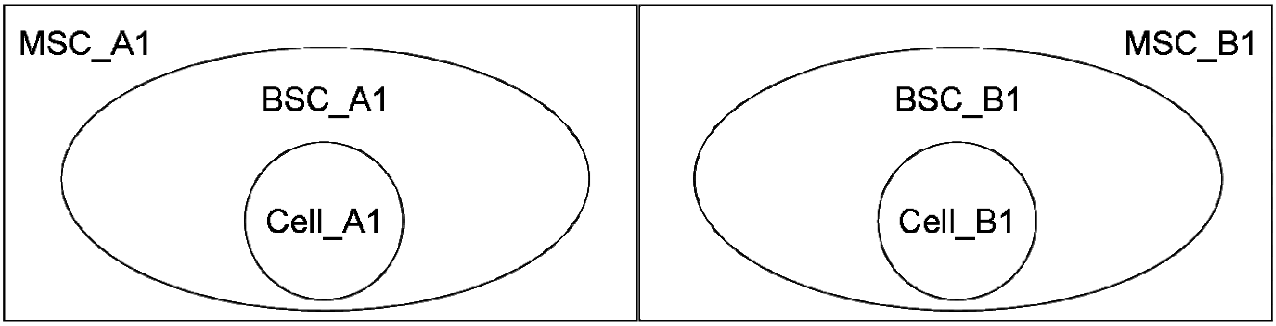
Step 13: Mobile to fixed network data call from MS_A2 in network B to DCE_B1 in network B.

Step 14: Mobile to fixed network data call from MS_A1 in network A to DCE_B1 in network B.

Step 15: Mobile to fixed network data call from MS_B2 in network A to DCE_B1 in network B.

Test configuration for step 1 to 15

Network A **Network B**



MSC_A1	**MSC_B1**
DCE_A1 (no VGCS / VBS subscriber)	DCE_B1 (no VGCS / VBS subscriber)
MS_A1 (no VGCS / VBS subscriber)	MS_B1 (no VGCS / VBS subscriber)
MS_B2 (no VGCS / VBS subscriber)	MS_A2 (no VGCS / VBS subscriber)

c) Test procedure

Case	Data service	Digital interworking (UDI / ISDN) V.110	Analogue interworking (3,1 kHz) V.22bis, V.32	Transparent	eMLPP Priority
1	BS 24 2400 bps	X		X	3
2			X (V.22bis)	X	1
3		X		X	4
4			X (V.22bis)	X	2
5	BS 25 4800 bps	X		X	1
6			X (V.32)	X	3
7		X		X	2
8			X (V.32)	X	4
9	BS 26 9600 bps	X		X	1
10			X (V.32)	X	2
11		X		X	3
12			X (V.32)	X	4

Step 1: Mobile to mobile data call from MS_A1 in network A to MS_B2 in network A.

Step	Action	Expected result(s)
1)	Configure MS_A1 and MS_B2 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”	MS_A1 and MS_B2 are configured with the correct bearer service.
2)	MS_A1 establishes a data call to MS_B2 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_B2 is notified of the incoming data call from MS_A1. The MSISDN of MS_A1 is displayed on MS_B2.
3)	MS_B2 takes the data call.	The data call between MS_A1 and MS_B2 is successfully established.
4)	MS_A1 sends test data to MS_B2.	The test data is successfully transmitted and received.
5)	MS_B2 sends test data to MS_A1.	The test data is successfully transmitted and received.
6)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
7)	Repeat the test using case 2 and 12 from table above.	

Step 2: Mobile to mobile data call from MS_A1 in network A to MS_A2 in network B.

Step	Action	Expected result(s)
1)	Configure MS_A1 and MS_A2 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”	MS_A1 and MS_A2 are configured with the correct bearer service.
2)	MS_A1 establishes a data call to MS_A2 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_A2 is notified of the incoming data call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A2.
3)	MS_A2 takes the data call.	The data call between MS_A1 and MS_A2 is successfully established.
4)	MS_A1 sends test data to MS_A2.	The test data is successfully transmitted and received.
5)	MS_A2 sends test data to MS_A1.	The test data is successfully transmitted and received.
6)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
7)	Repeat the test using case 2 and 12 from table above.	

Step 3: Mobile to mobile data call from MS_A1 in network A to MS_B1 in network B.

Step	Action	Expected result(s)
1)	Configure MS_A1 and MS_B1 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”	MS_A1 and MS_B1 are configured with the correct bearer service.
2)	MS_A1 establishes a data call to MS_B1 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_B1 is notified of the incoming data call from MS_A1. The MSISDN of MS_A1 is displayed on MS_B1.
3)	MS_B1 takes the data call.	The data call between MS_A1 and MS_B1 is successfully established.
4)	MS_A1 sends test data to MS_B1.	The test data is successfully transmitted and received.
5)	MS_B1 sends test data to MS_A1.	The test data is successfully transmitted and received.
6)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.

Step	Action	Expected result(s)
7)	Repeat the test using case 2 and 12 from table above.	

Step 4: Mobile to mobile data call from MS_B1 in network B to MS_A2 in network B.

Step	Action	Expected result(s)
1)	Configure MS_B1 and MS_A2 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”	MS_B1 and MS_A2 are configured with the correct bearer service.
2)	MS_B1 establishes a data call to MS_A2 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_A2 is notified of the incoming data call from MS_B1. The MSISDN of MS_B1 is displayed on MS_A2.
3)	MS_A2 takes the data call.	The data call between MS_B1 and MS_A2 is successfully established.
4)	MS_B1 sends test data to MS_A2.	The test data is successfully transmitted and received.
5)	MS_A2 sends test data to MS_B1.	The test data is successfully transmitted and received.
6)	MS_B1 closes the call.	Call is released. All related resources are de-allocated.
7)	Repeat the test using case 2 and 12 from table above.	

Step 5: Mobile to mobile data call from MS_B1 in network B to MS_B2 in network A.

Step	Action	Expected result(s)
1)	Configure MS_B1 and MS_B2 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”	MS_B1 and MS_B2 are configured with the correct bearer service.
2)	MS_B1 establishes a data call to MS_B2 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_B2 is notified of the incoming data call from MS_B1. The MSISDN of MS_B1 is displayed on MS_B2.
3)	MS_B2 takes the data call.	The data call between MS_B1 and MS_B2 is successfully established.

Step	Action	Expected result(s)
4)	MS_B1 sends test data to MS_B2.	The test data is successfully transmitted and received.
5)	MS_B2 sends test data to MS_B1.	The test data is successfully transmitted and received.
6)	MS_B1 closes the call.	Call is released. All related resources are de-allocated.
7)	Repeat the test using case 2 and 12 from table above.	

Step 6: Mobile to mobile data call from MS_B1 in network B to MS_A1 in network A.

Step	Action	Expected result(s)
1)	Configure MS_B1 and MS_A1 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”	MS_B1 and MS_A1 are configured with the correct bearer service.
2)	MS_B1 establishes a data call to MS_A1 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_A1 is notified of the incoming data call from MS_B1. The MSISDN of MS_B1 is displayed on MS_A1.
3)	MS_A1 takes the data call.	The data call between MS_B1 and MS_A1 is successfully established.
4)	MS_B1 sends test data to MS_A1.	The test data is successfully transmitted received.
5)	MS_A1 sends test data to MS_B1.	The test data is successfully transmitted and received.
6)	MS_B1 closes the call.	Call is released. All related resources are de-allocated.
7)	Repeat the test using case 2 and 12 from table above.	

Step 7: Data call between DCE_A1 in network A to DCE_B1 in network B.

Step	Action	Expected result(s)
1)	Configure DCE_A1 and DCE_B1 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”	DCE_A1 and DCE_B1 are configured with the correct bearer service.
2)	DCE_A1 establishes a data call to DCE_B1 by dialling: ATD *75<Priority>#<MSISDN>	DCE_B1 is notified of the incoming data call from DCE_A1.
3)	DCE_B1 takes the data call.	The data call between DCE_A1 and DCE_B1 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
4)	DCE_A1 sends test data to DCE_B1.	The test data is successfully transmitted and received.
5)	DCE_B1 sends test data to DCE_A1.	The test data is successfully transmitted and received.
6)	DCE_A1 closes the call.	Call is released. All related resources are de-allocated.
7)	DCE_B1 establishes a data call to DCE_A1 by dialling: ATD *75<Priority>#<MSISDN>	DCE_A1 is notified of the incoming data call from DCE_B1.
8)	DCE_A1 takes the data call.	The data call between DCE_B1 and DCE_A1 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
9)	DCE_A1 sends test data to DCE_B1.	The test data is successfully transmitted and received.
10)	DCE_B1 sends test data to DCE_A1.	The test data is successfully transmitted and received.
11)	DCE_B1 closes the call.	Call is released. All related resources are de-allocated.
12)	Repeat the test using case 2 and 12 from table above.	

Step 8: Mobile to fixed network data call from MS_A1 in network A to DCE_A1 in network A.

Step	Action	Expected result(s)
1)	Configure MS_A1 and DCE_A1 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”	MS_A1 and DCE_A1 are configured with the correct bearer service.
2)	MS_A1 establishes a data call to DCE_A1 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	DCE_A1 is notified of the incoming data call from MS_A1.
3)	DCE_A1 takes the data call.	The data call between MS_A1 and DCE_A1 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
4)	MS_A1 sends test data to DCE_A1.	The test data is successfully transmitted and received.
5)	DCE_A1 sends test data to MS_A1.	The test data is successfully transmitted and received.
6)	MS_A1 closes the call.	Call is released. All related resources are deallocated.
7)	DCE_A1 establishes a data call to MS_A1 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_A1 is notified of the incoming data call from DCE_A1.
8)	MS_A1 takes the data call.	The data call between DCE_A1 and MS_A1 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
9)	MS_A1 sends test data to DCE_A1.	The test data is successfully transmitted and received.
10)	DCE_A1 sends test data to MS_A1.	The test data is successfully transmitted and received.
11)	DCE_A1 closes the call.	Call is released. All related resources are deallocated.
12)	Repeat the test using case 2 and 12 from table above.	

Step 9: Mobile to fixed network data call from MS_B2 in network A to DCE_A1 in network A.

Step	Action	Expected result(s)
1)	Configure MS_B2 and DCE_A1 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”	MS_B2 and DCE_A1 are configured with the correct bearer service.
2)	MS_B2 establishes a data call to DCE_A1 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	DCE_A1 is notified of the incoming data call from MS_B2.
3)	DCE_A1 takes the data call.	The data call between MS_B2 and DCE_A1 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
4)	MS_B2 sends test data to DCE_A1.	The test data is successfully transmitted and received.
5)	DCE_A1 sends test data to MS_B2.	The test data is successfully transmitted and received.
6)	MS_B2 closes the call.	Call is released. All related resources are deallocated.
7)	DCE_A1 establishes a data call to MS_B2 by dialling: ATD *75<Priority>#<MSISDN>	MS_B2 is notified of the incoming data call from DCE_A1.
8)	MS_B2 takes the data call.	The data call between DCE_A1 and MS_B2 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
9)	MS_B2 sends test data to DCE_A1.	The test data is successfully transmitted and received.
10)	DCE_A1 sends test data to MS_B2.	The test data is successfully transmitted and received.
11)	DCE_A1 closes the call.	Call is released. All related resources are deallocated.
12)	Repeat the test using case 2 and 12 from table above.	

Step 10: Mobile to fixed network data call from MS_B1 in network B to DCE_A1 in network A.

Step	Action	Expected result(s)
1)	Configure MS_B1 and DCE_A1 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”	MS_A1 and DCE_A1 are configured with the correct bearer service.
2)	MS_B1 establishes a data call to DCE_A1 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	DCE_A1 is notified of the incoming data call from MS_B1.
3)	DCE_A1 takes the data call.	The data call between MS_B1 and DCE_A1 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
4)	MS_B1 sends test data to DCE_A1.	The test data is successfully transmitted and received.
5)	DCE_A1 sends test data to MS_B1.	The test data is successfully transmitted and received.
6)	MS_B1 closes the call.	Call is released. All related resources are deallocated.
7)	DCE_A1 establishes a data call to MS_B1 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_B1 is notified of the incoming data call from DCE_A1.
8)	MS_B1 takes the data call.	The data call between DCE_A1 and MS_B1 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
9)	MS_B1 sends test data to DCE_A1.	The test data is successfully transmitted and received.
10)	DCE_A1 sends test data to MS_B1.	The test data is successfully transmitted and received.
11)	DCE_A1 closes the call.	Call is released. All related resources are deallocated.
12)	Repeat the test using case 2 and 12 from table above.	

Step 11: Mobile to fixed network data call from MS_A2 in network B to DCE_A1 in network A.

Step	Action	Expected result(s)
1)	Configure MS_A2 and DCE_A1 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”	MS_A2 and DCE_A1 are configured with the correct bearer service.
2)	MS_A2 establishes a data call to DCE_A1 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	DCE_A1 is notified of the incoming data call from MS_A2.
3)	DCE_A1 takes the data call.	The data call between MS_A2 and DCE_A1 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
4)	MS_A2 sends test data to DCE_A1.	The test data is successfully transmitted and received.
5)	DCE_A1 sends test data to MS_A2.	The test data is successfully transmitted and received.
6)	MS_A2 closes the call.	Call is released. All related resources are deallocated.
7)	DCE_A1 establishes a data call to MS_A2 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_A2 is notified of the incoming data call from DCE_A1.
8)	MS_A2 takes the data call.	The data call between DCE_A1 and MS_A2 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
9)	MS_A2 sends test data to DCE_A1.	The test data is successfully transmitted and received.
10)	DCE_A1 sends test data to MS_A2.	The test data is successfully transmitted and received.
11)	DCE_A1 closes the call.	Call is released. All related resources are deallocated.
12)	Repeat the test using case 2 and 12 from table above.	

Step 12: Mobile to fixed network data call from MS_B1 in network B to DCE_B1 in network B.

Step	Action	Expected result(s)
1)	Configure MS_B1 and DCE_B1 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 "Annex - Configuration of User Equipment for Data Calls"	MS_B1 and DCE_B1 are configured with the correct bearer service.
2)	MS_B1 establishes a data call to DCE_B1 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	DCE_B1 is notified of the incoming data call from MS_B1.
3)	DCE_B1 takes the data call.	The data call between MS_B1 and DCE_B1 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
4)	MS_B1 sends test data to DCE_B1.	The test data is successfully transmitted and received.
5)	DCE_B1 sends test data to MS_B1.	The test data is successfully transmitted and received.
6)	MS_B1 closes the call.	Call is released. All related resources are deallocated.
7)	DCE_B1 establishes a data call to MS_B1 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_B1 is notified of the incoming data call from DCE_B1.
8)	MS_B1 takes the data call.	The data call between DCE_B1 and MS_B1 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
9)	MS_B1 sends test data to DCE_B1.	The test data is successfully transmitted and received.
10)	DCE_B1 sends test data to MS_B1.	The test data is successfully transmitted and received.
11)	DCE_B1 closes the call.	Call is released. All related resources are deallocated.
12)	Repeat the test using case 2 and 12 from table above.	

Step 13: Mobile to fixed network data call from MS_A2 in network B to DCE_B1 in network B.

Step	Action	Expected result(s)
1)	Configure MS_A2 and DCE_B1 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 "Annex - Configuration of User Equipment for Data Calls"	MS_A2 and DCE_B1 are configured with the correct bearer service.
2)	MS_A2 establishes a data call to DCE_B1 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	DCE_B1 is notified of the incoming data call from MS_A2.
3)	DCE_B1 takes the data call.	The data call between MS_A2 and DCE_B1 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
4)	MS_A2 sends test data to DCE_B1.	The test data is successfully transmitted and received.
5)	DCE_B1 sends test data to MS_A2.	The test data is successfully transmitted and received.
6)	MS_A2 closes the call.	Call is released. All related resources are deallocated.
7)	DCE_B1 establishes a data call to MS_A2 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_A2 is notified of the incoming data call from DCE_B1.
8)	MS_A2 takes the data call.	The data call between DCE_B1 and MS_A2 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
9)	MS_A2 sends test data to DCE_B1.	The test data is successfully transmitted and received.
10)	DCE_B1 sends test data to MS_A2.	The test data is successfully transmitted and received.
11)	DCE_B1 closes the call.	Call is released. All related resources are deallocated.
12)	Repeat the test using case 2 and 12 from table above.	

Step 14: Mobile to fixed network data call from MS_A1 in network A to DCE_B1 in network B.

Step	Action	Expected result(s)
1)	Configure MS_A1 and DCE_B1 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”	MS_A1 and DCE_B1 are configured with the correct bearer service.
2)	MS_A1 establishes a data call to DCE_B1 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	DCE_B1 is notified of the incoming data call from MS_A1.
3)	DCE_B1 takes the data call.	The data call between MS_A1 and DCE_B1 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
4)	MS_A1 sends test data to DCE_B1.	The test data is successfully transmitted and received.
5)	DCE_B1 sends test data to MS_A1.	The test data is successfully transmitted and received.
6)	MS_A1 closes the call.	Call is released. All related resources are deallocated.
7)	DCE_B1 establishes a data call to MS_A1 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_A1 is notified of the incoming data call from DCE_B1.
8)	MS_A1 takes the data call.	The data call between DCE_B1 and MS_A1 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
9)	MS_A1 sends test data to DCE_B1.	The test data is successfully transmitted and received.
10)	DCE_B1 sends test data to MS_A1.	The test data is successfully transmitted and received.
11)	DCE_B1 closes the call.	Call is released. All related resources are deallocated.
12)	Repeat the test using case 2 and 12 from table above.	

Step 15: Mobile to fixed network data call from MS_B2 in network A to DCE_B1 in network B.

Step	Action	Expected result(s)
1)	Configure MS_B2 and DCE_B1 to perform a data call with the settings indicated in table above case 1. To configure the bearer services see chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”	MS_B2 and DCE_B1 are configured with the correct bearer service.
2)	MS_B2 establishes a data call to DCE_B1 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	DCE_B1 is notified of the incoming data call from MS_B2.
3)	DCE_B1 takes the data call.	The data call between MS_B2 and DCE_B1 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
4)	MS_B2 sends test data to DCE_B1.	The test data is successfully transmitted and received.
5)	DCE_B1 sends test data to MS_B2.	The test data is successfully transmitted and received.
6)	MS_B2 closes the call.	Call is released. All related resources are deallocated.
7)	DCE_B1 establishes a data call to MS_B2 by dialling: ATD *75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_B2 is notified of the incoming data call from DCE_B1.
8)	MS_B2 takes the data call.	The data call between DCE_B1 and MS_B2 is successfully established with the correct bearer service and line speed. Therefore check the channel assignment messages.
9)	MS_B2 sends test data to DCE_B1.	The test data is successfully transmitted and received.
10)	DCE_B1 sends test data to MS_B2.	The test data is successfully transmitted and received.
11)	DCE_B1 closes the call.	Call is released. All related resources are deallocated.
12)	Repeat the test using case 2 and 12 from table above.	

d) Success criteria

MS_A1, MS_A2, MS_B1, MS_B2 and the Data Circuit Terminating Equipment DCE_A1 and DCE_B1 are able to setup and receive data calls with different bearer services and line speeds.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.39 Establishment of several PTP calls with different priorities (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 10.2.1 10.2.2	10.2.1	

a) Purpose

Verify that a PTP call is established successfully with the correct priority.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

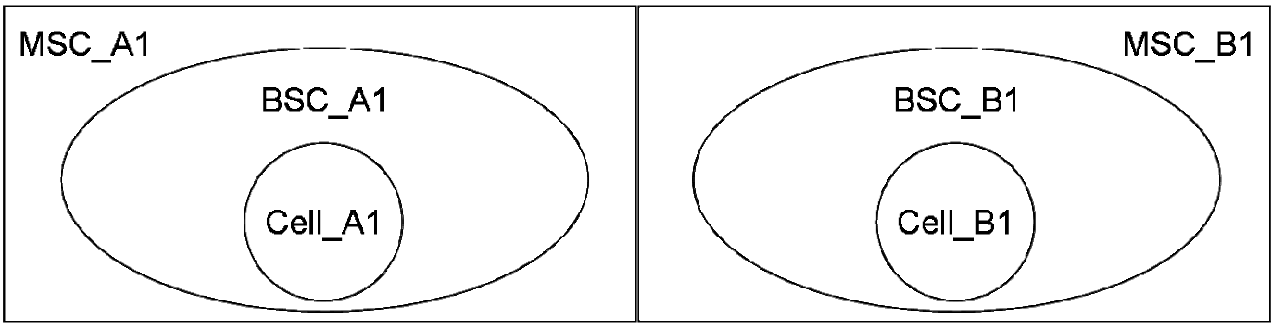
Step 1: MS_A1 in network A calls MS_B1 in network B.

Step 2: MS_B2 in network A calls MS_A2 in network B.

Step 3: MS_B1 in network B calls MS_A1 in network A.

Step 4: MS_A2 in network B calls MS_B2 in network A.

Network A **Network B**



MSC_A1	**MSC_B1**
MS_A1	MS_B1
MS_B2	MS_A2

c) Test procedure

Step 1: MS_A1 in network A calls MS_B1 in network B.

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_B1 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A1 and MS_B1. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’ sent to MS_B1.
2)	MS_A1 releases the call.	The call is correctly released. All related resources are de-allocated.
3)	Repeat step 1 and 2 using priorities 1, 2, 3 and 4.	

Step 2: MS_B2 in network A calls MS_A2 in network B.

Step	Action	Expected result(s)
1)	MS_B2 establishes a PTP call to MS_A2 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_B2 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’ sent to MS_A2.
2)	MS_B2 releases the call.	The call is correctly released. All related resources are de-allocated.
3)	Repeat step 1 and 2 using priorities 1, 2, 3 and 4.	

Step 3: MS_B1 in network B calls MS_A1 in network A.

Step	Action	Expected result(s)
1)	MS_B1 establishes a PTP call to MS_A1 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_B1 and MS_A1. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’ sent to MS_A1.

Step	Action	Expected result(s)
2)	MS_B1 releases the call.	The call is correctly released. All related resources are de-allocated.
3)	Repeat step 1 and 2 using priorities 1, 2, 3 and 4.	

Step 4: MS_A2 in network B calls MS_B2 in network A.

Step	Action	Expected result(s)
1)	MS_A2 establishes a PTP call to MS_B2 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A2 and MS_B2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’ sent to MS_B2.
2)	MS_A2 releases the call.	The call is correctly released. All related resources are de-allocated.
3)	Repeat step 1 and 2 using priorities 1, 2, 3 and 4.	

d) Success criteria

The PTP call is established successfully with the correct priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.40 Call to busy Mobile – CFBusy to other mobile subscriber (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.12	2.4.1	

a) Purpose

Verify that a PTP call to a busy mobile subscriber is forwarded when this subscriber has activated Call Forwarding Busy (CFB).

b) Test configuration / initial conditions

MS_A1 and MS_B1 have Supplementary Service Call Forwarding Busy (CFB).

This test case has been divided into the following steps:

Step 1: MS_A1 in network A activates CFB to MS_B2 in network A.

Step 2: MS_A1 in network A activates CFB to MS_A3 in network B.

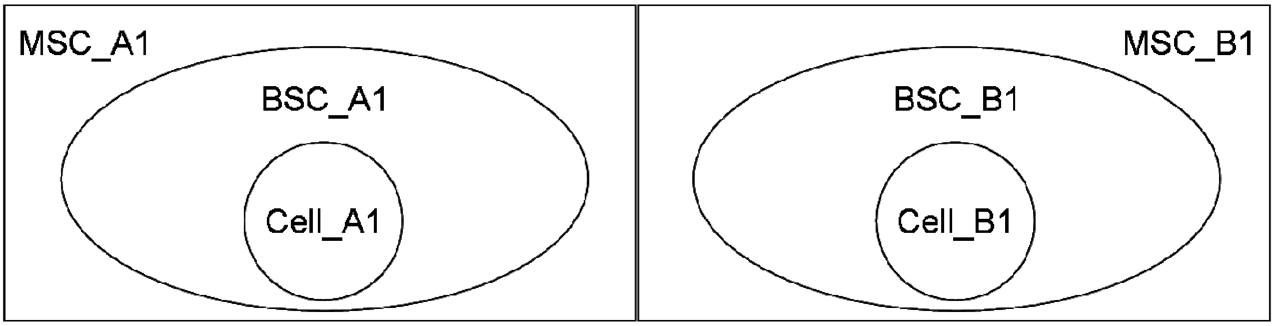
Step 3: MS_A1 in network A activates CFB to MS_B4 in network B.

Step 4: MS_B1 in network B activates CFB to MS_A2 in network B.

Step 5: MS_B1 in network B activates CFB to MS_B3 in network A.

Step 6: MS_B1 in network B activates CFB to MS_A4 in network A.

Network A **Network B**



MSC_A1	**MSC_B1**
MS_A1	MS_B1
MS_B2	MS_A2
MS_B3	MS_A3
MS_A4	MS_B4

c) Test procedure

Step 1: MS_A1 in network A activates CFB to MS_B2 in network A.

Step	Action	Expected result(s)
1)	MS_A1 activates Call Forwarding Busy (CFB) to MS_B2.	If MS_A1 is busy, incoming calls will be forwarded to MS_B2.
2)	MS_A1 calls MS_B1.	Call is correctly established. There is speech path between MS_A1 and MS_B1.
3)	MS_A2 calls MS_A1.	The call is forwarded to MS_B2. The MSISDN number from MS_A2 is displayed on MS_B2. There is speech path between MS_A2 and MS_B2.
4)	MS_A2 releases the call.	The call is correctly released. All related resources are de-allocated.
5)	MS_A1 releases the call.	The call is correctly released. All related resources are de-allocated.
6)	MS_A1 deactivates CFB to MS_B2.	CFB is deactivated.
7)	MS_A1 calls MS_B1.	Call is correctly established. There is speech path between MS_A1 and MS_B1.
8)	MS_A2 calls MS_A1.	The call is not forwarded. MS_A2 gets the busy ring tone and the call is released. All related resources are de-allocated.

Step	Action	Expected result(s)
9)	MS_A1 releases the call.	The call is correctly released. All related resources are de-allocated.

Step 2: MS_A1 in network A activates CFB to MS_B2 in network A.

Step	Action	Expected result(s)
1)	MS_A1 activates CFB to MS_A3.	If MS_A1 is busy, incoming calls will be forwarded to MS_A3.
2)	MS_A1 calls MS_B1.	Call is correctly established. There is speech path between MS_A1 and MS_B1.
3)	MS_A2 calls MS_A1.	The call is forwarded to MS_A3. The MSISDN number from MS_A2 is displayed on MS_A3. There is speech path between MS_A2 and MS_A3.
4)	MS_A2 releases the call.	The call is correctly released. All related resources are de-allocated.
5)	MS_A1 releases the call.	The call is correctly released. All related resources are de-allocated.
6)	MS_A1 deactivates CFB to MS_A3.	CFB is deactivated.
7)	MS_A1 calls MS_B1.	Call is correctly established. There is speech path between MS_A1 and MS_B1.
8)	MS_A2 calls MS_A1.	The call is not forwarded. MS_A2 gets the busy ring tone and the call is released. All related resources are de-allocated.
9)	MS_A1 releases the call.	The call is correctly released. All related resources are de-allocated.

Step 3: MS_A1 in network A activates CFB to MS_B4 in network B.

Step	Action	Expected result(s)
1)	MS_A1 activates CFB to MS_B4.	If MS_A1 is busy, incoming calls will be forwarded to MS_B4.
2)	MS_A1 calls MS_B1.	Call is correctly established. There is speech path between MS_A1 and MS_B1.
3)	MS_A2 calls MS_A1.	The call is forwarded to MS_B4. The MSISDN number from MS_A2 is displayed on MS_B4. There is speech path between MS_A2 and MS_B4.
4)	MS_A2 releases the call.	The call is correctly released. All related resources are de-allocated.
5)	MS_A1 releases the call.	The call is correctly released. All related resources are de-allocated.

Step	Action	Expected result(s)
6)	MS_A1 deactivates CFB to MS_B4.	CFB is deactivated.
7)	MS_A1 calls MS_B1.	Call is correctly established. There is speech path between MS_A1 and MS_B1.
8)	MS_A2 calls MS_A1.	The call is not forwarded. MS_A2 gets the busy ring tone and the call is released. All related resources are de-allocated.
9)	MS_A1 releases the call.	The call is correctly released. All related resources are de-allocated.

Step 4: MS_B1 in network B activates CFB to MS_A2 in network B.

Step	Action	Expected result(s)
1)	MS_B1 activates Call Forwarding Busy (CFB) to MS_A2.	If MS_B1 is busy, incoming calls will be forwarded to MS_A2.
2)	MS_B1 calls MS_A1.	Call is correctly established. There is speech path between MS_B1 and MS_A1.
3)	MS_B2 calls MS_B1.	The call is forwarded to MS_A2. The MSISDN number from MS_B2 is displayed on MS_A2. There is speech path between MS_B2 and MS_A2.
4)	MS_B2 releases the call.	The call is correctly released. All related resources are de-allocated.
5)	MS_B1 releases the call.	The call is correctly released. All related resources are de-allocated.
6)	MS_B1 deactivates CFB to MS_A2.	CFB is deactivated.
7)	MS_B1 calls MS_A1.	Call is correctly established. There is speech path between MS_B1 and MS_A1.
8)	MS_B2 calls MS_B1.	The call is not forwarded. MS_B2 gets the busy ring tone and the call is released. All related resources are de-allocated.
9)	MS_B1 releases the call.	The call is correctly released. All related resources are de-allocated.

Step 5: MS_B1 in network B activates CFB to MS_B3 in network A.

Step	Action	Expected result(s)
1)	MS_B1 activates CFB to MS_B3.	If MS_B1 is busy, incoming calls will be forwarded to MS_B3.
2)	MS_B1 calls MS_A1.	Call is correctly established. There is speech path between MS_B1 and MS_A1.
3)	MS_B2 calls MS_B1.	The call is forwarded to MS_B3. The MSISDN number from MS_B2 is displayed on MS_B3.

Step	Action	Expected result(s)
		There is speech path between MS_B2 and MS_B3.
4)	MS_B2 releases the call.	The call is correctly released. All related resources are de-allocated.
5)	MS_B1 releases the call.	The call is correctly released. All related resources are de-allocated.
6)	MS_B1 deactivates CFB to MS_B3.	CFB is deactivated.
7)	MS_B1 calls MS_A1.	Call is correctly established. There is speech path between MS_B1 and MS_A1.
8)	MS_B2 calls MS_B1.	The call is not forwarded. MS_B2 gets the busy ring tone and the call is released. All related resources are de-allocated.
9)	MS_B1 releases the call.	The call is correctly released. All related resources are de-allocated.

Step 6: MS_B1 in network B activates CFB to MS_A4 in network A.

Step	Action	Expected result(s)
1)	MS_B1 activates CFB to MS_A4.	If MS_B1 is busy, incoming calls will be forwarded to MS_A4.
2)	MS_B1 calls MS_A1.	Call is correctly established. There is speech path between MS_B1 and MS_A1.
3)	MS_B2 calls MS_B1.	The call is forwarded to MS_A4. The MSISDN number from MS_B2 is displayed on MS_A4. There is speech path between MS_B2 and MS_A4.
4)	MS_B2 releases the call.	The call is correctly released. All related resources are de-allocated.
5)	MS_B1 releases the call.	The call is correctly released. All related resources are de-allocated.
6)	MS_B1 deactivates CFB to MS_A4.	CFB is deactivated.
7)	MS_B1 calls MS_A1.	Call is correctly established. There is speech path between MS_B1 and MS_A1.
8)	MS_B2 calls MS_B1.	The call is not forwarded. MS_B2 gets the busy ring tone and the call is released. All related resources are de-allocated.
9)	MS_B1 releases the call.	The call is correctly released. All related resources are de-allocated.

d) Success criteria

The PTP call to a busy mobile subscriber was correctly forwarded.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.41 MOC call when terminator rejects call (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
			EN 301515

a) Purpose

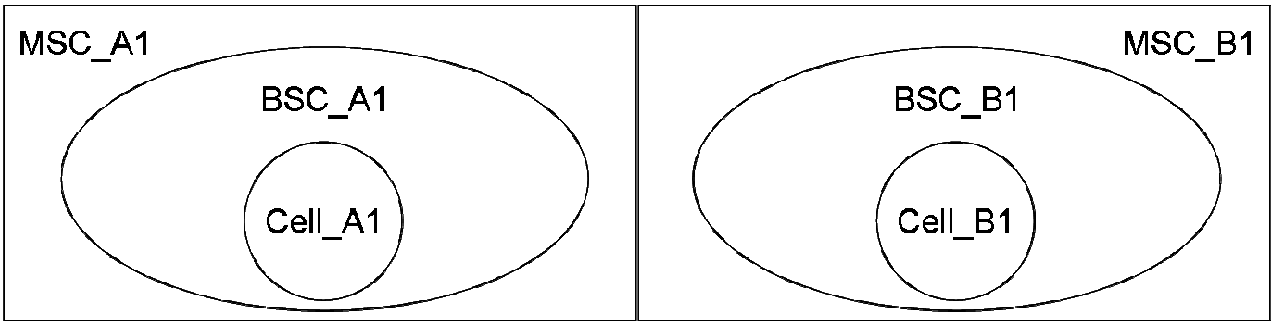
Verify that a MOC is released when the terminator rejects it.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

CT_B1 is connected to network B.

Network A **Network B**



MSC_A1	MSC_B1
MS_A1	MS_B1
MS_B2	MS_A2
CT_A1	CT_B1

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 calls CT_A1.	CT_A1 is notified of the incoming call.
2)	CT_A1 rejects the call.	The call is correctly released. All related re-sources are de-allocated.
3)	MS_B1 calls CT_B1	CT_B1 is notified of the incoming call.

Step	Action	Expected result(s)
4)	CT_B1 rejects the call.	The call is correctly released. All related resources are de-allocated.
5)	MS_A1 calls CT_B1.	CT_B1 is notified of the incoming call.
6)	CT_B1 rejects the call.	The call is correctly released. All related resources are de-allocated.
7)	MS_B1 calls CT_A1.	CT_A1 is notified of the incoming call.
8)	CT_A1 rejects the call.	The call is correctly released. All related resources are de-allocated.
9)	MS_B2 calls CT_A1.	CT_A1 is notified of the incoming call.
10)	CT_A1 rejects the call.	The call is correctly released. All related resources are de-allocated.
11)	MS_A2 calls CT_B1.	CT_B1 is notified of the incoming call.
12)	CT_B1 rejects the call.	The call is correctly released. All related resources are de-allocated.
13)	MS_A2 calls CT_A1.	CT_A1 is notified of the incoming call.
14)	CT_A1 rejects the call.	The call is correctly released. All related resources are de-allocated.
15)	MS_B2 calls CT_B1.	CT_B1 is notified of the incoming call.
16)	CT_B1 rejects the call.	The call is correctly released. All related resources are de-allocated.

d) Success criteria

The mobile originating call is released when terminating subscriber rejects the call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.42 Unsuccessful MOC due to unallocated number (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
			EN 301515

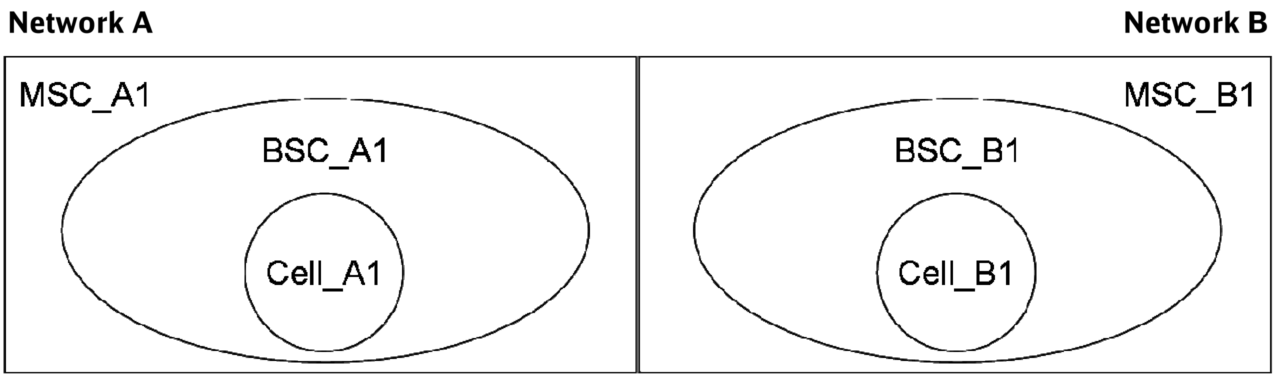
a) Purpose

Verify that no mobile originating call can be established when calling a number that is not assigned.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

CT_B1 is connected to network B.



MSC_A1	MSC_B1
MS_A1	MS_B1
MS_B2	MS_A2
CT_A1	CT_B1

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 calls CT_A1 by dialling a number that is not assigned.	MS_A1 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.

Step	Action	Expected result(s)
2)	MS_A1 closes the call or awaits the network terminates the call.	The call is correctly released. All related resources are de-allocated.
3)	MS_B1 calls CT_B1 by dialling a number that is not assigned.	MS_B1 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
4)	MS_B1 closes the call or awaits the network terminates the call.	The call is correctly released. All related resources are de-allocated.
5)	MS_A1 calls CT_B1 by dialling a number that is not assigned.	MS_A1 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
6)	MS_A1 closes the call or awaits the network terminates the call.	The call is correctly released. All related resources are de-allocated.
7)	MS_B1 calls CT_A1 by dialling a number that is not assigned.	MS_B1 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
8)	MS_B1 closes the call or awaits the network terminates the call.	The call is correctly released. All related resources are de-allocated.
9)	MS_B2 calls CT_A1 by dialling a number that is not assigned.	MS_B2 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
10)	MS_B2 closes the call or awaits the network terminates the call.	The call is correctly released. All related resources are de-allocated.
11)	MS_A2 calls CT_B1 by dialling a number that is not assigned.	MS_A2 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
12)	MS_A2 closes the call or awaits the network terminates the call.	The call is correctly released. All related resources are de-allocated.
13)	MS_A2 calls CT_A1 by dialling a number that is not assigned.	MS_A2 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
14)	MS_A2 closes the call or awaits the network terminates the call.	The call is correctly released. All related resources are de-allocated.
15)	MS_B2 calls CT_B1 by dialling a number that is not assigned.	MS_B2 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
16)	MS_B2 closes the call or awaits the network terminates the call.	The call is correctly released. All related resources are de-allocated.

d) Success criteria

No mobile originating call can be established when calling a number that is not assigned.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.43 MTC – Paging Time Out (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
			EN 301515

a) Purpose

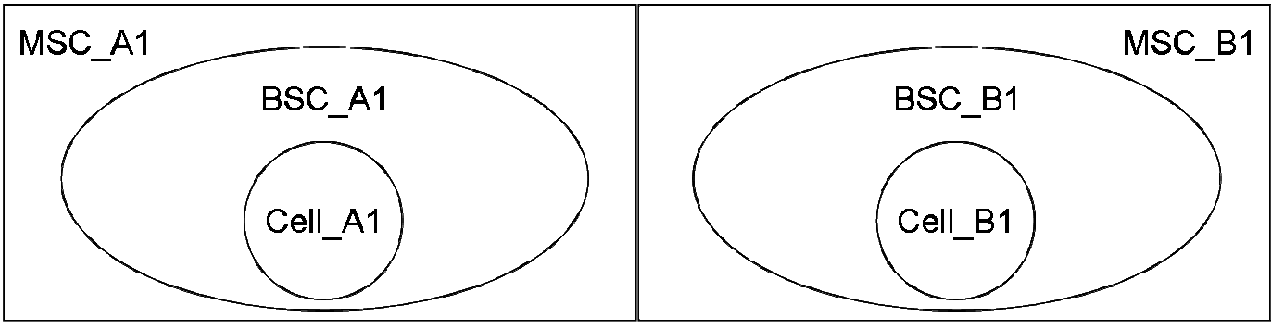
Verify that a MTC is released after paging time out when the terminating subscriber does not answer the call.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

CT_B1 is connected to network B.

Network A **Network B**



MSC_A1	MSC_B1
MS_B1	MS_A1
CT_A1	CT_B1

c) Test procedure

Step	Action	Expected result(s)
1)	MS_B1 leaves coverage area.	VLR_A1 data still available for MS_B1. It is still attached to network A.
2)	CT_A1 calls MS_B1.	The call is correctly released after paging time out. All related resources are de-allocated.
3)	MS_B1 moves to coverage area.	MS_B1 is attached to network A.

Step	Action	Expected result(s)
4)	MS_A1 leaves coverage area.	VLR_B1 data still available for MS_A1. It is still attached to network B.
5)	CT_B1 calls MS_A1.	The call is correctly released after paging time out. All related resources are de-allocated.
6)	MS_A1 moves to coverage area.	MS_A1 is attached to network B.
7)	MS_B1 leaves coverage area.	VLR_A1 data still available for MS_B1. It is still attached to network A.
8)	CT_B1 calls MS_B1.	The call is correctly released after paging time out. All related resources are de-allocated.
9)	MS_B1 moves to coverage area.	MS_B1 is attached to network A.
10)	MS_A1 leaves coverage area.	VLR_B1 data still available for MS_A1. It is still attached to network B.
11)	CT_A1 calls MS_A1.	The call is correctly released after paging time out. All related resources are de-allocated.
12)	MS_A1 moves to coverage area.	MS_A1 is attached to network B.

d) Success criteria

The mobile terminated call is released after paging time out when the terminating subscriber does not answer the call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.44 Unsuccessful MTC call, subscriber not in VLR (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
			EN 301515

a) Purpose

Verify that a mobile terminating call is released when there is no VLR subscriber information for the terminating subscriber.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

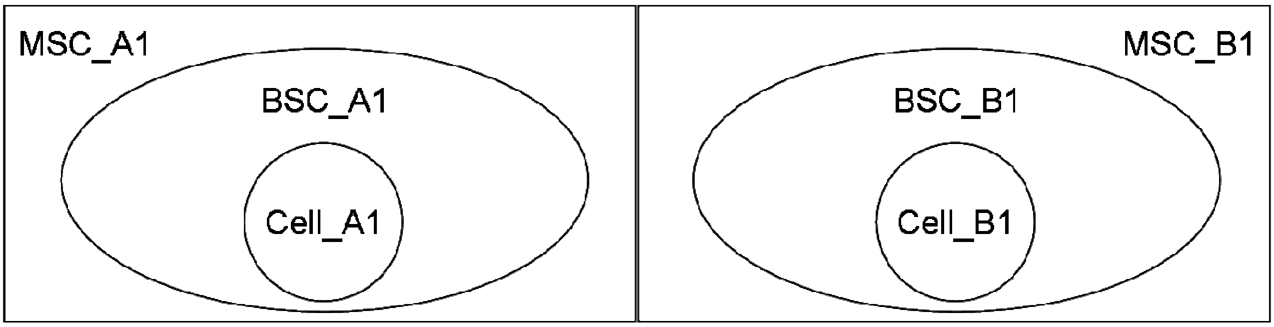
Step 1: Delete the subscriber information for MS_B1 in VLR_B1.

Step 2: Delete the subscriber information for MS_A1 in VLR_A1.

Step 3: Delete the subscriber information for MS_B2 in VLR_A1.

Step 4: Delete the subscriber information for MS_A2 in VLR_B1.

Network A **Network B**



MSC_A1	MSC_B1
MS_A1	MS_B1
MS_B2	MS_A2

c) Test procedure

Step 1: Delete the subscriber information for MS_B1 in VLR_B1.

Step	Action	Expected result(s)
1)	Delete the subscriber information for MS_B1 in VLR_B1.	Subscriber information is not available any-more for MS_B1 in VLR_B1.
2)	MS_A1 calls MS_B1.	The call is correctly released. All related re-sources are de-allocated.
3)	MS_B2 calls MS_B1.	The call is correctly released. All related re-sources are de-allocated.
4)	MS_A2 calls MS_B1.	The call is correctly released. All related re-sources are de-allocated.
5)	Switch off MS_B1 and switch it on again.	MS_B1 performs location update, has correct subscriber data in the VLR_B1 and is attached to network B.

Step 2: Delete the subscriber information for MS_A1 in VLR_A1.

Step	Action	Expected result(s)
1)	Delete the subscriber information for MS_A1 in VLR_A1.	Subscriber information is not available any-more for MS_A1 in VLR_A1.
2)	MS_B1 calls MS_A1.	The call is correctly released. All related re-sources are de-allocated.
3)	MS_A2 calls MS_A1.	The call is correctly released. All related re-sources are de-allocated.
4)	MS_B2 calls MS_A1.	The call is correctly released. All related re-sources are de-allocated.
5)	Switch off MS_A1 and switch it on again.	MS_A1 performs location update, has correct subscriber data in the VLR_A1 and is attached to network A.

Step 3: Delete the subscriber information for MS_B2 in VLR_A1.

Step	Action	Expected result(s)
1)	Delete the subscriber information for MS_B2 in VLR_A1.	Subscriber information is not available any-more for MS_B2 in VLR_A1.
2)	MS_A2 calls MS_B2.	The call is correctly released. All related re-sources are de-allocated.
3)	MS_B1 calls MS_B2.	The call is correctly released. All related re-sources are de-allocated.
4)	MS_A1 calls MS_B2.	The call is correctly released. All related re-sources are de-allocated.
5)	Switch off MS_B2 and switch it on again.	MS_B2 performs location update, has correct subscriber data in the VLR_A1 and is attached to network A.

Step 4: Delete the subscriber information for MS_A2 in VLR_B1.

Step	Action	Expected result(s)
1)	Delete the subscriber information for MS_A2 in VLR_B1.	Subscriber information is not available any-more for MS_A2 in VLR_B1.
2)	MS_B2 calls MS_A2.	The call is correctly released. All related re-sources are de-allocated.
3)	MS_A1 calls MS_A2.	The call is correctly released. All related re-sources are de-allocated.
4)	MS_B1 calls MS_A2.	The call is correctly released. All related re-sources are de-allocated.
5)	Switch off MS_A2 and switch it on again.	MS_A2 performs location update, has correct subscriber data in the VLR_B1 and is attached to network B.

d) Success criteria

The MTC is released because there is no VLR subscriber information for the terminating sub-scriber.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.45 Closed User Group (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.8 2.4.9 10.4	2.4.1 10.4.2 11.3.2 11.3.8i 11.5.1	3GPP TS22.085

a) Purpose

Verify the Supplementary Service Closed User Group (CUG).

- **Incoming Access (IA):**
  An arrangement which allows a member of a CUG to receive calls from outside the CUG.

- **Outgoing Access (OA):**
  An arrangement which allows a member of a CUG to place calls outside the CUG.

- **Incoming Calls Barred Within A CUG (ICB):**
  An access restriction that prevents a CUG member from receiving calls from other members of that group.

- **Outgoing Calls Barred Within A CUG (OCB):**
  An access restriction that prevents a CUG member from placing calls to other members of that group.

- **Subscriber membership of one or more CUGs**
  A specific user may be a member of one or more CUGs.

- **The ability to set up emergency calls remains unaffected according to 3GPP TS22.085**

- **The ability to set up Railway emergency calls remains unaffected according to EIRENE FRS/SRS.**

b) Test configuration / initial conditions

MS_A1, MS_A2, MS_A3 MS_A4 have Supplementary Service Closed User Group.

CT_A1 is connected to network A.

This test case has been divided into the following steps:

Step 1: Incoming Access (IA).

Step 2: Outgoing Access (OA).

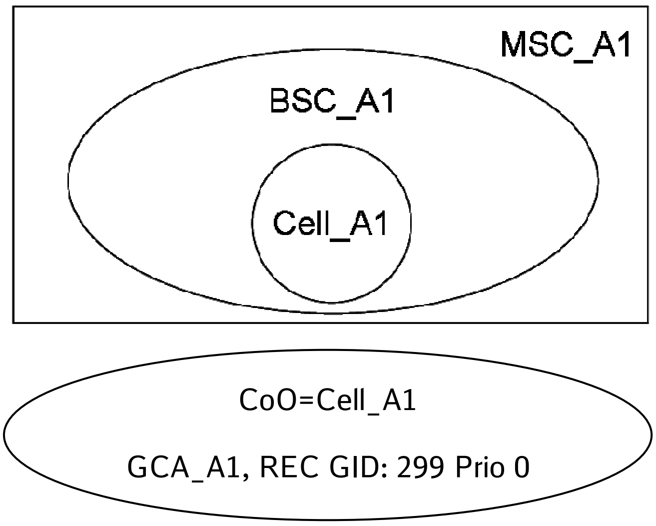
Step 3: Incoming Calls Barred Within A CUG (ICB) and Outgoing Calls Barred Within A CUG (OCB).

Step 4: Outgoing Access (OA) subscription CUG_A1 and CUG_A2.

Step 5: Public Emergency Call and Railway Emergency Call (GID: 299).

Test configuration for steps 1 to 5:

Network A



MS_A1 (REC GID: 299, CUG_A1)
MS_A2 (CUG_A1, no VGCS / VBS subscriber)
MS_A3 (CUG_A2, no VGCS / VBS subscriber)
MS_A4 (CUG_A1, CUG_A2, no VGCS / VBS subscriber)
MS_A5 (no CUG, no VGCS / VBS subscriber)
CT_A1 (REC GID: 299)

c) Test procedure

Step 1: Incoming Access (IA).

Step	Action	Expected result(s)
1)	All CUG_A1 members have incoming access (IA).	Incoming calls to CUG_A1 members are possible.
2)	All CUG_A2 members have NO incoming access (IA).	Incoming calls to CUG_A2 members are not possible.
3)	MS_A5 establishes a PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_A5. The MSISDN of MS_A5 is displayed on MS_A1.
4)	MS_A1 takes the call.	The PTP call between MS_A5 and MS_A1 is successfully established. MS_A5 has speech path to MS_A1.
5)	MS_A5 closes the call.	Call is released. All related resources are deallocated.
6)	MS_A5 establishes a PTP call to MS_A3.	MS_A5 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
7)	MS_A5 closes the call or awaits the network terminates the call.	Call is released. All related resources are deallocated.

Step 2: Outgoing Access (OA).

Step	Action	Expected result(s)
1)	All CUG_A1 members have outgoing access (OA).	Outgoing calls for CUG_A1 members are possible.
2)	All CUG_A2 members have NO outgoing access (OA).	Outgoing calls for CUG_A2 members are not possible.
3)	MS_A1 establishes a PTP call to MS_A5.	MS_A5 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A5.
4)	MS_A5 takes the call.	The PTP call between MS_A1 and MS_A5 is successfully established. MS_A1 has speech path to MS_A5.
5)	MS_A1 closes the call.	Call is released. All related resources are deallocated.
6)	MS_A3 establishes a PTP call to MS_A5.	MS_A3 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
7)	MS_A3 closes the call or awaits the network terminates the call.	Call is released. All related resources are deallocated.

Step 3: Incoming Calls Barred Within A CUG (ICB) and Outgoing Calls Barred Within A CUG (OCB).

Step	Action	Expected result(s)
1)	All CUG_A1 members have incoming access (IA) and outgoing access (OA).	Incoming and outgoing calls for CUG_A1 members are possible.
2)	Subscriber MS_A1 have incoming calls barred within a CUG (ICB).	Incoming calls to MS_A1 form other CUG_A1 members are not possible.
3)	Subscriber MS_A2 have outgoing calls barred within a CUG (OCB).	Outgoing calls from MS_A2 to other CUG_A1 members are not possible.
4)	MS_A1 establishes a PTP call to MS_A5.	MS_A5 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A5.
5)	MS_A5 takes the call.	The PTP call between MS_A1 and MS_A5 is successfully established. MS_A1 has speech path to MS_A5.
6)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
7)	MS_A5 establishes a PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_A5. The MSISDN of MS_A5 is displayed on MS_A1.
8)	MS_A1 takes the call.	The PTP call between MS_A5 and MS_A1 is successfully established. MS_A5 has speech path to MS_A1.
9)	MS_A5 closes the call.	Call is released. All related resources are de-allocated.
10)	MS_A2 establishes a PTP call to MS_A5.	MS_A5 is notified of the incoming call from MS_A2. The MSISDN of MS_A2 is displayed on MS_A5.
11)	MS_A5 takes the call.	The PTP call between MS_A2 and MS_A5 is successfully established. MS_A2 has speech path to MS_A5.
12)	MS_A2 closes the call.	Call is released. All related resources are de-allocated.
13)	MS_A5 establishes a PTP call to MS_A2.	MS_A2 is notified of the incoming call from MS_A5. The MSISDN of MS_A5 is displayed on MS_A2.
14)	MS_A2 takes the call.	The PTP call between MS_A5 and MS_A2 is successfully established. MS_A5 has speech path to MS_A2.
15)	MS_A5 closes the call.	Call is released. All related resources are de-allocated.
16)	MS_A4 establishes a PTP call to MS_A1.	MS_A4 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.

Step	Action	Expected result(s)
17)	MS_A4 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
18)	MS_A1 establishes a PTP call to MS_A4.	MS_A4 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A4.
19)	MS_A4 takes the call.	The PTP call between MS_A1 and MS_A4 is successfully established. MS_A1 has speech path to MS_A4.
20)	MS_A1 closes the call	Call is released. All related resources are de-allocated.
21)	MS_A2 establishes a PTP call to MS_A4.	MS_A2 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
22)	MS_A2 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
23)	MS_A4 establishes a PTP call to MS_A2.	MS_A2 is notified of the incoming call from MS_A4. The MSISDN of MS_A4 is displayed on MS_A2.
24)	MS_A2 takes the call.	The PTP call between MS_A4 and MS_A2 is successfully established. MS_A4 has speech path to MS_A2.
25)	MS_A4 closes the call	Call is released. All related resources are de-allocated.

Step 4: Outgoing Access (OA) subscription CUG_A1 and CUG_A2.

Step	Action	Expected result(s)
1)	All CUG_A1 members have NO outgoing access (OA).	Outgoing calls for CUG_A1 members are not possible.
2)	All CUG_A2 members have outgoing access (OA).	Outgoing calls for CUG_A2 members are possible.
3)	MS_A4 establishes a PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_A4. The MSISDN of MS_A4 is displayed on MS_A1.
4)	MS_A1 takes the call.	The PTP call between MS_A4 and MS_A1 is successfully established. MS_A4 has speech path to MS_A1.
5)	MS_A4 closes the call.	Call is released. All related resources are de-allocated.
6)	MS_A4 establishes a PTP call to MS_A3.	MS_A3 is notified of the incoming call from MS_A4. The MSISDN of MS_A4 is displayed on MS_A3.

Step	Action	Expected result(s)
7)	MS_A3 takes the call.	The PTP call between MS_A4 and MS_A3 is successfully established. MS_A4 has speech path to MS_A3.
8)	MS_A4 closes the call.	Call is released. All related resources are de-allocated.
9)	MS_A4 establishes a PTP call to MS_A5.	MS_A4 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
10)	MS_A4 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.

Step 5: Public Emergency Call and Railway Emergency Call (GID: 299).

Step	Action	Expected result(s)
1)	All CUG_A1 members have NO outgoing access (OA).	Outgoing calls for CUG_A1 members are not possible.
2)	MS_A1 is registered to a FN (Functional Number).	MS_A1 have a FN witch is shown on the display of MS_A1.
3)	MS_A1 establishes a Public Emergency Call.	The PSAP (Public Safety Answering Point) operator is notified of the incoming emergency call from MS_A1. The MSISDN of MS_A1 is displayed on the display of the operator terminal.
4)	The PSAP operator takes the call.	The emergency call between MS_A1 and PSAP operator is successfully established. MS_A1 has speech path to the operator.
5)	MS_A1 closes the call.	Emergency call is released. All related resources are de-allocated.
6)	MS_A1 establishes a Railway Emergency Call (GID: 299).	The CT_A1 is notified of the incoming emergency call from MS_A1. The FN (Functional Number) of MS_A1 is displayed on the display of the CT_A1 terminal via OTDI.
7)	The CT_A1 takes the call.	The emergency call between MS_A1 and the CT_A1 is successfully established. MS_A1 has speech path to the CT_A1.
8)	MS_A1 closes the call.	Emergency call is released. All related resources are de-allocated.

d) Success criteria

Handling from incoming and outgoing calls are in accordance with the barring settings of the CUG members.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.46 Closed User Group (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.8 2.4.9 10.4	2.4.1 10.4.2 11.3.2 11.3.8i 11.5.1	3GPP TS22.085

a) Purpose

Verify the Supplementary Service Closed User Group (CUG).

- **Incoming Access (IA):**
  An arrangement which allows a member of a CUG to receive calls from outside the CUG.

- **Outgoing Access (OA):**
  An arrangement which allows a member of a CUG to place calls outside the CUG.

- **Incoming Calls Barred Within A CUG (ICB):**
  An access restriction that prevents a CUG member from receiving calls from other members of that group.

- **Outgoing Calls Barred Within A CUG (OCB):**
  An access restriction that prevents a CUG member from placing calls to other members of that group.

- **Subscriber membership of one or more CUGs**
  A specific user may be a member of one or more CUGs.

- **The ability to set up emergency calls remains unaffected according to 3GPP TS22.085.**

- **The ability to set up Railway emergency calls remains unaffected according to EI-RENE FRS/SRS.**

b) Test configuration / initial conditions

MS_A1, MS_A2, MS_A3 MS_A5, MS_A6, MS_A7, MS_B1, MS_B2, MS_B3 MS_B5, MS_B6 and MS_B7 have Supplementary Service Closed User Group.

CT_A1 is connected to network A.

CT_B1 is connected to network B.

This test case has been divided into the following steps:

Step 1: Incoming Access (IA) originating subscriber of HLR_A1 in network A, CUG/HLR_A1.

Step 2: Incoming Access (IA) originating subscriber of HLR_B1 in network A, CUG/HLR_A1.

Step 3: Incoming Access (IA) originating subscriber of HLR_A1 in network B, CUG/HLR_A1.

Step 4: Incoming Access (IA) originating subscriber of HLR_B1 in network B, CUG/HLR_A1.

Step 5: Incoming Access (IA) originating subscriber of HLR_B1 in network B, CUG/HLR_B1.

Step 6: Incoming Access (IA) originating subscriber of HLR_A1 in network B, CUG/HLR_B1.

Step 7: Incoming Access (IA) originating subscriber of HLR_B1 in network A, CUG/HLR_B1.

Step 8: Incoming Access (IA) originating subscriber of HLR_A1 in network A, CUG/HLR_B1.

Step 9: Outgoing Access (OA) originating subscriber of HLR_A1/CUG_A1 in network A.

Step 10: Outgoing Access (OA) originating subscriber of HLR_A1/CUG_A2 in network A.

Step 11: Outgoing Access (OA) originating subscriber of HLR_A1/CUG_A1 and CUG_A2 in network A.

Step 12: Outgoing Access (OA) originating subscriber of HLR_A1/CUG_A1 in network B.

Step 13: No Outgoing Access (OA) originating subscriber of HLR_A1/CUG_A2 in network B.

Step 14: Outgoing Access (OA) originating subscriber of HLR_A1/CUG_A1 and CUG_A2 in network B.

Step 15: Incoming Calls Barred Within A CUG (ICB) and Outgoing Calls Barred Within A CUG (OCB) CUG in HLR_A1.

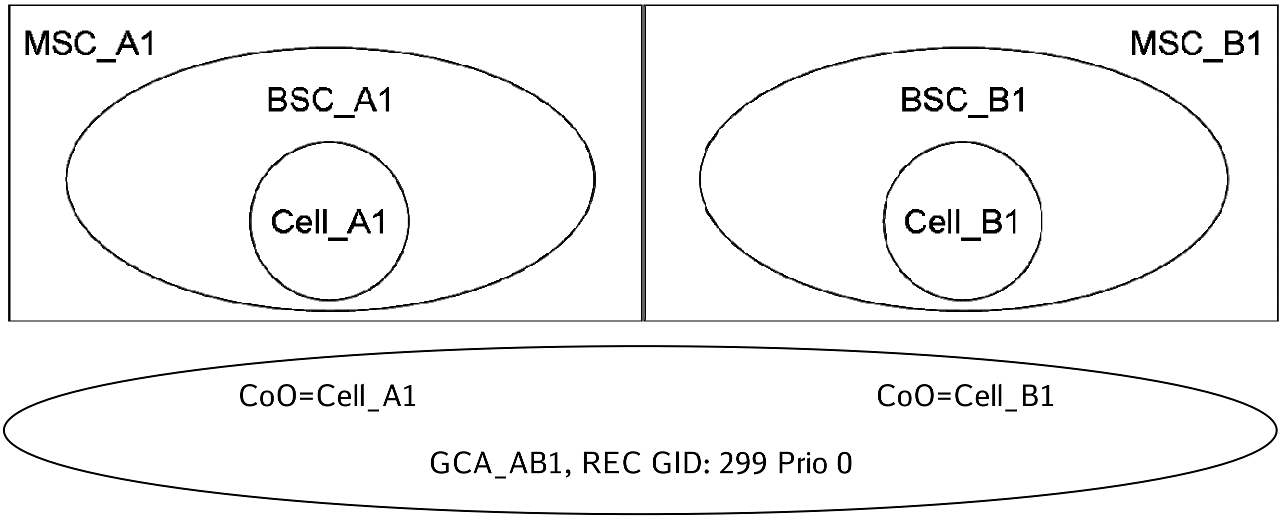
Step 16: Incoming Calls Barred Within A CUG (ICB) and Outgoing Calls Barred Within A CUG (OCB) CUG in HLR_B1.

Step 17: Public Emergency Call.

Step 18: Railway Emergency Call (GID: 299).

Test configuration for step 1 to 18:

Network A **Network B**



A-MSC_A1	**R-MSC_B1**
MS_B1 (REC GID: 299, CUG_B3)	MS_A1 (REC GID: 299, CUG_A1)
MS_B2 (CUG_B4, no VGCS / VBS subscriber)	MS_A2 (CUG_A2, no VGCS / VBS subscriber)
MS_B3 (CUG_B3, CUG_B4, no VGCS / VBS subscriber)	MS_A3 (CUG_A1, CUG_A2, no VGCS / VBS subscriber)
MS_B4 (no CUG, no VGCS / VBS subscriber)	MS_A4 (no CUG, no VGCS / VBS subscriber)
MS_A5 (REC GID: 299, CUG_A1)	MS_B5 (REC GID: 299, CUG_B3)
MS_A6 (CUG_A2, no VGCS / VBS subscriber)	MS_B6 (CUG_B4, no VGCS / VBS subscriber)
MS_A7 (CUG_A1, CUG_A2, no VGCS / VBS subscriber)	MS_B7 (CUG_B3, CUG_B4, no VGCS / VBS subscriber)
MS_A8 (no CUG, no VGCS / VBS subscriber)	MS_B8 (no CUG, no VGCS / VBS subscriber)
CT_A1 (GCA_AB1, REC GID: 299)	CT_B1 (GCA_AB1, REC GID: 299)

c) Test procedure

Step 1: Incoming Access (IA) originating subscriber of HLR_A1 in network A, CUG/HLR_A1.

Step	Action	Expected result(s)
1)	All CUG_A1 members have incoming access (IA).	Incoming calls to CUG_A1 members are possible.
2)	All CUG_A2 members have NO incoming access (IA).	Incoming calls to CUG_A2 members are not possible.
3)	MS_A8 establishes a PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_A8. The MSISDN of MS_A8 is displayed on MS_A1.
4)	MS_A1 takes the call.	The PTP call between MS_A8 and MS_A1 is successfully established. MS_A8 has speech path to MS_A1.
5)	MS_A8 closes the call.	Call is released. All related resources are de-allocated.
6)	MS_A8 establishes a PTP call to MS_A2.	MS_A8 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
7)	MS_A8 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
8)	MS_A8 establishes a PTP call to MS_A5.	MS_A5 is notified of the incoming call from MS_A8. The MSISDN of MS_A8 is displayed on MS_A5.
9)	MS_A5 takes the call.	The PTP call between MS_A8 and MS_A5 is successfully established. MS_A8 has speech path to MS_A5.
10)	MS_A8 closes the call.	Call is released. All related resources are de-allocated.
11)	MS_A8 establishes a PTP call to MS_A6.	MS_A8 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
12)	MS_A8 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
13)	MS_A8 establishes a PTP call to MS_A3.	MS_A3 is notified of the incoming call from MS_A8. The MSISDN of MS_A8 is displayed on MS_A3.
14)	MS_A3 takes the call.	The PTP call between MS_A8 and MS_A3 is successfully established. MS_A8 has speech path to MS_A3.
15)	MS_A8 closes the call.	Call is released. All related resources are de-allocated.

Step	Action	Expected result(s)
16)	MS_A8 establishes a PTP call to MS_A7.	MS_A7 is notified of the incoming call from MS_A8. The MSISDN of MS_A8 is displayed on MS_A7.
17)	MS_A7 takes the call.	The PTP call between MS_A8 and MS_A7 is successfully established. MS_A8 has speech path to MS_A7.
18)	MS_A8 closes the call.	Call is released. All related resources are de-allocated.

Step 2: Incoming Access (IA) originating subscriber of HLR_B1 in network A, CUG/HLR_A1.

Step	Action	Expected result(s)
1)	All CUG_A1 members have incoming access (IA).	Incoming calls to CUG_A1 members are possible.
2)	All CUG_A2 members have NO incoming access (IA).	Incoming calls to CUG_A2 members are not possible.
3)	MS_B4 establishes a PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_B4. The MSISDN of MS_B4 is displayed on MS_A1.
4)	MS_A1 takes the call.	The PTP call between MS_B4 and MS_A1 is successfully established. MS_B4 has speech path to MS_A1.
5)	MS_B4 closes the call.	Call is released. All related resources are de-allocated.
6)	MS_B4 establishes a PTP call to MS_A2.	MS_B4 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
7)	MS_B4 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
8)	MS_B4 establishes a PTP call to MS_A5.	MS_A5 is notified of the incoming call from MS_B4. The MSISDN of MS_B4 is displayed on MS_A5.
9)	MS_A5 takes the call.	The PTP call between MS_B4 and MS_A5 is successfully established. MS_B4 has speech path to MS_A5.
10)	MS_B4 closes the call.	Call is released. All related resources are de-allocated.
11)	MS_B4 establishes a PTP call to MS_A6.	MS_B4 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
12)	MS_B4 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.

Step	Action	Expected result(s)
13)	MS_B4 establishes a PTP call to MS_A3.	MS_A3 is notified of the incoming call from MS_B4. The MSISDN of MS_B4 is displayed on MS_A3.
14)	MS_A3 takes the call.	The PTP call between MS_B4 and MS_A3 is successfully established. MS_B4 has speech path to MS_A3.
15)	MS_B4 closes the call.	Call is released. All related resources are de-allocated.
16)	MS_B4 establishes a PTP call to MS_A7.	MS_A7 is notified of the incoming call from MS_B4. The MSISDN of MS_B4 is displayed on MS_A7.
17)	MS_A7 takes the call.	The PTP call between MS_B4 and MS_A7 is successfully established. MS_B4 has speech path to MS_A7.
18)	MS_B4 closes the call.	Call is released. All related resources are de-allocated.

Step 3: Incoming Access (IA) originating subscriber of HLR_A1 in network B,CUG/HLR_A1.

Step	Action	Expected result(s)
1)	All CUG_A1 members have incoming access (IA).	Incoming calls to CUG_A1 members are possible.
2)	All CUG_A2 members have NO incoming access (IA).	Incoming calls to CUG_A2 members are not possible.
3)	MS_A4 establishes a PTP call to MS_A5.	MS_A5 is notified of the incoming call from MS_A4. The MSISDN of MS_A4 is displayed on MS_A5.
4)	MS_A5 takes the call.	The PTP call between MS_A4 and MS_A5 is successfully established. MS_A4 has speech path to MS_A5.
5)	MS_A4 closes the call.	Call is released. All related resources are de-allocated.
6)	MS_A4 establishes a PTP call to MS_A6.	MS_A4 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
7)	MS_A4 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
8)	MS_A4 establishes a PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_A4. The MSISDN of MS_A4 is displayed on MS_A1.

Step	Action	Expected result(s)
9)	MS_A1 takes the call.	The PTP call between MS_A4 and MS_A1 is successfully established. MS_A4 has speech path to MS_A1.
10)	MS_A4 closes the call.	Call is released. All related resources are de-allocated.
11)	MS_A4 establishes a PTP call to MS_A2.	MS_A4 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
12)	MS_A4 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
13)	MS_A4 establishes a PTP call to MS_A7.	MS_A7 is notified of the incoming call from MS_A4. The MSISDN of MS_A4 is displayed on MS_A7.
14)	MS_A7 takes the call.	The PTP call between MS_A4 and MS_A7 is successfully established. MS_A4 has speech path to MS_A7.
15)	MS_A4 closes the call.	Call is released. All related resources are de-allocated.
16)	MS_A4 establishes a PTP call to MS_A3.	MS_A3 is notified of the incoming call from MS_A4. The MSISDN of MS_A4 is displayed on MS_A3.
17)	MS_A3 takes the call.	The PTP call between MS_A4 and MS_A3 is successfully established. MS_A4 has speech path to MS_A3.
18)	MS_A4 closes the call.	Call is released. All related resources are de-allocated.

Step 4: Incoming Access (IA) originating subscriber of HLR_B1 in network B,CUG/HLR_A1.

Step	Action	Expected result(s)
1)	All CUG_A1 members have incoming access (IA).	Incoming calls to CUG_A1 members are possible.
2)	All CUG_A2 members have NO incoming access (IA).	Incoming calls to CUG_A2 members are not possible.
3)	MS_B8 establishes a PTP call to MS_A5.	MS_A5 is notified of the incoming call from MS_B8. The MSISDN of MS_B8 is displayed on MS_A5.
4)	MS_A5 takes the call.	The PTP call between MS_B8 and MS_A5 is successfully established. MS_B8 has speech path to MS_A5.
5)	MS_B8 closes the call.	Call is released. All related resources are de-allocated.

Step	Action	Expected result(s)
6)	MS_B8 establishes a PTP call to MS_A6.	MS_B8 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
7)	MS_B8 closes the call or awaits the network terminates the call.	Call is released. All related resources are deallocated.
8)	MS_B8 establishes a PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_B8. The MSISDN of MS_B8 is displayed on MS_A1.
9)	MS_A1 takes the call.	The PTP call between MS_B8 and MS_A1 is successfully established. MS_B8 has speech path to MS_A1.
10)	MS_B8 closes the call.	Call is released. All related resources are deallocated.
11)	MS_B8 establishes a PTP call to MS_A2.	MS_B8 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
12)	MS_B8 closes the call or awaits the network terminates the call.	Call is released. All related resources are deallocated.
13)	MS_B8 establishes a PTP call to MS_A7.	MS_A7 is notified of the incoming call from MS_B8. The MSISDN of MS_B8 is displayed on MS_A7.
14)	MS_A7 takes the call.	The PTP call between MS_B8 and MS_A7 is successfully established. MS_B8 has speech path to MS_A7.
15)	MS_B8 closes the call.	Call is released. All related resources are deallocated.
16)	MS_B8 establishes a PTP call to MS_A3.	MS_A3 is notified of the incoming call from MS_B8. The MSISDN of MS_B8 is displayed on MS_A3.
17)	MS_A3 takes the call.	The PTP call between MS_B8 and MS_A3 is successfully established. MS_B8 has speech path to MS_A3.
18)	MS_B8 closes the call.	Call is released. All related resources are deallocated.

Step 5: Incoming Access (IA) originating subscriber of HLR_B1 in network B,CUG/HLR_B1.

Step	Action	Expected result(s)
1)	All CUG_B3 members have incoming access (IA).	Incoming calls to CUG_B3 members are possible.
2)	All CUG_B4 members have NO incoming access (IA).	Incoming calls to CUG_B4 members are not possible.

Step	Action	Expected result(s)
3)	MS_B8 establishes a PTP call to MS_B1.	MS_B1 is notified of the incoming call from MS_B8. The MSISDN of MS_B8 is displayed on MS_B1.
4)	MS_B1 takes the call.	The PTP call between MS_B8 and MS_B1 is successfully established. MS_B8 has speech path to MS_B1.
5)	MS_B8 closes the call.	Call is released. All related resources are de-allocated.
6)	MS_B8 establishes a PTP call to MS_B2.	MS_B8 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
7)	MS_B8 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
8)	MS_B8 establishes a PTP call to MS_B5.	MS_B5 is notified of the incoming call from MS_B8. The MSISDN of MS_B8 is displayed on MS_B5.
9)	MS_B5 takes the call.	The PTP call between MS_B8 and MS_B5 is successfully established. MS_B8 has speech path to MS_B5.
10)	MS_B8 closes the call.	Call is released. All related resources are de-allocated.
11)	MS_B8 establishes a PTP call to MS_B6.	MS_B8 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
12)	MS_B8 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
13)	MS_B8 establishes a PTP call to MS_B3.	MS_B3 is notified of the incoming call from MS_B8. The MSISDN of MS_B8 is displayed on MS_B3.
14)	MS_B3 takes the call.	The PTP call between MS_B8 and MS_B3 is successfully established. MS_B8 has speech path to MS_B3.
15)	MS_B8 closes the call.	Call is released. All related resources are de-allocated.
16)	MS_B8 establishes a PTP call to MS_B7.	MS_B7 is notified of the incoming call from MS_B8. The MSISDN of MS_B8 is displayed on MS_B7.
17)	MS_B7 takes the call.	The PTP call between MS_B8 and MS_B7 is successfully established. MS_B8 has speech path to MS_B7.
18)	MS_B8 closes the call.	Call is released. All related resources are de-allocated.

Step 6: Incoming Access (IA) originating subscriber of HLR_A1 in network B, CUG/HLR_B1.

Step	Action	Expected result(s)
1)	All CUG_B3 members have incoming access (IA).	Incoming calls to CUG_B3 members are possible.
2)	All CUG_B4 members have NO incoming access (IA).	Incoming calls to CUG_B4 members are not possible.
3)	MS_A4 establishes a PTP call to MS_B1.	MS_B1 is notified of the incoming call from MS_A4. The MSISDN of MS_A4 is displayed on MS_B1.
4)	MS_B1 takes the call.	The PTP call between MS_A4 and MS_B1 is successfully established. MS_A4 has speech path to MS_B1.
5)	MS_A4 closes the call.	Call is released. All related resources are de-allocated.
6)	MS_A4 establishes a PTP call to MS_B2.	MS_A4 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
7)	MS_A4 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
8)	MS_A4 establishes a PTP call to MS_B5.	MS_B5 is notified of the incoming call from MS_A4. The MSISDN of MS_A4 is displayed on MS_B5.
9)	MS_B5 takes the call.	The PTP call between MS_A4 and MS_B5 is successfully established. MS_A4 has speech path to MS_B5.
10)	MS_A4 closes the call.	Call is released. All related resources are de-allocated.
11)	MS_A4 establishes a PTP call to MS_B6.	MS_A4 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
12)	MS_A4 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
13)	MS_A4 establishes a PTP call to MS_B3.	MS_B3 is notified of the incoming call from MS_A4. The MSISDN of MS_A4 is displayed on MS_B3.
14)	MS_B3 takes the call.	The PTP call between MS_A4 and MS_B3 is successfully established. MS_A4 has speech path to MS_B3.
15)	MS_A4 closes the call.	Call is released. All related resources are de-allocated.

Step	Action	Expected result(s)
16)	MS_A4 establishes a PTP call to MS_B7.	MS_B7 is notified of the incoming call from MS_A4. The MSISDN of MS_A4 is displayed on MS_B7.
17)	MS_B7 takes the call.	The PTP call between MS_A4 and MS_B7 is successfully established. MS_A4 has speech path to MS_B7.
18)	MS_A4 closes the call.	Call is released. All related resources are de-allocated.

Step 7: Incoming Access (IA) originating subscriber of HLR_B1 in network A, CUG/HLR_B1.

Step	Action	Expected result(s)
1)	All CUG_B3 members have incoming access (IA).	Incoming calls to CUG_B4 members are possible.
2)	All CUG_B4 members have NO incoming access (IA).	Incoming calls to CUG_B4 members are not possible.
3)	MS_B4 establishes a PTP call to MS_B5.	MS_B5 is notified of the incoming call from MS_B4. The MSISDN of MS_B4 is displayed on MS_B5.
4)	MS_B5 takes the call.	The PTP call between MS_B4 and MS_B5 is successfully established. MS_B4 has speech path to MS_B5.
5)	MS_B4 closes the call.	Call is released. All related resources are de-allocated.
6)	MS_B4 establishes a PTP call to MS_B6.	MS_B4 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
7)	MS_B4 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
8)	MS_B4 establishes a PTP call to MS_B1.	MS_B1 is notified of the incoming call from MS_B4. The MSISDN of MS_B4 is displayed on MS_B1.
9)	MS_B1 takes the call.	The PTP call between MS_B4 and MS_B1 is successfully established. MS_B4 has speech path to MS_B1.
10)	MS_B4 closes the call.	Call is released. All related resources are de-allocated.
11)	MS_B4 establishes a PTP call to MS_B2.	MS_B4 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
12)	MS_B4 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.

Step	Action	Expected result(s)
13)	MS_B4 establishes a PTP call to MS_B7.	MS_B7 is notified of the incoming call from MS_B4. The MSISDN of MS_B4 is displayed on MS_B7.
14)	MS_B7 takes the call.	The PTP call between MS_B4 and MS_B7 is successfully established. MS_B4 has speech path to MS_B7.
15)	MS_B4 closes the call.	Call is released. All related resources are de-allocated.
16)	MS_B4 establishes a PTP call to MS_B3.	MS_B3 is notified of the incoming call from MS_B4. The MSISDN of MS_B4 is displayed on MS_B3.
17)	MS_B3 takes the call.	The PTP call between MS_B4 and MS_B3 is successfully established. MS_B4 has speech path to MS_B3.
18)	MS_B4 closes the call.	Call is released. All related resources are de-allocated.

Step 8: Incoming Access (IA) originating subscriber of HLR_A1 in network A, CUG/HLR_B1.

Step	Action	Expected result(s)
1)	All CUG_B3 members have incoming access (IA).	Incoming calls to CUG_B4 members are possible.
2)	All CUG_B4 members have NO incoming access (IA).	Incoming calls to CUG_B4 members are not possible.
3)	MS_A8 establishes a PTP call to MS_B5.	MS_B5 is notified of the incoming call from MS_A8. The MSISDN of MS_A8 is displayed on MS_B5.
4)	MS_B5 takes the call.	The PTP call between MS_A8 and MS_B5 is successfully established. MS_A8 has speech path to MS_B5.
5)	MS_A8 closes the call.	Call is released. All related resources are de-allocated.
6)	MS_A8 establishes a PTP call to MS_B6.	MS_A8 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
7)	MS_A8 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
8)	MS_A8 establishes a PTP call to MS_B1.	MS_B1 is notified of the incoming call from MS_A8. The MSISDN of MS_A8 is displayed on MS_B1.

Step	Action	Expected result(s)
9)	MS_B1 takes the call.	The PTP call between MS_A8 and MS_B1 is successfully established. MS_A8 has speech path to MS_B1.
10)	MS_A8 closes the call.	Call is released. All related resources are de-allocated.
11)	MS_A8 establishes a PTP call to MS_B2.	MS_A8 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
12)	MS_A8 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
13)	MS_A8 establishes a PTP call to MS_B7.	MS_B7 is notified of the incoming call from MS_A8. The MSISDN of MS_A8 is displayed on MS_B7.
14)	MS_B7 takes the call.	The PTP call between MS_A8 and MS_B7 is successfully established. MS_A8 has speech path to MS_B7.
15)	MS_A8 closes the call.	Call is released. All related resources are de-allocated.
16)	MS_A8 establishes a PTP call to MS_B3.	MS_B3 is notified of the incoming call from MS_A8. The MSISDN of MS_A8 is displayed on MS_B3.
17)	MS_B3 takes the call.	The PTP call between MS_A8 and MS_B3 is successfully established. MS_A8 has speech path to MS_B3.
18)	MS_A8 closes the call.	Call is released. All related resources are de-allocated.

Step 9: Outgoing Access (OA) originating subscriber of HLR_A1/CUG_A1 in network A.

Step	Action	Expected result(s)
1)	All CUG_A1 members have outgoing access (OA).	Outgoing calls for CUG_A1 members are possible.
2)	All CUG_A2 members have NO outgoing access (OA).	Outgoing calls for CUG_A2 members are not possible.
3)	MS_A5 establishes a PTP call to MS_A4.	MS_A4 is notified of the incoming call from MS_A5. The MSISDN of MS_A5 is displayed on MS_A4.
4)	MS_A4 takes the call.	The PTP call between MS_A5 and MS_A4 is successfully established. MS_A5 has speech path to MS_A4.
5)	MS_A5 closes the call.	Call is released. All related resources are de-allocated.

Step	Action	Expected result(s)
6)	MS_A5 establishes a PTP call to MS_B8.	MS_B8 is notified of the incoming call from MS_A5. The MSISDN of MS_A5 is displayed on MS_B8.
7)	MS_B8 takes the call.	The PTP call between MS_A5 and MS_B8 is successfully established. MS_A5 has speech path to MS_B8.
8)	MS_A5 closes the call.	Call is released. All related resources are de-allocated.
9)	MS_A5 establishes a PTP call to MS_B4.	MS_B4 is notified of the incoming call from MS_A5. The MSISDN of MS_A5 is displayed on MS_B4.
10)	MS_B4 takes the call.	The PTP call between MS_A5 and MS_B4 is successfully established. MS_A5 has speech path to MS_B4.
11)	MS_A5 closes the call.	Call is released. All related resources are de-allocated.

Step 10: Outgoing Access (OA) originating subscriber of HLR_A1/CUG_A2 in network A.

Step	Action	Expected result(s)
1)	All CUG_A1 members have outgoing access (OA).	Outgoing calls for CUG_A1 members are possible.
2)	All CUG_A2 members have NO outgoing access (OA).	Outgoing calls for CUG_A2 members are not possible.
3)	MS_A6 establishes a PTP call to MS_A4.	MS_A6 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
4)	MS_A6 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
5)	MS_A6 establishes a PTP call to MS_B8.	MS_A6 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
6)	MS_A6 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
7)	MS_A6 establishes a PTP call to MS_B4.	MS_A6 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
8)	MS_A6 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.

Step 11: Outgoing Access (OA) originating subscriber of HLR_A1/CUG_A1 and CUG_A2 in network A.

Step	Action	Expected result(s)
1)	All CUG_A1 members have outgoing access (OA).	Outgoing calls for CUG_A1 members are possible.
2)	All CUG_A2 members have NO outgoing access (OA).	Outgoing calls for CUG_A2 members are not possible.
3)	MS_A7 establishes a PTP call to MS_A4.	MS_A4 is notified of the incoming call from MS_A7. The MSISDN of MS_A7 is displayed on MS_A4.
4)	MS_A4 takes the call.	The PTP call between MS_A7 and MS_A4 is successfully established. MS_A7 has speech path to MS_A4.
5)	MS_A7 closes the call.	Call is released. All related resources are de-allocated.
6)	MS_A7 establishes a PTP call to MS_B8.	MS_B8 is notified of the incoming call from MS_A7. The MSISDN of MS_A7 is displayed on MS_B8.
7)	MS_B8 takes the call.	The PTP call between MS_A7 and MS_B8 is successfully established. MS_A7 has speech path to MS_B8.
8)	MS_A7 closes the call.	Call is released. All related resources are de-allocated.
9)	MS_A7 establishes a PTP call to MS_B4.	MS_B4 is notified of the incoming call from MS_A7. The MSISDN of MS_A7 is displayed on MS_B4.
10)	MS_B4 takes the call.	The PTP call between MS_A7 and MS_B4 is successfully established. MS_A7 has speech path to MS_B4.
11)	MS_A7 closes the call.	Call is released. All related resources are de-allocated.

Step 12: Outgoing Access (OA) originating subscriber of HLR_A1/CUG_A1 in network B.

Step	Action	Expected result(s)
1)	All CUG_A1 members have outgoing access (OA).	Outgoing calls for CUG_A1 members are possible.
2)	All CUG_A2 members have NO outgoing access (OA).	Outgoing calls for CUG_A2 members are not possible.
3)	MS_A1 establishes a PTP call to MS_A8.	MS_A8 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A8.

Step	Action	Expected result(s)
4)	MS_A8 takes the call.	The PTP call between MS_A1 and MS_A8 is successfully established. MS_A1 has speech path to MS_A8.
5)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
6)	MS_A1 establishes a PTP call to MS_B4.	MS_B4 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_B4.
7)	MS_B4 takes the call.	The PTP call between MS_A1 and MS_B4 is successfully established. MS_A1 has speech path to MS_B4.
8)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
9)	MS_A1 establishes a PTP call to MS_B8.	MS_B8 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_B8.
10)	MS_B8 takes the call.	The PTP call between MS_A1 and MS_B8 is successfully established. MS_A1 has speech path to MS_B8.
11)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
12)	MS_A1 establishes a PTP call to MS_A4.	MS_A4 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A4.
13)	MS_A4 takes the call.	The PTP call between MS_A1 and MS_BA4 is successfully established. MS_A1 has speech path to MS_A4.
14)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.

Step 13: No Outgoing Access (OA) originating subscriber of HLR_A1/CUG_A2 in network B.

Step	Action	Expected result(s)
1)	All CUG_A1 members have outgoing access (OA).	Outgoing calls for CUG_A1 members are possible.
2)	All CUG_A2 members have NO outgoing access (OA).	Outgoing calls for CUG_A2 members are not possible.
3)	MS_A2 establishes a PTP call to MS_A8.	MS_A6 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
4)	MS_A2 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.

Step	Action	Expected result(s)
5)	MS_A2 establishes a PTP call to MS_B4.	MS_A2 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
6)	MS_A2 closes the call or awaits the network terminates the call.	Call is released. All related resources are deallocated.
7)	MS_A2 establishes a PTP call to MS_B8.	MS_A2 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
8)	MS_A2 closes the call or awaits the network terminates the call.	Call is released. All related resources are deallocated.
9)	MS_A2 establishes a PTP call to MS_A4.	MS_A2 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
10)	MS_A2 closes the call or awaits the network terminates the call.	Call is released. All related resources are deallocated.

Step 14: Outgoing Access (OA) originating subscriber of HLR_A1/CUG_A1 and CUG_A2 in network B.

Step	Action	Expected result(s)
1)	All CUG_A1 members have outgoing access (OA).	Outgoing calls for CUG_A1 members are possible.
2)	All CUG_A2 have NO outgoing access (OA).	Outgoing calls for CUG_A2 members are not possible.
3)	MS_A3 establishes a PTP call to MS_A8.	MS_A8 is notified of the incoming call from MS_A3. The MSISDN of MS_A3 is displayed on MS_A8.
4)	MS_A8 takes the call.	The PTP call between MS_A3 and MS_A8 is successfully established. MS_A3 has speech path to MS_A8.
5)	MS_A3 closes the call.	Call is released. All related resources are deallocated.
6)	MS_A3 establishes a PTP call to MS_B4.	MS_B4 is notified of the incoming call from MS_A3. The MSISDN of MS_A3 is displayed on MS_B4.
7)	MS_B4 takes the call.	The PTP call between MS_A3 and MS_B4 is successfully established. MS_A3 has speech path to MS_B4.
8)	MS_A3 closes the call.	Call is released. All related resources are deallocated.
9)	MS_A3 establishes a PTP call to MS_B8.	MS_B8 is notified of the incoming call from MS_A3. The MSISDN of MS_A3 is displayed on MS_B8.

Step	Action	Expected result(s)
10)	MS_B8 takes the call.	The PTP call between MS_A3 and MS_B8 is successfully established. MS_A3 has speech path to MS_B8.
11)	MS_A3 closes the call.	Call is released. All related resources are de-allocated.
12)	MS_A3 establishes a PTP call to MS_A4.	MS_A4 is notified of the incoming call from MS_A3. The MSISDN of MS_A3 is displayed on MS_A4.
13)	MS_A4 takes the call.	The PTP call between MS_A3 and MS_BA4 is successfully established. MS_A3 has speech path to MS_A4.
14)	MS_A3 closes the call.	Call is released. All related resources are de-allocated.

Step 15: Incoming Calls Barred Within A CUG (ICB) and Outgoing Calls Barred Within A CUG (OCB) CUG in HLR_A1.

Step	Action	Expected result(s)
1)	All CUG_A1 members have incoming access (IA).	Incoming calls for CUG_A1 members are possible.
2)	All CUG_A1 members have outgoing access (OA).	Outgoing calls for CUG_A1 members are possible.
3)	Subscriber MS_A1 have incoming calls barred within a CUG (ICB).	Incoming calls to MS_A1 form other CUG_A1 members are not possible.
4)	Subscriber MS_A5 have outgoing calls barred within a CUG (OCB).	Outgoing calls from MS_A5 form other CUG_A1 members are not possible.
5)	MS_A1 establishes a PTP call to MS_A8.	MS_A8 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A8.
6)	MS_A8 takes the call.	The PTP call between MS_A1 and MS_A8 is successfully established. MS_A1 has speech path to MS_A8.
7)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
8)	MS_A1 establishes a PTP call to MS_B4.	MS_B4 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_B4.
9)	MS_B4 takes the call.	The PTP call between MS_A1 and MS_B4 is successfully established. MS_A1 has speech path to MS_B4.
10)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.

Step	Action	Expected result(s)
11)	MS_A1 establishes a PTP call to MS_A4.	MS_A4 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A4.
12)	MS_A4 takes the call.	The PTP call between MS_A1 and MS_A4 is successfully established. MS_A1 has speech path to MS_A4.
13)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
14)	MS_A1 establishes a PTP call to MS_B8.	MS_B8 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_B8.
15)	MS_B8 takes the call.	The PTP call between MS_A1 and MS_B8 is successfully established. MS_A1 has speech path to MS_B8.
16)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
17)	MS_A8 establishes a PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_A8. The MSISDN of MS_A8 is displayed on MS_A1.
18)	MS_A1 takes the call.	The PTP call between MS_A8 and MS_A1 is successfully established. MS_A8 has speech path to MS_A1.
19)	MS_A8 closes the call.	Call is released. All related resources are de-allocated.
20)	MS_B4 establishes a PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_B4. The MSISDN of MS_B4 is displayed on MS_A1.
21)	MS_A1 takes the call.	The PTP call between MS_B4 and MS_A1 is successfully established. MS_B4 has speech path to MS_A1.
22)	MS_B4 closes the call.	Call is released. All related resources are de-allocated.
23)	MS_A4 establishes a PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_A4. The MSISDN of MS_A4 is displayed on MS_A1.
24)	MS_A1 takes the call.	The PTP call between MS_A4 and MS_A1 is successfully established. MS_A4 has speech path to MS_A1.
25)	MS_A4 closes the call.	Call is released. All related resources are de-allocated.
26)	MS_B8 establishes a PTP call to MS_A1.	MS_A1 is notified of the incoming call from MS_B8. The MSISDN of MS_B8 is displayed on MS_A1.

Step	Action	Expected result(s)
27)	MS_A1 takes the call.	The PTP call between MS_B8 and MS_A1 is successfully established. MS_B8 has speech path to MS_A1.
28)	MS_B8 closes the call.	Call is released. All related resources are de-allocated.
29)	MS_A1 establishes a PTP call to MS_A5.	MS_A5 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A5.
30)	MS_A5 takes the call.	The PTP call between MS_A1 and MS_A5 is successfully established. MS_A1 has speech path to MS_A5.
31)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
32)	MS_A5 establishes a PTP call to MS_A1.	MS_A5 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
33)	MS_A5 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
34)	MS_A1 establishes a PTP call to MS_A3.	MS_A3 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A3.
35)	MS_A3 takes the call.	The PTP call between MS_A1 and MS_A3 is successfully established. MS_A1 has speech path to MS_A3.
36)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
37)	MS_A3 establishes a PTP call to MS_A1.	MS_A3 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
38)	MS_A3 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
39)	MS_A1 establishes a PTP call to MS_A7.	MS_A7 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A7.
40)	MS_A7 takes the call.	The PTP call between MS_A1 and MS_A7 is successfully established. MS_A1 has speech path to MS_A7.
41)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
42)	MS_A7 establishes a PTP call to MS_A1.	MS_A7 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.

Step	Action	Expected result(s)
43)	MS_A7 closes the call or awaits the network terminates the call.	Call is released. All related resources are deallocated.
44)	MS_A5 establishes a PTP call to MS_A3.	MS_A5 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
45)	MS_A5 closes the call or awaits the network terminates the call.	Call is released. All related resources are deallocated.
46)	MS_A3 establishes a PTP call to MS_A5.	MS_A5 is notified of the incoming call from MS_A3. The MSISDN of MS_A3 is displayed on MS_A5.
47)	MS_A5 takes the call.	The PTP call between MS_A3 and MS_A5 is successfully established. MS_A3 has speech path to MS_A5.
48)	MS_A3 closes the call.	Call is released. All related resources are deallocated.
49)	MS_A5 establishes a PTP call to MS_A7	MS_A5 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
50)	MS_A5 closes the call or awaits the network terminates the call.	Call is released. All related resources are deallocated.
51)	MS_A7 establishes a PTP call to MS_A5.	MS_A5 is notified of the incoming call from MS_A7. The MSISDN of MS_A7 is displayed on MS_A5.
52)	MS_A5 takes the call.	The PTP call between MS_A3 and MS_A5 is successfully established. MS_A3 has speech path to MS_A5.
53)	MS_A7 closes the call.	Call is released. All related resources are deallocated.

Step 16: Incoming Calls Barred Within A CUG (ICB) and Outgoing Calls Barred Within A CUG (OCB) CUG in HLR_B1.

Step	Action	Expected result(s)
1)	All CUG_B3 members have incoming access (IA).	Incoming calls for CUG_A1 members are possible.
2)	All CUG_B3 members have outgoing access (OA).	Outgoing calls for CUG_A1 members are possible.
3)	Subscriber MS_B1 have incoming calls barred within a CUG (ICB).	Incoming calls to MS_B1 form other CUG_B3 members are not possible.
4)	Subscriber MS_B5 have outgoing calls barred within a CUG (OCB).	Outgoing calls from MS_B5 form other CUG_B3 members are not possible.

Step	Action	Expected result(s)
5)	MS_B1 establishes a PTP call to MS_A8.	MS_A8 is notified of the incoming call from MS_B1. The MSISDN of MS_B1 is displayed on MS_A8.
6)	MS_A8 takes the call.	The PTP call between MS_B1 and MS_A8 is successfully established. MS_B1 has speech path to MS_A8.
7)	MS_B1 closes the call.	Call is released. All related resources are de-allocated.
8)	MS_B1 establishes a PTP call to MS_B4.	MS_B4 is notified of the incoming call from MS_B1. The MSISDN of MS_B1 is displayed on MS_B4.
9)	MS_B4 takes the call.	The PTP call between MS_B1 and MS_B4 is successfully established. MS_B1 has speech path to MS_B4.
10)	MS_B1 closes the call.	Call is released. All related resources are de-allocated.
11)	MS_B1 establishes a PTP call to MS_A4.	MS_A4 is notified of the incoming call from MS_B1. The MSISDN of MS_B1 is displayed on MS_A4.
12)	MS_A4 takes the call.	The PTP call between MS_B1 and MS_A4 is successfully established. MS_B1 has speech path to MS_A4.
13)	MS_B1 closes the call.	Call is released. All related resources are de-allocated.
14)	MS_B1 establishes a PTP call to MS_B8.	MS_B8 is notified of the incoming call from MS_B1. The MSISDN of MS_B1 is displayed on MS_B8.
15)	MS_B8 takes the call.	The PTP call between MS_B1 and MS_B8 is successfully established. MS_B1 has speech path to MS_B8.
16)	MS_B1 closes the call.	Call is released. All related resources are de-allocated.
17)	MS_A8 establishes a PTP call to MS_B1.	MS_B1 is notified of the incoming call from MS_A8. The MSISDN of MS_A8 is displayed on MS_B1.
18)	MS_B1 takes the call.	The PTP call between MS_A8 and MS_B1 is successfully established. MS_A8 has speech path to MS_B1.
19)	MS_A8 closes the call.	Call is released. All related resources are de-allocated.
20)	MS_B4 establishes a PTP call to MS_B1.	MS_B1 is notified of the incoming call from MS_B4. The MSISDN of MS_B4 is displayed on MS_B1.

Step	Action	Expected result(s)
21)	MS_B1 takes the call.	The PTP call between MS_B4 and MS_B1 is successfully established. MS_B4 has speech path to MS_B1.
22)	MS_B4 closes the call.	Call is released. All related resources are de-allocated.
23)	MS_A4 establishes a PTP call to MS_B1.	MS_B1 is notified of the incoming call from MS_A4. The MSISDN of MS_A4 is displayed on MS_B1.
24)	MS_B1 takes the call.	The PTP call between MS_A4 and MS_B1 is successfully established. MS_A4 has speech path to MS_B1.
25)	MS_A4 closes the call.	Call is released. All related resources are de-allocated.
26)	MS_B8 establishes a PTP call to MS_B1.	MS_B1 is notified of the incoming call from MS_B8. The MSISDN of MS_B8 is displayed on MS_B1.
27)	MS_B1 takes the call.	The PTP call between MS_B8 and MS_B1 is successfully established. MS_B8 has speech path to MS_B1.
28)	MS_B8 closes the call.	Call is released. All related resources are de-allocated.
29)	MS_B1 establishes a PTP call to MS_A5.	MS_A5 is notified of the incoming call from MS_B1. The MSISDN of MS_B1 is displayed on MS_A5.
30)	MS_A5 takes the call.	The PTP call between MS_B1 and MS_A5 is successfully established. MS_B1 has speech path to MS_A5.
31)	MS_B1 closes the call.	Call is released. All related resources are de-allocated.
32)	MS_A5 establishes a PTP call to MS_B1.	MS_A5 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
33)	MS_A5 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
34)	MS_B1 establishes a PTP call to MS_A3.	MS_A3 is notified of the incoming call from MS_B1. The MSISDN of MS_B1 is displayed on MS_A3.
35)	MS_A3 takes the call.	The PTP call between MS_B1 and MS_A3 is successfully established. MS_B1 has speech path to MS_A3.
36)	MS_B1 closes the call.	Call is released. All related resources are de-allocated.

Step	Action	Expected result(s)
37)	MS_A3 establishes a PTP call to MS_B1.	MS_A3 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
38)	MS_A3 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
39)	MS_B1 establishes a PTP call to MS_A7.	MS_A7 is notified of the incoming call from MS_B1. The MSISDN of MS_B1 is displayed on MS_A7.
40)	MS_A7 takes the call.	The PTP call between MS_B1 and MS_A7 is successfully established. MS_B1 has speech path to MS_A7.
41)	MS_B1 closes the call.	Call is released. All related resources are de-allocated.
42)	MS_A7 establishes a PTP call to MS_B1.	MS_A7 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
43)	MS_A7 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
44)	MS_A5 establishes a PTP call to MS_A3.	MS_A5 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
45)	MS_A5 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
46)	MS_A3 establishes a PTP call to MS_A5.	MS_A5 is notified of the incoming call from MS_A3. The MSISDN of MS_A3 is displayed on MS_A5.
47)	MS_A5 takes the call.	The PTP call between MS_A3 and MS_A5 is successfully established. MS_A3 has speech path to MS_A5.
48)	MS_A3 closes the call.	Call is released. All related resources are de-allocated.
49)	MS_A5 establishes a PTP call to MS_A7	MS_A5 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
50)	MS_A5 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.
51)	MS_A7 establishes a PTP call to MS_A5.	MS_A5 is notified of the incoming call from MS_A7. The MSISDN of MS_A7 is displayed on MS_A5.
52)	MS_A5 takes the call.	The PTP call between MS_A3 and MS_A5 is successfully established. MS_A3 has speech path to MS_A5.

Step	Action	Expected result(s)
53)	MS_A7 closes the call.	Call is released. All related resources are de-allocated.

Step 17: Public Emergency Call.

Step	Action	Expected result(s)
1)	Subscribers MS_A1, MS_A5, MS_B1 and MS_B5 do not have the service outgoing access (OA).	Outgoing calls for MS_A1, MS_A5, MS_B1 and MS_B5 are NOT possible.
2)	MS_A1 establishes a Public Emergency Call.	The PSAP (Public Safety Answering Point) operator is notified of the incoming emergency call from MS_A1. The MSISDN of MS_A1 is displayed on the display of the operator terminal.
3)	The PSAP operator takes the call.	The emergency call between MS_A1 and PSAP operator is successfully established. MS_A1 has speech path to the operator.
4)	MS_A1 closes the call.	Emergency call is released. All related resources are de-allocated.
5)	MS_A5 establishes a Public Emergency Call.	The PSAP (Public Safety Answering Point) operator is notified of the incoming emergency call from MS_A5. The MSISDN of MS_A5 is displayed on the display of the operator terminal.
6)	The PSAP operator takes the call.	The emergency call between MS_A5 and PSAP operator is successfully established. MS_A5 has speech path to the operator.
7)	MS_A5 closes the call.	Emergency call is released. All related resources are de-allocated.
8)	MS_B1 establishes a Public Emergency Call.	The PSAP (Public Safety Answering Point) operator is notified of the incoming emergency call from MS_B1. The MSISDN of MS_B1 is displayed on the display of the operator terminal.
9)	The PSAP operator takes the call.	The emergency call between MS_B1 and PSAP operator is successfully established. MS_B1 has speech path to the operator.
10)	MS_B1 closes the call.	Emergency call is released. All related resources are de-allocated.
11)	MS_B5 establishes a Public Emergency Call.	The PSAP (Public Safety Answering Point) operator is notified of the incoming emergency call from MS_B5. The MSISDN of MS_B5 is displayed on the display of the operator terminal.

Step	Action	Expected result(s)
12)	The PSAP operator takes the call.	The emergency call between MS_B5 and PSAP operator is successfully established. MS_B5 has speech path to the operator.
13)	MS_B5 closes the call.	Emergency call is released. All related resources are de-allocated.

Step 18: Railway Emergency Call (GID: 299).

Step	Action	Expected result(s)
1)	Subscribers MS_A1, MS_A5, MS_B1 and MS_B5 do not have the service outgoing access (OA).	Outgoing calls for MS_A1, MS_A5, MS_B1 and MS_B5 are NOT possible.
2)	MS_A1 is registered to a FN (Functional Number).	MS_A1 have a FN witch is shown on the display of MS_A1.
3)	MS_A1 establishes a Railway Emergency Call (GID: 299).	The CT_A1 and CT_B1 are notified of the incoming emergency call from MS_A1. The FN (Functional Number) of MS_A1 is displayed on the display of the CT terminals via OTDI.
4)	The CT_A1 takes the call.	The emergency call between MS_A1 and the CT_A1 is successfully established. MS_A1 has speech path to the CT_A1.
5)	The CT_B1 takes the call.	The emergency call between MS_A1 and the CT_B1 is successfully established. MS_A1 has speech path to the CT_B1.
6)	MS_A1 closes the call.	Emergency call is released. All related resources are de-allocated.
7)	MS_A5 is registered to a FN (Functional Number).	MS_A5 have a FN witch is shown on the display of MS_A5.
8)	MS_A5 establishes a Railway Emergency Call (GID: 299).	The CT_A1 and CT_B1 are notified of the incoming emergency call from MS_A5. The FN (Functional Number) of MS_A5 is displayed on the display of the CT terminals via OTDI.
9)	The CT_A1 takes the call.	The emergency call between MS_A5 and the CT_A1 is successfully established. MS_A5 has speech path to the CT_A1.
10)	The CT_B1 takes the call.	The emergency call between MS_A5 and the CT_B1 is successfully established. MS_A5 has speech path to the CT_B1.
11)	MS_A5 closes the call.	Emergency call is released. All related resources are de-allocated.
12)	MS_B1 is registered to a FN (Functional Number).	MS_B1 have a FN witch is shown on the display of MS_B1.

Step	Action	Expected result(s)
13)	MS_B1 establishes a Railway Emergency Call (GID: 299).	The CT_A1 and CT_B1 are notified of the incoming emergency call from MS_B1. The FN (Functional Number) of MS_B1 is displayed on the display of the CT terminals via OTDI.
14)	The CT_A1 takes the call.	The emergency call between MS_B1 and the CT_A1 is successfully established. MS_B1 has speech path to the CT_A1.
15)	The CT_B1 takes the call.	The emergency call between MS_B1 and the CT_B1 is successfully established. MS_B1 has speech path to the CT_B1.
16)	MS_B1 closes the call.	Emergency call is released. All related resources are de-allocated.
17)	MS_B5 is registered to a FN (Functional Number).	MS_B5 have a FN witch is shown on the display of MS_B5.
18)	MS_B5 establishes a Railway Emergency Call (GID: 299).	The CT_A1 and CT_B1 are notified of the incoming emergency call from MS_B5. The FN (Functional Number) of MS_B5 is displayed on the display of the CT terminals via OTDI.
19)	The CT_A1 takes the call.	The emergency call between MS_B5 and the CT_A1 is successfully established. MS_B5 has speech path to the CT_A1.
20)	The CT_B1 takes the call.	The emergency call between MS_B5 and the CT_B1 is successfully established. MS_B5 has speech path to the CT_B1.
21)	MS_B5 closes the call.	Emergency call is released. All related resources are de-allocated.

d) Success criteria

Handling from incoming and outgoing calls are in accordance with the barring settings of the CUG members.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.47 Call barring (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.17	2.4.1 9.10.2	

a) Purpose

Verify the Supplementary Service Call barring.

- Barring of outgoing international calls except those directed to the home PLMN country (BOICEXHC)
- Barring of incoming calls when roaming outside the home PLMN country (BIC-Roam)

b) Test configuration / initial conditions

MS_A1 have Supplementary Service Call barring.

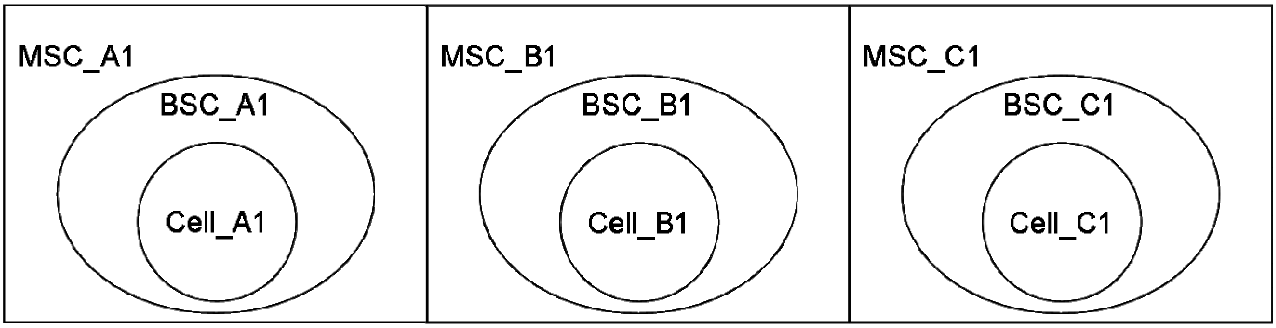
This test case has been divided into the following steps:

Step 1: Barring of outgoing international calls except those directed to the home PLMN country (BOICEXHC).

Step 2: Barring of incoming calls when roaming outside the home PLMN country (BIC-Roam).

Test configuration for step 1 and 2:

Network A **Network B** **Network C**



MSC_A1	**MSC_B1**	**MSC_C1**
MS_B1	MS_A1	MS_C1
MS_A2	MS_B2	
	MS_A3	

c) Test procedure

All Call Barring codes are specific to your network, so you'll have to ask the network operator what [code] to enter below:

Feature	**All**	**Outgoing**	**Incoming**	**Outgoing International**	**Outgoing Intl except home country**	**Incoming outside home country**
Activate Cancel Status	**330*[code]# ##330*[code]# *#330#	**333*[code]# ##333*[code]# *#333#	**35*[code]# ##35*[code]# *#35#	**331*[code]# ##331*[code]# *#331#	**332*[code]# ##332*[code]# *#332#	**351*[code]# ##351*[code]# *#351#

Step 1: Barring of outgoing international calls except those directed to the home PLMN country (BOICEXHC).

Step	Action	Expected result(s)
1)	Configure MS_A1 to further call barring of outgoing international calls except those directed to the home PLMN country by dialling **332*[code]#.	Subscriber information is updated.
2)	MS_A1 establishes a PTP Call to MS_B1.	MS_B1 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_B1.
3)	MS_B1 takes the call.	The PTP call between MS_A1 and MS_B1 is successfully established. MS_A1 has speech path to MS_B1.
4)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
5)	MS_A1 establishes a PTP Call to MS_B2.	MS_B2 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_B2.
6)	MS_B2 takes the call.	The PTP call between MS_A1 and MS_B2 is successfully established. MS_A1 has speech path to MS_B2.
7)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
8)	MS_A1 establishes a PTP Call to MS_A2.	MS_A2 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A2.
9)	MS_A2 takes the call.	The PTP call between MS_A1 and MS_A2 is successfully established. MS_A1 has speech path to MS_A2.
10)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
11)	MS_A1 establishes a PTP Call to MS_A3.	MS_A3 is notified of the incoming call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A3.
12)	MS_A3 takes the call.	The PTP call between MS_A1 and MS_A3 is successfully established. MS_A1 has speech path to MS_A3.
13)	MS_A1 closes the call.	Call is released. All related resources are de-allocated.
14)	MS_A1 establishes a PTP Call to MS_C1.	MS_A1 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
15)	MS_A1 closes the call or awaits the network terminates the call.	Call is released. All related resources are de-allocated.

Step	Action	Expected result(s)
16)	MS_A1 did cancel the call barring of outgoing international calls except those directed to the home PLMN country by dialling ##332*[code]#.	Barring of outgoing international calls except those directed to the home PLMN country is deactivated.
17)	MS_A1 did check the status by dialling *#332# for call barring of outgoing international calls except those directed to the home PLMN country.	

Step 2: Barring of incoming calls when roaming outside the home PLMN country (BIC-Roam).

Step	Action	Expected result(s)
1)	Configure MS_A1 to further call barring of incoming calls when roaming outside the home PLMN country by dialling **351*[code]#.	Subscriber information is updated.
2)	MS_A2 establishes a PTP Call to MS_A1.	MS_A2 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
3)	MS_A2 closes the call or awaits the network terminates the call.	Call is released. All related resources are deallocated.
4)	MS_A3 establishes a PTP Call to MS_A1.	MS_A3 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
5)	MS_A3 closes the call or awaits the network terminates the call.	Call is released. All related resources are deallocated.
6)	MS_B1 establishes a PTP Call to MS_A1.	MS_B1 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
7)	MS_B1 closes the call or awaits the network terminates the call.	Call is released. All related resources are deallocated.
8)	MS_B2 establishes a PTP Call to MS_A1.	MS_B2 receives an audible indicator (e.g. announcement or a tree-tone). Depending on the network configuration.
9)	MS_B2 closes the call or awaits the network terminates the call.	Call is released. All related resources are deallocated.
10)	MS_A1 did cancel the call barring of incoming calls when roaming outside the home PLMN country by dialling ##351*[code]#.	Barring of incoming calls when roaming outside the home PLMN country is deactivated.

Step	Action	Expected result(s)
11)	MS_A1 did check the status by dialling *#351# for call barring of incoming calls when roaming outside the home PLMN country.	

d) Success criteria

MS_A1 was able configure different call barring settings. Handling from incoming and outgoing calls are in accordance with the barring settings.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.48 Public Emergency Call – With SIM (non-roaming case)

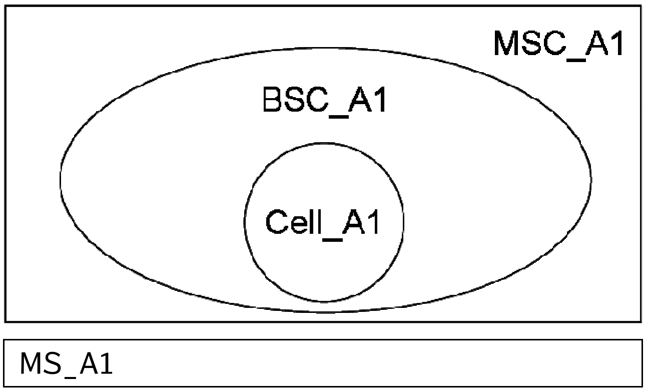
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.2.1 2.2.5 9.3.2	2.2.1	

a) Purpose

Verify Public Emergency Call - With SIM.

b) Test configuration / initial conditions

Network A



c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a Public Emergency Call.	The PSAP (Public Safety Answering Point) operator is notified of the incoming emergency call from MS_A1. The MSISDN of MS_A1 is displayed on the display of the operator terminal.
2)	The PSAP operator takes the call.	The emergency call between MS_A1 and PSAP operator is successfully established. MS_A1 has speech path to the operator.
3)	MS_A1 closes the call.	Emergency call is released. All related resources are de-allocated.

d) Success criteria

MS_A1 was able to establish a Public Emergency Call. The MSISDN from MS_A1 was displayed on PSAP (Public Safety Answering Point) operator terminal.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.49 Public Emergency Call – Without SIM (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.2.5 9.3.2	2.2.1	

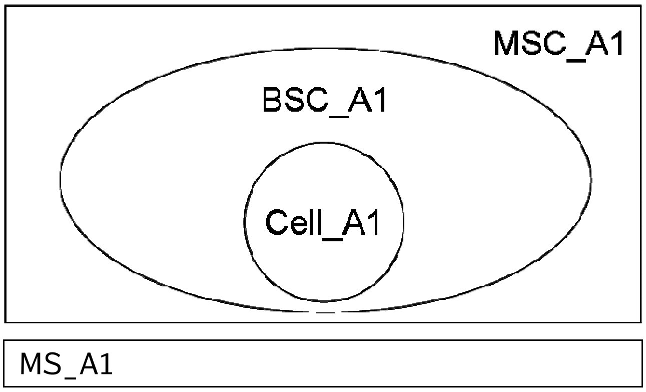
a) Purpose

Verify Public Emergency Call – Without SIM.

b) Test configuration / initial conditions

MS_A1 has NO SIM inside.

Network A



c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a Public Emergency Call.	The PSAP (Public Safety Answering Point) operator is notified of the incoming emergency call from MS_A1. The MSISDN of MS_A1 is NOT displayed on the display of the operator terminal.
2)	The PSAP operator takes the call.	The emergency call between MS_A1 and PSAP operator is successfully established. MS_A1 has speech path to the operator.
3)	MS_A1 closes the call.	Emergency call is released. All related re-sources are de-allocated.

d) Success criteria

MS_A1 was able to establish a Public Emergency Call without SIM.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.50 Public Emergency Call – with TMSI and IMSI unknown in VLR (non-roaming case)

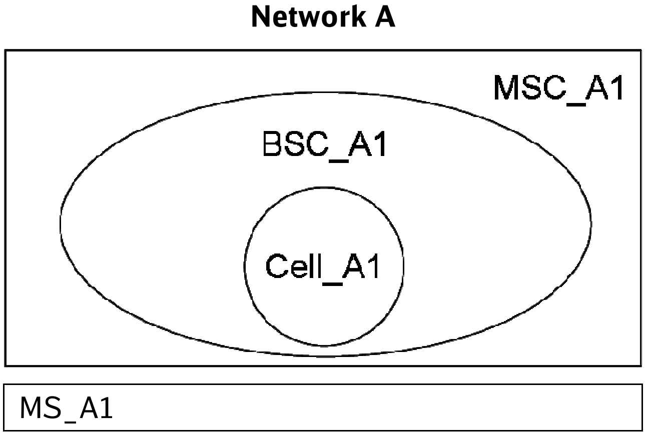
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.2.5 9.3.2	2.2.1	

a) Purpose

Verify Public Emergency Call - With SIM, but the TMSI and IMSI are unknown in VLR

b) Test configuration / initial conditions

SIM of MS_A1 has no subscription to network A.



c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a Public Emergency Call.	The PSAP (Public Safety Answering Point) operator is notified of the incoming emergency call from MS_A1. The MSISDN of MS_A1 is NOT displayed on the display of the operator terminal.
2)	The PSAP operator takes the call.	The emergency call between MS_A1 and PSAP operator is successfully established. MS_A1 has speech path to the operator.
3)	MS_A1 close the call.	Emergency call is released. All related re-sources are de-allocated.

d) Success criteria

MS_A1 is able to establish a Public Emergency Call with unknown TMSI and IMSI in VLR.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.51 Public Emergency Call – With SIM (roaming case)

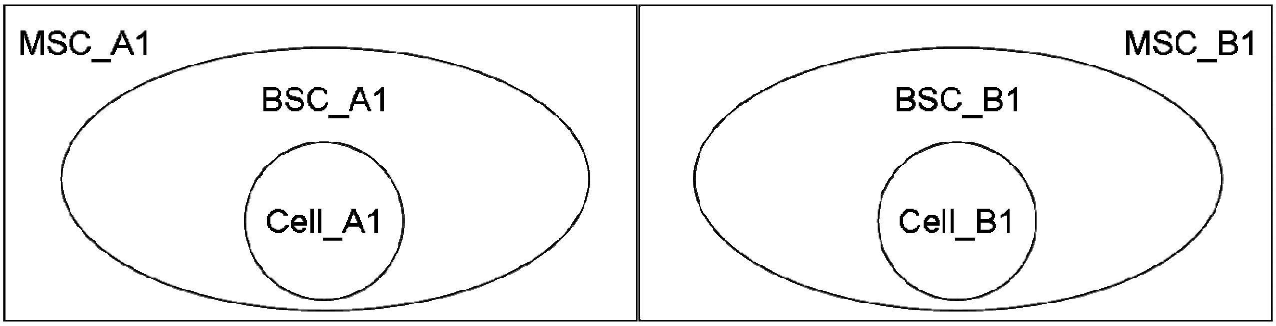
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.2.5 9.3.2	2.2.1	

a) Purpose

Verify Public Emergency Call - With SIM.

b) Test configuration / initial conditions

Network A **Network B**



MSC_A1	MSC_B1
MS_B1	MS_A1

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a Public Emergency Call.	The PSAP (Public Safety Answering Point) operator is notified of the incoming emergency call from MS_A1. The MSISDN of MS_A1 is displayed on the display of the operator terminal.
2)	The PSAP operator takes the call.	The emergency call between MS_A1 and PSAP operator is successfully established. MS_A1 has speech path to the operator.
3)	MS_A1 closes the call.	Emergency call is released. All related resources are de-allocated.

Step	Action	Expected result(s)
4)	MS_B1 establishes a Public Emergency Call.	The PSAP (Public Safety Answering Point) operator is notified of the incoming emergency call from MS_B1. The MSISDN of MS_B1 is displayed on the display of the operator terminal.
5)	The PSAP operator takes the call.	The emergency call between MS_B1 and PSAP operator is successfully established. MS_B1 has speech path to the operator.
6)	MS_B1 closes the call.	Emergency call is released. All related resources are de-allocated.

d) Success criteria

MS_A1 and MS_B1 are able to establish a Public Emergency Call. The MSISDN of the originator was displayed on PSAP (Public Safety Answering Point) operator terminal.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.52 Public Emergency Call – Without SIM (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.2.5 9.3.2	2.2.1	

a) Purpose

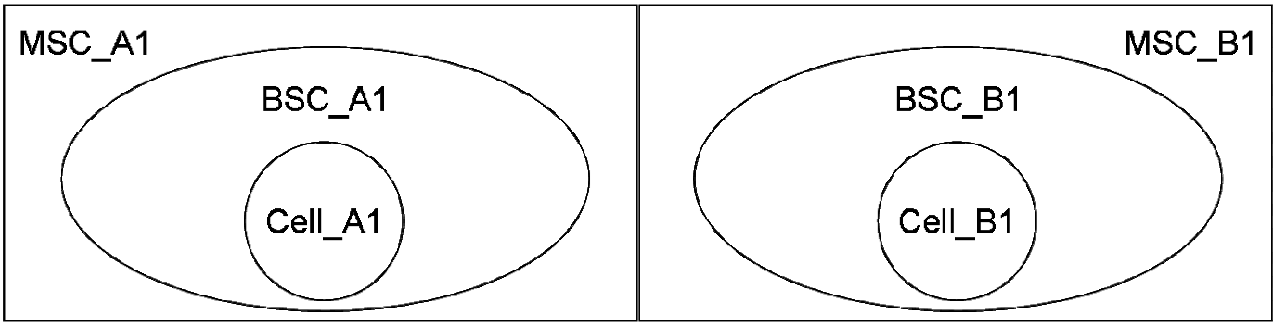
Verify Public Emergency Call - Without SIM.

b) Test configuration / initial conditions

MS_A1 has NO SIM.

MS_B1 has NO SIM.

Network A **Network B**



MSC_A1	MSC_B1
MS_B1	MS_A1

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a Public Emergency Call.	The PSAP (Public Safety Answering Point) operator is notified of the incoming emergency call from MS_A1. The MSISDN of MS_A1 is NOT displayed on the display of the operator terminal.
2)	The PSAP operator takes the call.	The emergency call between MS_A1 and PSAP operator is successfully established. MS_A1 has speech path to the operator.
3)	MS_A1 closes the call.	Emergency call is released. All related re-sources are de-allocated.
4)	MS_B1 establishes a Public Emergency Call.	The PSAP (Public Safety Answering Point) operator is notified of the incoming emergency call from MS_B1. The MSISDN of MS_B1 is NOT displayed on the display of the operator terminal.
5)	The PSAP operator takes the call.	The emergency call between MS_B1 and PSAP operator is successfully established. MS_B1 has speech path to the operator.
6)	MS_B1 closes the call.	Emergency call is released. All related re-sources are de-allocated.

d) Success criteria

MS_A1 and MS_B1 are able to establish a Public Emergency Call without SIM.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.1.53 Public Emergency Call – with TMSI and IMSI unknown in VLR (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.2.5 9.3.2	2.2.1	

a) Purpose

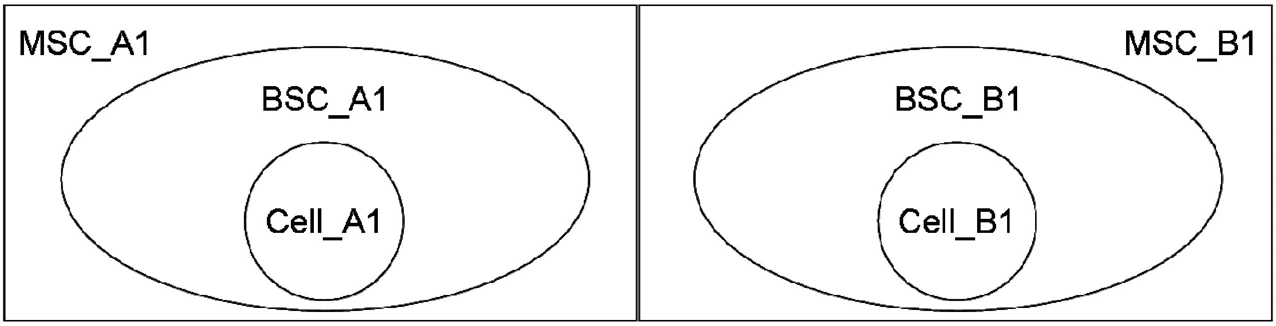
Verify Public Emergency Call - With SIM, but the TMSI and IMSI are unknown in VLR.

b) Test configuration / initial conditions

HLR settings of MS_A1 do NOT allow it to perform roaming in network B.

HLR settings of MS_B1 do NOT allow it to perform roaming in network A.

Network A **Network B**



MSC_A1	**MSC_B1**
MS_B1	MS_A1

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a Public Emergency Call.	The PSAP (Public Safety Answering Point) operator is notified of the incoming emergency call from MS_A1. The MSISDN of MS_A1 is NOT displayed on the display of the operator terminal.
2)	The PSAP operator takes the call.	The emergency call between MS_A1 and PSAP operator is successfully established. MS_A1 has speech path to the operator.
3)	MS_A1 close the call.	Emergency call is released. All related re-sources are de-allocated.
4)	MS_B1 establishes a Public Emergency Call.	The PSAP (Public Safety Answering Point) operator is notified of the incoming emergency call from MS_B1. The MSISDN of MS_B1 is NOT displayed on the display of the operator terminal.
5)	The PSAP operator takes the call.	The emergency call between MS_B1 and PSAP operator is successfully established. MS_B1 has speech path to the operator.
6)	MS_B1 close the call.	Emergency call is released. All related re-sources are de-allocated.

d) Success criteria

MS_A1 and MS_B1 are able to establish a Public Emergency Call with unknown TMSI and IMSI in VLR.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2 Functional Addressing

General Purpose

Verify the registration, deregistration, interrogation and forced deregistration of FN in home network and also in roaming cases.

5.2.1 Register of a FN (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 11.2.1.1 11.3.2.1 11.3.2.3	2.4.1 2.5.1 11.3.2 11.3.5 11.3.7	

a) Purpose

Verify registration of FN in different ways.

Verify the registration of 10 FN within 30 seconds.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Register of a FN in different ways

Step 2: Register of 10 FN

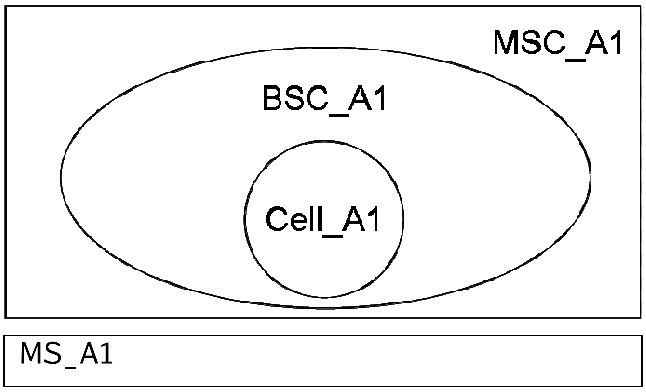
Test configuration for step 1 and 2

Preprovisioning of FN or Dynamic FN creation

All FN to register are unregistered.

Protocol analyzer is configured to trace A-interface to verify the transmitting USSD string from and to the network on the MAP interface.

Network A



c) Test procedure

Step 1: Register of a FN in different ways

Step	Action	Expected result(s)
1)	MS_A1 registers a FN_1, CT2, FC01 by sending an USSD string "**214*<IC_A+FN_1>***#".	The MAP interface contains the USSD string as sent from MS. The USSD outcome code "01" which means "Follow Me activated" is displayed on MS A1. Alternatively MS converts the outcome code in an appropriate text message.
2)	Verify the corresponding entry of FFN data-base.	An entry of mapping between FN_1 and MS_A1 exists in FFN database.
3)	MS_A1 registers a FN_9, CT2, FC01 by using the mobile menu.	The MAP interface contains the USSD string as sent from MS. The USSD outcome code "01" which means "Follow Me activated" is displayed on MS A1. Alternatively MS converts the outcome code in an appropriate text message.
4)	Verify the corresponding entry of FFN data-base.	An entry of mapping between FN_9 and MS_A1 exists in FFN database.

Step 2: Register of 10 FN

Step	Action	Expected result(s)
1)	Define 10 FN to register.	10 FN to register are defined.

2)	MS_A1 sends the first USSD message for registration either by typing it manually or by using the terminal menu. When sending the USSD message, start the stop watch simultaneously.	The stop watch runs.
3)	Observe the display of MS_A1. When MS_A1 displays the confirmation of registration (outcome code or text message), stop the stop watch.	MS_A1 displays the confirmation of Registration. The stop watch stops.
4)	Repeat 2) and 3) until all 10 FN registered.	MS_A1 registered to 10 FN.
5)	Verify the recorded duration of the stop watch.	The measured time does not exceed 30 seconds.
6)	Verify the corresponding entries of FFN database.	All 10 entries of mapping between FN and MS_A1 exist in FFN database.

d) Success criteria

Registration of FN works in different ways.

Registration of 10 FN within 30 seconds is possible.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.2 Register 3 functional numbers to one user (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	11.2.1.4	2.4.1 2.5.1	

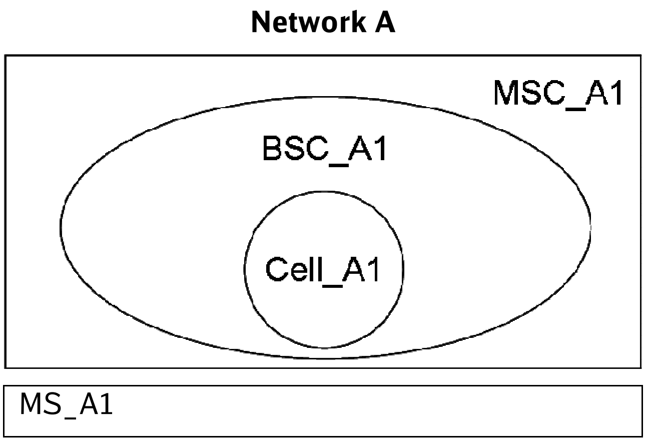
a) Purpose

Verify the registration of 3 FN to one and the same user is possible.

b) Test configuration / initial conditions

Preprovisioning of FN or Dynamic FN Creation.

All FN to register are unregistered.



c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 registers a FN_1, CT2, FC01 by sending an USSD string "**214*<IC_A+FN_1>***#".	The USSD outcome code "01" which means "FollowMe activated" is displayed on MS A1. Alternatively MS converts the outcome code in an appropriate text message.

Step	Action	Expected result(s)
2)	MS_A1 registers a FN_2, CT3, FC01 by sending an USSD string "**214*<IC_A+FN_2>***#".	The USSD outcome code "01" which means "Follow Me activated" is displayed on MS_A1. Alternatively MS converts the outcome code in an appropriate text message.
3)	MS_A1 registers a FN_3, CT4, FC01 by sending an USSD string "**214*<IC_A+FN_3>***#".	The USSD outcome code "01" which means "Follow Me activated" is displayed on MS_A1. Alternatively MS converts the outcome code in an appropriate text message.

d) Success criteria

MS_A1 is registered to 3 different functional numbers.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.3 Register 3 functional numbers to one user (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	11.2.1.4	2.4.1 2.5.1	

a) Purpose

Verify the registration of 3 FN to one and the same user is possible.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

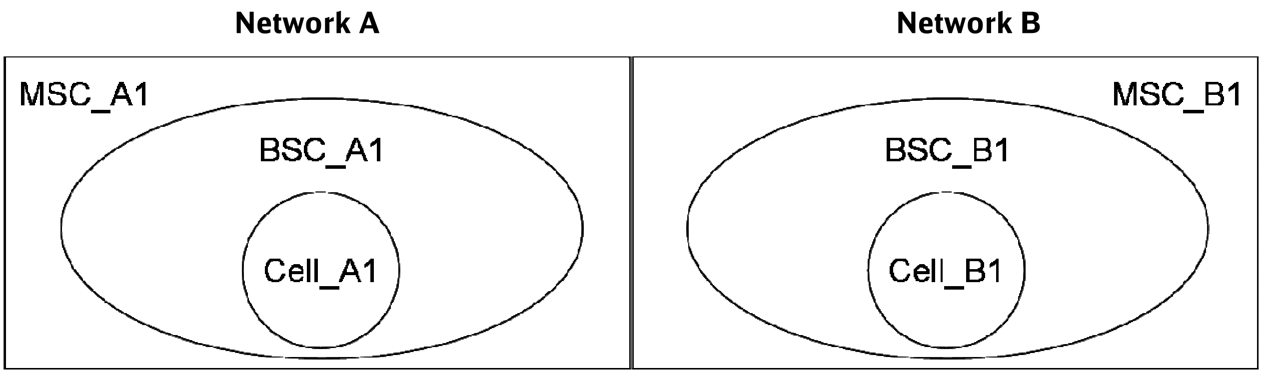
Step 1: Registration of 3 FN to one and the same user in roaming network B.

Step 2: Registration of 3 FN to one and the same user in roaming network A.

Test configuration for step 1 and 2

Preprovisioning of FN or Dynamic FN Creation.

All FN to register are unregistered.



MSC_A1	**MSC_B1**
MS_B2	MS_A2

c) Test procedure

Step 1: Registration of 3 FN to one and the same user in roaming network B.

Step	Action	Expected result(s)
1)	MS_A2 registers a FN_1, CT2, FC01 by sending an USSD string “**214*<IC_B+FN_1>***#”.	The USSD outcome code “01” which means “FollowMe activated” is displayed on MS_A2. Alternatively MS converts the outcome code in an appropriate text message.
2)	MS_A2 registers a FN_2, CT3, FC01 by sending an USSD string “**214*<IC_B+FN_2>***#”.	The USSD outcome code “01” which means “Follow Me activated” is displayed on MS_A2. Alternatively MS converts the outcome code in an appropriate text message.
3)	MS_A2 registers a FN_3, CT4, FC01 by sending an USSD string “**214*<IC_B+FN_3>***#”.	The USSD outcome code “01” which means “Follow Me activated” is displayed on MS_A2. Alternatively MS converts the outcome code in an appropriate text message.

Step 2: Registration of 3 FN to one and the same user in roaming network B.

Step	Action	Expected result(s)
1)	MS_B2 registers a FN_1, CT2, FC01 by sending an USSD string “**214*<IC_A+FN_1>***#”.	The USSD outcome code “01” which means “FollowMe activated” is displayed on MS_B2. Alternatively MS converts the outcome code in an appropriate text message.
2)	MS_B2 registers a FN_2, CT3, FC01 by sending an USSD string “**214*<IC_A+FN_2>***#”.	The USSD outcome code “01” which means “Follow Me activated” is displayed on MS_B2. Alternatively MS converts the outcome code in an appropriate text message.
3)	MS_B2 registers a FN_3, CT4, FC01 by sending an USSD string “**214*<IC_A+FN_3>***#”.	The USSD outcome code “01” which means “Follow Me activated” is displayed on MS_B2. Alternatively MS converts the outcome code in an appropriate text message.

d) Success criteria

MS_A2 is registered to 3 different functional numbers of the network B and MS_B2 is registered to 3 different functional numbers of the network A.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.4 Registration of an unknown FN fails (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	11.3.2.4	2.4.1 2.5.1 11.3.8 11.3.9	

a) Purpose

Verify the registration of a FN which is not preconfigured in the database fails.

b) Test configuration / initial conditions

Preprovioning of FN: the test configuration does not allow the dynamic FN creation.

FN_9 to register is not data filled in FA database.

Protocol analyzer is configured to trace A-interface to verify the transmitting USSD string from and to the network on the MAP interface.

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 sends an USSD string “**214*<IC_A+FN_9>***#”.	The MAP interface contains the USSD string as sent from MS. The USSD outcome code “41” which means “Unknown Remote Party” is displayed on MS_A1. Alternatively MS converts the outcome code in an appropriate text message.

d) Success criteria

Registration of a FN which is not preconfigured in the database fails.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.5 Deregistration of a FN (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 11.3.3.1 11.3.3.3 11.3.3.5	2.4.1 2.5.1 11.3.2 11.3.5 11.3.7 11.3.10 11.3.12	

a) Purpose

Verify the deregistration of a FN.

Verify the deregistration of 10 FN within 30 seconds.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Deregister of a FN in different ways

Step 2: Deregister of 10 FN

Test configuration for step 1 and 2

Protocol analyzer is configured to trace A-interface to verify the transmitting USSD string from and to the network on the MAP interface.

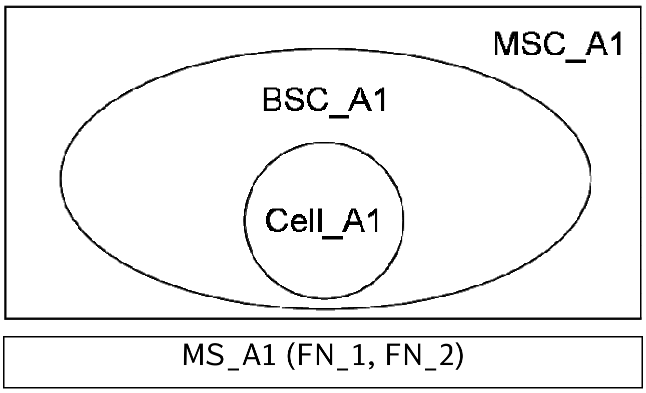
Step 1: MS_A1 is registered to at least 2 FN (e.g. FN_1 and FN_2).

Corresponding entries exist in FFN database.

Step 2: MS_A1 is registered to 10 FN.

Corresponding entries exist in FFN database.

Network A



c) Test procedure

Step 1: Deregister of a FN in different ways

Step	Action	Expected result(s)
1)	MS_A1 deregisters a FN by sending an USSD string "##214*<IC_A+FN_1>***#".	The MAP interface contains the USSD string as sent from MS. The USSD outcome code "02" which means "Follow Me deactivated" is displayed on MS_A1. Alternatively MS converts the outcome code in an appropriate text message. MS_A1 is still registered to FN_2.
2)	Verify FFN database.	The mapping between FN_1 and MS_A1 does no more exist or is labelled as "deregistered" in FFN database.
3)	MS_A1 deregisters its still registered FN_2 by using the mobile menu.	The MAP interface contains the USSD string as sent from MS. The USSD outcome code "02" which means "Follow Me deactivated" is displayed on MS_A1. Alternatively MS converts the outcome code in an appropriate text message.
4)	Verify FFN database.	The mapping between FN_2 and MS_A1 does no more exist or is labelled as "deregistered" in FFN database.

Step2: Deregister of 10 FN

Step	Action	Expected result(s)
1)	Define 10 FN to deregister.	10 FN to deregister are defined.
2)	MS_A1 sends the first USSD message for deregistration either by typing it manually or by using the terminal menu. When sending the USSD message, start the stop watch simultaneously.	The stop watch runs.
3)	Observe the display of MS_A1. When MS_A1 displays the confirmation of deregistration (outcome code or text message), stop the stop watch.	MS_A1 displays the confirmation of deregistration. The stop watch stops.
4)	Repeat 2) and 3) until all 10 FN deregistered.	MS_A1 deregistered to 10 FN.

Step	Action	Expected result(s)
5)	Verify the recorded duration of the stop watch.	The measured time does not exceed 30 seconds.
6)	Verify FFN database.	The mappings between the 10 FN and MS_A1 no more exist or labelled as "de-registered" in FFN database.

d) Success criteria

Deregistration of FN works in different ways.

Deregistration of 10 FN within 30 seconds is possible.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.6 Deregistration of a FN fails (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	11.3.3.1	2.4.1 2.5.1 11.3.10 11.3.12	

a) Purpose

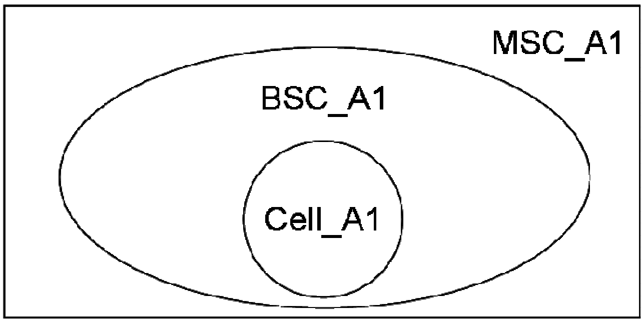
Verify the deregistration of a FN by a non-owner fails.

b) Test configuration / initial conditions

MS_A1 is registered to FN_1.

A corresponding entry exists in FFN database.

Network A



MS_A1 (FN_1)
MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A2 sends an USSD string “##214*<IC_A+FN_1>***#”.	The USSD outcome code “63” which means “Remote Party not registered to this MSISDN” is displayed on MS_A2. Alternatively MS converts the outcome code in an appropriate text message. MS_A1 is still registered to FN_A1.
2)	Verify FFN database.	The mapping between FN_1 and MS_A1 still exists in FFN database.

d) Success criteria

Deregistration of a FN by a non-owner fails.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.7 Forced Deregistration of a FN (non-roaming case)

Reference to	**EIRENE FRS V7**	**EIRENE SRS V15**	**other**
	11.3.3.4	2.4.1 2.5.1 11.3.7 11.3.8i	

a) Purpose

Verify the forced deregistration of a FN.

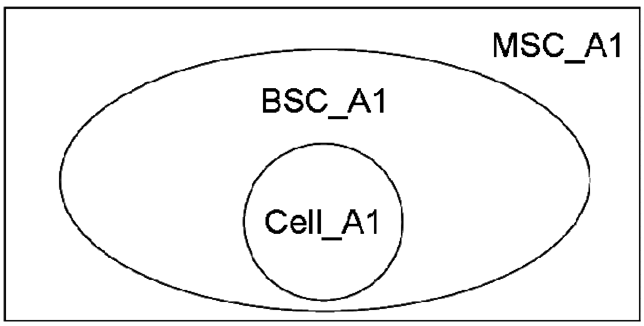
b) Test configuration / initial conditions

MS_A1 has HLR subscription to perform Forced Deregistration.

MS_A2 is registered to FN_1.

A corresponding entry exists in FFN database.

Network A



MS_A1
MS_A2 (FN_1)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 performs an interrogation of the FN_1 to forced-deregister by sending USSD string “*#214*<IC_A+FN_1>***#” or by using Terminal Menu.	The USSD response for successful interrogation is displayed. It contains the outcome code “03” and the MSISDN digits. Alternatively MS converts the outcome code in an appropriate text message.
2)	MS_A1 performs a forced deregistration of	The USSD outcome code “02” which

Step	Action	Expected result(s)
	the FN to which MS_A2 registered by sending USSD string “##214*<IC_A+FN to forced-deregister>*88*<MSISDN of MS_A2>*#” or by using Terminal Menu.	means “Follow Me deactivated” is displayed on MS_A1. Alternatively MS converts the outcome code in an appropriate text message.
3)	Verify that the FFN_A sends Forced Deregistration Notification to MS_A2.	FFN_A logged the Forced Deregistration Notification sent to MS_A2.
4)	Verify that MS_A2 sends an Interrogation invoked by the implementation of MS-feature, receives a related notification and erases the FN_1.	MS_A2 erases FN_1 forced deregistered. Note: This is a MS-Feature, not a network-feature.

d) Success criteria

Forced deregistration of a FN works.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.8 Forced Deregistration of a FN fails (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	11.3.3.4	2.4.1 2.5.1 11.3.7 11.3.8i	

a) Purpose

Verify the forced deregistration of a FN fails in case of missing supervisor CoR.

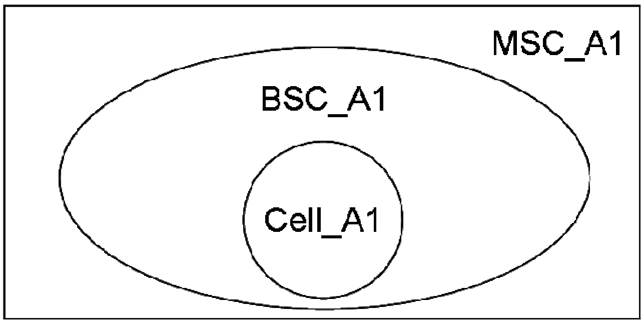
b) Test configuration / initial conditions

MS_A1 is registered to FN_1.

A corresponding entry exists in FFN database.

MS_A2 does not have the HLR subscription to perform Forced Deregistration.

Network A



MS_A1(FN_1)
MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A2 performs an interrogation of the FN_1 to forced-deregister by sending USSD string "*#214*<IC_A+FN_1>***#" or by using Terminal Menu.	The USSD response for successful interrogation is displayed. It contains the outcome code "03" and the MSISDN digits. Alternatively MS converts the outcome code in an appropriate text message.
2)	MS_A2 performs a forced-deregistration by	The USSD outcome code "22" which

Step	Action	Expected result(s)
	sending USSD string “##214*<IC_A+FN to forced-deregister>*88*<MSISDN of MS_A1>*#” or by using Terminal Menu.	means “Unauthorised request” is displayed on MS_A2. Alternatively MS converts the outcome code in an appropriate text message.
3)	Verify that MS_A1 still registered to FN_1.	MS_A1 displays its identity, FN_1. A corresponding entry exists in FFN database.

d) Success criteria

Forced Deregistration of a FN fails in case of missing supervisor CoR.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.9 Class of Registration (CoR) check (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.4.1 2.5.1 11.3.6	

a) Purpose

Verify the CoR check is performed on registration of a FN.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Follow Me Subscription check for a registration

Step 2: Follow Me Subscription- different CoR check for a registration

Test configuration for step 1 and 2

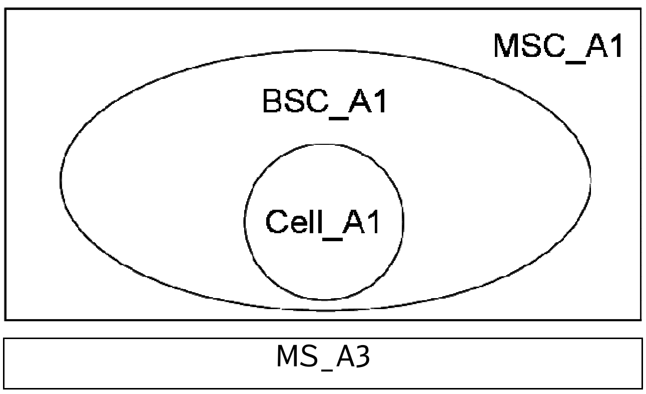
HLR Provisioning Tool is available.

FN_7 is not registered.

MS_A3 does not have the HLR_A subscription to perform Follow Me Services.

CoR of MS_A2 has been temporarily changed from ABCD to ABD on HLR_A.

Network A



c) Test procedure

Step 1: Follow Me Subscription check for a registration

Step	Action	Expected result(s)
1)	MS_A3 sends an USSD string “**214*<IC_A+FN_8>***#” for a registration.	The USSD outcome code “22” which means “Unauthorised request” is displayed on MS_A3. Alternatively MS converts the outcome code in an appropriate text message.

Step 2: Follow Me Subscription- different CoR check for a registration

Step	Action	Expected result(s)
1)	MS_A2 sends an USSD string “**214*<IC_A+FN_7>***#” for a registration.	The USSD outcome code “22” which means “Unauthorised request” is displayed on MS_A2, as the CoR C is required to register to any FN with FC 10. Alternatively MS converts the outcome code in an appropriate text message.
2)	Undo the CoR change for MS_A2.	MS_A2 gets the initial CoR, ABCD again.
3)	Repeat 1)	The USSD outcome code “01” which means “Follow Me activated” is displayed on MS_A2. Alternatively MS converts the outcome code in an appropriate text message.
4)	Verify FFN database.	The mapping between FN_7 and MS_A2 exists in FFN database.

d) Success criteria

CoR check is performed on registration of a FN.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.10 Registration of a FN (roaming case)

5.2.10.1 Registration of a FN (roaming case – Roaming does not affect registered FN)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	11.2.1.1 11.2.1.7 11.2.1.8 11.3.2.1 11.3.2.3 11.3.4	2.4.1 2.5.1 11.3.2 11.3.7 11.3.14 11.3.17 11.6	

a) Purpose

Verify FN which is registered in home network is still valid in roaming network.

Verify the registration of 10 FN within 30 seconds.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Register of a FN in Home Network (A) and verify its validness after Network change (B)

Step 2: Register of a FN in Home Network (B) and verify its validness after Network change (A)

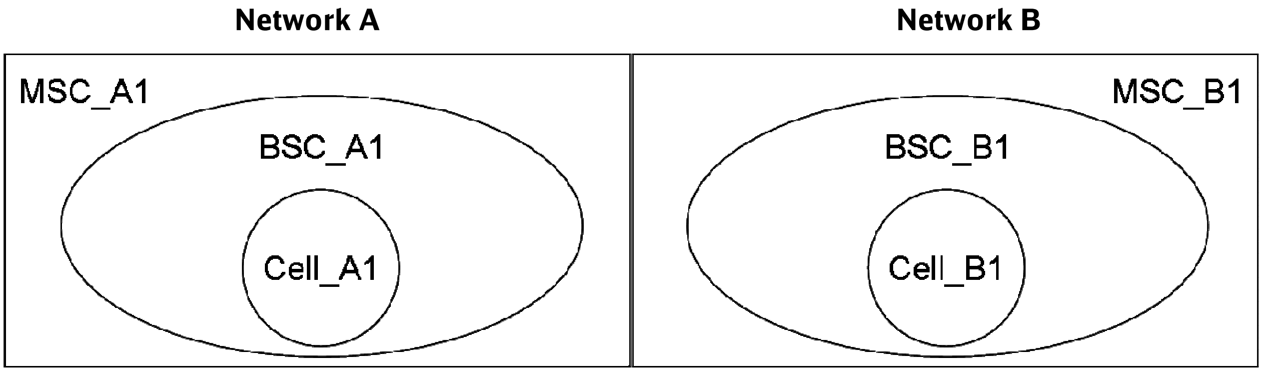
Step 3: Register of 10 FN in Home Network (A), take time measurement and verify FN-validness after Network change (B)

Step 4: Register of 10 FN in Home Network (B), take time measurement and verify FN-validness after Network change (A)

Test configuration for step 1, 2, 3 and 4

All FNs to register are defined and unregistered.

MS-Feature which performs automatic registration of train number after network change has to be deactivated if it has been implemented.



MSC_A1	**MSC_B1**
MS_A1	MS_B1

c) Test procedure

Step 1: Register of a FN in Home Network (A) and verify its validness after Network change (B)

Step	Action	Expected result(s)
1)	MS_A1 registers a FN by sending an USSD string “**214*<IC_A+FN_1>***#”.	The USSD outcome code “01” which means “Follow Me activated” is displayed on MS_A1. Alternatively MS converts the outcome code in an appropriate text message.
2)	Change the serving cell of MS_A1 to cell_B1.	Cell_B1 of Network B is now the serving Network of MS_A1.
3)	Verify that MS_A1 still registered to FN_1.	MS_A1 still displays the identity FN_1. An entry of mapping between FN_1 and MS_A1 exists in FFN database of network A.

Step 2: Register of a FN in Home Network (B) and verify its validness after Network change (A)

Step	Action	Expected result(s)
1)	MS_B1 registers a FN by sending an USSD string "**214*<IC_B+FN_8>***#".	The USSD outcome code "01" which means "Follow Me activated" is displayed on MS_B1. Alternatively MS converts the outcome code in an appropriate text message.
2)	Change the serving cell of MS_B1 to cell_A1.	Cell_A1 of Network A is now the serving Network of MS_B1.
3)	Verify that MS_B1 still registered to FN_8.	MS_B1 still displays the identity FN_8. An entry of mapping between FN_8 and MS_B1 exists in FFN database of network B.

Step 3: Register of 10 FN in Home Network (A), take time measurement and verify FN-validness after Network change (B)

Step	Action	Expected result(s)
1)	MS_A1 sends the first USSD message for registration either by typing it manually or by using the terminal menu. When sending the USSD message, start the stop watch simultaneously.	The stop watch runs.
2)	Observe the display of MS_A1. When MS_A1 displays the confirmation of registration (outcome code or text message), stop the stop watch.	MS_A1 displays the confirmation of Registration. The stop watch stops.
3)	Repeat 1) and 2) until all 10 FN registered.	MS_A1 registered to 10 FN.
4)	Verify the recorded duration of the stop watch.	The measured time does not exceed 30 seconds.
5)	Verify the corresponding entries of FFN database of network A.	All 10 entries of mappings between FN and MS_A1 exist in FFN database of network A.
6)	Change the serving cell of MS_A1 to cell_B1.	Cell_B1 of Network B is now the serving Network of MS_A1.
7)	Verify that MS_A1 still registered to all 10 FN.	MS_A1 still displays its last registered identity FN. FFN database of network A contains the entries of mappings between 10 FNs and MS_A1.

Step 4: Register of 10 FN in Home Network (B), take time measurement and verify FN-validness after Network change (A)

Step	Action	Expected result(s)
1)	MS_B1 sends the first USSD message for registration either by typing it manually or by using the terminal menu. When sending the USSD message, start the stop watch simultaneously.	The stop watch runs.
2)	Observe the display of MS_B1. When MS_B1 displays the confirmation of registration (outcome code or text message), stop the stop watch.	MS_B1 displays the confirmation of Registration. The stop watch stops.
3)	Repeat 1) and 2) until all 10 FN registered.	MS_B1 registered to 10 FN.
4)	Verify the recorded duration of the stop watch.	The measured time does not exceed 30 seconds.
5)	Verify the corresponding entries of FFN database of network B.	All 10 entries of mappings between FN and MS_B1 exist in FFN database of network B.
6)	Change the serving cell of MS_B1 to cell_A1.	Cell_A1 of Network A is now the serving Network of MS_B1.
7)	Verify that MS_B1 still registered to all 10 FN.	MS_B1 still displays its last registered identity FN. FFN database of network B contains the entries of mappings between 10 FNs and MS_B1.

d) Success criteria

All FN which are registered in home network are still valid in roaming network.

Registration of 10 FN does not take more than 30 seconds.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.10.2 Registration of a FN (roaming case – Registration of a FN after network change)

a) Purpose

Verify the registration of a FN in a roaming network works.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Register of a FN in roaming Network B.

Step 2: Register of a FN in roaming Network A.

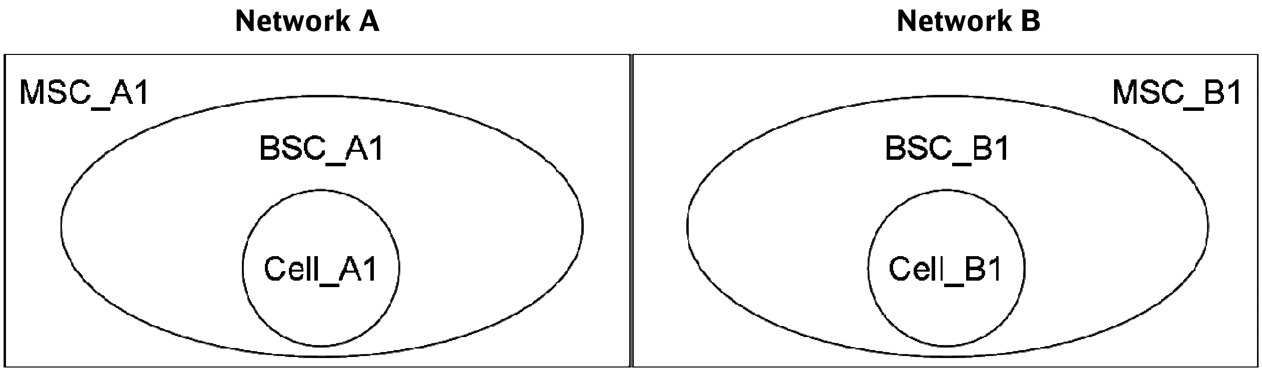
Test configuration for step 1 and 2

MS_A1 roams in network B.

MS_B1 roams in network A.

All FN to register are unregistered.

MS feature which performs automatic registration of train number after network change has to be deactivated if it has been implemented.



MSC_A1	**MSC_B1**
MS_B1	MS_A1

c) Test procedure

Step 1: Register of a FN in roaming Network B.

Step	Action	Expected result(s)
1)	MS_A1 registers a FN by sending an USSD string “**214*<IC_B+FN_1>***#”.	The USSD outcome code “01” which means “Follow Me activated” is displayed on MS_A1. Alternatively MS converts the outcome code in an appropriate text message.
2)	Verify the registration.	MS_A1 displays the identity FN_1. An entry of mapping between FN_1 and MS_A1 exists in FFN database of network B.

Step 2: Register of a FN in roaming Network A.

Step	Action	Expected result(s)
1)	MS_B1 registers a FN by sending an USSD string “**214*<IC_A+FN_8>***#”.	The USSD outcome code “01” which means “Follow Me activated” is displayed on MS_B1. Alternatively MS converts the outcome code in an appropriate text message.
2)	Verify the registration.	MS_B1 displays the identity FN_8. An entry of mapping between FN_8 and MS_B1 exists in FFN database of network A.

d) Success criteria

Registration of a FN in a roaming network works.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.11 Registration of a unknown FN fails (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	11.3.2.4	2.4.1 2.5.1 11.3.8 11.3.9	

a) Purpose

Verify the registration of a FN which is not preconfigured in the database fails.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Registration of an unknown FN in roaming network B.

Step 2: Registration of an unknown FN in roaming network A.

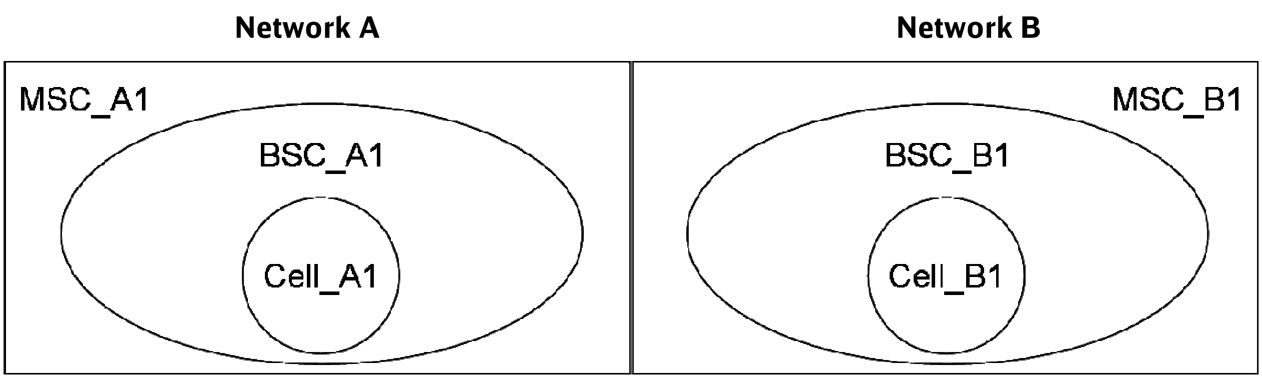
Test configuration for step 1 and 2

Preprovioning of FN.

FN_9 to register is not data filled in FA database in network B.

FN_4 to register is not data filled in FA database in network A.

Protocol analyzer is configured to trace A-interface to verify the transmitting USSD string from and to the network on the MAP interface.



MSC_A1	MSC_B1
MS_B1	MS_A1

c) Test procedure

Step 1: Registration of an unknown FN in roaming network B.

Step	Action	Expected result(s)
1)	MS_A1 sends an USSD string “**214*<IC_B+FN_9>***#”.	The MAP interface contains the USSD string as sent from MS. The USSD outcome code “41” which means “Unknown Remote Party” is displayed on MS_A1. Alternatively MS converts the outcome code in a text message like “FN unknown”.

Step 2: Registration of an unknown FN in roaming network A.

Step	Action	Expected result(s)
2)	MS_B1 sends an USSD string “**214*<IC_A+FN_4>***#”.	The MAP interface contains the USSD string as sent from MS. The USSD outcome code “41” which means “Unknown Remote Party” is displayed on MS_B1. Alternatively MS converts the outcome code in a text message like “FN unknown”.

d) Success criteria

Registration of a unknown FN fails.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.12 Check of the storage of CT2 Number and its destination in the current EIRENE network.

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		9.2.3	

a) Purpose

Verify the storage of CT2 Number and its associated MSISDN numbers in the same routing database, which is the database of the GSM-R network in which the train is currently operating.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Registration of a FN after network change, check of FFN database in roaming network B.

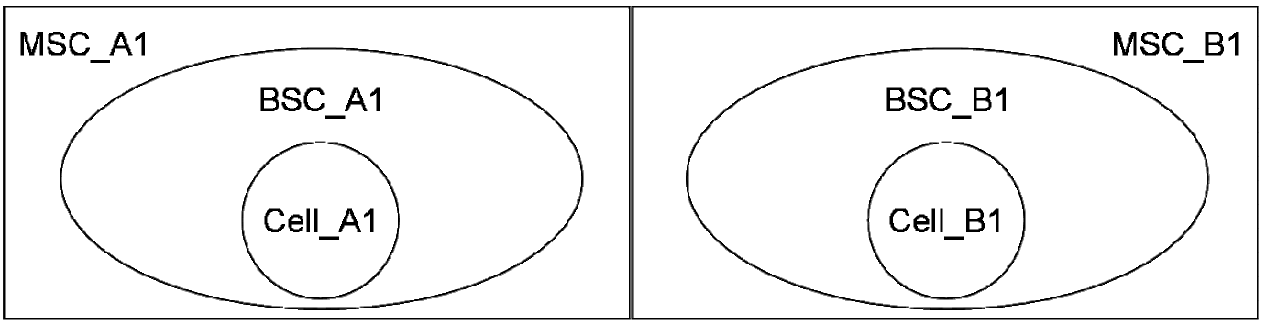
Step 2: Registration of a FN after network change, check of FFN database in roaming network B.

Test configuration for step 1 and 2

MS_A1 is registered to IC_A, FN_1.

MS_B1 is registered to IC_B, FN_8.

Network A **Network B**



MSC_A1	MSC_B1
MS_A1 (IC_A, FN_1)	MS_B1 (IC_B, FN_8)

c) Test procedure

Step 1: Registration of a FN after network change, check of FFN database in roaming network B.

Step	Action	Expected result(s)
1)	MS_A1 roams in network B, registers to IC_B, FN_1 by sending an USSD string "**214*<IC_B+FN_1>***#" or using the terminal menu.	The USSD outcome code "01" which means "Follow Me activated" is displayed on MS_A1. Alternatively MS converts the outcome code in an appropriate text message.
2)	Verify the according entry in FFN database of network B.	The corresponding entry exists in FFN database of network B.

Step 2: Registration of a FN after network change, check of FFN database in roaming network A.

Step	Action	Expected result(s)
1)	MS_B1 roams in network A, registers to IC_A, FN_8 which is the same train number but in the currently operating network by sending an USSD string "**214*<IC_A+FN_8>***#" or using the terminal menu.	The USSD outcome code "01" which means "Follow Me activated" is displayed on MS_B1. Alternatively MS converts the outcome code in an appropriate text message.
2)	Verify the according entry in FFN database of network A.	The corresponding entry exists in FFN database of network A.

d) Success criteria

The storage of CT2 Number and its associated MSISDN numbers is available in the same routing database in which the train is currently operating.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.13 Check of the storage of CT3 Number and the according destination in the home EIRENE network.

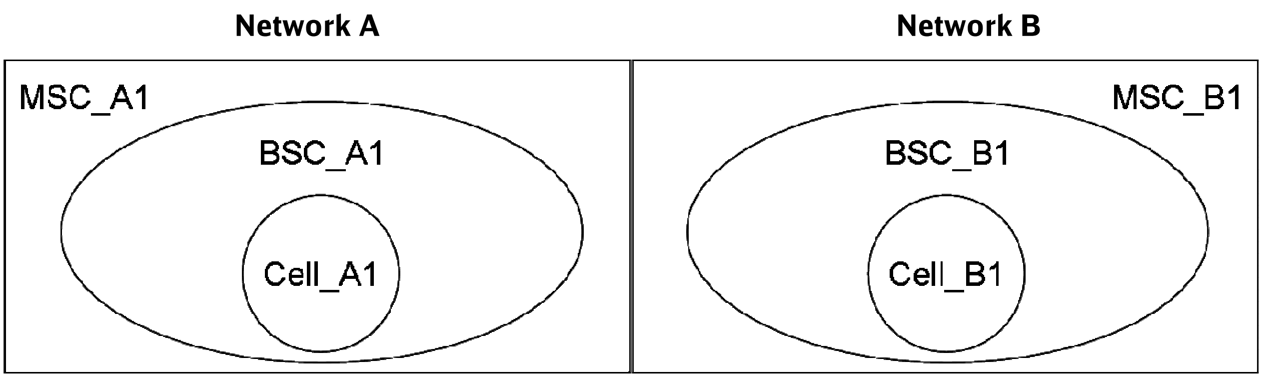
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		9.2.5	

a) Purpose

Verify the storage of CT3 Number and associated MSISDN number as an entry in the routing database of the home GSM-R network of the engine at any time.

b) Test configuration / initial conditions

An engine number IC_A, FN_2 (CT3 /FC01) is associated to the MSISDN number of MS_A1.



MSC_A1	MSC_B1
MS_A1	

c) Test procedure

Step	Action	Expected result(s)
1)	Verify the entry of IC_A, FN_2 in FFN database of network A.	An entry of mapping between IC_A, FN_2 and the MSISDN of MS_A1 as destination number exists in FFN database of network A.
2)	MS_A1 roams in network B.	Cell_B1 of Network B is serving Network of MS_A1.

Step	Action	Expected result(s)
3)	Repeat 1)	An entry of mapping between IC_A, FN_2 and the MSISDN of MS_A1 as destination number still exists in FFN database of network A.
4)	MS_A1 switches off (see purpose “at any time”.	MS_A1 switched off.
5)	Repeat 1)	An entry of mapping between IC_A, FN_2 and the MSISDN of MS_A1 as destination number still exists in FFN database of network A.

d) Success criteria

The storage of CT3 Number and associated MSISDN number as an entry is available in the routing database of the home GSM-R network of the engine at any time.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.14 Check of the storage of CT4 Number and its destination in the home EIRENE network.

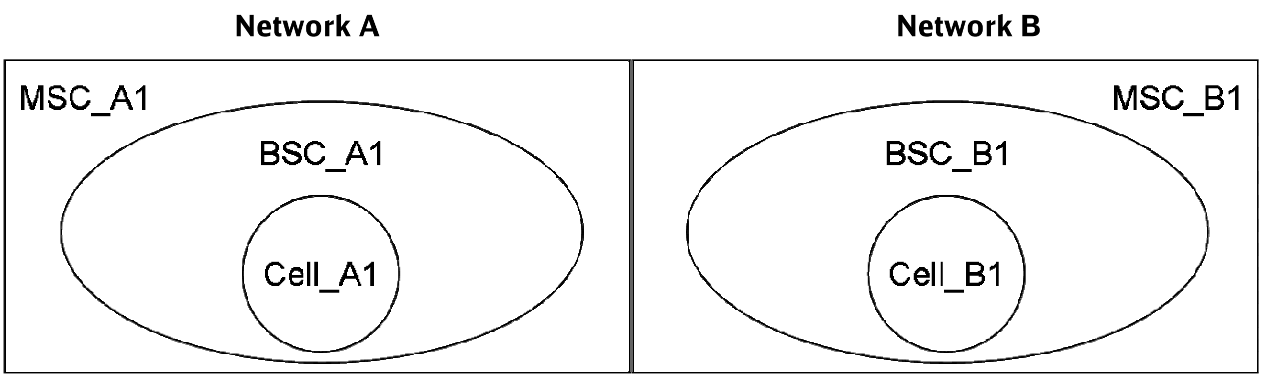
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		9.2.6	

a) Purpose

Verify the storage of CT4 Number and associated MSISDN number as an entry in the routing database of the home GSM-R network of the coach at any time.

b) Test configuration / initial conditions

An engine number IC_A, FN_3 (CT4 /FC01) is associated to the MSISDN number of MS_A2.



MSC_A1	MSC_B1
MS_A2	

c) Test procedure

Step	Action	Expected result(s)
1)	Verify the entry of IC_A, FN_3 in FFN database of network A.	An entry of mapping between IC_A, FN_3 and the MSISDN of MS_A2 as destination number exists in FFN database of network A.
2)	MS_A2 roams in network B.	Cell_B1 of Network B is serving Network of MS_A2.

Step	Action	Expected result(s)
3)	Repeat 1)	An entry of mapping between IC_A, FN_3 and the MSISDN of MS_A2 as destination number still exists in FFN database of network A.
4)	MS_A2 switches off (see purpose “at any time”).	MS_A2 switched off.
5)	Repeat 1)	An entry of mapping between IC_A, FN_3 and the MSISDN of MS_A2 as destination number still exists in FFN database of network A.

d) Success criteria

The storage of CT4 Number and associated MSISDN number as an entry is available in the routing database of the home GSM-R network of the coach at any time.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.15 Check of the storage of CT6 and CT7 Numbers and their destinations in the home EIRENE network.

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		9.2.8	

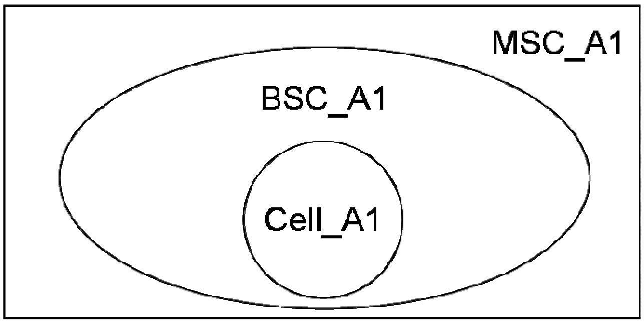
a) Purpose

Verify the storage of CT6 and CT7 Number and associated MSISDN numbers as entries in the routing database of the home GSM-R network.

b) Test configuration / initial conditions

CT_A1 is associated to IC_A, FN_11.

Network A



CT_A1 (IC_A, FN_11)
MS_A1

c) Test procedure

Step	Action	Expected result(s)
1)	Verify the entry of IC_A, FN_11 in FFN database of network A.	An entry of mapping between IC_A, FN_11 and the MSISDN of CT_A1 as destination number exists in FFN database of network A.

Step	Action	Expected result(s)
2)	MS_A1 registers to IC_A, FN_4. (CT6 /FC5yxx)	The USSD outcome code “01” which means “Follow Me activated” is displayed on MS_A1. Alternatively MS converts the outcome code in an appropriate text message.
3)	Verify the entry of IC_A, FN_4 in FFN data-base of network A.	An entry of mapping between IC_A, FN_4 and the MSISDN of MS_A1 as destination number exists in FFN database of network A.

d) Success criteria

Storages of CT6 and CT7 Number and associated MSISDN numbers as entries are available in the routing database of the home GSM-R network.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.16 Registration failures --> outcome code 61 [remote party already registered] (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	9.2.2.2 9.2.3.2 11.2.1.5 11.2.2.1 11.3.2.5	2.4.1 2.5.1 9.2.1 11.3.8 11.3.9	

a) Purpose

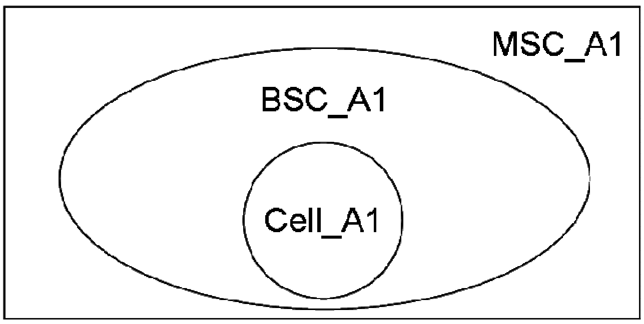
Verify a registration attempt to an already registered functional number fails.

b) Test configuration / initial conditions

MS_A1 is registered to IC_A, FN_1.

The corresponding entry exists in FFN database of network A.

Network A



MS_A1 (IC_A, FN_1)
MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	Make sure that MS_A1 is registered to IC_A, FN_1.	MS A1 displays the functional identity of FN_1.

Step	Action	Expected result(s)
2)	MS_A2 sends an USSD string "**214*<IC_A+FN_1>***#".	The USSD outcome code "61" which means "remote party already registered" is displayed on MS_A2. Alternatively MS converts the outcome code in an appropriate text message.
3)	MS_A1 is still registers to FN_1	There is no change of the displayed functional identity of FN_1. The corresponding entry still exists in FFN database of network A.

d) Success criteria

MS_A2 cannot register to an already registered functional number.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.17 Registration failures --> outcome code 61 [remote party already registered] (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.2.2 9.2.3.2 11.2.1.5 11.2.2.1 11.3.2.5	2.4.1 2.5.1 9.2.1 11.3.8 11.3.9	

a) Purpose

Verify a registration attempt to an already registered functional number fails.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Registration of a FN which is already registered to another user fails in roaming network A.

Step 2: Registration of a FN which is already registered to another user fails in roaming network B.

Test configuration for step 1 and 2

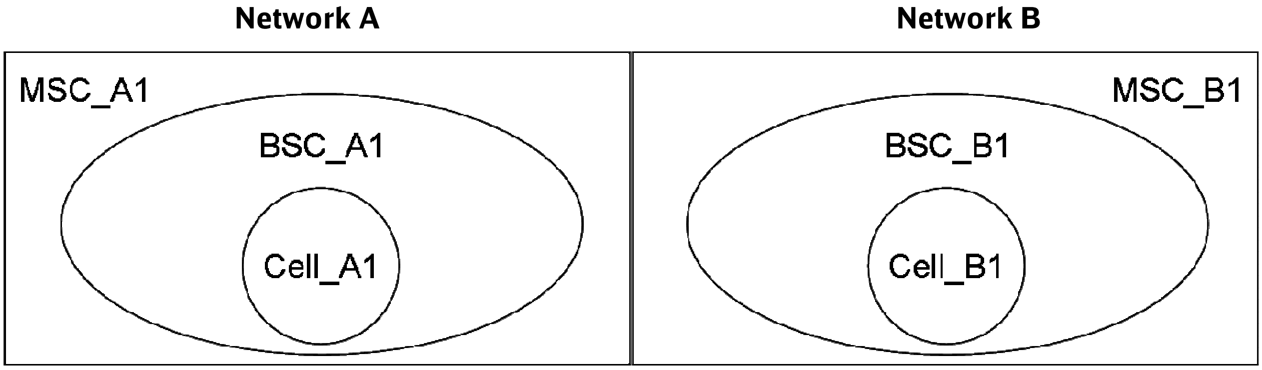
MS_A2 roams in network B.

MS_B2 roams in network A.

MS_A1 is registered to IC_A, FN_5.

MS_B1 is registered to IC_B, FN_1.

The corresponding entries exist in FFN database of network A and B.



MSC_A1	MSC_B1
MS_A1 (IC_A, FN_5)	MS_B1 (IC_B, FN_1)
MS_B2	MS_A2

c) Test procedure

Step 1: Registration of a FN which is already registered to another user fails in roaming network A.

Step	Action	Expected result(s)
1)	MS_B2 which roams in network A, sends an USSD string “**214*<IC_A+FN_5>***#”.	The USSD outcome code “61” which means “remote party already registered” is displayed on MS_B2. Alternatively MS converts the outcome code in an appropriate text message.
2)	MS_A1 is still registers to FN_5.	There is no change of the displayed functional identity of FN_5 on MS_A1. The corresponding entry still exists in FFN database of network A.

Step 2: Registration of a FN which is already registered to another user fails in roaming network A.

Step	Action	Expected result(s)
1)	MS_A2 which roams in network B, sends an USSD string “**214*<IC_B+FN_1>***#”.	The USSD outcome code “61” which means “remote party already registered” is displayed on MS_A2. Alternatively MS converts the outcome code in an appropriate text message.
2)	MS_B1 is still registers to FN_1	There is no change of the displayed functional identity of FN_1 on MS_B1. The corresponding entry exists in FFN database of network B.

d) Success criteria

MS_A2 and MS_B2 cannot register to an already registered functional number.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.18 Deregistration of a FN (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	11.2.1.7 11.2.1.8 11.3.3.1 11.3.3.3 11.3.3.5	2.4.1 2.5.1 11.3.2 11.3.7 11.3.10 11.3.12 11.3.14 11.3.17 11.6	

a) Purpose

Verify the deregistration of FN in roaming network which is a part of re-registration.

Verify the deregistration of 10 FN within 30 seconds.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Deregistration of a FN in roaming network B.

Step 2: Deregistration of a FN in roaming network A.

Step 3: Deregistration of 10 FN in roaming network B with taking time measurement.

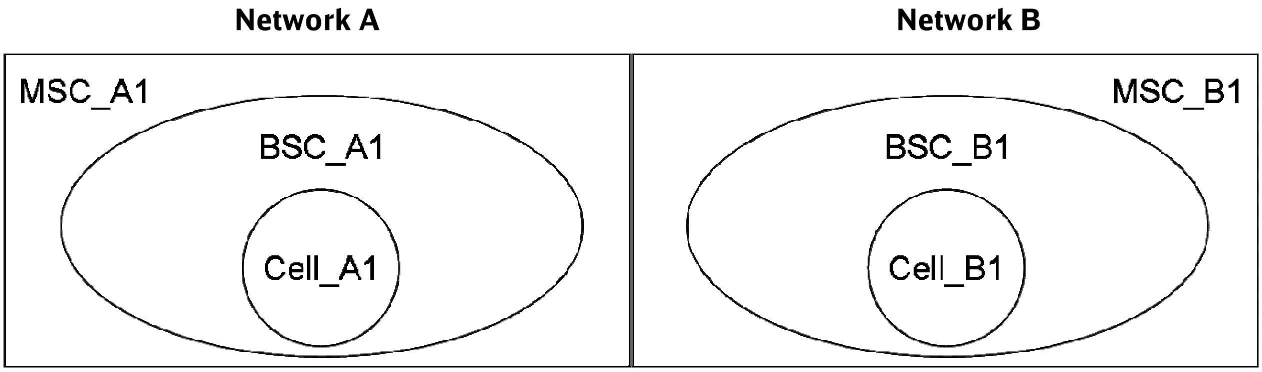
Step 4: Deregistration of 10 FN in roaming network A with taking time measurement.

Test configuration for step 1 and 2

MS_A1 roams in network B and is still registered to a FN in network A

MS_B1 roams in network A and is still registered to a FN in network B.

The corresponding entries exist in FFN database of network A and B respectively.



MSC_A1	**MSC_B1**
MS_B1	MS_A1

c) Test procedure

Step 1: Deregistration of a FN in roaming network B.

Step	Action	Expected result(s)
1)	MS_A1 deregisters its FN by sending an USSD string “##214*<IC_A+FN_1>***#”.	The USSD outcome code “02” which means “Follow Me deactivated” is displayed on MS_A1. Alternatively MS converts the outcome code in an appropriate text message.

Step 2: Deregistration of a FN in roaming network A.

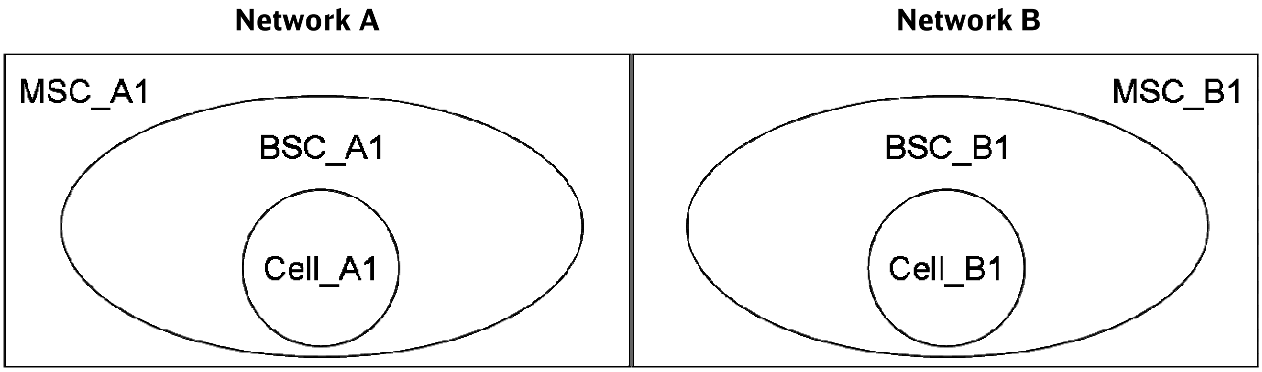
Step	Action	Expected result(s)
1)	MS_B1 deregisters its FN by sending an USSD string “##214*<IC_B+FN_1>***#”.	The USSD outcome code “02” which means “Follow Me deactivated” is displayed on MS_B1. Alternatively MS converts the outcome code in an appropriate text message.

Test configuration for step 3 and 4

MS_A1 roams in network B and is still registered to 10 FN in network A

MS_B1 roams in network A and is still registered to 10 FN in network B.

The corresponding entries exist in FFN database of network A and B respectively.



MSC_A1	**MSC_B1**
MS_B1	MS_A1

Step 3: Deregistration of 10 FN in roaming network B with taking time measurement.

Step	Action	Expected result(s)
1)	MS_A1 sends the first USSD message for deregistration either by typing it manually or by using the terminal menu. When sending the USSD message, start the stop watch simultaneously.	The stop watch runs.
2)	Observe the display of MS_A1. When MS_A1 displays the confirmation of deregistration (outcome code or text message), stop the stop watch.	MS_A1 displays the confirmation of Deregistration. The stop watch stops.
3)	Repeat 1) and 2) until all 10 FN deregistered.	MS_A1 deregistered to 10 FN.
4)	Verify the recorded duration of the stop watch.	The measured time does not exceed 30 seconds.
5)	Verify the deregistration.	MS_A1 does not display any of the FN deregistered above. All 10 above entries of mappings between FN and MS_A1 no more exist in FFN database of network A.

Step 4: Deregistration of 10 FN in roaming network A with taking time measurement.

Step	Action	Expected result(s)
1)	MS_B1 sends the first USSD message for deregistration either by typing it manually or by using the terminal menu. When sending the USSD message, start the stop watch simultaneously.	The stop watch runs.
2)	Observe the display of MS_B1. When MS_B1 displays the confirmation of deregistration (outcome code or text message), stop the stop watch.	MS_B1 displays the confirmation of Deregistration. The stop watch stops.
3)	Repeat 1) and 2) until all 10 FN deregistered.	MS_B1 deregistered to 10 FN.
4)	Verify the recorded duration of the stop watch.	The measured time does not exceed 30 seconds.
5)	Verify the deregistration.	MS_B1 does not display any of the FN deregistered above. All 10 above entries of mappings between FN and MS_B1 no more exist in FFN database of network B.

d) Success criteria

Deregistration FN in roaming network works.

Deregistration of 10 FNs in roaming network neither do nor take more than 30 seconds.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.19 Deregistration of a FN fails (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	11.2.1.7 11.2.1.8 11.3.3.1	2.4.1 2.5.1 11.3.10 11.3.12	

a) Purpose

Verify deregistration of a FN to which another MS registered fails.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Deregistration of a FN to which another MS registered in roaming network B fails.

Step 2: Deregistration of a FN to which another MS registered in roaming network A fails.

Test configuration for step 1 and 2

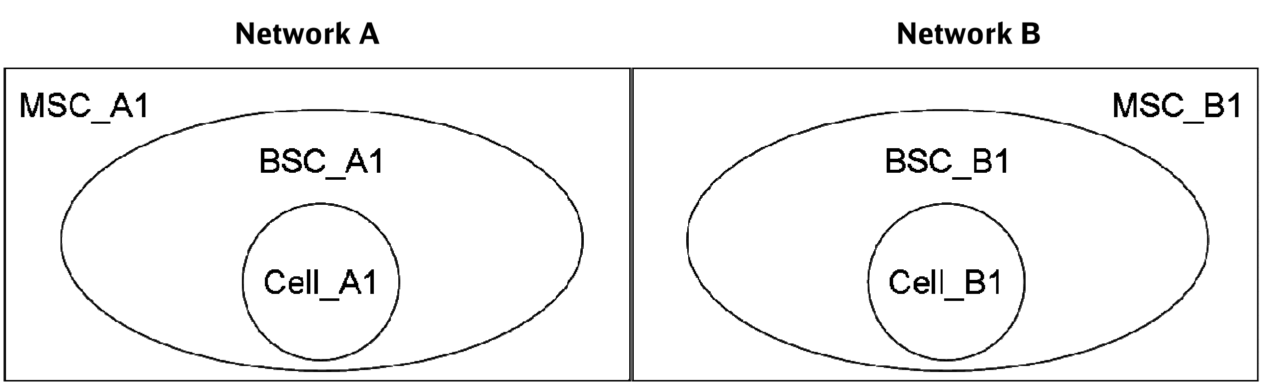
MS_A1 roams in network B and is not registered to IC_A, FN_9.

MS_B2 roams in network A and is not registered to IC_B, FN_1.

MS_B1 is registered to IC_B, FN_1.

MS_A2 is registered to IC_A, FN_9.

The corresponding entries exist in FFN database of network A and B respectively.



MSC_A1	**MSC_B1**
MS_A2 (IC_A, FN_9)	MS_B1 (IC_B, FN_1)
MS_B2	MS_A1

c) Test procedure

Step 1: Deregistration of a FN to which another MS registered in roaming network B fails.

Step	Action	Expected result(s)
1)	MS_A1 sends an USSD string "##214*<IC_B+FN_1>***#" to deregister the FN to which MS_B1 is registered.	The USSD outcome code "63" which means "Remote party not registered to this MSISDN" is displayed on MS_A1. Alternatively MS converts the outcome code in an appropriate text message.
2)	Verify that MS_B1 is still registered to its FN.	MS_B1 displays its identity FN_1. The entry of mapping between FN_1 and MS_B1 still exists in FFN database of network B.

Step 2: Deregistration of a FN to which another MS registered in roaming network A fails.

Step	Action	Expected result(s)
1)	MS_B2 sends an USSD string "##214*<IC_A+FN_9>***#" to deregister the FN to which MS_A2 is registered.	The USSD outcome code "63" which means "Remote party not registered to this MSISDN" is displayed on MS_B2. Alternatively MS converts the outcome code in an appropriate text message.
2)	Verify that MS_A2 is still registered to its FN.	MS_A2 displays its identity FN_9. The entry of mapping between FN_9 and MS_A2 still exists in FFN database of network A.

d) Success criteria

Deregistration of a FN to which another MS registered fails, also in roaming case.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.20 Forced Deregistration of a FN (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	11.3.3.4	2.4.1 2.5.1 11.3.8i 11.3.17 11.6	

a) Purpose

Verify the forced deregistration of a FN in a roaming case.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Forced Deregistration of a FN to which a roaming MS registered (network B).

Step 2: Forced Deregistration of a FN to which a roaming MS registered (network A).

Test configuration for step 1 and 2

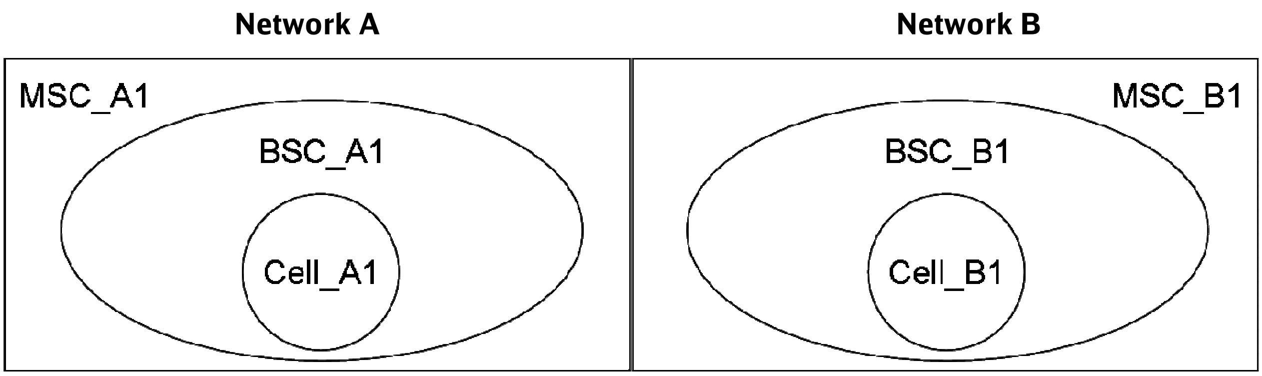
MS_A2 roams in network B.

MS_B2 roams in network A.

MS_A2 is registered to IC_B, FN_1.

MS_B2 is registered to IC_A, FN_8.

The corresponding entries exist in FFN database of network A and B respectively.



MSC_A1	**MSC_B1**
MS_A1	MS_B1
MS_B2 (IC_A, FN_8)	MS_A2 (IC_B, FN_1)

c) Test procedure

Step 1: Forced Deregistration of a FN to which a roaming MS registered (network B).

Step	Action	Expected result(s)
1)	MS_B1 performs an interrogation of the FN_1 to forced-deregister by sending USSD string "*#214*<IC_B+FN_1>***#" or by using Terminal Menu.	The USSD response for successful interrogation is displayed. It contains the outcome code "03" and the MSISDN digits of MS_A2. Alternatively MS converts the outcome code in an appropriate text message.
2)	MS_B1 forced deregisters the FN to which MS_A2 has registered by sending USSD string "##214*<IC_B+FN to forced-deregister>*88*<MSISDN of MS_A2>*#" or by using Terminal Menu.	The USSD outcome code "02" which means "Follow Me deactivated" is displayed on MS_B1. Alternatively MS converts the outcome code in an appropriate text message.
3)	Verify that the FFN_B sends Forced Deregistration Notification to MS_A2.	FFN_B logged the Forced Deregistration Notification sent to MS_A2.
4)	Verify that MS_A2 sends an Interrogation invoked by the implementation of MS-feature, receives a related notification and erases the FN_1.	MS_A2 erases FN_1 forced deregistered. Note: This is a MS-feature, not a network-feature.

Step 2: Forced Deregistration of a FN to which a roaming MS registered (network A).

Step	Action	Expected result(s)
1)	MS_A1 performs an interrogation of the FN_8 to forced-deregister by sending USSD string "*#214*<IC_A+FN_8>***#" or by using Terminal Menu.	The USSD response for successful interrogation is displayed. It contains the outcome code "03" and the MSISDN digits of MS_B2. Alternatively MS converts the outcome code in an appropriate text message.
2)	MS_A1 forced deregisters the FN to which MS_B2 has registered by sending USSD string "##214*<IC_A+FN to forced-deregister>*88*<MSISDN of MS_B2>*#" or by using Terminal Menu.	The USSD outcome code "02" which means "Follow Me deactivated" is displayed on MS_A1. Alternatively MS converts the outcome code in an appropriate text message.
3)	Verify that the FFN_A sends Forced Deregistration Notification to MS_B2.	FFN_A logged the Forced Deregistration Notification sent to MS_B2.
4)	Verify that MS_B2 sends an Interrogation invoked by the implementation of MS-feature, receives a related notification and erases the FN_8.	MS_B2 erases FN_8 forced deregistered. Note: This is a MS-feature, not a network-feature.

d) Success criteria

Forced deregistration of a FN in a roaming case works.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.21 Forced Deregistration of a FN fails due to a missing supervisor CoR (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	11.3.3.4	2.4.1 2.5.1 11.3.8i	

a) Purpose

Verify the forced deregistration of a FN fails in case of missing supervisor CoR.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Forced Deregistration of a FN to which a roaming MS registered fails due to missing CoR (network B).

Step 2: Forced Deregistration of a FN to which a roaming MS registered fails due to missing CoR (network A).

Test configuration for step 1 and 2

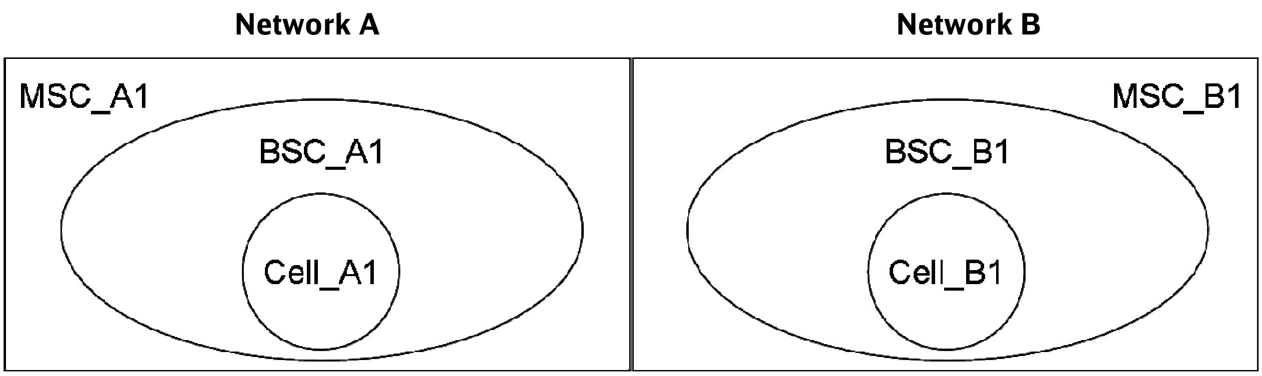
MS_A1 roams in network B.

MS_B1 roams in network A.

MS_A1 is registered to IC_B, FN_1.

MS_B1 is registered to IC_A, FN_4.

The corresponding entries exist in FFN database of network A and B respectively.



MSC_A1	MSC_B1
MS_A2	MS_B2
MS_B1 (IC_A, FN_4)	MS_A1 (IC_B, FN_1)

c) Test procedure

Step 1: Forced Deregistration of a FN to which a roaming MS registered fails due to missing CoR (network B).

Step	Action	Expected result(s)
1)	MS_B2 performs an interrogation of the FN_1 to forced-deregister by sending USSD string "*#214*<IC_B+FN_1>***#" or by using Terminal Menu.	The USSD response for successful interrogation is displayed. It contains the outcome code "03" and the MSISDN digits of MS_A1. Alternatively MS converts the outcome code in an appropriate text message.
2)	MS_B2 initiates a forced deregistration of the FN to which MS_A1 has registered by sending USSD string "##214*<IC_B+FN to forced-deregister>*88*<MSISDN of MS_A1>*#" or by using Terminal Menu. Note: MS_B2 has no subscription to supervisor CoR.	The USSD outcome code "22" which means "Unauthorized request" is displayed on MS_B2. Alternatively MS converts the outcome code in an appropriate text message.
3)	Verify that MS_A1 still registered to IC_B, FN_1.	MS_A1 displays its identity FN_1. The entry of mapping between FN_1 and MS_A1 still exists in FFN database of network B.

Step 2: Forced Deregistration of a FN to which a roaming MS registered fails due to missing CoR (network A).

Step	Action	Expected result(s)
	MS_A2 performs an interrogation of the FN_4 to forced-deregister by sending USSD string "*#214*<IC_A+FN_4>***#" or by using Terminal Menu.	The USSD response for successful interrogation is displayed. It contains the outcome code "03" and the MSISDN digits of MS_B1. Alternatively MS converts the outcome code in an appropriate text message.
2)	MS_A2 initiates a forced deregistration of the FN to which MS_B1 has registered by sending USSD string "##214*<IC_A+FN to forced-deregister>*88*<MSISDN of MS_B1>*#" or by using Terminal Menu. Note: MS_A2 has no subscription to supervisor CoR.	The USSD outcome code "22" which means "Unauthorized request" is displayed on MS_A2. Alternatively MS converts the outcome code in an appropriate text message.

Step	Action	Expected result(s)
3)	Verify that MS_B1 still registered to IC_A, FN_4.	MS_B1 displays its identity FN_4. The entry of mapping between FN_4 and MS_B1 still exists in FFN database of network A.

d) Success criteria

Forced deregistration of a FN fails in case of missing supervisor CoR.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.22 Class of registration (CoR) check (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.4.1 2.5.1 11.3.6	

a) Purpose

Verify the CoR check is performed on registration of a FN.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Registration of a FN first without and after with CoR Subscription in roaming network B.

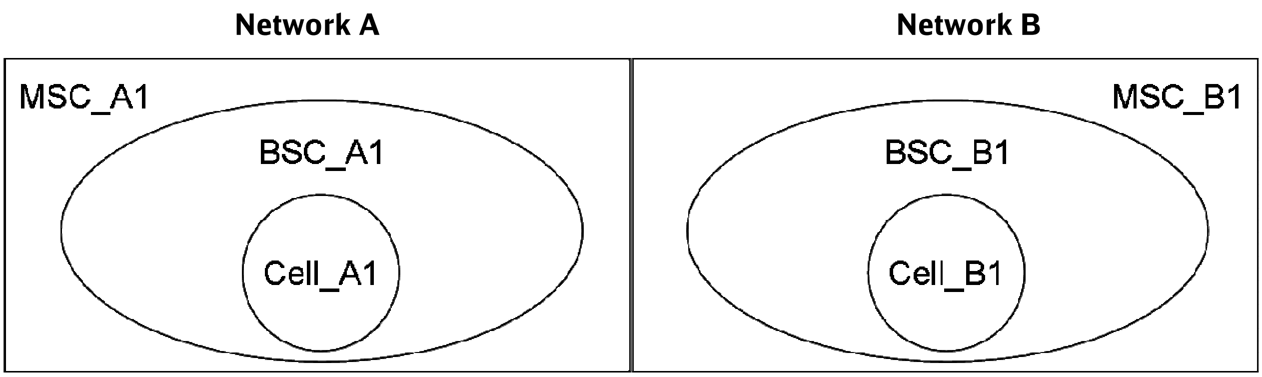
Step 2: Registration of a FN first without and after with CoR Subscription in roaming network A.

Test configuration for step 1 and 2

MS_A3 roams in network B.

MS_B3 roams in network A.

HLR Provisioning Tool is available.



MSC_A1	**MSC_B1**
MS_B3	MS_A3

c) Test procedure

Step 1: Registration of a FN first without and after with CoR Subscription in roaming network B.

Step	Action	Expected result(s)
1)	MS_A3 sends an USSD string "**214*<IC_B+FN_8>***#". Note: MS_A3 has no subscription to perform any Follow Me service.	The USSD outcome code "22" which means "Unauthorized request" is displayed on MS_A3. Alternatively MS converts the outcome code in an appropriate text message.
2)	Assign MS_A3 a subscription to Follow Me Service CoR A on HLR_A temporarily.	HLR_A subscription allows the MS_A3 to register only the Engine/Train cab-radio basic functions.
3)	Repeat 1)	The USSD outcome code "01" which means "Follow Me activated" is displayed on MS_A3. Alternatively MS converts the outcome code in an appropriate text message.
4)	Verify the registration.	MS_A3 displays its identity FN_8. The entry of mapping between FN_8 and MS_A3 exists in FFN database of network B.
5)	Undo the CoR change of 2).	Follow Me Service CoR A for MS_A3 is detracted on HLR_A again.

Step 2: Registration of a FN first without and after with CoR Subscription in roaming network A.

Step	Action	Expected result(s)
1)	MS_B3 sends an USSD string "**214*<IC_A+FN_8>***#". Note: MS_B3 has no subscription to perform any Follow Me service.	The USSD outcome code "22" which means "Unauthorized request" is displayed on MS_B3. Alternatively MS converts the outcome code in an appropriate text message.
2)	Assign MS_B3 a subscription to Follow Me Service CoR A on HLR_B temporarily.	HLR_B subscription allows the MS_B3 to register only the Engine/Train cab-radio basic functions.
3)	Repeat 1)	The USSD outcome code "01" which means "Follow Me activated" is displayed on MS_B3. Alternatively MS converts the outcome code in an appropriate text message.

Step	Action	Expected result(s)
4)	Verify the registration.	MS_B3 displays its identity FN_8. The entry of mapping between FN_8 and MS_B3 exists in FFN database of network A.
5)	Undo the CoR change of 2).	Follow Me Service CoR A for MS_B3 is detracted on HLR_B again.

d) Success criteria

CoR check is performed on registration of a FN.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**

5.2.23 FFN recovery

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	11.3.2.6	11.4.1	

a) Purpose

Verify the FFN database can be recovered after a system failure.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: FFN Database recovery in case of geo-redundancy.

Step 2: FFN Database recovery in case of non-geo-redundancy.

Test configuration for step 1 and 2

For step 1: The (geo)redundant FFN databases are available.

For step 2: The only FFN database is available.

c) Test procedure

Step 1: FFN Database recovery in case of geo-redundancy.

Step	Action	Expected result(s)
1)	Stop database replication between (geo)redundant SCP databases.	The FFN database replication feature between (geo)redundant SCP databases is disabled.
2)	Perform a registration on one active SCP database.	The registration creates or updates the according entry in the active FFN database.
3)	Redirect SS7 traffic to other SCP and if necessary activate other SCP and its database.	Newly active database does not have the registration made in 2)
4)	Make a call to FN registered in 2).	The call is not successful.

Step	Action	Expected result(s)
5)	Activate database replication feature between the (geo)redundant SCP databases.	The FFN database replication feature between (geo)redundant FFN databases is enabled.
6)	In case the FFN databases do not synchronise automatically, perform a manual database synchronisation.	The (geo)redundant FFN databases are synchronised.
7)	Make a call to FN registered in 2)	The call is now successful.

Step 2: FFN Database recovery in case of non-geo-redundancy.

Step	Action	Expected result(s)
1)	Make a backup of FFN database as instructed in the system manual.	A complete copy of FFN database has been made.
2)	Simulate the failure of FFN, e.g. by power cut or disconnecting of SS7 interface(s) to FFN.	FFN is not available in the network.
3)	Perform registrations.	Registrations are not possible.
4)	Undo 2).	FFN is available again.
5)	Restore the FFN database by using the database backup in 1).	FFN database contains data from the time point of 1).
6)	Perform registrations.	Registrations are now possible.
7)	Make a call to FN registered in 6)	The call is now successful.

d) Success criteria

FFN database can be recovered after a system failure.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.24 FA Call – Successful Call (national call)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	3.2.3 9.2.1.1 9.2.4.1 9.2.4.2 9.2.4.3 9.2.4.4 2.4.3 11.2.1.10 11.2.2.2 11.2.3.1	2.4.1 2.5.1 9.2.2 9.2.4 9.2.7 9.4.1 9.5.2 9.5.3 9.5.4 9.6.2 9.A2 9.A3 11.2.3 11.5.1 11.5.2 11.5.4 11.5.5	

a) Purpose

Verify FA calls to different Call Types (CT).

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: CT2 /FC01 calls CT2 /FC08.

Step 2: CT3 /FC01 calls CT2 /FC08.

Step3: CT2 /FC01 calls CT4 /FC01.

Step4: CT3 /FC01 calls CT6 /FC5yxx.

Step5: CT7 /FC01 calls CT2 /FC01.

Test configuration for all steps

Access Matrix which controls calls from and to FN is disabled. This can be done either by switch-off of Access Matrix or by setting all calls to “Yes” temporarily.

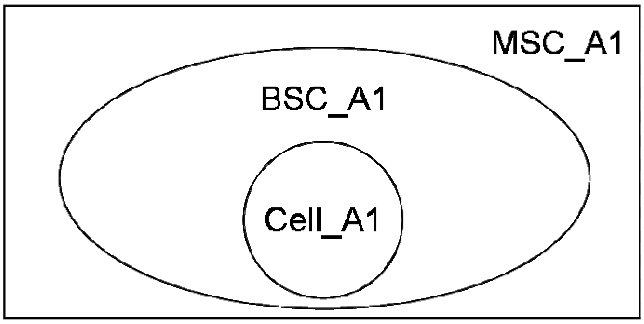
Protocol analyzer is configured to trace A-interface to verify the Setup message.

For the Step 1, MS_A1 is registered to IC_A, FN_1 and MS_A2 is registered to IC_A, FN_6.

The corresponding entries exist in FFN database of network A.

All FN to register in the following calls are unregistered.

Network A



MS_A1 (FN_1)
MS_A2 (FN_6)

c) Test procedure

Step1: CT2 /FC01 calls CT2 /FC08

Step	Action	Expected result(s)
1)	MS_A1 initiates a call to FN_6.	The outgoing call is displayed on MS_A1.
2)	Verify that the function related SA (Sub Address) derived from the FN, using ODD (originally dialled digits) is provided in the Setup Message.	Protocol analyzer shows the corresponding Setup Message including the correct SA. The incoming call is displayed on MS_A2.
3)	MS_A2 accepts the call.	The PTP call between MS_A1 and MS_A2 is successfully established.
4)	Verify Presentation of FN (PFN) and check the number displayed on both calling- and called party.	MS_A1 displays the function of the connected MS_A2 and MS_A2 displays the function of MS_A1.
5)	MS_A2 closes the call.	Call is released.
6)	MS_A1 initiates a call to FN_6 by preceding the Breakout Code (BC) 900 and IC_A.	The outgoing call is displayed on MS_A1.
7)	Repeat 3) to 6).	See above.

Step2: CT3 /FC01 calls CT2 /FC08.

Step	Action	Expected result(s)
1)	MS_A1 registers to IC_A, FN_2.	The USSD outcome code “01” which means “Follow Me activated” is displayed on MS_A1. Alternatively MS converts the outcome code in an appropriate text message.
2)	MS_A1 initiates a call to FN_6.	The outgoing call is displayed on MS_A1.
3)	Verify that the function related SA (Sub Address) derived from the FN, using ODD (originally dialled digits) is provided in the Setup Message.	Protocol analyzer shows the corresponding Setup Message including the correct SA. The incoming call is displayed on MS_A2.
4)	MS_A2 accepts the call.	The PTP call between MS_A1 and MS_A2 is successfully established.
5)	Verify PFN and check the number displayed on both calling- and called party.	MS_A1 displays the function of the connected MS_A2 and MS_A2 displays the function of MS_A1.
6)	MS_A1 closes the call.	Call is released.
7)	MS_A1 initiates a call to FN_6 by preceding the Breakout Code (BC) 900 and IC_A.	The outgoing call is displayed on MS_A1.
8)	Repeat 3) to 6).	See above.

Step3: CT2 /FC01 calls CT4 /FC01.

Step	Action	Expected result(s)
1)	MS_A2 registers to IC_A, FN_3.	The USSD outcome code “01” which means “Follow Me activated” is displayed on MS_A2. Alternatively MS converts the outcome code in an appropriate text message.
2)	MS_A1 initiates a call to FN_3.	The outgoing call is displayed on MS_A1
3)	Verify that the function related SA (Sub Address) derived from the FN, using ODD (originally dialled digits) is provided in the Setup Message.	Protocol analyzer shows the corresponding Setup Message including the correct SA. The incoming call is displayed on MS_A2.
4)	MS_A2 accepts the call.	The PTP call between MS_A1 and MS_A2 is successfully established.
5)	Verify PFN and check the number displayed on both calling- and called party.	MS_A1 displays the function of the connected MS_A2 and MS_A2 displays the function of MS_A1.
6)	MS_A2 closes the call.	Call is released.

Step	Action	Expected result(s)
7)	MS_A1 initiates a call to FN_3 by preceding the Breakout Code (BC) 900 and IC_A.	The outgoing call is displayed on MS_A1.
8)	Repeat 3) to 6).	See above.

Step4: CT3 /FC01 calls CT6 /FC5yxx.

Step	Action	Expected result(s)
1)	MS_A2 registers to IC_A, FN_4.	The USSD outcome code “01” which means “Follow Me activated” is displayed on MS_A2. Alternatively MS converts the outcome code in an appropriate text message.
2)	MS_A1 whose last registered FN is FN_2 (CT3 /FC01) initiates a call to FN_4.	The incoming call is displayed on MS_A2.
3)	MS_A2 accepts the call.	The PTP call between MS_A1 and MS_A2 is successfully established.
4)	Verify PFN and check the number displayed on both calling- and called party.	MS_A1 displays the function of the connected MS_A2 and MS_A2 displays the function of MS_A1.
5)	MS_A2 closes the call.	Call is released.
6)	MS_A1 initiates a call to FN_4 by preceding the Breakout Code (BC) 900 and IC_A.	The outgoing call is displayed on MS_A1.
7)	Repeat 3) to 5).	See above.

Step5: CT7 /FC01 calls CT2 /FC01.

Step	Action	Expected result(s)
1)	IC_A, FN_11 is assigned to CT_A1.	CT_A1 displays its identity FN_11.
2)	CT_A1 initiates a call to FN_1.	The incoming call is displayed on MS_A1.
3)	MS_A1 accepts the call.	The PTP call between CT_A1 and MS_A1 is successfully established.
4)	Verify PFN and check the number displayed on both calling- and called party.	MS_A1 displays the function of the connected CT_A1 and CT_A1 displays the function of MS_A1.
5)	MS_A1 closes the call.	Call is released.
6)	CT_A1 initiates a call to FN_1 by preceding the Breakout Code (BC) 900 and IC_A.	The outgoing call is displayed on CT_A1.
7)	Repeat 3) to 5).	See above.

d) Success criteria

All FA calls are successfully connected. The Presentation Of Functional Number (PFN) was correct in all calls.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.25 FA Call – Call is not completed (national call)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that a call to an unregistered FN can not be completed.

b) Test configuration / initial conditions

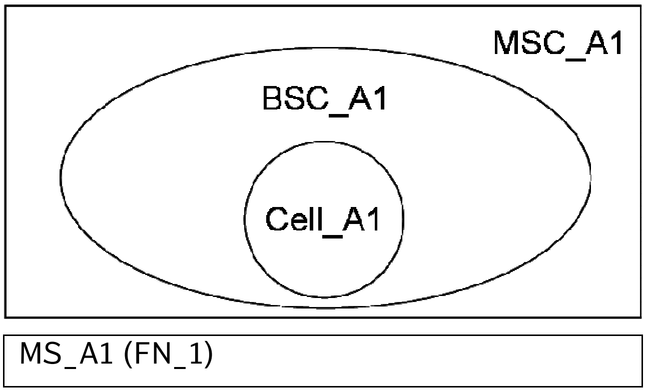
Access Matrix which controls calls from and to FN is disabled. This can be done either by switch-off of Access Matrix or by setting all calls to “Yes” temporarily.

For the Step 1, MS_A1 is registered to IC_A, FN_1.

The corresponding entry exists in FFN database of network A.

None of the used MS is registered to FN_7.

Network A



c) Test procedure

Step	Action	Expected result(s)
1)	Make sure that MS_A1 is located in Cell _A1, network A.	Cell_A1 of network A is serving network of MS_A1.
2)	MS_A1 initiates a call to FN_7 to which	No call sets up.

Step	Action	Expected result(s)
	none of the test MS registered.	An appropriate tone or an announcement can be played to MS_A1 indicating that the dialled FN is not registered. Note: EIRENE-SRS V15.1 is going to define a special call release cause indicating a not registered FN.
3)	MS_A1 closes the call.	MS_A1 turns to an idle mode.

d) Success criteria

FA call to an unregistered FN can not be completed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.26 FA Call – Successful Call (international call)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.1.1 2.4.3 11.2.1.10 11.2.3.1	2.4.1 2.5.1 9.4.1 9.5.2 9.6.2 9.6.3 9.6.4 9.10.1 9.10.1ii 11.5.1 11.5.2 11.5.4 11.5.5	

a) Purpose

Verify FA calls to different Call Types (CT).

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: international CT2 /FC01 to CT2 /FC01 call.

Step 2: international CT7 /FC01 to CT2 /FC01 call.

Step 3: international CT2 /FC01 to CT3 FC01 call.

Step 4: international CT7 /FC01 to CT2 /FC01 call.

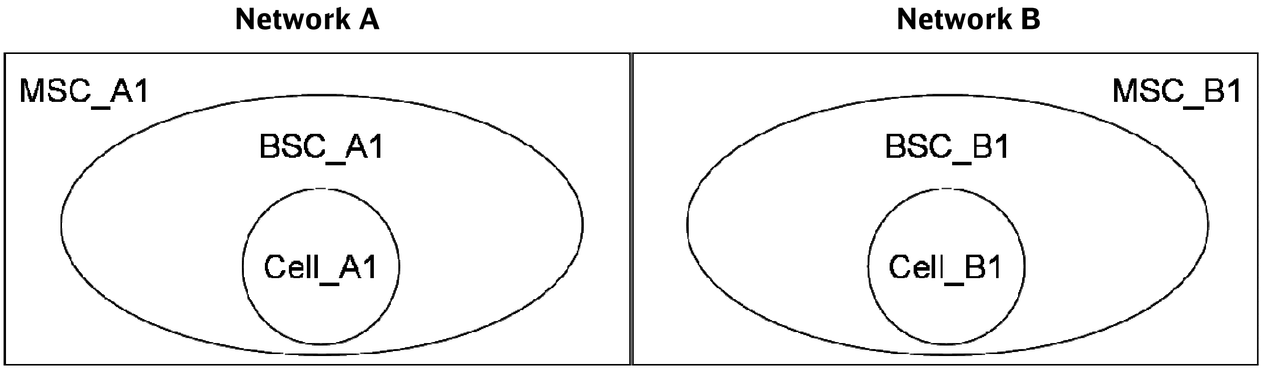
Step 5: international CT7 /FC01 to CT6 /FC5yxx call.

Test configuration for all steps

Access Matrix which controls calls from and to FN is disabled in both networks A and B. This can be done either by switch-off of Access Matrix or by setting all calls to “Yes” temporarily.

The initial registration is given as diagram shows below. The corresponding entries exist in FFN database of network A and B.

All FN to register in the following calls are unregistered.



MSC_A1	MSC_B1
MS_A1 (IC_A, FN_1)	MS_B1 (IC_B, FN_8)
MS_A2 (IC_A, FN_2)	MS_B2 (IC_B, FN_7)
CT_A1 (IC_A, FN_11)	CT_B1 (IC_B, FN_12)

c) Test procedure

Step 1: international CT2 /FC01 to CT2 /FC01 call.

Step	Action	Expected result(s)
1)	MS_A1 initiates a call to IC_B, FN_8 by preceding the Breakout Code (BC) 900.	The incoming call is displayed on MS_B1.
2)	MS_B1 accepts the call.	The PTP call between MS_A1 and MS_B1 is successfully established.
3)	Verify PFN and check the number displayed on both calling- and called party.	MS_A1 displays the function of the connected MS_B1 and MS_B1 displays the function of MS_A1.
4)	MS_B1 closes the call.	Call is released.

Step 2: international CT7 /FC01 to CT2 /FC01 call.

Step	Action	Expected result(s)
1)	CT_A1 initiates a call to IC_B, FN_8 by preceding the BC 900.	The incoming call is displayed on MS_B1.
3)	MS_B1 accepts the call.	The PTP call between CT_A1 and MS_B1 is successfully established.
4)	Verify PFN and check the number displayed on both calling- and called party.	CT_A1 displays the function of the connected MS_B1 and MS_B1 displays the function of CT_A1.
5)	CT_A1 closes the call.	Call is released.

Step 3: international CT2 /FC01 to CT3 FC01 call.

Step	Action	Expected result(s)
1)	MS_B1 initiates a call to IC_A, FN_2 by preceding the BC 900.	The incoming call is displayed on MS_A2.
3)	MS_A2 accepts the call.	The PTP call between MS_A2 and MS_B1 is successfully established.
4)	Verify PFN and check the number displayed on both calling- and called party.	MS_A2 displays the function of the connected MS_B1 and MS_B1 displays the function of MS_A2.
5)	MS_A2 closes the call.	Call is released.

Step 4: international CT7 /FC01 to CT2 /FC01 call.

Step	Action	Expected result(s)
1)	CT_B1 initiates a call to IC_A, FN_1 by preceding the BC 900.	The incoming call is displayed on MS_A1.
3)	MS_A1 accepts the call.	The PTP call between CT_B1 and MS_A1 is successfully established.
4)	Verify PFN and check the number displayed on both calling- and called party.	CT_B1 displays the function of the connected MS_A1 and MS_A1 displays the function of CT_B1.
5)	CT_B1 closes the call.	Call is released.

t

Step 5: international CT7 /FC01 to CT6 /FC5yxx call.

Step	Action	Expected result(s)
1)	MS_A2 registers to IC_A, FN_4.	The USSD outcome code “01” which means “Follow Me activated” is displayed on MS_A2. Alternatively MS converts the outcome code in an appropriate text message.
1)	CT_B1 initiates a call to IC_A, FN_4 by preceding the BC 900.	The incoming call is displayed on MS_A2.
3)	MS_A2 accepts the call.	The PTP call between CT_B1 and MS_A2 is successfully established.
4)	Verify PFN and check the number displayed on both calling- and called party.	CT_B1 displays the function of the connected MS_A2 and MS_A2 displays the function of CT_B1.
5)	CT_B1 closes the call.	Call is released.

d) Success criteria

All international FA calls are successfully connected. The Presentation of Functional Number (PFN) was correct in all calls.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.2.27 FA Call – Call is not completed (international call)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

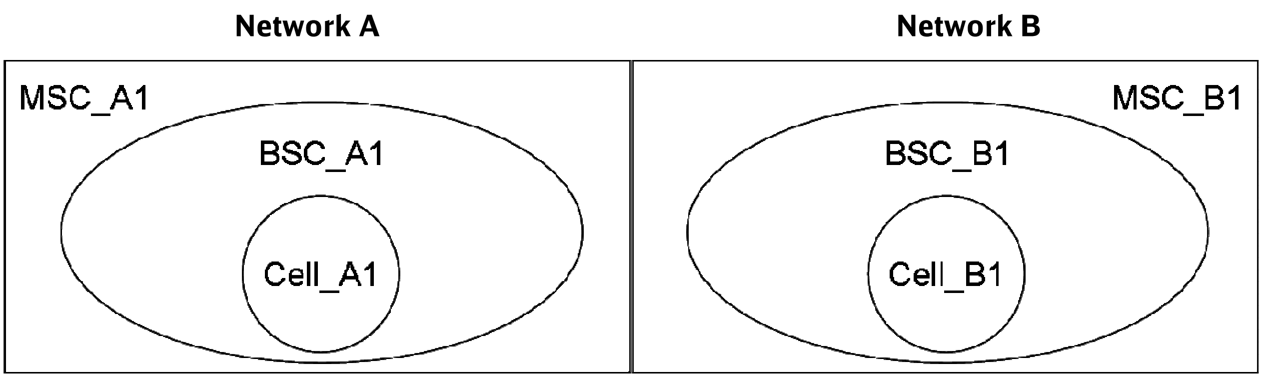
a) Purpose

Verify that a call to an unregistered FN can not be completed.

b) Test configuration / initial conditions

Access Matrix which controls calls from and to FN is disabled in both networks A and B. This can be done either by switch-off of Access Matrix or by setting all calls to "Yes" temporarily.

None of the used MS is registered to FN_5.



MSC_A1	MSC_B1
MS_A1	CT_B1 (IC_B, FN_15)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 initiates a call to IC_B, FN_5 to which none of the test MS registered by preceding the BC 900.	No call sets up. An appropriate tone or an announcement can be played to MS_A1 indicating that the dialled FN is not registered.
2)	MS_A1 closes the call.	MS_A1 turns to an idle mode.

Step	Action	Expected result(s)
3)	CT_B1 initiates a call to IC_A, FN_5 to which none of the test MS registered by preceding the BC 900.	No call sets up. An appropriate tone or an announcement can be played to CT_B1 indicating that the dialled FN is not registered. Note: EIRENE-SRS V15.1 is going to define a special call release cause indicating a not registered FN.
4)	CT_B1 closes the call.	CT_B1 turns to an idle mode.

d) Success criteria

FA call to an unregistered FN can not be completed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.3 Access Matrix and Access to External Networks

The following table shows the Access Matrix defined in the EIRENE FRS V7 and will be used as the test configuration.

		Receiving Party						
		Primary Controller	Secondary Controller	Power Controller	Lead Driver	Other Driver	Chief Conductor	Public Address
Initiating Party	Primary Controller				Yes	Open	Open	Open
	Secondary Controller				Yes	Open	Open	Open
	Power Controller				Yes	Open	Open	Open
	Lead Driver	Yes	Yes	Yes	Open	Yes*	Yes*	Yes*
	Other Driver	Yes	Yes	Yes	Yes*	Yes*	Yes*	Yes*
	Chief Conductor	Open	Open	Open	Yes*	Yes*	Yes*	Yes*
	Public Address							

* At least for persons on the same train

Table 10-2: Access matrix

Excerpt from FRS v7.0

10.6.2 “Yes” indicates that the network shall allow a call from the stated initiating party to the stated receiving party. “Yes*” indicates that the call shall be allowed at least for users on the same train. “Open” indicates that permissions for calls of this type are to be assigned by the implementing railway according to their specific communication requirements. Shaded cells on the access matrix mean that this call is outside the scope of the EIRENE specifications. The access matrix is shown in table 10-2. (M)

5.3.1 National call: AM allows call

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	10.6.1 10.6.2	11.8.1	

a) Purpose

Verify the Access matrix configuration works.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: CT2 / FC 01 calls CT7 /FC01.

Step 2: CT2 / FC 02 calls CT7 /FC02.

Step 3: CT2 / FC 01 calls CT2 /FC10.

Step 4: CT2 /FC10 calls CT2 /FC01.

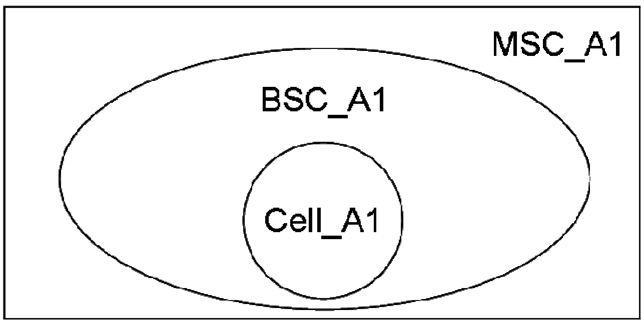
Test configuration for all steps

Access Matrix is enabled and configured as defined in the EIRENE FRS V7 and shown above.

The initial registration has been done as the diagram shows below. The corresponding entries exist in FFN database of network A.

MS_A3 has the Follow Me subscription ABCD.

Network A



MS_A1 (FN_1)
MS_A2 (FN_5)
MS_A3 (FN_7)
CT_A1 (FN_11)
CT_A2 (FN_13)

c) Test procedure

Step 1: CT2 / FC 01 calls CT7 /FC01.

Step	Action	Expected result(s)
1)	MS_A1 calls FN_11.	AM allows the call, the incoming call is displayed on CT_A1.
2)	MS_A1 accepts the call.	The PTP call between CT_A1 and MS_A1 is successfully established.
3)	Verify PFN and check the number displayed on both calling- and called party.	CT_A1 displays the function of the connected MS_A1 and MS_A1 displays the function of CT_A1.
4)	One of the calling- and called party closes the call.	Call is released.

Step 2: CT2 / FC 02 calls CT7 /FC02.

Step	Action	Expected result(s)
1)	MS_A2 calls FN_13.	AM allows the call, the incoming call is displayed on CT_A2.
2)	CT_A2 accepts the call.	The PTP call between CT_A2 and MS_A2 is successfully established.
3)	Verify PFN and check the number displayed on both calling- and called party.	CT_A2 displays the function of the connected MS_A2 and MS_A2 displays the function of CT_A2.
4)	One of the calling- and called party closes the call.	Call is released.

Step 3: CT2 / FC 01 calls CT2 /FC10.

Step	Action	Expected result(s)
1)	MS_A1 calls FN_7.	AM allows the call, the incoming call is displayed on MS_A3.
2)	MS_A3 accepts the call.	The PTP call between MS_A3 and MS_A1 is successfully established.
3)	Verify PFN and check the number displayed on both calling- and called party.	MS_A3 displays the function of the connected MS_A1 and MS_A1 displays the function of MS_A3.
4)	One of the calling- and called party closes the call.	Call is released.

Step 4: CT2 /FC10 calls CT2 /FC01.

Step	Action	Expected result(s)
1)	MS_A3 calls FN_1.	AM allows the call, the incoming call is displayed on MS_A1.
2)	MS_A1 accepts the call.	The PTP call between MS_A3 and MS_A1 is successfully established.
3)	Verify PFN and check the number displayed on both calling- and called party.	MS_A3 displays the function of the connected MS_A1 and MS_A1 displays the function of MS_A3.
4)	One of the calling- and called party closes the call.	Call is released.

d) Success criteria

All above calls set up as the Access Matrix configuration allows.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.3.2 National call: AM denies call

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	10.6.1 10.6.2	11.8.1	

a) Purpose

Verify the Access matrix check on call processing.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: CT7 /FC 01 calls CT2 /FC02.

Step 2: CT7 /FC02 calls CT2 /FC10.

Step 3: CT7 /FC02 calls CT2 /FC08.

Step 4: CT2 /FC10 calls CT7 /FC02.

Test configuration for all steps

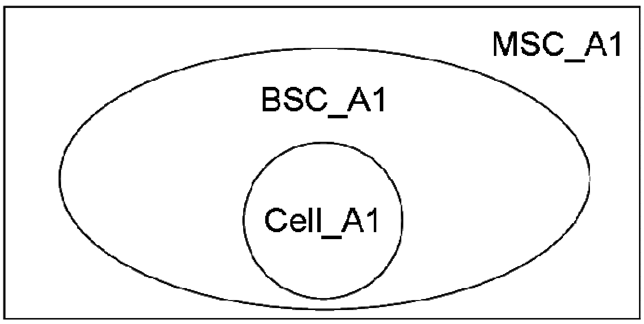
Access Matrix is enabled and configured as defined in the EIRENE FRS V7 and shown above.

The cells marked to "Open" in the Access Matrix are set up to "No".

The initial registration has been done as the diagram shows below. The corresponding entries exist in FFN database of network A.

MS_A3 has the Follow Me subscription ABCD.

Network A



MS_A1 (FN_1)
MS_A2 (FN_5)
MS_A3 (FN_7)
CT_A1 (FN_11)
CT_A2 (FN_13)

c) Test procedure

Step 1: CT7 /FC 01 calls CT2 /FC02.

Step	Action	Expected result(s)
1)	CT_A1 calls FN_5.	AM does not allow the call. Note: EIRENE-SRS V15.1 is going to define a special call release cause indicating a disallowed call by AM.
2)	Change the according entry of AM to allow the call ("yes") temporarily.	The affected call is configured to be allowed.
3)	CT_A1 calls FN_5.	AM now allows the call, the incoming call is displayed on MS_A2.
4)	MS_A2 accepts the call.	The PTP call between MS_A2 and CT_A1 is successfully established.
5)	Verify PFN and check the number displayed on both calling- and called party.	MS_A2 displays the function of the connected CT_A1 and CT_A1 displays the function of MS_A2.
6)	One of the calling- and called party closes the call.	Call is released.
7)	Undo the above temporary change.	The affected cell of AM is configured to "No".

Step 2: CT7 /FC02 calls CT2 /FC10.

Step	Action	Expected result(s)
1)	CT_A2 calls FN_7.	AM does not allow the call. Note: EIRENE-SRS V15.1 is going to define a special call release cause indicating a disallowed call by AM.
2)	Change the according entry of AM to allow the call ("yes") temporarily.	The affected call is configured to be allowed.
3)	CT_A2 calls FN_7.	AM now allows the call, the incoming call is displayed on MS_A3.
4)	MS_A3 accepts the call.	The PTP call between MS_A3 and CT_A2 is successfully established.
5)	Verify PFN and check the number displayed on both calling- and called party.	MS_A3 displays the function of the connected CT_A2 and CT_A2 displays the function of MS_A3.
6)	One of the calling- and called party closes the call.	Call is released.

Step	Action	Expected result(s)
7)	Undo the above temporary change.	The affected cell of AM is configured to "No".

Step 3: CT7 /FC02 calls CT2 /FC08.

Step	Action	Expected result(s)
1)	MS_A2 registers to IC_A, FN_6.	The USSD outcome code "01" which means "Follow Me activated" is displayed on MS_A2. Alternatively MS converts the outcome code in an appropriate text message.
2)	CT_A2 calls FN_6.	AM does not allow the call. Note: EIRENE-SRS V15.1 is going to define a special call release cause indicating a disallowed call by AM.
3)	Change the according entry of AM to allow the call ("yes") temporarily.	The affected call is configured to be allowed.
4)	CT_A2 calls FN_6.	AM now allows the call, the incoming call is displayed on MS_A2.
5)	MS_A2 accepts the call.	The PTP call between MS_A2 and CT_A2 is successfully established.
6)	Verify PFN and check the number displayed on both calling- and called party.	MS_A2 displays the function of the connected CT_A2 and CT_A2 displays the function of MS_A2.
7)	One of the calling- and called party closes the call.	Call is released.
8)	Undo the above temporary change.	The affected cell of AM is configured to "No".

Step 4: CT2 /FC10 calls CT7 /FC02.

Step	Action	Expected result(s)
1)	MS_A3 calls FN_13.	AM does not allow the call. Note: EIRENE-SRS V15.1 is going to define a special call release cause indicating a disallowed call by AM.
2)	Change the according entry of AM to allow the call ("yes") temporarily.	The affected call is configured to be allowed.
3)	MS_A3 calls FN_13.	AM now allows the call, the incoming call is displayed on CT_A2.

Step	Action	Expected result(s)
4)	CT_A2 accepts the call.	The PTP call between MS_A3 and CT_A2 is successfully established.
5)	Verify PFN and check the number displayed on both calling- and called party.	MS_A3 displays the function of the connected CT_A2 and CT_A2 displays the function of MS_A3.
6)	One of the calling- and called party closes the call.	Call is released.
7)	Undo the above temporary change.	The affected cell of AM is configured to "No".
8)	Undo the subscription change for MS_A3.	MS_A3 has no more Follow Me subscription.

d) Success criteria

Calls can be set up only if the Access Matrix configuration allows.

Dependent on network configuration an appropriate tone and/or an announcement can be played to the calling party in case of not allowed call by Access Matrix.

Note: E-SRS V15.1 will specify a special call release code for such a case.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.3.3 International call: AM allows call

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	10.6.1 10.6.2	9.3.4 9.10.1 9.10.1ii 11.8.1	

a) Purpose

Verify the Access matrix check on international call processing.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: IC_A /CT7 /FC01 calls IC_B /CT2 /FC01.

Step 2: IC_A /CT7 /FC02 calls IC_B /CT2 /FC01.

Step 3: IC_B /CT2 /FC01 calls IC_A /CT7 /FC01.

Step 4: IC_B /CT7 /FC01 calls IC_A /CT2 /FC01.

Step 5: IC_B /CT7 /FC02 calls IC_A /CT2 /FC01.

Step 6: IC_A /CT2 /FC01 calls IC_B /CT7 /FC01.

Test configuration for all steps

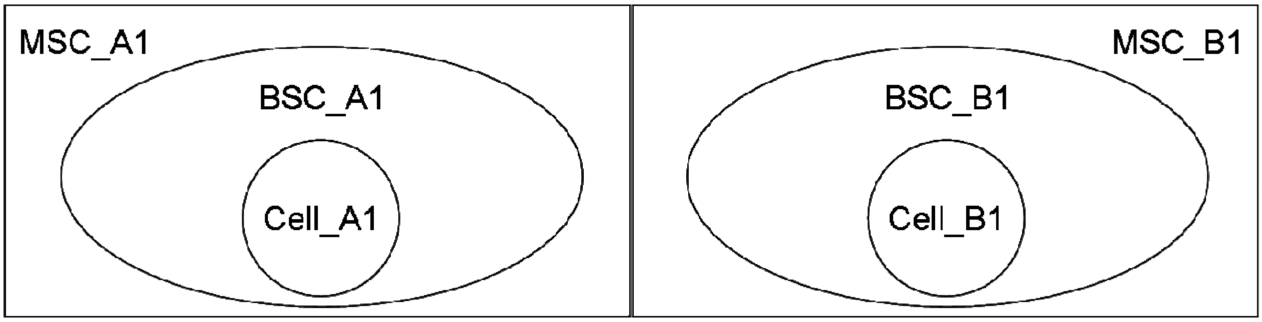
Access Matrix is enabled and configured as defined in the EIRENE FRS V7 and shown above in both networks A and B.

MS_A1 and MS_A2 roam in network B.

MS_B1 and MS_B2 roam in network A.

The initial registration has been done as the diagram shows below. The corresponding entries exist in FFN database of network A and B.

Network A **Network B**



MSC_A1	**MSC_B1**
MS_B1 (IC_A, FN_1)	MS_A1 (IC_B, FN_7)
MS_B2 (IC_A, FN_6)	MS_A2 (IC_B, FN_8)
CT_A1 (IC_A, FN_11)	CT_B1 (IC_B, FN_15)
CT_A2 (IC_A, FN_13)	CT_B2 (IC_B, FN_16)

c) Test procedure

Step 1: IC_A /CT7 /FC01 calls IC_B /CT2 /FC01.

Step	Action	Expected result(s)
1)	Make sure that the last assigned FN of CT_A1 is IC_A, FN_11.	CT_A1 displays the functional identity of FN_11.
2)	CT_A1 calls IC_B, FN_8 by preceding the BC 900.	AM of network B allows the call, the incoming call is displayed on MS_A2.
3)	MS_A2 accepts the call.	The PTP call between MS_A2 and CT_A1 is successfully established.
4)	Verify PFN and check the number displayed on both calling- and called party.	MS_A2 displays the function of the connected CT_A1 and CT_A1 displays the function of MS_A2.
5)	One of the calling- and called party closes the call.	Call is released.

Step 2: IC_A /CT7 /FC02 calls IC_B /CT2 /FC01.

Step	Action	Expected result(s)
1)	Make sure that the last assigned FN of CT_A2 is IC_A, FN_13.	CT_A2 displays the functional identity of FN_13.
2)	CT_A2 calls IC_B, FN_8 by preceding the BC 900.	AM of network B allows the call, the incoming call is displayed on MS_A2.

Step	Action	Expected result(s)
3)	MS_A2 accepts the call.	The PTP call between MS_A2 and CT_A2 is successfully established.
4)	Verify PFN and check the number displayed on both calling- and called party.	MS_A2 displays the function of the connected CT_A2 and CT_A2 displays the function of MS_A2.
5)	One of the calling- and called party closes the call.	Call is released.

Step 3: IC_B /CT2 /FC01 calls IC_A /CT7 /FC01.

Step	Action	Expected result(s)
1)	Make sure that the last registered FN of MS_A2 is IC_B, FN_8.	MS_A2 displays the functional identity of FN_8.
2)	MS_A2 calls IC_A, FN_11 by preceding the BC 900.	AM of network A allows the call, the incoming call is displayed on CT_A1.
3)	CT_A1 accepts the call.	The PTP call between MS_A2 and CT_A1 is successfully established.
4)	Verify PFN and check the number displayed on both calling- and called party.	MS_A2 displays the function of the connected CT_A1 and CT_A1 displays the function of MS_A2.
5)	One of the calling- and called party closes the call.	Call is released.

Step 4: IC_B /CT7 /FC01 calls IC_A /CT2 /FC01.

Step	Action	Expected result(s)
1)	Make sure that the last assigned FN of CT_B1 is IC_B, FN_15.	CT_B1 displays the functional identity of FN_15.
2)	CT_B1 calls IC_A, FN_1 by preceding the BC 900.	AM of network A allows the call, the incoming call is displayed on MS_B1.
3)	MS_B1 accepts the call.	The PTP call between MS_B1 and CT_B1 is successfully established.
4)	Verify PFN and check the number displayed on both calling- and called party.	MS_B1 displays the function of the connected CT_B1 and CT_B1 displays the function of MS_B1.
5)	One of the calling- and called party closes the call.	Call is released.

Step 5: IC_B /CT7 /FC02 calls IC_A /CT2 /FC01.

Step	Action	Expected result(s)
1)	Make sure that the last assigned FN of CT_B2 is IC_B, FN_16.	CT_B2 displays the functional identity of FN_16.
2)	CT_B2 calls IC_A, FN_1 by preceding the BC 900.	AM of network A allows the call, the in-coming call is displayed on MS_B1.
3)	MS_B1 accepts the call.	The PTP call between MS_B1 and CT_B2 is successfully established.
4)	Verify PFN and check the number displayed on both calling- and called party.	MS_B1 displays the function of the con-nected CT_B2 and CT_B2 displays the function of MS_B1.
5)	One of the calling- and called party closes the call.	Call is released.

Step 6: IC_A /CT2 /FC01 calls IC_B /CT7 /FC01.

Step	Action	Expected result(s)
1)	Make sure that the last registered FN of MS_B1 is IC_A, FN_1.	MS_B1 displays the functional identity of FN_1.
2)	MS_B1 calls IC_B, FN_15 by preceding the BC 900.	AM of network B allows the call, the in-coming call is displayed on CT_B1.
3)	CT_B1 accepts the call.	The PTP call between MS_B1 and CT_B1 is successfully established.
4)	Verify PFN and check the number displayed on both calling- and called party.	MS_B1 displays the function of the con-nected CT_B1 and CT_B1 displays the function of MS_B1.
5)	One of the calling- and called party closes the call.	Call is released.

d) Success criteria

International FA-calls can be set up as the Access Matrix allows.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.3.4 International call: AM denies call

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	10.6.1 10.6.2	11.8.1	

a) Purpose

Verify the Access matrix check on international call processing.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: IC_A /CT7 /FC01 calls IC_B /CT2 /FC10.

Step 2: IC_A /CT7 /FC02 calls IC_B /CT2 /FC08.

Step 3: IC_B /CT2 /FC10 calls IC_A /CT7 /FC01.

Step 4: IC_B /CT7 /FC01 calls IC_A /CT2 /FC10.

Step 5: IC_B /CT7 /FC02 calls IC_A /CT2 /FC08.

Step 6: IC_A /CT2 /FC10 calls IC_B /CT7 /FC01.

Test configuration for all steps

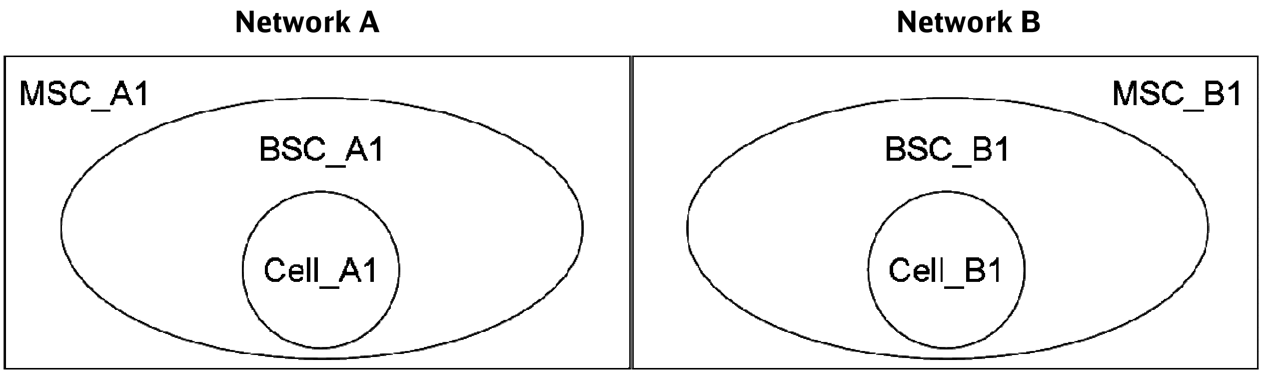
Access Matrix is enabled and configured as defined in the EIRENE FRS V7 and shown above in both networks A and B.

The cells marked to “Open” in the above Access Matrix are set up to “No”.

MS_A1 and MS_A2 roam in network B.

MS_B1 and MS_B2 roam in network A.

The initial registration has been done as the diagram shows below. The corresponding entries exist in FFN database of network A and B.



MSC_A1	MSC_B1
MS_B1 (IC_A, FN_6)	MS_A1 (IC_B, FN_6)
MS_B2 (IC_A, FN_7)	MS_A2 (IC_B, FN_7)
CT_A1(IC_A, FN_11)	CT_B1 (IC_B, FN_15)
CT_A2 (IC_A, FN_13)	CT_B2 (IC_B, FN_16)

c) Test procedure

Step 1: IC_A /CT7 /FC01 calls IC_B /CT2 /FC10.

Step	Action	Expected result(s)
1)	CT_A1 calls IC_B, FN_7 by preceding the BC 900.	AM of network B does not allow the call. Note: EIRENE-SRS V15.1 is going to define a special call release cause indicating a disallowed call by AM.
2)	Change the according entry of AM on network B to allow the call ("yes") temporarily.	The affected call is configured to be allowed.
3)	CT_A1 calls IC_B, FN_7 by preceding the BC 900.	AM of network B now allows the call, the incoming call is displayed on MS_A2.
4)	MS_A2 accepts the call.	The PTP call between MS_A2 and CT_A1 is successfully established.
5)	Verify PFN and check the number displayed on both calling- and called party.	MS_A2 displays the function of the connected CT_A1 and CT_A1 displays the function of MS_A2.
6)	One of the calling- and called party closes the call.	Call is released.
7)	Undo the above temporary change.	The affected cell of AM is configured to "No".

Step 2: IC_A /CT7 /FC02 calls IC_B /CT2 /FC08.

Step	Action	Expected result(s)
1)	CT_A2 calls IC_B, FN_6 by preceding the BC 900.	AM of network B does not allow the call. Note: EIRENE-SRS V15.1 is going to define a special call release cause indicating a disallowed call by AM.
2)	Change the according entry of AM on network B to allow the call (“yes”) temporarily.	The affected call is configured to be allowed.
3)	CT_A2 calls IC_B, FN_6 by preceding the BC 900.	AM of network B now allows the call, the incoming call is displayed on MS_A1.
4)	MS_A1 accepts the call.	The PTP call between MS_A1 and CT_A2 is successfully established.
5)	Verify PFN and check the number displayed on both calling- and called party.	MS_A1 displays the function of the connected CT_A2 and CT_A2 displays the function of MS_A1.
6)	One of the calling- and called party closes the call.	Call is released.
7)	Undo the above temporary change.	The affected cell of AM is configured to “No”.

Step 3: IC_B /CT2 /FC10 calls IC_A /CT7 /FC01.

Step	Action	Expected result(s)
1)	MS_A2 calls IC_A, FN_11 by preceding the BC 900.	AM of network A does not allow the call. Note: EIRENE-SRS V15.1 is going to define a special call release cause indicating a disallowed call by AM.
2)	Change the according entry of AM on network A to allow the call (“yes”) temporarily.	The affected call is configured to be allowed.
3)	MS_A2 calls IC_A, FN_11 by preceding the BC 900.	AM of network A now allows the call, the incoming call is displayed on CT_A1.
4)	CT_A1 accepts the call.	The PTP call between CT_A1 and MS_A2 is successfully established.
5)	Verify PFN and check the number displayed on both calling- and called party.	CT_A1 displays the function of the connected MS_A2 and MS_A2 displays the function of CT_A1.
6)	One of the calling- and called party closes the call.	Call is released.
7)	Undo the above temporary change.	The affected cell of AM is configured to “No”.

Step 4: IC_B /CT7 /FC01 calls IC_A /CT2 /FC10.

Step	Action	Expected result(s)
1)	CT_B1 calls IC_A, FN_7 by preceding the BC 900.	AM of network A does not allow the call. Note: EIRENE-SRS V15.1 is going to define a special call release cause indicating a disallowed call by AM.
2)	Change the according entry of AM on network A to allow the call (“yes”) temporarily.	The affected call is configured to be allowed.
3)	CT_B1 calls IC_A, FN_7 by preceding the BC 900.	AM of network A now allows the call, the incoming call is displayed on MS_B2.
4)	MS_B2 accepts the call.	The PTP call between MS_B2 and CT_B1 is successfully established.
5)	Verify PFN and check the number displayed on both calling- and called party.	MS_B2 displays the function of the connected CT_B1 and CT_B1 displays the function of MS_B2.
6)	One of the calling- and called party closes the call.	Call is released.
7)	Undo the above temporary change.	The affected cell of AM is configured to “No”.

Step 5: IC_B /CT7 /FC02 calls IC_A /CT2 /FC08.

Step	Action	Expected result(s)
1)	CT_B2 calls IC_A, FN_6 by preceding the BC 900.	AM of network A does not allow the call. Note: EIRENE-SRS V15.1 is going to define a special call release cause indicating a disallowed call by AM.
2)	Change the according entry of AM on network A to allow the call (“yes”) temporarily.	The affected call is configured to be allowed.
3)	CT_B2 calls IC_A, FN_6 by preceding the BC 900.	AM of network A now allows the call, the incoming call is displayed on MS_B1.
4)	MS_B1 accepts the call.	The PTP call between MS_B1 and CT_B2 is successfully established.
5)	Verify PFN and check the number displayed on both calling- and called party.	MS_B1 displays the function of the connected CT_B2 and CT_B2 displays the function of MS_B1.
6)	One of the calling- and called party closes the call.	Call is released.
7)	Undo the above temporary change.	The affected cell of AM is configured to “No”.

Step 6: IC_A /CT2 /FC10 calls IC_B /CT7 /FC01.

Step	Action	Expected result(s)
1)	MS_B2 calls IC_B, FN_15 by preceding the BC 900.	AM of network B does not allow the call. Note: EIRENE-SRS V15.1 is going to define a special call release cause indicating a disallowed call by AM.
2)	Change the according entry of AM on network B to allow the call (“yes”) temporarily.	The affected call is configured to be allowed.
3)	MS_B2 calls IC_B, FN_15 by preceding the BC 900.	AM of network B now allows the call, the incoming call is displayed on CT_B1.
4)	CT_B1 accepts the call.	The PTP call between CT_B1 and MS_B2 is successfully established.
5)	Verify PFN and check the number displayed on both calling- and called party.	CT_B1 displays the function of the connected MS_B2 and MS_B2 displays the function of CT_B1.
6)	One of the calling- and called party closes the call.	Call is released.
7)	Undo the above temporary change.	The affected cell of AM is configured to “No”.

d) Success criteria

International FA-calls can be set up in case that Access Matrix allows.

Dependent on network configuration an appropriate tone and/or an announcement can be played to the calling party in case of not allowed call by Access Matrix.

Note: E-SRS V15.1 will specify a special call release code for such a case.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.3.5 Calling party outside the EIRENE network (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.17 9.5.1 11.2.1.10	9.2.9 11.8.1	

a) Purpose

Verify the check on call authorization.

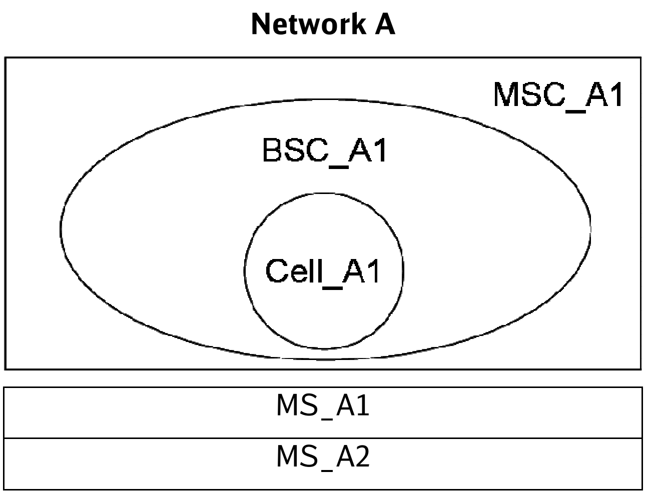
b) Test configuration / initial conditions

A PSTN Phone is available.

MS_A1 is authorized to receive incoming calls from public network(s).

MS_A2 is not authorized to receive incoming calls from public network(s).

The configuration of above subscriber information can be done either on HLR or on IN/SCP.



c) Test procedure

Step	Action	Expected result(s)
1)	A PSTN phone calls MS_A1 by dialling AC+NDC+SN.	The incoming call is displayed on MS_A1.

Step	Action	Expected result(s)
2)	MS_A1 accepts the call.	The PTP call between MS_A1 and the PSTN phone is successfully established.
3)	MS_A1 closes the call.	Call is released.
4)	A PSTN phone calls MS_A2 by dialling AC+NDC+SN.	The call does not establish. Dependent on network setting the calling party gets an appropriate tone or an announcement played.

d) Success criteria

Check on call authorization works.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.3.6 Calling party outside the EIRENE network (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.17 9.5.1 11.2.1.10	9.2.9 11.8.1	

a) Purpose

Verify the check on call authorization in case of roaming.

b) Test configuration / initial conditions

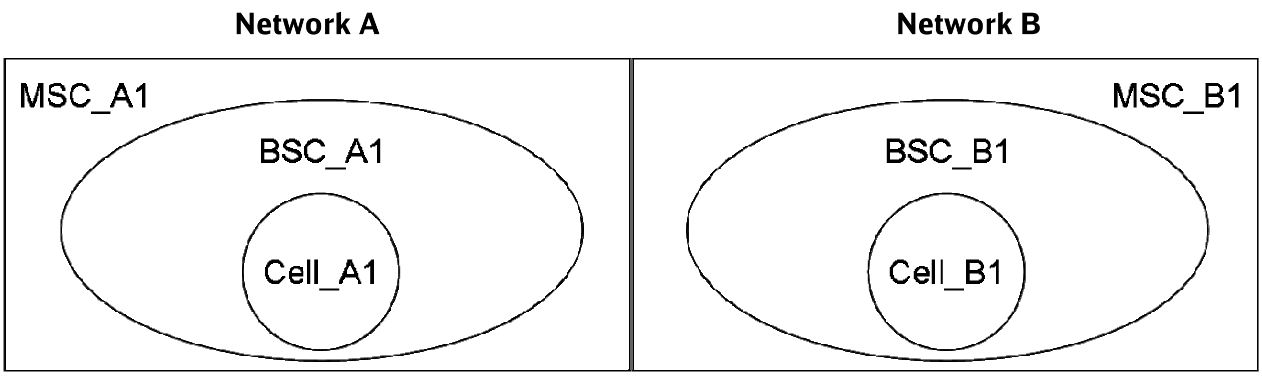
A PSTN Phone is available.

MS_A1 is authorized to receive incoming calls from public network(s).

MS_A2 is not authorized to receive incoming calls from public network(s).

MS_A1 and MS_A2 are roaming in network B.

The configuration of above subscriber information can be done either on HLR or on IN/SCP.



MSC_A1	**MSC_B1**
	MS_A1
	MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	A PSTN phone calls MS_A1 by dialling AC+CC+NDC+SN.	The incoming call is displayed on MS_A1.
2)	MS_A1 accepts the call.	The PTP call between MS_A1 and the PSTN phone is successfully established.
3)	MS_A1 closes the call.	Call is released.
4)	A PSTN phone calls MS_A2 by dialling AC+CC+NDC+SN.	The call does not establish. Dependent on network setting the calling party gets an appropriate tone or an announcement played.

d) Success criteria

Check on call authorization works also in roaming case.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.3.7 Access to other GSM-R networks: Break out codes (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		9.4.2 9.10.1 9.10.1i 9.10.1ii 9.10.1iii	

a) Purpose

Verify the access to other GSM-R network by using BC (Breakout Code) and AC (Access Code) works.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Access to other GSM-R network by using BC (Breakout Code) from network A.

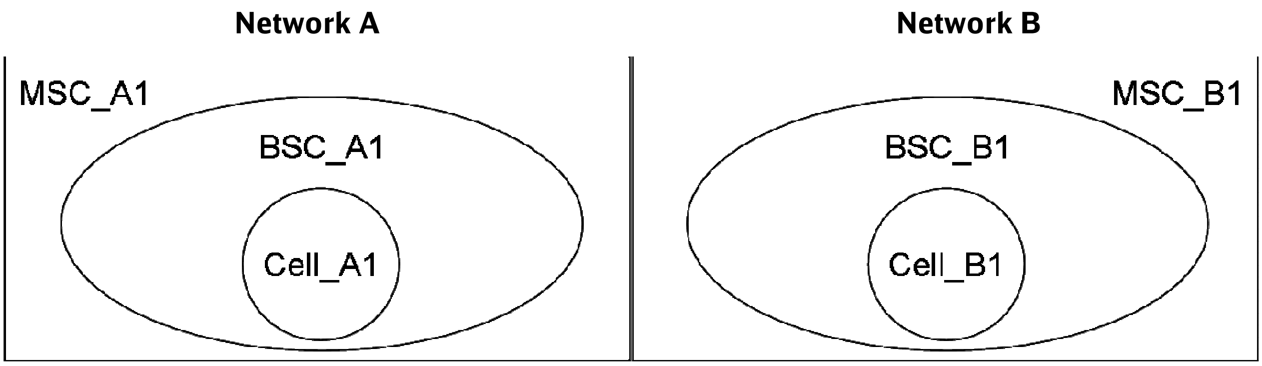
Step 2: Access to other GSM-R network by using BC (Breakout Code) from network B.

Step 3: Access to other GSM-R network by using AC (Access Code) from network A.

Step 4: Access to other GSM-R network by using AC (Access Code) from network B.

Test configuration for all steps

Access Matrix which controls calls from and to FN is disabled in both networks A and B. This can be done either by switch-off of Access Matrix or by setting all calls to "Yes" temporarily.



MSC_A1	MSC_B1
MS_A1 (IC_A, FN_8)	MS_B1 (IC_B, FN_1)

c) Test procedure

Step 1: Access to other GSM-R network by using BC (Breakout Code) from network A.

Step	Action	Expected result(s)
1)	MS_A1 initiates a call to IC_B, FN_1 by preceding the Breakout Code (BC) 900. CDN = 900 + IC_B + FN_1	The incoming call is displayed on MS_B1.
2)	MS_B1 accepts the call.	The PTP call between MS_A1 and MS_B1 is successfully established.
3)	Verify PFN and check the number displayed on both calling- and called party.	MS_A1 displays the function of the connected MS_B1 and MS_B1 displays the function of MS_A1.
4)	MS_B1 closes the call.	Call is released.

Step 2: Access to other GSM-R network by using BC (Breakout Code) from network B.

Step	Action	Expected result(s)
1)	MS_B1 initiates a call to IC_A, FN_8 by preceding the Breakout Code (BC) 900. CDN = 900 + IC_A + FN_8	The incoming call is displayed on MS_A1.
2)	MS_A1 accepts the call.	The PTP call between MS_A1 and MS_B1 is successfully established.
3)	Verify PFN and check the number displayed on both calling- and called party.	MS_A1 displays the function of the connected MS_B1 and MS_B1 displays the function of MS_A1.
4)	MS_A1 closes the call.	Call is released.

Step 3: Access to other GSM-R network by using AC (Access Code) from network A.

Step	Action	Expected result(s)
1)	MS_A1 initiates a call to MS_B1 by dialling the AC 00 followed by CC and NSN (National Significant Number = NDC + SN). CDN = 00 + CC_B + NDC_B + SN	The incoming call is displayed on MS_B1.
2)	MS_B1 accepts the call.	The PTP call between MS_A1 and MS_B1 is successfully established.
3)	Verify PFN and check the number displayed on both calling- and called party.	MS_A1 displays the function of the connected MS_B1 and MS_B1 displays the function of MS_A1.
4)	MS_A1 closes the call.	Call is released.

Step 4: Access to other GSM-R network by using AC (Access Code) from network B.

Step	Action	Expected result(s)
1)	MS_B1 initiates a call to MS_A1 by dialling the AC 00 followed by CC and NSN (National Significant Number = NDC + SN). CDN = 00 + CC_A + NDC_A + SN	The incoming call is displayed on MS_A1.
2)	MS_A1 accepts the call.	The PTP call between MS_A1 and MS_B1 is successfully established.
3)	Verify PFN and check the number displayed on both calling- and called party.	MS_A1 displays the function of the connected MS_B1 and MS_B1 displays the function of MS_A1.
4)	MS_B1 closes the call.	Call is released.

d) Success criteria

Access to other GSM-R network by using BC (Breakout Code) and AC (Access Code) works.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.3.8 Access to other GSM-R networks: Break out codes (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		9.4.2 9.10.1 9.10.1i 9.10.1ii 9.10.1iii	

a) Purpose

Verify the access to other GSM-R network by using BC (Breakout Code) and AC (Access Code) works also in roaming case.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Access to other GSM-R network by using BC (Breakout Code) from network A.

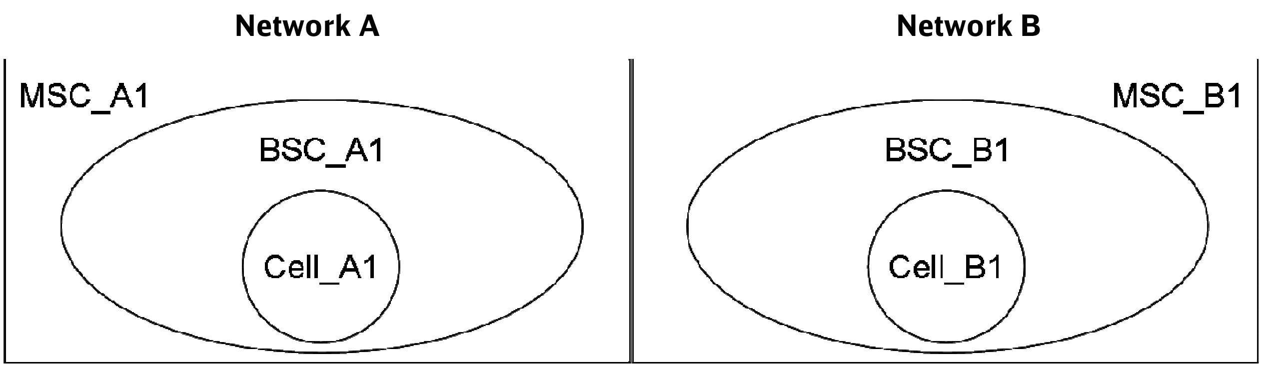
Step 2: Access to other GSM-R network by using BC (Breakout Code) from network B.

Step 3: Access to other GSM-R network by using AC (Access Code) from network A.

Step 4: Access to other GSM-R network by using AC (Access Code) from network B.

Test configuration for all steps

Access Matrix which controls calls from and to FN is disabled in both networks A and B. This can be done either by switch-off of Access Matrix or by setting all calls to "Yes" temporarily.



MSC_A1	**MSC_B1**
MS_A1 (IC_A, FN_8)	MS_B1 (IC_B, FN_1)
MS_B2	MS_A2

c) Test procedure

Step 1: Access to other GSM-R network by using BC (Breakout Code) from network A.

Step	Action	Expected result(s)
1)	MS_B2 which roams in network A initiates a call to IC_B, FN_1 by preceding the Breakout Code (BC) 900. CDN = 900 + IC_B + FN_1	The incoming call is displayed on MS_B1.
2)	MS_B1 accepts the call.	The PTP call between MS_B2 and MS_B1 is successfully established.
3)	Verify PFN and check the number displayed on both calling- and called party.	MS_B2 displays the function of the connected MS_B1.
4)	MS_B1 closes the call.	Call is released.

Step 2: Access to other GSM-R network by using BC (Breakout Code) from network B.

Step	Action	Expected result(s)
1)	MS_A2 which roams in network B initiates a call to IC_A, FN_8 by preceding the Breakout Code (BC) 900. CDN = 900 + IC_A + FN_8	The incoming call is displayed on MS_A1.
2)	MS_A1 accepts the call.	The PTP call between MS_A2 and MS_A1 is successfully established.
3)	Verify PFN and check the number displayed on both calling- and called party.	MS_A2 displays the function of the connected MS_A1.
4)	MS_A2 closes the call.	Call is released.

Step 3: Access to other GSM-R network by using AC (Access Code) from network A.

Step	Action	Expected result(s)
1)	MS_B2 which roams in network A initiates a call to MS_B1 by dialling the AC 00 followed by CC and NSN (National Significant Number = NDC + SN). CDN = 00 + CC_B + NDC_B + SN	The incoming call is displayed on MS_B1.
2)	MS_B1 accepts the call.	The PTP call between MS_B2 and MS_B1 is successfully established.
3)	Verify PFN and check the number displayed on both calling- and called party.	MS_B2 displays the function of the connected MS_B1.
4)	MS_B2 closes the call.	Call is released.

Step 4: Access to other GSM-R network by using AC (Access Code) from network B.

Step	Action	Expected result(s)
1)	MS_A2 which roams in network B initiates a call to MS_A1 by dialling the AC 00 followed by CC and NSN (National Significant Number = NDC + SN). CDN = 00 + CC_A + NDC_A + SN	The incoming call is displayed on MS_A1.
2)	MS_A1 accepts the call.	The PTP call between MS_A2 and MS_A1 is successfully established.
3)	Verify PFN and check the number displayed on both calling- and called party.	MS_A2 displays the function of the connected MS_A1.
4)	MS_A1 closes the call.	Call is released.

d) Success criteria

Access to other GSM-R network by using BC (Breakout Code) and AC (Access Code) works also in roaming case.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.3.9 Access to public networks (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		9.10.3	

a) Purpose

Verify the access to public networks by using AC (Access Code) works.

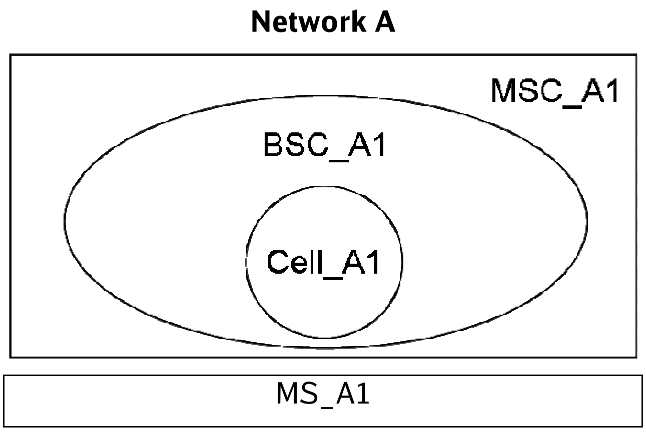
b) Test configuration / initial conditions

Network_A is connected to a Public Network.

PSTN Phone(s) are available.

MS_A1 is authorized to make outgoing calls to public network(s).

The configuration of above subscriber information can be done either on HLR or on IN/SCP.



c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 calls a PSTN Number by dialling AC (0) +NDC+SN. CDN = 0 + NDC + SN	The incoming call is displayed on the PSTN phone.
2)	The PSTN phone accepts the call.	The PTP call between MS_A1 and the PSTN phone is successfully established.

Step	Action	Expected result(s)
3)	MS_A1 closes the call.	Call is released.
4)	MS_A1 calls a PSTN Number by dialling AC (00)+CC+NDC+SN. CDN = 00 + CC + NDC + SN	The incoming call is displayed on the PSTN phone.
5)	The PSTN phone accepts the call.	The PTP call between MS_A1 and the PSTN phone is successfully established.
6)	MS_A1 closes the call.	Call is released.

d) Success criteria

Access to public networks by using AC (Access Code) works.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.3.10 Access to public networks (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		9.10.3	

a) Purpose

Verify the access to public networks by using AC (Access Code) works also in roaming case.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Access to public network by using AC (Access Code) from roaming network B.

Step 2: Access to public network by using AC (Access Code) from roaming network A.

Test configuration for all steps

Network_A and Network_B are connected to a Public Network.

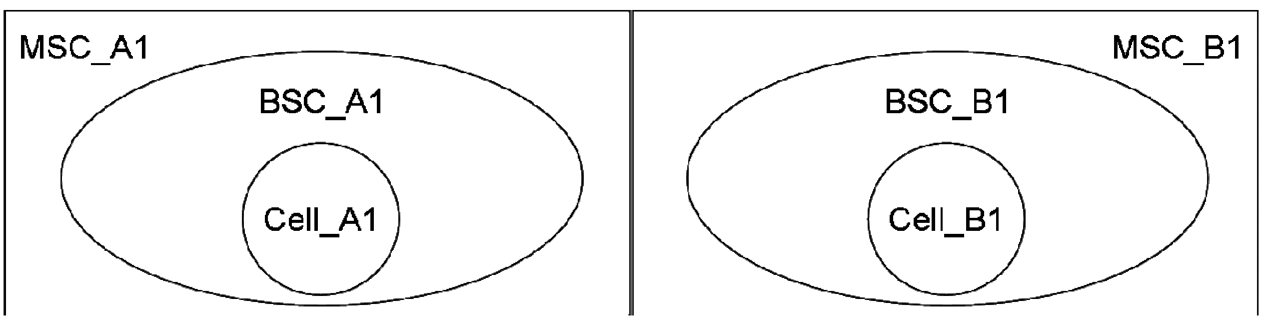
PSTN Phone(s) are available.

MS_A1 is authorized to make outgoing calls to public network(s) and roams in network B

MS_B1 is authorized to make outgoing calls to public network(s) and roams in network A.

The configuration of above subscriber information can be done either on HLR or on IN/SCP.

Network A **Network B**



MSC_A1	MSC_B1
MS_B1	MS_A1

c) Test procedure

Step 1: Access to public network by using AC (Access Code) from roaming network B.

Step	Action	Expected result(s)
1)	MS_A1 which roams in network B calls a PSTN Number by dialling AC (0) +NDC+SN. CDN = 0 + NDC + SN	The incoming call is displayed on the PSTN phone.
2)	The PSTN phone accepts the call.	The PTP call between MS_A1 and the PSTN phone is successfully established.
3)	MS_A1 closes the call.	Call is released.
4)	MS_A1 calls a PSTN Number by dialling AC (00) +CC+NDC+SN. CDN = 00 + CC + NDC + SN	The incoming call is displayed on the PSTN phone.
5)	The PSTN phone accepts the call.	The PTP call between MS_A1 and the PSTN phone is successfully established.
6)	The PSTN phone closes the call.	Call is released.

Step 2: Access to public network by using AC (Access Code) from roaming network A.

Step	Action	Expected result(s)
1)	MS_B1 which roams in network A calls a PSTN Number by dialling AC (0) +NDC+SN. CDN = 0 + NDC + SN	The incoming call is displayed on the PSTN phone.
2)	The PSTN phone accepts the call.	The PTP call between MS_B1 and the PSTN phone is successfully established.
3)	MS_B1 closes the call.	Call is released.
4)	MS_B1 calls a PSTN Number by dialling AC (00) +CC+NDC+SN. CDN = 00 + CC + NDC + SN	The incoming call is displayed on the PSTN phone.
5)	The PSTN phone accepts the call.	The PTP call between MS_B1 and the PSTN phone is successfully established.
6)	The PSTN phone closes the call.	Call is released.

d) Success criteria

Access to public networks by using AC (Access Code) works also in roaming case.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.3.11 Access to private networks: Break out codes (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		9.10.1v	

a) Purpose

Verify the access to private networks by using BC (Breakout Code) works.

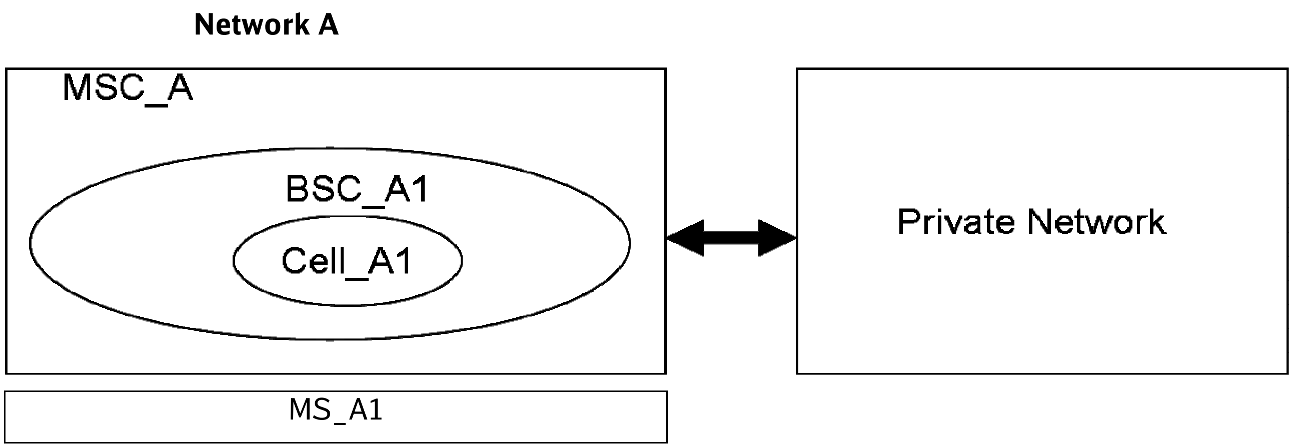
b) Test configuration / initial conditions

Network_A is connected to a private Network.

Private network Phone(s) are available.

MS_A1 is authorized to make outgoing calls to private network(s) in case this is not generally allowed.

The configuration of above subscriber information can be done either on HLR or on IN/SCP.



c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 calls the private network phone Number by dialling BC (901) +Private Network Code + SN. CDN = 901 + Private NC + SN	The incoming call is displayed on the Private network phone.

Step	Action	Expected result(s)
2)	The Private network phone accepts the call.	The PTP call between MS_A1 and the Private network phone is successfully established.
3)	MS_A1 closes the call.	Call is released.

d) Success criteria

Access to private networks by using BC (Breakout Code) works.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.3.12 Access to private networks: Break out codes (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		9.10.1v	

a) Purpose

Verify the access to private networks by using BC (Breakout Code) while roaming works.

b) Test configuration / initial conditions

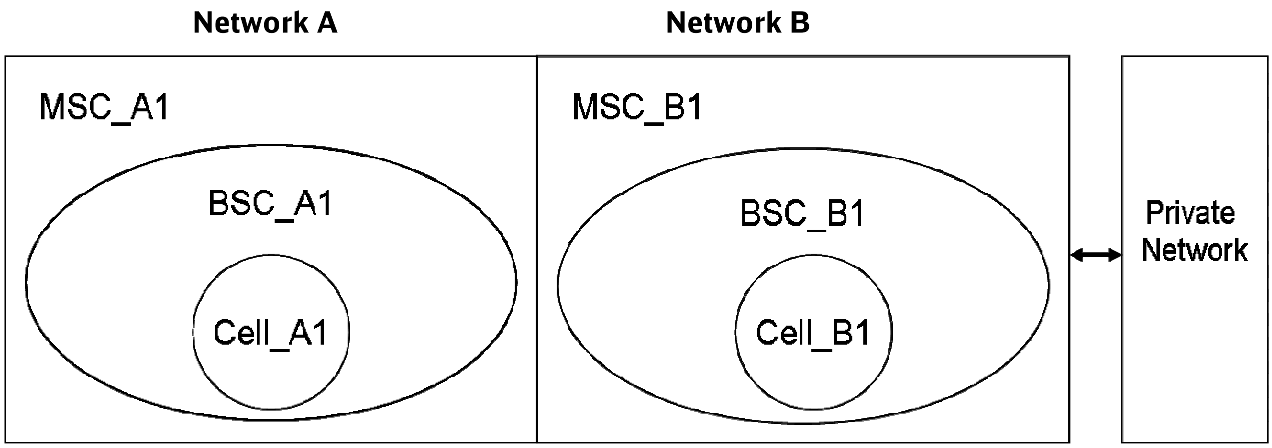
Network_B is connected to a Private Network.

Private network Phone(s) are available.

MS_A1 is authorized to make outgoing calls to private network(s) in case this is not generally allowed.

The configuration of above subscriber information can be done either on HLR or on IN/SCP.

MS_A1 roams in network B.



MSC_A1	MSC_B1
	MS_A1

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 calls the private network phone Number by dialling AC(00) + CC_A + NDC + BC (901) +Private Network Code + SN. CDN = AC + CC_A + NDC + BC(901) + Private NC + SN	The incoming call is displayed on the Private network phone.
2)	The Private network phone accepts the call.	The PTP call between MS_A1 and the Private network phone is successfully established.
3)	MS_A1 closes the call.	Call is released.
4)	MS_A1 calls the private network phone Number by dialling BC(900) + IC_A + BC (901) +Private Network Code+SN. CDN = BC(900) + IC_A + BC(901) + Private NC + SN	The incoming call is displayed on the Private network phone.
5)	The Private network phone accepts the call.	The PTP call between MS_A1 and the Private network phone is successfully established.
6)	MS_A1 closes the call.	Call is released.

d) Success criteria

Access to private networks by using BC (Breakout Code) while roaming works.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.4 Location Depending Addressing

The test configuration of LDA is described in chapter 4.6.3.

5.4.1 LDA call (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 3.2.3 9.3.2 11.4	2.5.1 9.4.1 9.8.1 9.8.2 9.8.3 9.8.4 11.7.1 11.7.2	

a) Purpose

Verify the short code calls are routed to the preconfigured controller.

b) Test configuration / initial conditions

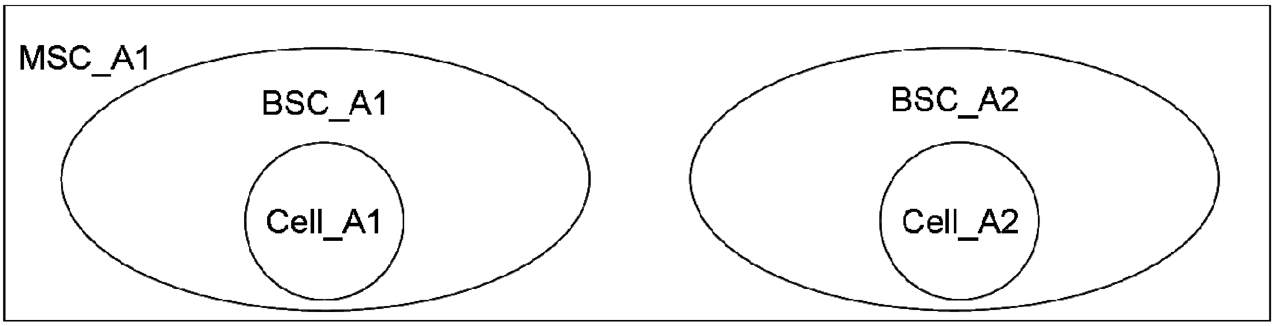
CT_A1, primary controller in charge of cell_A1 is assigned to IC_A, FN_11.

CT_A2, secondary controller in charge of cell_A1 is assigned to IC_A, FN_13.

CT_A3, primary controller in charge of cell_A2 is assigned to IC_A, FN_12.

CT_A4, secondary controller in charge of cell_A2 is assigned to IC_A, FN_14.

Network A



Cell_A1	Cell_A2
MS_A1	MS_A2
CT_A1 (IC_A, FN_11)	CT_A3 (IC_A, FN_12)
CT_A2 (IC_A, FN_13)	CT_A4 (IC_A, FN_14)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 dials short code 1200.	The call is routed to CT_A1 and if any, the functional number of MS_A1 is displayed on CT_A1.
2)	MS_A2 dials short code 1200.	The call is routed to CT_A3 and if any, the functional number of MS_A2 is displayed on CT_A3.
3)	MS_A1 dials short code 1300.	The call is routed to CT_A2 and if any, the functional number of MS_A1 is displayed on CT_A2.
4)	MS_A2 dials short code 1300.	The call is routed to CT_A4 and if any, the functional number of MS_A2 is displayed on CT_A4.

d) Success criteria

All calls are routed dependent on cell of origin. The System Log-files show the right routing data including cell of origin, Short Code and predefined destination etc.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.4.2 LDA call fails (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 11.4	2.5.1 11.7.1 11.7.2	

a) Purpose

Verify LDA calls cannot be routed in case of missing configurations.

b) Test configuration / initial conditions

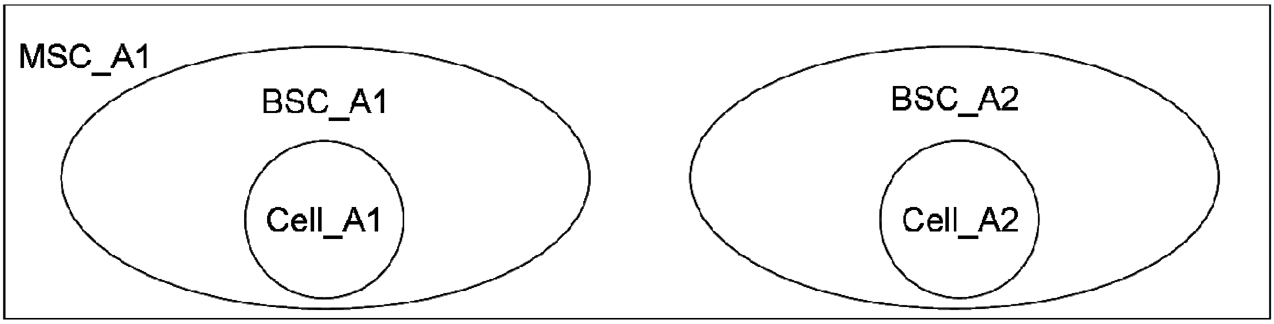
CT_A1, primary controller in charge of cell_A1 is assigned to IC_A, FN_11.

CT_A2, secondary controller in charge of cell_A1 is assigned to IC_A, FN_13.

CT_A4, secondary controller in charge of cell_A2 is assigned to IC_A, FN_14.

Primary controller of cell_B is not defined.

Network A



Cell_A1	Cell_A2
MS_A1	MS_A2
CT_A1 (IC_A, FN_11)	
CT_A2 (IC_A, FN_13)	CT_A4 (IC_A, FN_14)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 dials short code 1500.	No destination number for the short code 1500 is defined; an appropriate tone or an announcement is played to calling party. Note: E-SRS V15.1 will specify a special call release code for such a case.
2)	MS_A2 dials short code 1200.	No destination number for the short code 1200 is defined; an appropriate tone or an announcement is played to calling party.

d) Success criteria

LDA calls are released in case of missing configurations.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.4.3 LDA call (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.5.1 9.3.2 11.4	2.5.1 9.4.1 9.8.1 9.8.2 9.8.3 9.8.4 11.7.1 11.7.2	

a) Purpose

Verify the short code calls are routed to the preconfigured controller.

b) Test configuration / initial conditions

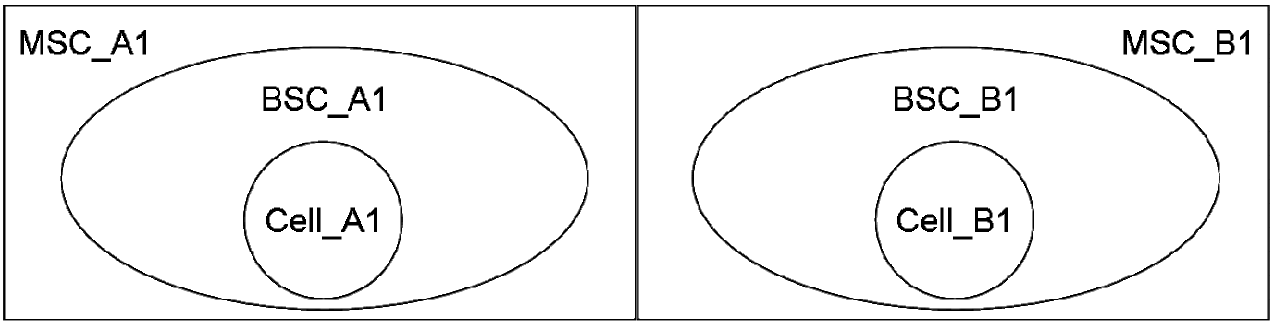
CT_A1, primary controller in charge of cell_A1 is assigned to IC_A, FN_11.

CT_A2, secondary controller in charge of cell_A1 is assigned to IC_A, FN_13.

CT_B1, primary controller in charge of cell_B1 is assigned to IC_B, FN_15.

CT_B2, secondary controller in charge of cell_B1 is assigned to IC_A, FN_1.

Network A **Network B**



MSC_A1	**MSC_B1**
MS_B1	MS_A1
CT_A1 (IC_A, FN_11)	CT_B1 (IC_B, FN_15)
CT_A2 (IC_A, FN_13)	CT_B2 (IC_B, FN_16)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 dials short code 1200.	The call is routed to CT_B1 and if any, the functional number of MS_A1 is displayed on CT_B1.
2)	MS_A1 dials short code 1300.	The call is routed to CT_B2 and if any, the functional number of MS_A1 is displayed on CT_B2.
3)	MS_B1 dials short code 1200.	The call is routed to CT_A1 and if any, the functional number of MS_B1 is displayed on CT_A1.
4)	MS_B1 dials short code 1300.	The call is routed to CT_A2 and if any, the functional number of MS_B1 is displayed on CT_A2.

d) Success criteria

All calls are routed dependent on cell of origin. The System Log files show the right routing data including cell of origin, Short Code and predefined destination etc.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.4.4 LDA call fails (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.5.1 11.4	2.5.1 11.7.1 11.7.2	

a) Purpose

Verify LDA calls cannot be routed in case of missing configurations.

b) Test configuration / initial conditions

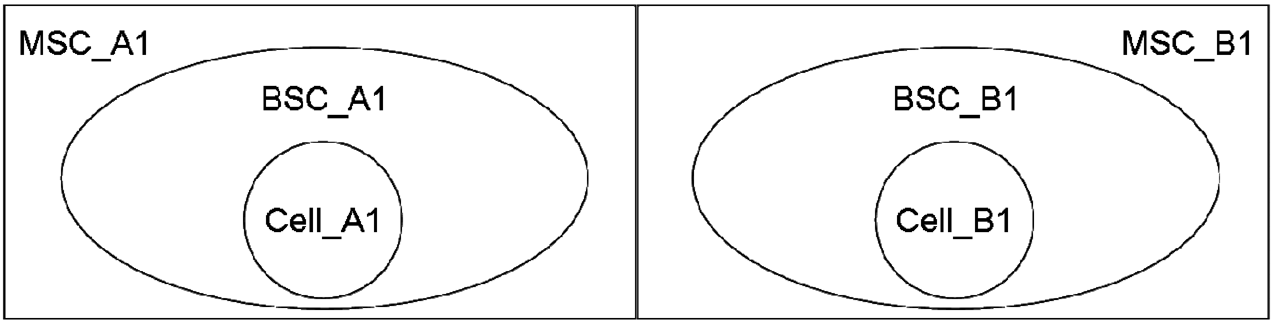
CT_A1, primary controller in charge of cell_A1 is assigned to IC_A, FN_11.

CT_B1, primary controller in charge of cell_B1 is assigned to IC_B, FN_15.

CT_B2, secondary controller in charge of cell_B1 is assigned to IC_A, FN_16.

Secondary controller of cell_A1 is not defined.

Network A **Network B**



MSC_A1	**MSC_B1**
MS_B1	MS_A1
CT_A1 (IC_A, FN_11)	CT_B1 (IC_B, FN_15)
	CT_B2 (IC_B, FN_16)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_B1 dials short code 1300.	No destination number for the short code 1300 for cell_A1 in network A is defined, an appropriate announcement is played to calling party. Note: E-SRS V15.1 will specify a special call release code for such a case.
2)	MS_A1 dials short code 1500.	No destination number for the short code 1500 for cell_B1 in network B is defined, an appropriate announcement is played to calling party. Note: E-SRS V15.1 will specify a special call release code for such a case.

d) Success criteria

LDA calls are released in case of missing configurations.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.5 MLPP

Overview reference to EIRENE FRS V7:

Chapter:	Text
2.4.1	The EIRENE network will support the following call related services: display of identity of called/calling user; (M) - restriction of display of called/calling user; (O) - priority and pre-emption; (M) - closed user group; (M) - call forwarding; (M) - call hold; (M) - call waiting; (M) - charging information; (O) - call barring. (M)
2.4.6	This mechanism shall allow calls with a higher assigned priority to override (pre-empt) existing calls of a lower priority. (M)
2.4.7	Pre-empted calls will be discontinued and the new call of a higher priority shall be connected instead. (M)
10.2.3	The lowest priority ongoing call shall be pre-empted before that of a higher priority. (M)

Overview reference to EIRENE SRS 15:

Chapter:	Text
2.4.1	The GSM supplementary services [EN 301 515, Index [9]] to be supported are listed in table 2-3. The applicability of these supplementary services to GSM basic services will be as indicated in [GSM 02.81-02.89 and EN 301 515, Index [28]]. (I)
10.2.1	In order to provide a consistent international service, it is necessary to ensure that priorities are allocated consistently across all railways. The following allocation of UIC priority levels to eMLPP priority codes is mandatory: (M)

Allocation of priorities according to Table 10-1 of EIRENE SRS 15:

UIC Priority	Automatic answering*	eMLPP priority designation	Pre-emption (of)
Railway emergency	Y	0	Control-command (safety) and below
Control-command (safety)	Y	1	Public emergency, group calls between drivers in the same area and below
Public emergency and group calls between drivers in the same area	Y	2	Railway operation. Control-command information and below
Railway operation (e.g. calls from or for drivers and controllers) and Control-command information	Y**	3	Railway information and all other calls
Railway information and all other calls	N	4	---

General Purpose:

Verify the call related service MLPP at the E-Interface.

Verify that a mobile subscriber can be subscribed with a default and a maximal priority.

Preconditions:

Fast Call Setup is configured for high priority calls on SIM.

Not all subscribers and controllers are subscribed for the REC.

The function of the subscribers and controllers can change from step to step and from case to case.

All subscribers have the default priority 4 and max priority 0 subscribed in HLR.

Sometimes it's necessary that the mobile do not react to the 299 REC. Special configured SIM-Cards may be necessary for that, e.g. subscriber profile 2.

The VGCS GID's used in this chapter are:

GID: 299 with prio 0

GID: 200 with prio 2

GID: 204 with prio 4

5.5.1 PtP call pre-emption at the E-IF between two networks by REC

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.4.1 2.4.6 2.4.7 10.2.3	2.4.1 10.2.1	

a) Purpose

Verify that any PtP connection at E-IF can be pre-empted from any side by a REC.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: REC initiated by service subscriber in A-MSC_A. MSC_A is pre-empting.

Step 2: REC initiated by service subscriber in R-MSC_B. MSC_A and MSC_B are pre-empting.

Step 3: REC initiated by service subscriber in A-MSC_B. MSC_B is pre-empting.

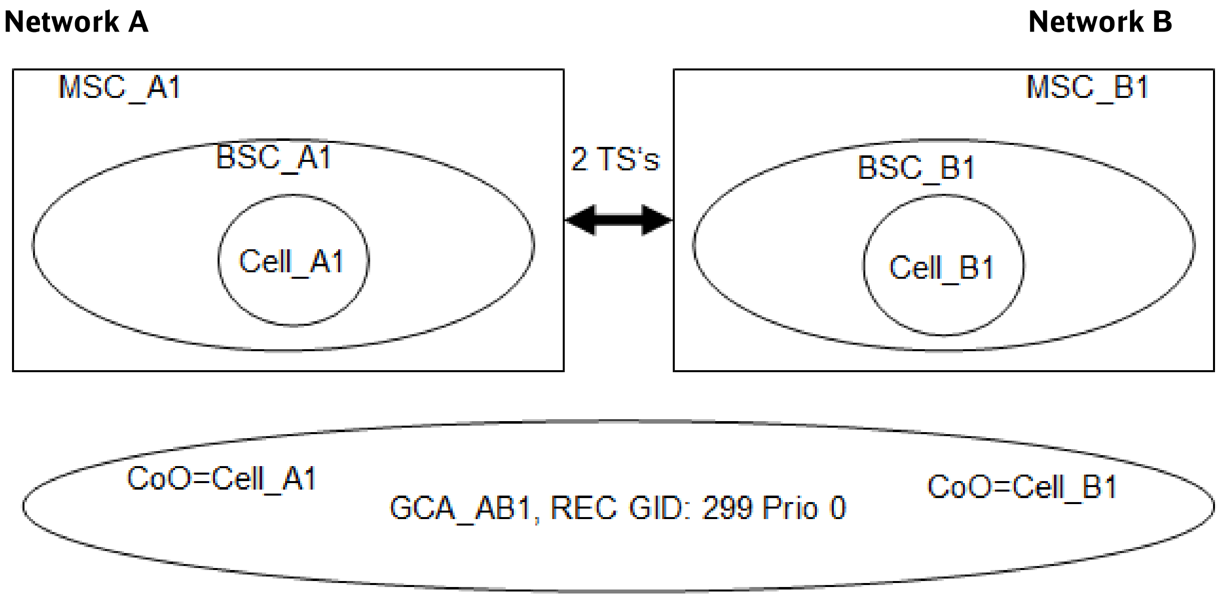
Step 4: REC initiated by service subscriber in R-MSC_A. MSC_A and MSC_B are pre-empting.

Step 5: Pre-emption of PtP at E-IF by controller connection to/from MSC_B. MSC_A or MSC_B is pre-empting.

Step 6: Pre-emption of PtP at E-IF by controller connection to/from MSC1. MSC_A or MSC_B is pre-empting.

Test configuration for steps 1-2: Pre-emption by originator and group call connection

The trunk capacity between the networks is reduced to 2 Time Slots (TS's).



A-MSC_A1		**R-MSC_B1**
MS_A1 (no VGCS / VBS subscriber)		MS_A2 (no VGCS / VBS subscriber)
MS_A3 (no VGCS / VBS subscriber)	**2 TS's at E-IF**	MS_A4 (no VGCS / VBS subscriber)
MS_A5 (REC GID: 299) , CoO=Cell_A1		MS_A6 (REC GID: 299) , CoO=Cell_B1
CT_A1		CT_B1

c) Test procedure

Step 1: REC initiated by service subscriber in A-MSC_A. MSC_A is pre-empting.

Step	Action	Expected result(s)
1.1	MS_A1 calls MS_A2 with Prio 4	MS_A1 connected with MS_A2 with Prio 4
1.2	MS_A3 calls MS_A4 with Prio 3	MS_A3 connected with MS_A4 with Prio 3 All TS's at E are BUSY
1.3	**MS_A5 originates a REC** **in A-MSC_A**	MS_A6 receives the REC **MS_A1 and MS_A2 are disconnected** MS_A3 connected with MS_A4 with Prio 3

Step	Action	Expected result(s)
1.4	MS_A5 releases the REC	The REC is released MS_A6 is idle MS_A3 connected with MS_A4 with Prio 3
1.5	MS_A2 calls MS_A1 with Prio 4	MS_A2 connected with MS_A1 with Prio 4 MS_A3 connected with MS_A4 with Prio 3
1.6	**MS_A5 originates a REC** **in A-MSC_A**	MS_A6 receives the REC **MS_A1 and MS_A2 are disconnected** MS_A3 connected with MS_A4 with Prio 3
1.7	MS_A5 releases the REC	The REC is released MS_A6 is idle MS_A3 connected with MS_A4 with Prio 3
1.8	CT_B1 calls MS_A1 with Prio 4	MS_A1 connected with CT_B1 with Prio 4 MS_A3 connected with MS_A4 with Prio 3
1.9	**MS_A5 originates a REC** **in A-MSC_A**	MS_A6 receives the REC **MS_A1 and CT_B1 are disconnected** MS_A3 connected with MS_A4 with Prio 3
1.10	MS_A5 releases the REC	The REC is released MS_A6 is idle MS_A3 connected with MS_A4 with Prio 3
1.11	CT_A1 calls MS_A2 with Prio 4	MS_A2 connected with CT_A1 with Prio 4 MS_A3 connected with MS_A4 with Prio 3
1.12	**MS_A5 originates a REC** **in A-MSC_A**	MS_A6 receives the REC **MS_A2 and CT_A1 are disconnected** MS_A3 connected with MS_A4 with Prio 3
1.13	MS_A5 releases the REC	The REC is released MS_A6 is idle MS_A3 connected with MS_A4 with Prio 3
1.14	MS_A2 calls CT_A1 with Prio 4	MS_A2 connected with CT_A1 with Prio 4 MS_A3 connected with MS_A4 with Prio 3
1.15	**MS_A5 originates a REC** **in A-MSC_A**	MS_A6 receives the REC **MS_A2 and CT_A1 are disconnected** MS_A3 connected with MS_A4 with Prio 3

Step	Action	Expected result(s)
1.16	MS_A5 releases the REC	The REC is released MS_A6 is idle MS_A3 connected with MS_A4
1.17	Terminate the remaining PtP call	All participants and both TS's at E are IDLE

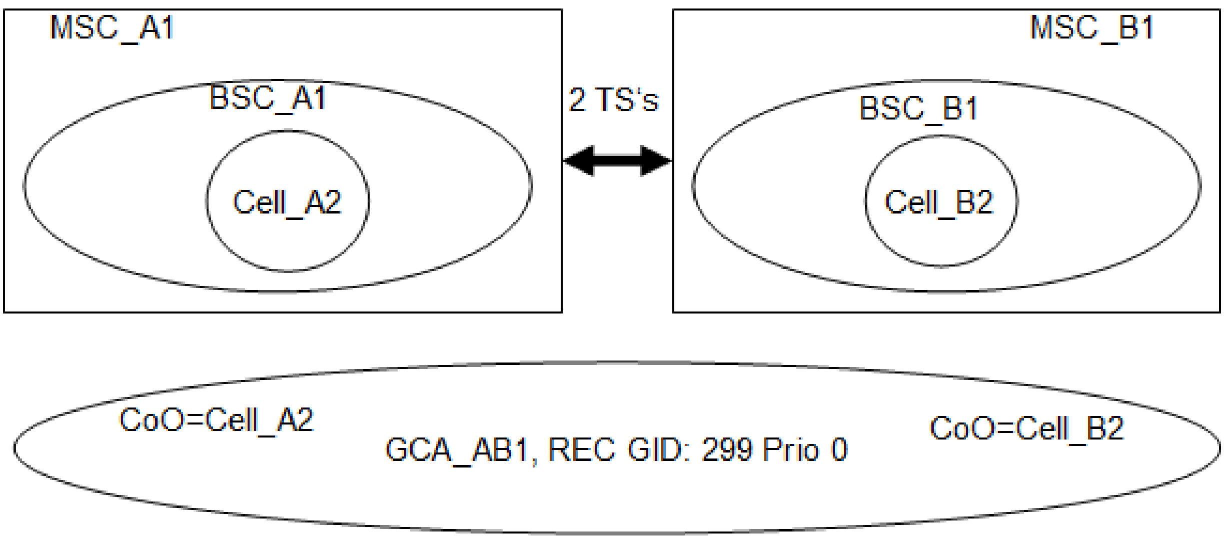
Step 2: REC initiated by service subscriber in R-MSC_B. MSC_A and MSC_B are pre-empting.

Step	Action	Expected result(s)
2.1	MS_A1 calls MS_A2 with Prio 4	MS_A1 connected with MS_A2 with Prio 4
2.2	MS_A3 calls MS_A4 with Prio 3	MS_A3 connected with MS_A4 with Prio 3 All TS's at E are BUSY
2.3	**MS_A6 originates a REC in R-MSC_B**	MS_A5 receives the REC **MS_A1 and MS_A2 are disconnected** **MS_A3 and MS_A4 are disconnected** **Connection MS_A1/MS_A2 pre-empted first**
2.4	MS_A6 releases the REC	The REC is released MS_A5 is idle All participants and TS's at E are IDLE
2.5	MS_A2 calls MS_A1 with Prio 3 MS_A4 calls MS_A3 with Prio 4	MS_A1 connected with MS_A2 with Prio 3 MS_A3 connected with MS_A4 with Prio 4 All TS's at E are BUSY
2.6	**MS_A6 originates a REC in R-MSC_B**	MS_A5 receives the REC **MS_A1 and MS_A2 are disconnected** **MS_A3 and MS_A4 are disconnected** **Connection MS_A3/MS_A4 pre-empted first**
2.7	MS_A5 releases the REC	The REC is released MS_A6 is idle All participants and TS's at E are IDLE
2.8	MS_A1 calls CT_B1 with Prio 4 CT_A1 calls MS_A2 with Prio 3	MS_A1 connected with CT_B1 with Prio 4 MS_A2 connected with CT_A1 with Prio 3
2.9	**MS_A6 originates a REC in R-MSC_B**	MS_A5 receives the REC **MS_A1 disconnected with CT_B1** **MS_A2 disconnected with CT_A1** **Connection MS_A1/CT_B1 pre-empted first**

Step	Action	Expected result(s)
2.10	MS_A6 releases the REC	The REC is released MS_A5 is idle All participants and TS'S at E are IDLE
2.11	CT_B1 calls MS_A1 with Prio 3 MS_A2 calls CT_A1 with Prio 4	MS_A1 connected with CT_B1 with Prio 3 MS_A2 connected with CT_A1 with Prio 4
2.12	**MS_A6 originates a REC in R-MSC_B**	MS_A5 receives the REC **MS_A1 disconnected with CT_B1** **MS_A2 disconnected with CT_A1** **Connection MS_A2/CT_A1 pre-empted first**
2.13	MS_A6 releases the REC	The REC is released MS_A5 is idle All participants and TS's at E are IDLE

Test configuration for steps 3-4: Pre-emption by originator and group call connection

Network A **Network B**



R-MSC_A1	**2 TS's at E-IF**	**A-MSC_B1**
MS_A1 (no VGCS / VBS subscriber)		MS_A2 (no VGCS / VBS subscriber)
MS_A3 (no VGCS / VBS subscriber)		MS_A4 (no VGCS / VBS subscriber)
MS_A5 (REC GID: 299),		MS_A6 (REC GID: 299) ,
CT_A1		CT_B1

Test procedure:

Step 3: REC initiated by service subscriber in A-MSC_B. MSC_B is pre-empting.

Step	Action	Expected result(s)
3.1	MS_A1 calls MS_A2 with Prio 4	MS_A1 connected with MS_A2 with Prio 4
3.2	MS_A3 calls MS_A4 with Prio 3	MS_A3 connected with MS_A4 with Prio 3 All TS's at E are BUSY
3.3	**MS_A6 originates a REC in A-MSC_B**	MS_A5 receives the REC **MS_A1 and MS_A2 are disconnected** MS_A3 connected with MS_A4 with Prio 3
3.4	MS_A6 releases the REC	The REC is released MS_A5 is idle MS_A3 connected with MS_A4 with Prio 3
3.5	MS_A2 calls MS_A1 with Prio 4	MS_A1 connected with MS_A2 with Prio 4 MS_A3 connected with MS_A4 with Prio 3
3.6	**MS_A6 originates a REC in A-MSC_B**	MS_A5 receives the REC **MS_A1 and MS_A2 are disconnected** MS_A3 connected with MS_A4 with Prio 3
3.7	MS_A6 releases the REC	The REC is released MS_A5 is idle MS_A3 connected with MS_A4 with Prio 3
3.8	MS_A1 calls CT_B1 with Prio 4	MS_A1 connected with CT_B1 with Prio 4 MS_A3 connected with MS_A4 with Prio 3
3.9	**MS_A6 originates a REC in A-MSC_B**	MS_A5 receives the REC **MS_A1 and CT_B1 are disconnected** MS_A3 connected with MS_A4 with Prio 3
3.10	MS_A6 releases the REC	The REC is released MS_A5 is idle MS_A3 connected with MS_A4 with Prio 3
3.11	CT_B1 calls MS_A1 with Prio 4	MS_A1connected with CT_B1 with Prio 4 MS_A3 connected with MS_A4 with Prio 3
3.12	**MS_A6 originates a REC in A-MSC_B**	MS_A5 receives the REC **MS_A1 and CT_B1 are disconnected** MS_A3 connected with MS_A4 with Prio 3

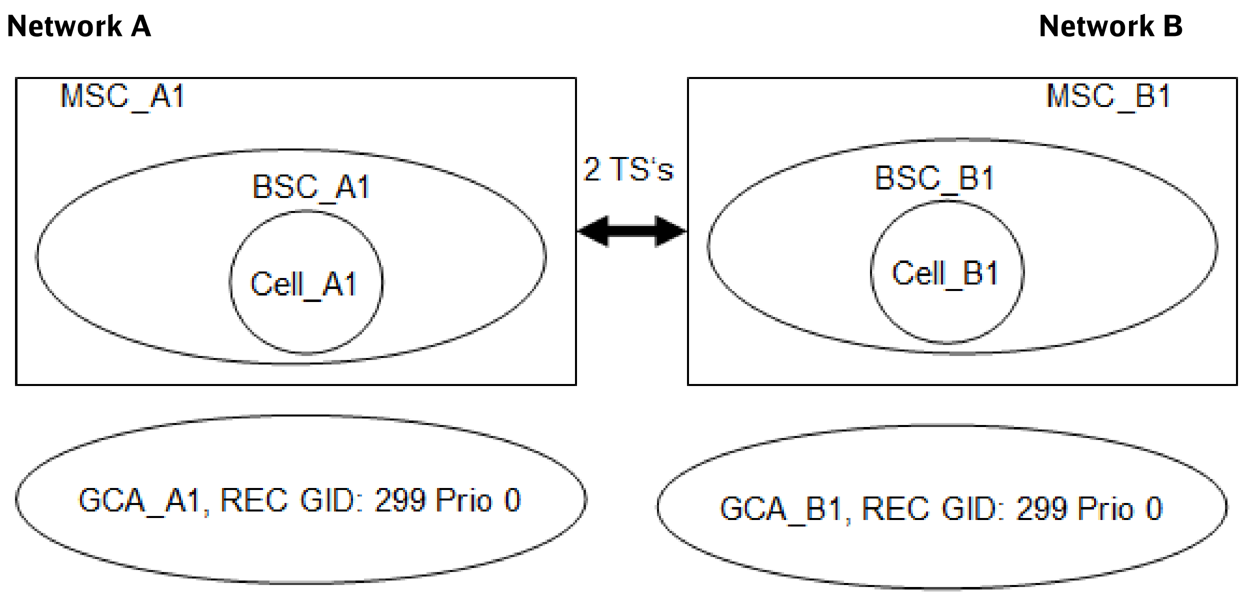
Step	Action	Expected result(s)
3.13	MS_A6 releases the REC	The REC is released MS_A5 is idle MS_A3 connected with MS_A4 with Prio 3
3.14	CT_A1 calls MS_A2 with Prio 4	MS_A2 connected with CT_A1 with Prio 4 MS_A3 connected with MS_A4 with Prio 3
3.15	**MS_A6 originates a REC in A-MSC_B**	MS_A5 receives the REC **MS_A2 and CT_A1 are disconnected** MS_A3 connected with MS_A4 with Prio 3
3.16	MS_A6 releases the REC	The REC is released MS_A5 is idle MS_A3 connected with MS_A4 with Prio 3
3.17	MS_A2 calls CT_A1 with Prio 4	MS_A2 connected with CT_A1 with Prio 4 MS_A3 connected with MS_A4 with Prio 3
3.18	**MS_A6 originates a REC in A-MSC_B**	MS_A5 receives the REC **MS_A2 and CT_A1 are disconnected** MS_A3 connected with MS_A4 with Prio 3
3.19	MS_A6 releases the REC	The REC is released MS_A5 is idle MS_A3 connected with MS_A4
3.20	Terminate the remaining PtP call	All participants and both TS's at E are IDLE

Step 4: REC initiated by service subscriber in R-MSC_A. MSC_A and MSC_B are pre-empting.

Step	Action	Expected result(s)
4.1	MS_A1 calls MS_A2 with Prio 4	MS_A1 connected with MS_A2 with Prio 4
4.2	MS_A3 calls MS_A4 with Prio 3	MS_A3 connected with MS_A4 with Prio 3 All TS's at E are BUSY
4.3	**MS_A5 originates a REC In R-MSC_A**	MS_A6 receives the REC **MS_A1 and MS_A2 are disconnected** **MS_A3 and MS_A4 are disconnected** **Connection MS_A1/MS_A2 pre-empted first**
4.4	MS_A5 releases the REC	The REC is released MS_A6 is idle All participants and TS's at E are IDLE

Step	Action	Expected result(s)
4.5	MS_A2 calls MS_A1 with Prio 3 MS_A4 calls MS_A3 with Prio 4	MS_A1 connected with MS_A2 with Prio 3 MS_A3 connected with MS_A4 with Prio 4 All TS's at E are BUSY
4.6	**MS_A5 originates a REC** **In R-MSC_A**	MS_A6 receives the REC **MS_A1 and MS_A2 are disconnected** **MS_A3 and MS_A4 are disconnected** **Connection MS_A3/MS_A4 pre-empted first**
4.7	MS_A5 releases the REC	The REC is released MS_A6 is idle All participants and TS's at E are IDLE
4.8	MS_A1 calls CT_B1 with Prio 4 CT_A1 calls MS_A2 with Prio 3	MS_A1 connected with CT_B1 with Prio 4 MS_A2 connected with CT_A1 with Prio 3
4.9	**MS_A5 originates a REC** **In R-MSC_A**	MS_A6 receives the REC **MS_A1 disconnected with CT_B1** **MS_A2 disconnected with CT_A1** **Connection MS_A1/CT_B1 pre-empted first**
4.10	MS_A5 releases the REC	The REC is released MS_A5 is idle All participants and TS'S at E are IDLE
4.11	CT_B1 calls MS_A1 with Prio 3 MS_A2 calls CT_A1 with Prio 4	MS_A1 connected with CT_B1 with Prio 3 MS_A2 connected with CT_A1 with Prio 4
4.12	**MS_A5 originates a REC** **In R-MSC_A**	MS_A6 receives the REC **MS_A1 disconnected with CT_B1** **MS_A2 disconnected with CT_A1** **Connection MS_A2/CT_A1 pre-empted first**
4.13	MS_A5 releases the REC	The REC is released MS_A5 is idle All participants and both TS's at E are IDLE

Test configuration for step 5-6: Pre-emption by controller connection



MSC_A1		**MSC_B1**
MS_A1 (no VGCS / VBS subscriber)		MS_A2 (no VGCS / VBS subscriber)
MS_A3 (no VGCS / VBS subscriber)	**2 TS's at E-IF**	MS_A4 (no VGCS / VBS subscriber)
MS_A5 (REC GID: 299)		MS_A6 (REC GID: 299)
CT_A1 (GCA_B1, REC GID: 299)		CT_B1 (GCA_A1, REC GID: 299)
CT_A2		CT_B2

Test procedure

Step 5: Pre-emption of PtP at E-IF by controller connection to/from MSC_B. MSC_A or MSC_B is pre-empting.

Step	Action	Expected result(s)
5.1	MS_A1 calls MS_A2 with Prio 4	MS_A1 connected with MS_A2 with Prio 4
5.2	MS_A3 calls MS_A4 with Prio 3	MS_A3 connected with MS_A4 with Prio 3 All TS's at E are BUSY
5.3	**MS_A5 originates a REC in MSC_A**	CT_B1 receives the REC **MS_A1 and MS_A2 are disconnected** MS_A3 and MS_A4 are connected with Prio 3

Step	Action	Expected result(s)
5.4	MS_A5 releases the REC	The REC is released CT_B1 is idle MS_A3 and MS_A4 are connected with Prio 3
5.5	CT_A2 calls CT_B2 with Prio 4	MS_A3 and MS_A4 are connected with Prio 3 CT_A2 connected with CT_B2 with Prio 4 All TS's at E are BUSY
5.6	**MS_A5 originates a REC in MSC_A**	CT_B1 receives the REC MS_A3 and MS_A4 are connected with Prio 3 **CT_A2 and CT_B2 are disconnected**
5.7	MS_A5 releases the REC	The REC is released CT_B1 is idle MS_A3 and MS_A4 are connected with Prio 3 CT_A2 and CT_B2 are IDLE
5.8	CT_B2 calls CT_A2 with Prio 4	MS_A3 and MS_A4 are connected with Prio 3 CT_A2 connected with CT_B2 with Prio 4 All TS's at E are BUSY
5.9	**MS_A5 originates a REC in MSC_A**	CT_B1 receives the REC MS_A3 and MS_A4 are connected with Prio 3 **CT_A2 and CT_B2 are disconnected**
5.10	MS_A5 releases the REC	The REC is released CT_B1 is idle MS_A3 and MS_A4 are connected with Prio 3 CT_A2 and CT_B2 are IDLE
5.11	MS_A3 release the call	All participants and TS's at E are IDLE
5.12	CT_B2 calls CT_A2 with Prio 4	CT_A2 connected with CT_B2 with Prio 4
5.13	MS_A1 calls MS_A2 with Prio 3	MS_A1 connected with MS_A2 with Prio 3 All TS's at E are BUSY
5.14	**CT_B1 connected to MSC_B originates a REC in MSC_A**	MS_A5 receives the REC **CT_A2 and CT_B2 are disconnected** MS_A1 and MS_A2 are connected with Prio 3
5.15	CT_B1 releases the REC	MS_A1 and MS_A2 are connected with Prio 3 MS_A5 is IDLE
5.16	Release the remaining PtP call	All participants and both TS's at E are IDLE

Step 6: Pre-emption of PtP at E-IF by controller connection to/from MSC1. MSC_A or MSC_B is pre-empting.

Step	Action	Expected result(s)
6.1	MS_A1 calls MS_A2 with Prio 4	MS_A1 connected with MS_A2 with Prio 4
6.2	MS_A3 calls MS_A4 with Prio 3	MS_A3 connected with MS_A4 with Prio 3 All TS's at E are BUSY
6.3	**MS_A6 originates a REC in MSC_B**	CT_A1 receives the REC **MS_A1 and MS_A2 are disconnected** MS_A3 and MS_A4 are connected with Prio 3
6.4	MS_A6 releases the REC	The REC is released CT_A1 is idle MS_A3 and MS_A4 are connected with Prio 3
6.5	CT_A2 calls CT_B2 with Prio 4	MS_A3 and MS_A4 are connected with Prio 3 CT_A2 connected with CT_B2 with Prio 4 All TS's at E are BUSY
6.6	**MS_A6 originates a REC in MSC_B**	CT_A1 receives the REC MS_A3 and MS_A4 are connected with Prio 3 **CT_A2 and CT_B2 are disconnected**
6.7	MS_A6 releases the REC	The REC is released CT_A1 is idle MS_A3 and MS_A4 are connected with Prio 3 CT_A2 and CT_B2 are IDLE
6.8	CT_B2 calls CT_A2 with Prio 4	MS_A3 and MS_A4 are connected with Prio 3 CT_A2 connected with CT_B2 with Prio 4 All TS's at E are BUSY
6.9	**MS_A6 originates a REC in MSC_B**	CT_A1 receives the REC MS_A3 and MS_A4 are connected with Prio 3 **CT_A2 and CT_B2 are disconnected**
6.10	MS_A6 releases the REC	The REC is released CT_A1 is idle MS_A3 and MS_A4 are connected with Prio 3 CT_A2 and CT_B2 are IDLE
6.11	MS_A3 release the call	All participants and TS's at E are IDLE
6.12	CT_B2 calls CT_A2 with Prio 4	CT_A2 connected with CT_B2 with Prio 4

Step	Action	Expected result(s)
6.13	MS_A1 calls MS_A2 with Prio 3	MS_A1 connected with MS_A2 with Prio 3 All TS's at E are BUSY
6.14	**CT_A1 located in MSC_A originates a REC in MSC_B**	MS_A6 receives the REC **CT_A2 and CT_B2 are disconnected** MS_A1 and MS_A2 are connected with Prio 3
6.15	CT_A1 releases the REC	MS_A1 and MS_A2 are connected with Prio 3 MS_A6 is IDLE
6.16	Terminate the remaining PtP call	All participants and TS's at E are IDLE
6.17	**Unblock the TS's at E-IF**	All resources are IDLE

d) Success criteria

Any PtP connection at E-IF can be pre-empted from any side by a REC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.5.2 PtP call pre-emption at the E-IF between two networks by an other PtP call

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.4.6 2.4.7 10.2.3		

a) Purpose

Verify that any PtP connection at E-IF can be pre-empted by any other PtP call with higher priority from any side of it.

b) Test configuration / initial conditions

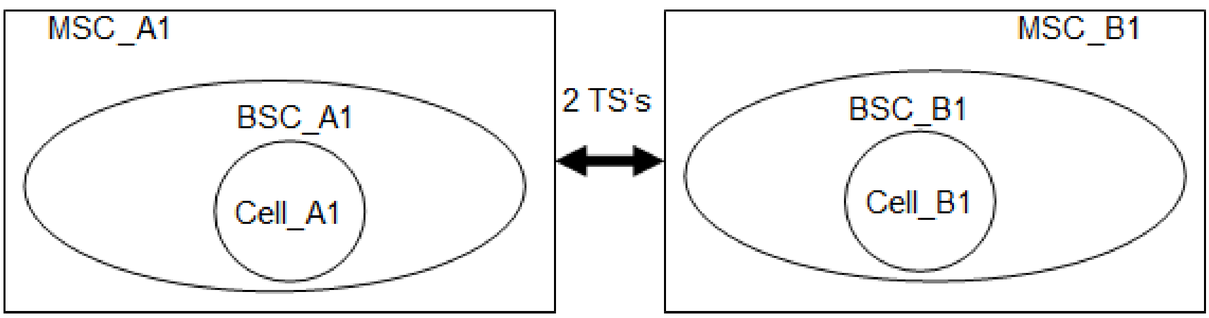
This test case has been divided into the following steps:

Step 1: PtP call pre-emption at the E-IF between two networks by another PtP call. MSC_A is pre-empting.

Step 2: PtP call pre-emption at the E-IF between two networks by another PtP call. MSC_B is pre-empting.

Test configuration for step 1 and 2:

Network A **Network B**



MSC_A1	2 TS's at E-IF	MSC_B1
MS_A1		MS_A2
MS_A3		MS_A4
CT_A1		CT_B1

c) Test procedures

Step 1: PtP call pre-emption at the E-IF between two networks by another PtP call. MSC_A is pre-empting.

Step	Action	Expected result(s)
1.1	MS_A1 calls MS_A2 with Prio 4	MS_A1 connected with MS_A2 with Prio 4
1.2	MS_A3 calls MS_A4 with Prio 4	MS_A3 connected with MS_A4 with Prio 4
1.3	**CT_A1 calls CT_B1 with Prio 4**	Call is unsuccessful
1.4	**CT_A1 calls CT_B1 with Prio 3**	CT_A1 connected with CT_B1 with Prio 3 **MS_A1 and MS_A2 or MS_A3 and MS_A4 are disconnected.**
1.5	Release the remaining calls	All participants and TS's at E-IF are IDLE
1.6	MS_A2 calls MS_A1 with Prio 4	MS_A2 connected with MS_A1 with Prio 4
1.7	MS_A4 calls MS_A3 with Prio 3	MS_A4 connected with MS_A3 with Prio 3
1.8	**CT_A1 calls CT_B1 with Prio 3**	CT_A1 connected with CT_B1 with Prio 3 **MS_A1 and MS_A2 are disconnected.** MS_A3 connected with MS_A4 with Prio 3
1.9	Release the remaining calls	All participants and TS's at E are IDLE
1.10	MS_A1 calls CT_B1 with Prio 4	MS_A1 connected with CT_B1 with Prio 4
1.11	CT_A1 calls MS_A2 with Prio 3	CT_A1 connected with MS_A2 with Prio 3
1.12	**MS_A3 calls MS_A4 with Prio 3**	MS_A3 connected with MS_A4 with Prio 3 **MS_A1 disconnected with CT_B1** CT_A1 connected with MS_A2 with Prio 3
1.13	Release the remaining calls	All participants and both TS's at E are IDLE

Step 2: PtP call pre-emption at the E-IF between two networks by another PtP call. MSC_B is pre-empting.

Step	Action	Expected result(s)
2.1	MS_A1 calls MS_A2 with Prio 4	MS_A1 connected with MS_A2 with Prio 4
2.2	MS_A4 calls MS_A3 with Prio 4	MS_A3 connected with MS_A4 with Prio 4
2.3	**CT_B1 calls CT_A1 with Prio 4**	Call is unsuccessful
2.4	**CT_B1 calls CT_A1 with Prio 3**	CT_A1 connected with CT_B1 with Prio 3 **MS_A1 and MS_A2 or MS_A3 and MS_A4 are disconnected.**
2.5	Release the remaining calls	All participants and TS's at E are IDLE
2.6	MS_A2 calls MS_A1 with Prio 4	MS_A2 connected with MS_A1 with Prio 4
2.7	MS_A3 calls MS_A4 with Prio 3	MS_A3 connected with MS_A4 with Prio 3

Step	Action	Expected result(s)
2.8	**CT_B1 calls CT_A1 with Prio 3**	CT_B1 connected with CT_A1 with Prio 3 **MS_A1 and MS_A2 are disconnected.** MS_A3 connected with MS_A4 with Prio 3
2.9	Release the remaining calls	All participants and both TS's at E are IDLE
2.10	MS_A2 calls CT_A1 with Prio 4	MS_A2 connected with CT_A1 with Prio 4
2.11	CT_B1 calls MS_A1 with Prio 3	CT_B1 connected with MS_A1 with Prio 3
2.12	**MS_A4 calls MS_A3 with Prio 3**	MS_A4 connected with MS_A3 with Prio 3 **MS_A2 disconnected with CT_A1** CT_B1 connected with MS_A1 with Prio 3
2.13	Release the remaining calls	All participants and both TS's at E are IDLE
2.14	**Unblock the TS's at E-IF**	All resources are IDLE

d) Success criteria

Any PtP connection at E-IF can be pre-empted by any other PtP call with higher priority from any side of it.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.5.3 Link to a controller of a VGCS call is pre-empted at the E-IF between two networks and at the PRI by REC

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.4.6 2.4.7 10.2.3		

a) Purpose

Verify that a controller connection at E-IF and at PRI can be pre-empted by a REC. Pre-emption **from** the PBX-side is **not** covered by this TC.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Link to a controller of a VGCS call is pre-empted at the E-IF between two networks by a REC. MSC_A1 and MSC_B1 are pre-empting.

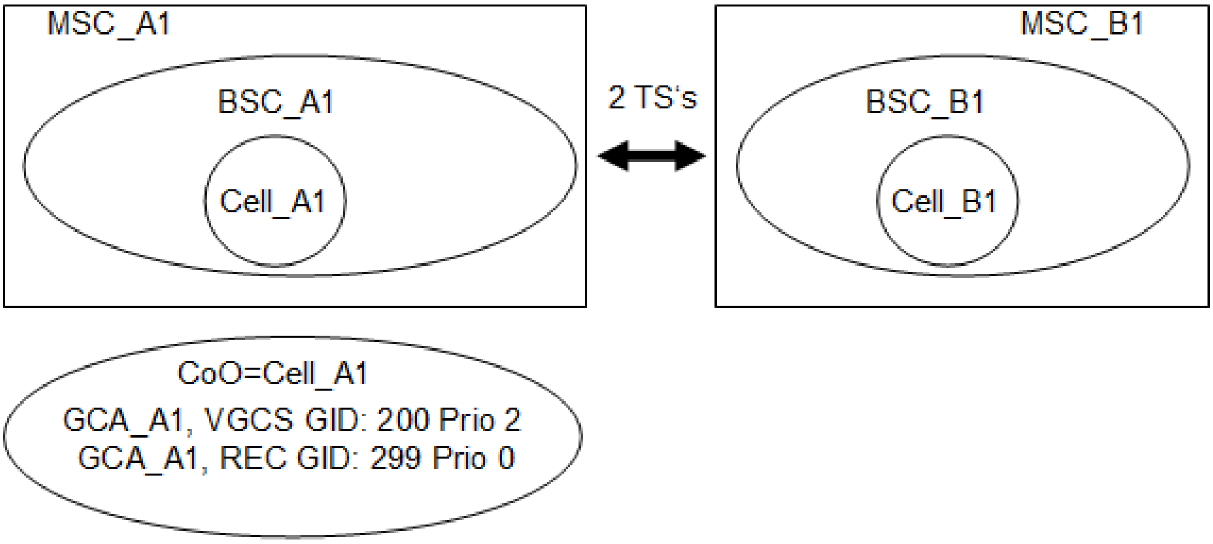
Step 2: Link to a controller of a VGCS call is pre-empted at the E-IF between two networks by a REC. MSC_B and MSC_B are pre-empting.

Step 3: Link to a controller of a VGCS call is pre-empted by REC at PRI in MSC_A.

Step 4: Link to a controller of a VGCS call is pre-empted by REC at PRI in MSC_B.

Test configuration for step 1:

Network A **Network B**



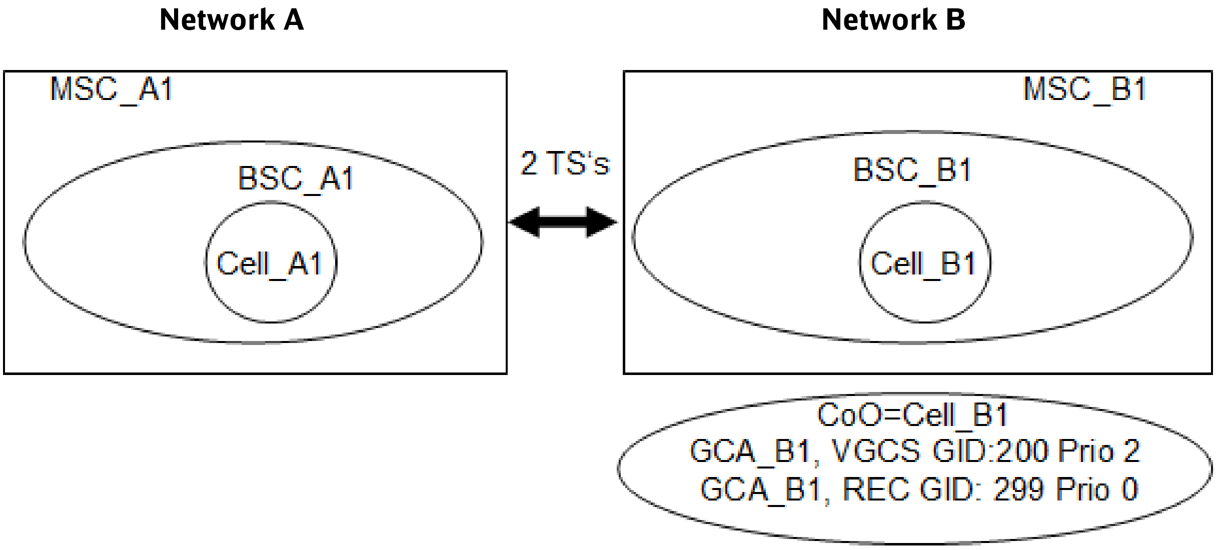
MSC_A1	**2 TS's at E-IF**	**MSC_B1**
MS_A1 (VGCS GID: 200)		CT_B1 (GCA_A1, VGCS GID: 200)
		CT_B2 (GCA_A1, VGCS GID: 200)
MS_A2 (REC GID: 299)		CT_ B3 (GCA_A1, REC GID: 299)

c) Test procedure

Step 1: Link to a controller of a VGCS call is pre-empted at the E-IF between two networks by a REC. MSC_A and MSC_B are pre-empting.

Step	Action	Expected result(s)
1.1	MS_A1 originates a 200 VGCS in MSC_A	CT_B1 und CT_B2 receive the 200 VGCS All TS's at E are BUSY
1.2	**MS_A2 originates a REC in MSC_A**	CT_B3 receives the REC **CT_B1 or CT_B2 are pre-empted**
1.3	All existing calls are released	All participants and TS's at E are IDLE
1.4	MS_A1 originates a 200 VGCS in MSC_A	CT_B1 und CT_B2 receive the 200 VGCS All TS's at E are BUSY
1.5	CT_B3 placed in MSC_B originates a REC in MSC_A	MS_A2 receives the REC **CT_B1 or CT_B2 are pre-empted**
1.6	All existing calls are released	All participants and both TS's at E are IDLE

Test configuration for step 2: Controller connection pre-empted by REC at E-IF



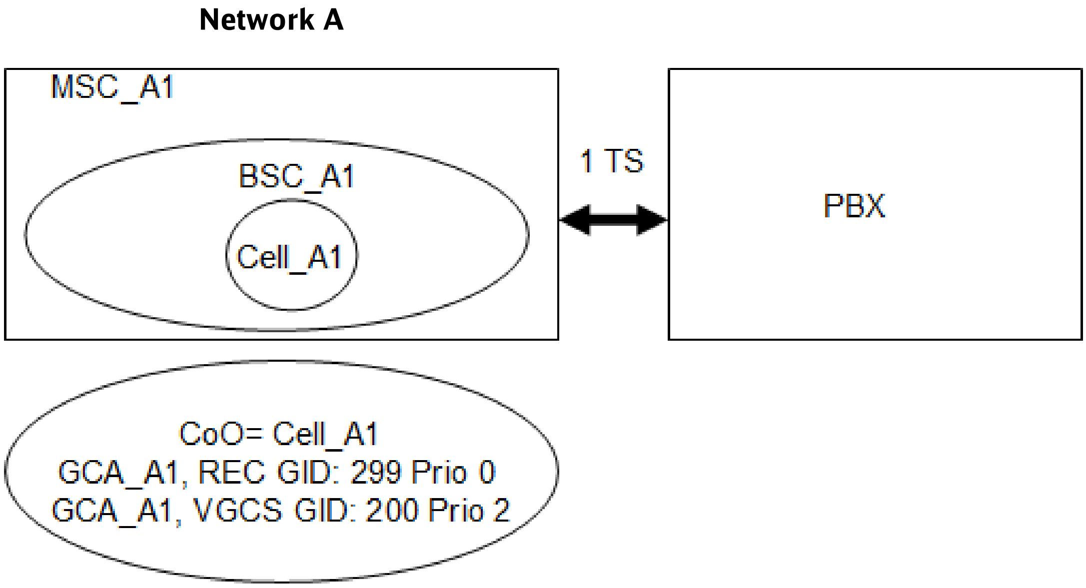
MSC_A1	**2 TS's at E-IF**	**MSC_B1**
CT_A1 (GCA_B1, VGCS GID: 200)		MS_A1 (VGCS GID: 200)
CT_A2 (GCA_B1, VGCS GID: 200)		
CT_A3 (GCA_B1, REC GID: 299)		MS_A2 (REC GID: 299)

Test procedure

Step 2: Link to a controller of a VGCS call is pre-empted at the E-IF between two networks by a REC. MSC_B and MSC_B are pre-empting.

Step	Action	Expected result(s)
2.1	MS_A1 originates a 200 VGCS in MSC_B	CT_A1 und CT_A2 receive the 200 VGCS All TS's at E are BUSY
2.2	**MS_A2 originates a REC in MSC_B**	CT_A3 receives the REC **CT_A1 or CT_A2 are pre-empted**
2.3	All existing calls are released	All participants and TS's at E are IDLE
2.4	MS_A1 originates a 200 VGCS in MSC_B	CT_A1 und CT_A2 receive the 200 VGCS All TS's at E are BUSY
2.5	CT_A3 placed in MSC_A originates a REC in MSC_B	MS_A2 receives the REC **CT_A1 or CT_A2 are pre-empted**
2.6	All existing calls are released	All participants and both TS's at E are IDLE

Test configuration for step 3: Controller connection pre-empted by REC at PRI



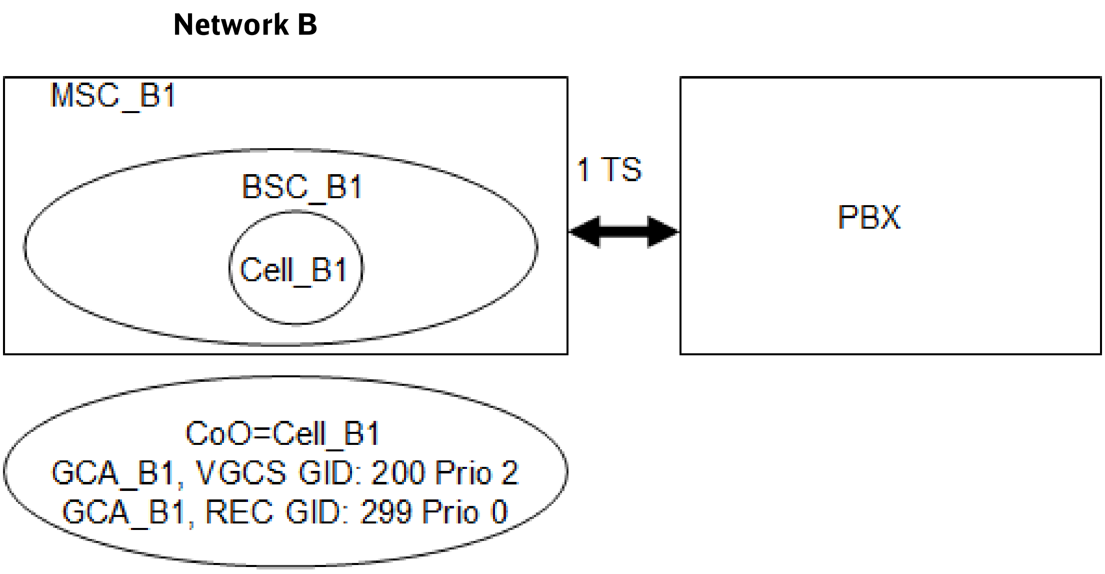
MSC_A1	**1 TS at PRI**	**PBX**
MS_A1 (VGCS GID: 200)		CT_A1 (GCA_A1, VGCS GID: 200)
MS_A2 (REC GID: 299)		CT_A2 (GCA_A1, REC GID: 299)

Test procedure

Step 3: Link to a controller of a VGCS call is pre-empted by REC at PRI in MSC_A.

Step	Action	Expected result(s)
4.1	MS_A1 originates a 200 VGCS	CT_A1 receives the 200 VGCS All TS's at the PRI are BUSY
4.2	**MS_A2 originates the REC**	CT_A2 receives the REC **CT_A1 is pre-empted at PRI**
4.3	All existing calls are released	All participants and TS's at E are IDLE
4.4	MS_A1 originates a 200 VGCS	CT_A1 receives the 200 VGCS All TS's at the PRI are BUSY
4.5	**CT_A2 originates the REC**	MS_A2 receives the REC **CT_A1 pre-empted at PRI**
4.6	All existing calls are released	All participants and TS's at PRI are IDLE
4.7	Unblock the TS's at the PRI	All resources are IDLE

Test configuration for step 4: Controller connection pre-empted by REC at PRI



MSC_B1	**1 TS at PRI**	**PBX**
MS_B1 (VGCS GID: 200)		CT_B1 (GCA_B1, VGCS GID: 200)
MS_B2 (REC GID: 299)		CT_B2 (GCA_B1, REC GID: 299)

Test Procedure

Step 4: Link to a controller of a VGCS call is pre-empted by REC at PRI in MSC_B.

Step	Action	Expected result(s)
4.1	MS_B1 originates a 200 VGCS	CT_B1 receives the 200 VGCS All TS's at the PRI are BUSY
4.2	**MS_B2 originates the REC**	CT_B2 receives the REC **CT_B1 is pre-empted at PRI**
4.3	All existing calls are released	All participants and TS's at E are IDLE
4.4	MS_B1 originates a 200 VGCS	CT_B1 receives the 200 VGCS All TS's at the PRI are BUSY
4.5	**CT_B2 originates the REC**	MS_B2 receives the REC **CT_A1 pre-empted at PRI**
4.6	All existing calls are released	All participants and TS's at PRI are IDLE
4.7	Unblock the TS's at the PRI	All resources are IDLE

d) Success criteria

A controller connection at E-IF and at PRI can be pre-empted by a REC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.5.4 Link to the originator as first talker of a VGCS call is pre-empted at the E-IF between two networks by REC

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.4.6 2.4.7 10.2.3		

a) Purpose

Verify that the dedicated link at E-IF can be pre-empted from any side by a REC.

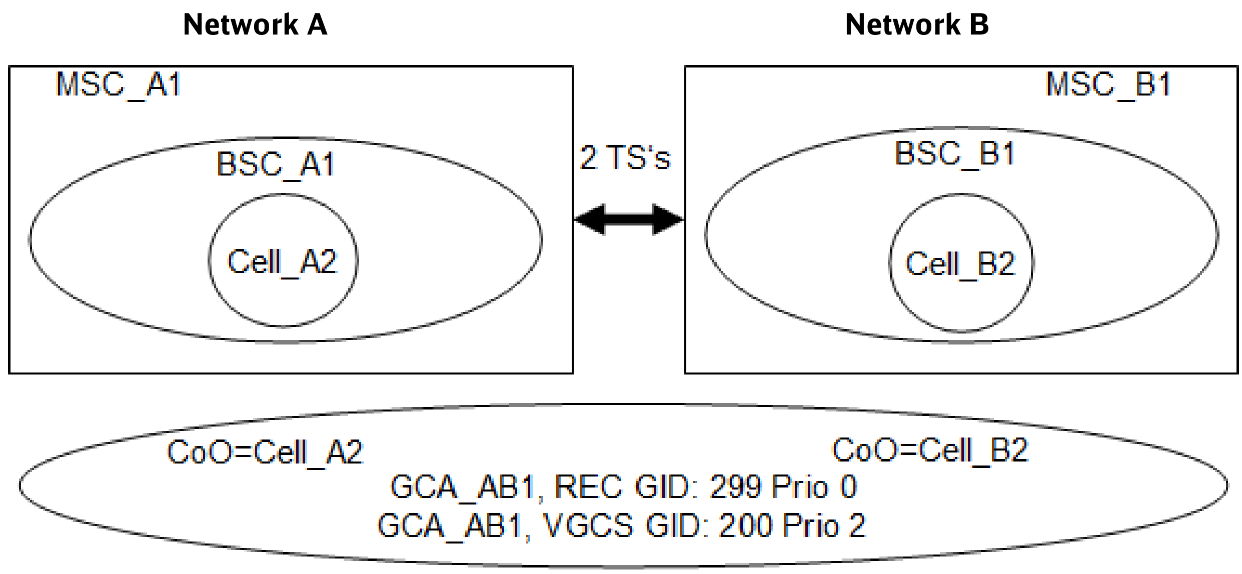
b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: REC initiated by service subscriber in R-MSC_A. MSC_A and MSC_B are pre-empting.

Step 2: REC initiated by service subscriber in R-MSC_B. MSC_B and MSC_A are pre-empting.

Test configuration for step 1



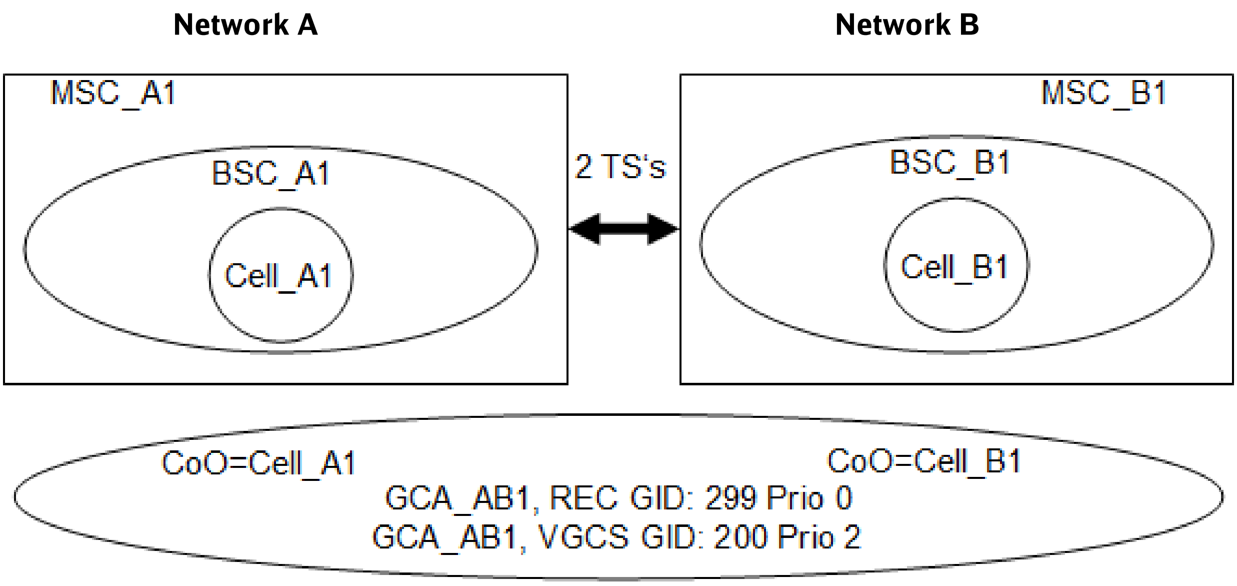
R-MSC_A1	2 TS's at E-IF	A-MSC_B1
MS_A1 (VGCS GID: 200)		MS_A2 (VGCS GID: 200)
MS_A3 (REC GID: 299)		MS_A4 (REC GID: 299)
		CT_B1 (GCA_AB1, VGCS GID: 200)

c) Test procedures

Step 1: REC initiated by service subscriber in R-MSC_A. MSC_A and MSC_B are pre-empting.

Step	Action	Expected result(s)
1.1	MS_A1 originates a 200 VGCS in R-MSC_A and keep the dedicated link	MS_A2 and CT_B1 receives the 200 VGCS All TS's at E-IF are BUSY
1.2	**MS_A3 originates the REC in R-MSC_A**	MS_A4 receives the REC in A-MSC_B **MS_A1 is IDLE after the pre-emption of the DCH and the group channel at E-IF** The 200 VGCS is **probably** released in R-MSC_A The 200 VGCS exists **probably** in A-MSC_B (behaviour not specified, implementation de-pendent) MS_A2 can not release the 200 VGCS
1.3	MS_A3 releases the REC	All TS's at E-IF are IDLE **MS_A2 is probably still in 200 VGCS and it can request the uplink**
1.4	CT_B1 kills the 200 VGCS	All participants and both TS's at E-IF are IDLE
1.5	MS_A1 originates a 200 VGCS in R-MSC_A and keep the dedicated link	MS_A2 and CT_B1 receives the 200 VGCS All TS's at E-IF are BUSY
1.6	MS_A4 originates the REC in A-MSC_B	**The DCH of MS_A1 or the group channel of the 200 VGCS is pre-empted at E-IF by the REC** (behaviour not specified)
1.7	MS_A4 releases the REC CT_B1 kills the 200 VGCS	All parties are IDLE

Test configuration for step 2



A-MSC_A1	**2 TS's at E-IF**	**R-MSC_B1**
MS_A1 (VGCS GID: 200)		MS_A2 (VGCS GID: 200)
MS_A3 (REC GID: 299)		MS_A4 (REC GID: 299)
CT_A1 (GCA_AB1, VGCS GID: 200)		

Test procedure

Step 2: REC initiated by service subscriber in R-MSC_B. MSC_B and MSC_A are pre-empting.

Step	Action	Expected result(s)
2.1	MS_A2 originates a 200 VGCS in R-MSC_B and keep the dedicated link	MS_A1 and CT_A1 receives the 200 VGCS All TS's at E-IF are BUSY
2.2	**MS_A4 originates the REC in R-MSC_B**	MS_A3 receives the REC in A-MSC_A **MS_A2 is IDLE after the pre-emption** The 200 VGCS is **probably** released in R-MSC_B The 200 VGCS exists **probably** in A-MSC_A (behaviour not specified, implementation dependent) MS_A1 can not release the 200 VGCS

Step	Action	Expected result(s)
2.3	MS_A4 releases the REC	All TS's at E-IF are IDLE **MS_A1 is probably still in 200 VGCS and it can request the uplink**
2.4	CT_A1 kills the 200 VGCS	All participants and both TS's at E-IF are IDLE
2.5	MS_A2 originates a 200 VGCS in R-MSC_B and keep the dedicated link	MS_A1 and CT_A1 receives the 200 VGCS All TS's at E-IF are BUSY
2.6	MS_A3 originates the REC in A-MSC_A	**The DCH of MS_A2 or the group channel of the 200 VGCS is pre-empted at E-IF by the REC (behaviour not specified)**
2.7	MS_A3 releases the REC CT_A1 kills the 200 VGCS	All parties are IDLE
2.8	Unblock the TS's at E-IF	All resources are IDLE

d) Success criteria

The dedicated link of a VGCS call can be pre-empted at E-IF from any side by a REC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.5.5 Link between A-MSC and R-MSC of VGCS call is pre-empted at the E-IF between two networks by REC

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.4.6 2.4.7 10.2.3		

a) Purpose

Verify that the group channel at E-IF can be pre-empted from any side by a REC.

Note: Some implementations do not support E-IF pre-emption in this case.

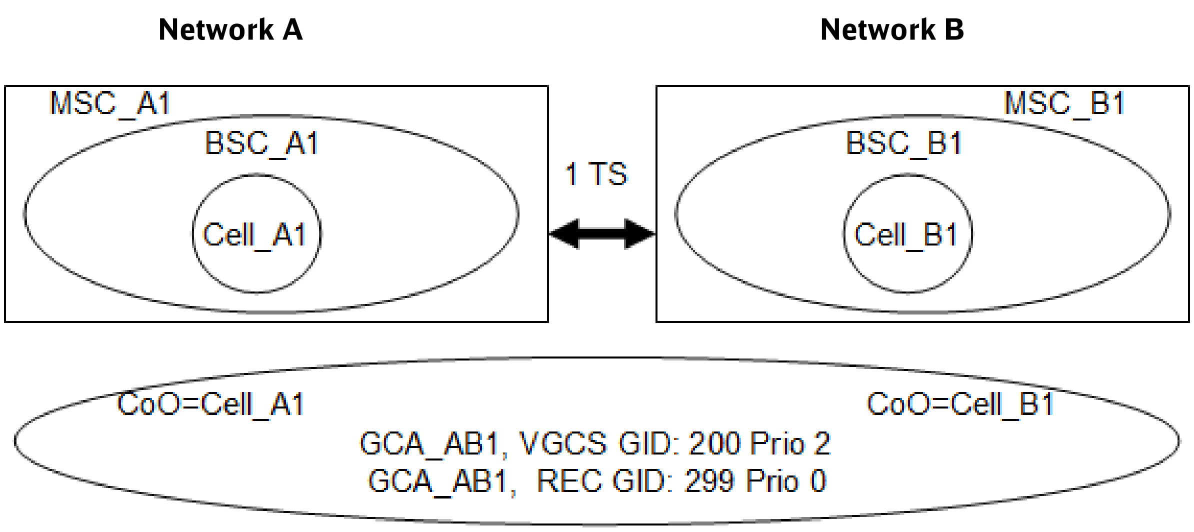
b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Group Channel pre-empted at E-IF. MSC_A is pre-empting.

Step 2: Group Channel pre-empted at E-IF. MSC_B is pre-empting.

Test configuration for step 1:



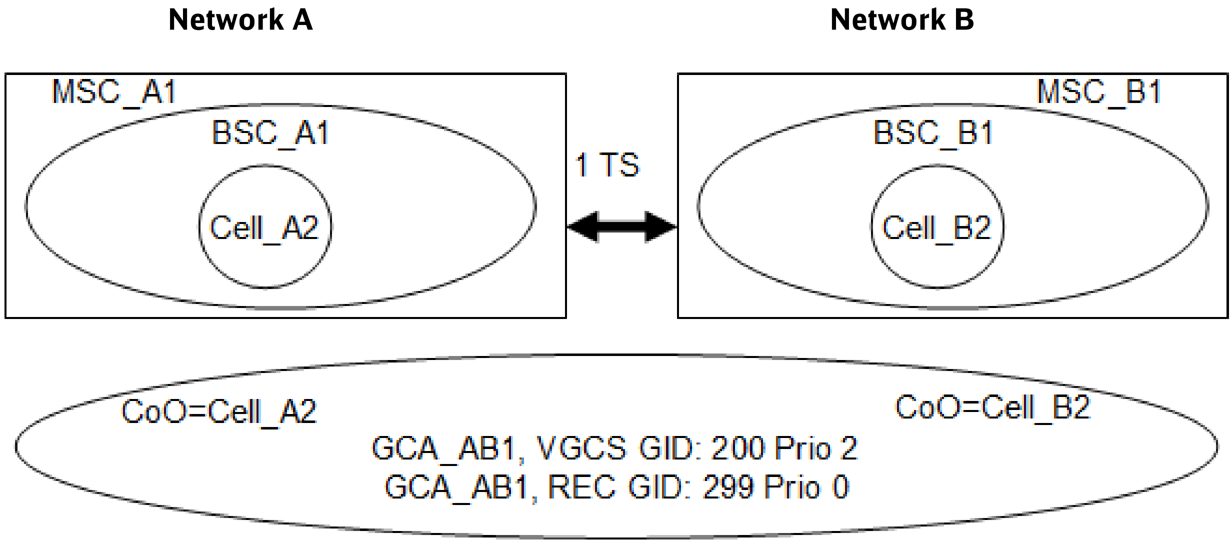
A-MSC_A1		R-MSC_B1
MS_A1 (VGCS GID: 200)	**1 TS at E-IF**	MS_A2 (VGCS GID: 200)
MS_A3 (REC GID: 299)		MS_A4 (REC GID: 299)
CT_A1 (GCA_AB1, VGCS GID: 200)		

c) Test procedures

Step 1: Group Channel pre-empted at E-IF. MSC_A is pre-empting.

Step	Action	Expected result(s)
1.1	MS_A1 originates a 200 VGCS in A-MSC_A	MS_A2 and CT_A1 receives the 200 VGCS All TS's at E-IF are BUSY
1.2	**MS_A3 originates a REC** **in A-MSC_A**	MS_A4 receives the REC in R-MSC_B MS_A2 is disconnected from the 200 VGCS The 200 VGCS is released in R-MSC_B The 200 VGCS exists **probably** in A-MSC_A (behaviour not specified, implementation dependent)
1.3	MS_A3 releases the REC	MS_A4 is IDLE
1.4	CT_A1 kill the 200 VGCS	MS_A1 is IDLE
1.5	MS_A1 originates a 200 VGCS in A-MSC_A	MS_A2 and CT_A1 receives the 200 VGCS All TS's at E-IF are BUSY
1.6	**MS_A4 originates a REC** **in R-MSC_B**	The REC is not established, while there is only one TS at E-IF. **The group channel of the 200 VGCS is pre-empted at E-IF.** MS_A2 is IDLE The 200 VGCS is released in R-MSC_B The 200 VGCS exists **probably** in A-MSC_A (behaviour not specified, implementation dependent)
1.7	CT_A1 kill the 200 VGCS	All participants and TS's at E-IF are IDLE

Test configuration for step 2:



R-MSC_A1		**A-MSC_B1**
MS_A1 (VGCS GID: 200)	**1 TS at E-IF**	MS_A2 (VGCS GID: 200)
MS_A3 (REC GID: 299)		MS_A4 (REC GID: 299)
		CT_B1 (GCA_AB1, VGCS GID: 200)

Test procedure

Step 2: Group Channel pre-empted at E-IF. MSC_B is pre-empting.

Step	Action	Expected result(s)
2.1	MS_A2 originates a 200 VGCS in A-MSC_B	MS_A1 and CT_B1 receives the 200 VGCS All TS's at E-IF are BUSY
2.2	**MS_A4 originates a REC in A-MSC_B**	MS_A3 receives the REC in R-MSC_A **MS_A1 is disconnected from the 200 VGCS** **The 200 VGCS is released in R-MSC_A** The 200 VGCS exists **probably** in A-MSC_B (behaviour not specified, implementation dependent)
2.3	MS_A4 releases the REC	MS_A3 is IDLE
2.4	CT_B1 kill the 200 VGCS	MS_A2 is IDLE
2.5	MS_A2 originates a 200 VGCS in A-MSC_B	MS_A1 and CT_B1 receives the 200 VGCS All TS's at E-IF are BUSY

Step	Action	Expected result(s)
2.6	**MS_A3 originates a REC in R-MSC_B**	The REC is not established, while there is only one TS at E-IF. **The group channel of the 200 VGCS is pre-empted at E-IF.** MS_A1 is IDLE The 200 VGCS is released in R-MSC_A The 200 VGCS exists **probably** in A-MSC_B (behaviour not specified, implementation de-pendent)
2.7	MS_A3 releases the REC	MS_A4 is IDLE
2.8	CT_B1 kill the 200 VGCS	All participants and both TS's at E-IF are IDLE
2.9	Unblock the TS's at E-IF	All resources are IDLE

d) Success criteria

The group channel of a VGCS call can be pre-empted at E-IF from any side by a REC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.5.6 Link to a controller of a VGCS call is pre-empted at the E-IF between two networks by PtP call

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.2.2 2.4.6 2.4.7 10.2.3		

a) Purpose

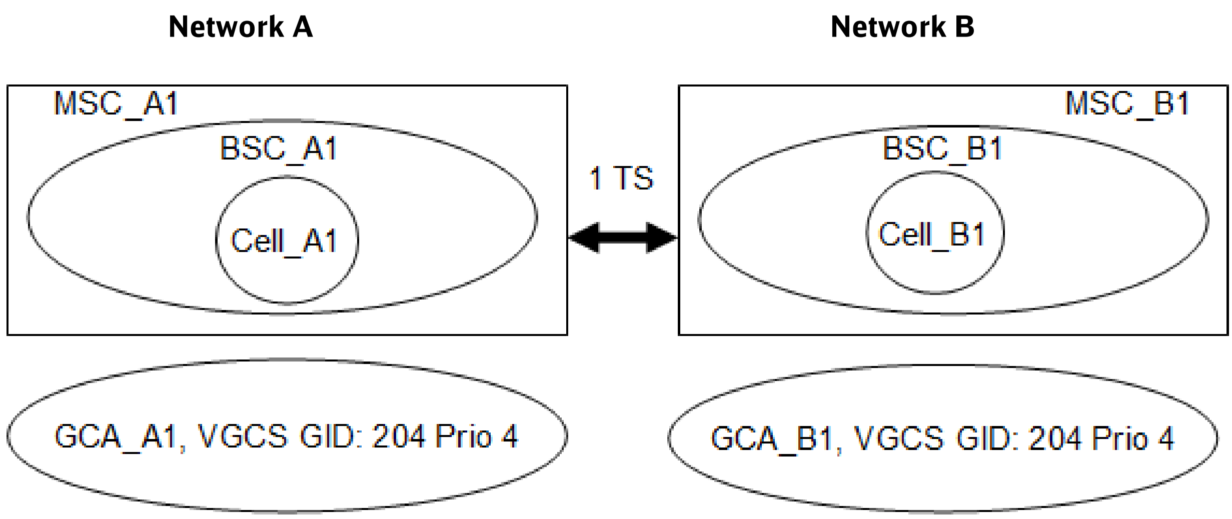
Verify that the link to a controller of VGCS Call can be pre-empted by a PtP call at E-IF.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Controller connection at E-IF pre-empted by PtP call. Group Call in MSC_A.

Step 2: Controller connection at E-IF pre-empted by PtP call. Group Call in MSC_B.



MSC_A1		**MSC_B1**
MS_A1 (no VGCS / VBS subscriber)	**1 TS at E-IF**	MS_A2 (no VGCS / VBS subscriber)
MS_A3 (VGCS GID: 204)		MS_A4 (VGCS GID: 204)
CT_A1 (GCA_B1, VGCS GID: 204)		CT_B1 (GCA_A1, VGCSD GID: 204)
CT_A2		CT_B2

c) Test procedures

Step 1: Controller connection at E-IF pre-empted by PtP call. Group Call in MSC_A.

Step	Action	Expected result(s)
1.1	MS_A3 originates a 204 VGCS in MSC_A	CT_B1 receives the 204 VGCS from MSC_A All TS's at E-IF are BUSY
1.2	MS_A1 calls MS_A2 with Prio 3	**The connection to CT_B1 is pre-empted at E-IF** MS_A1 is connected with MS_A2
1.3	MS_A3 releases the VGCS call MS_A1 releases the PtP call	All participants are IDLE
1.4	MS_A3 originates a 204 VGCS in MSC_A	CT_B1 receives the 204 VGCS from MSC_A All TS's at E-IF are BUSY
1.5	MS_A2 calls MS_A1 with Prio 3	**The connection to CT_B1 is pre-empted at E-IF** MS_A2 is connected with MS_A1
1.6	MS_A3 releases the VGCS call MS_A1 releases the PtP call	All participants are IDLE
1.7	MS_A3 originates a 204 VGCS in MSC_A	CT_B1 receives the 204 VGCS from MSC_A All TS's at E-IF are BUSY
1.8	CT_A2 calls CT_B2 with Prio 3	**The connection to CT_B1 is pre-empted at E-IF** CT_A2 is connected with CT_B2
1.9	MS_A3 releases the VGCS call CT_A2 releases the PtP call	All participants are IDLE
1.10	MS_A3 originates a 204 VGCS in MSC_A	CT_B1 receives the 204 VGCS from MSC_A All TS's at E-IF are BUSY
1.11	CT_B2 calls CT_A2 with Prio 3	**The connection to CT_B1 is pre-empted at E-IF** CT_B2 is connected with CT_A2
1.12	MS_A3 releases the VGCS call CT_B2 releases the PtP call	All participants are IDLE

Step 2: Controller connection at E-IF pre-empted by PtP call. Group Call in MSC_B.

Step	Action	Expected result(s)
2.1	MS_A4 originates a 204 VGCS in MSC_B	CT_A1 receives the 204 VGCS from MSC_B All TS's at E-IF are BUSY
2.2	MS_A1 calls MS_A2 with Prio 3	**The connection to CT_A1 is pre-empted at E-IF** MS_A1 is connected with MS_A2
2.3	MS_A4 releases the VGCS call MS_A1 releases the PtP call	All participants are IDLE
2.4	MS_A4 originates a 204 VGCS in MSC_B	CT_A1 receives the 204 VGCS from MSC_B All TS's at E-IF are BUSY
2.5	MS_A2 calls MS_A1 with Prio 3	**The connection to CT_A1 is pre-empted at E-IF** MS_A2 is connected with MS_A1
2.6	MS_A4 releases the VGCS call MS_A2 releases the PtP call	All participants are IDLE
2.7	MS_A4 originates a 204 VGCS in MSC_B	CT_A1 receives the 204 VGCS from MSC_B All TS's at E-IF are BUSY
2.8	CT_A2 calls CT_B2 with Prio 3	**The connection to CT_A1 is pre-empted at E-IF** CT_A2 is connected with CT_B2
2.9	MS_A4 releases the VGCS call CT_A2 releases the PtP call	All participants are IDLE
2.10	MS_A4 originates a 204 VGCS in MSC_B	CT_A1 receives the 204 VGCS from MSC_B All TS's at E-IF are BUSY
2.11	CT_B2 calls CT_A2 with Prio 3	**The connection to CT_A1 is pre-empted at E-IF** CT_B2 is connected with CT_A2
2.12	MS_A4 releases the VGCS call CT_B2 releases the PtP call	All participants are IDLE
2.19	**Unblock all TS's at E-IF**	All resources are IDLE

d) Success criteria

The link to a controller of VGCS Call can be pre-empted by a PtP call at E-IF.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.5.7 Link to the originator as first talker of a VGCS call is pre-empted at the E-IF between two networks by PtP call

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.4.6 2.4.7 10.2.3		

a) Purpose

Verify that the dedicated link at E-IF can be pre-empted from any side by a PtP call.

Note: Some implementations do not support group channel pre-emption at E-IF.

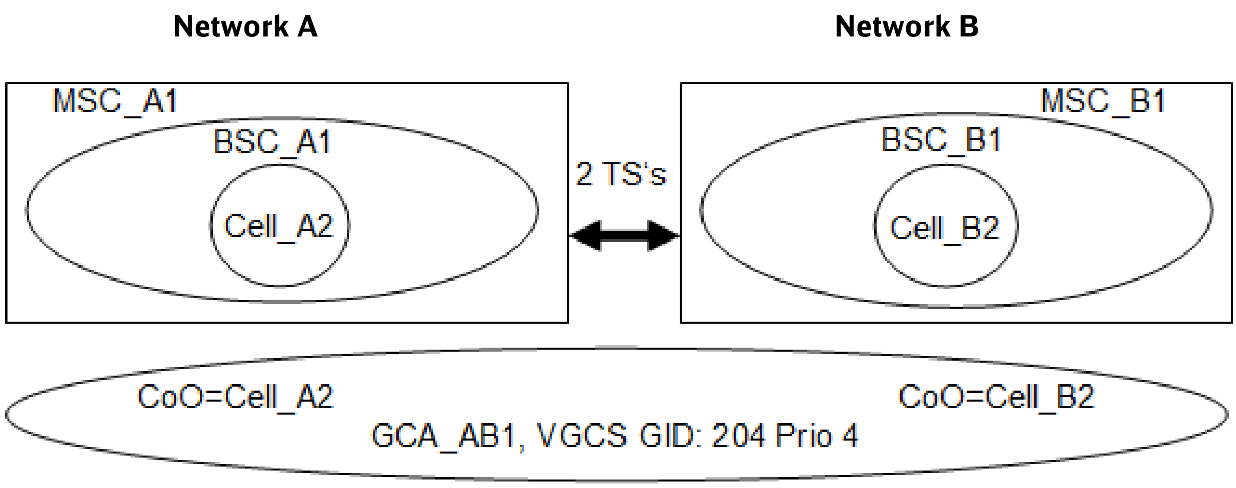
b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Link to the originator as first talker of a VGCS call is pre-empted at the E-IF between two networks by a PtP call. Group Call originated in R-MSC_A.

Step 2: Link to the originator as first talker of a VGCS call is pre-empted at the E-IF between two networks by a PtP call. Group Call originated in R-MSC_B.

Test configuration for step 1:



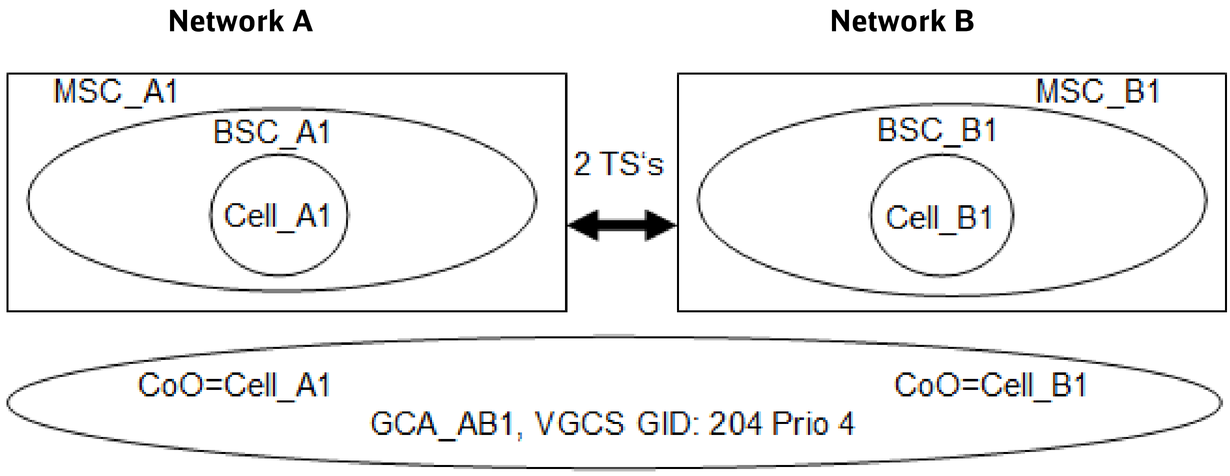
R-MSC_A1	2 TS's at E-IF	A-MSC_B1
MS_A1 (no VGCS / VBS subscriber)		MS_A2 (no VGCS / VBS subscriber)
MS_A3 (no VGCS / VBS subscriber)		MS_A4 (no VGCS / VBS subscriber)
MS_A5 (VGCS GID: 204)		MS_A6 (VGCS GID: 204)
		CT_B1 (GCA_AB1, VGCS GID: 204)

c) Test procedures

Step 1: Link to the originator as first talker of a VGCS call is pre-empted at the E-IF between two networks by a PtP call. Group Call originated in R-MSC_A.

Step	Action	Expected result(s)
1.1	MS_A5 originates a 204 VGCS in R-MSC_A and keep the dedicated link	MS_A6 and CT_B1 receive the 204 VGCS All TS's at E-IF are BUSY
1.2	MS_A1 calls MS_A2 with Prio 3 and parallel MS_A4 calls MS_A3 with Prio 3	**The Dedicated link of MS_A5 is pre-empted** The group channel of the inter MSC group call is pre-empted. MS_A1 connected with MS_A2 MS_A4 connected with MS_A3 Group Call released in R-MSC_A Group Call **probably** existing in A-MSC_B MS_A6 can take the uplink.
1.3	CT_B1 kill the 204 VGCS	MS_A6 is IDLE
1.4	MS_A5 originates a 204 VGCS in R-MSC_A and keep the dedicated link	MS_A6 and CT_B1 receive the 204 VGCS All TS's at E-IF are BUSY
1.5	MS_A2 calls MS_A1 with Prio 3 and parallel MS_A3 calls MS_A4 with Prio 3	**The Dedicated link of MS_A5 is pre-empted** The group channel of the inter MSC group call is pre-empted. MS_A2 connected with MS_A1 MS_A3 connected with MS_A4 Group Call released in R-MSC_A Group Call **probably** existing in A-MSC_B MS_A6 can take the uplink.
1.6	CT_B1 kill the 204 VGCS	MS_A6 is IDLE
1.7	Release all calls	All participants and both TS's at E-IF are IDLE

Test configuration for Step 2:



A-MSC_A		**R-MSC_B**
MS_A1 (no VGCS / VBS subscriber)		MS_A2 (no VGCS / VBS subscriber)
MS_A3 (no VGCS / VBS subscriber)	**2 TS's at E-IF**	MS_A4 (no VGCS / VBS subscriber)
MS_A5 (VGCS GID: 204)		MS_A6 (VGCS GID: 204)
CT_A1 (GCA_AB1, VGCS GID: 204)		

Test procedure

Step 2: Link to the originator as first talker of a VGCS call is pre-empted at the E-IF between two networks by a PtP call. Group Call originated in R-MSC_B.

Step	Action	Expected result(s)
2.1	MS_A6 originates a 204 VGCS in R-MSC_B and keep the dedicated link	MS_A5 and CT_A1 receive the 204 VGCS All TS's at E-IF are BUSY
2.2	MS_A1 calls MS_A2 with Prio 3 and parallel MS_A4 calls MS_A3 with Prio 3	**The Dedicated link of MS_A6 is pre-empted** **The group channel of the inter MSC group call is pre-empted.** MS_A1 connected with MS_A2 MS_A4 connected with MS_A3 Group Call released in R-MSC_A Group Call **probably** existing in A-MSC_A MS_A5 can take the uplink.
2.3	CT_A1 kill the 204 VGCS	MS_A5 is IDLE

2.4	MS_A6 originates a 204 VGCS in R-MSC_B and keep the dedicated link	MS_A5 and CT_A1 receives the 204 VGCS All TS's at E-IF are BUSY
2.5	MS_A2 calls MS_A1 with Prio 3 and parallel MS_A3 calls MS_A4 with Prio 3	**The Dedicated link of MS_A6 is pre-empted** The group channel of the inter MSC group call is pre-empted. MS_A2 connected with MS_A1 MS_A3 connected with MS_A4 Group Call released in R-MSC_A Group Call **probably** existing in A-MSC_A MS_A5 can take the uplink.
2.6	CT_A1 kill the 204 VGCS	MS_A5 is IDLE
2.7	Release all calls	All participants and both TS's at E-IF are IDLE
2.8	Unblock the TS'S at E'IF	All resources are IDLE
2.9	Set the Prio of the 204 VGCS to the right value (prio 2).	The previous configuration is re-established.

d) Success criteria

The dedicated link of a VGCS call can be pre-empted at E-IF from any side by a PtP call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.5.8 Link between A-MSC and R-MSC of VGCS call is pre-empted at the E-IF between two networks by PtP call

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.4.6 2.4.7 10.2.3		

a) Purpose:

Verify that the Link between A-MSC and R-MSC of VGCS at E-IF can be pre-empted from any side by a PtP call.

Note: Some implementations do not support E-IF pre-emption in this case.

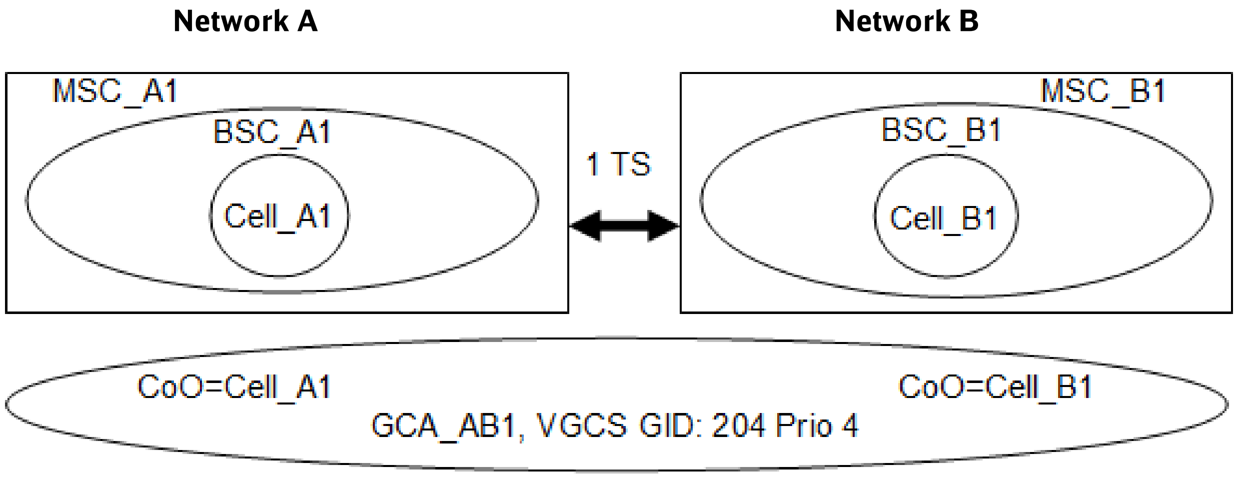
b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Link between A-MSC and R-MSC of VGCS call is pre-empted at the E-IF between two networks by a PtP call. Group Call originated in A-MSC_A.

Step 2: Link between A-MSC and R-MSC of VGCS call is pre-empted at the E-IF between two networks by a PtP call. Group Call originated in A-MSC_B.

Test configuration for Step 1:



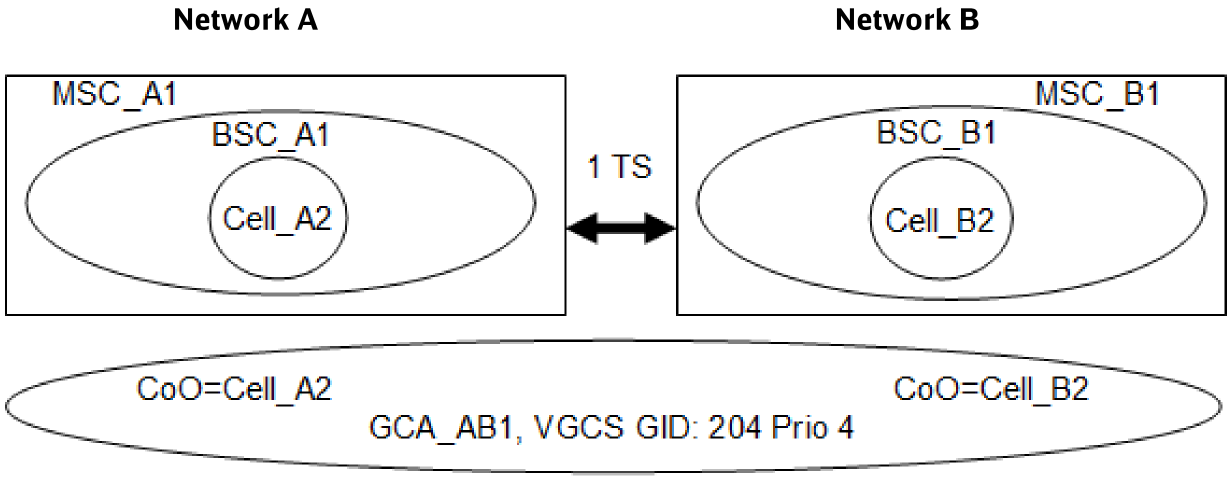
A-MSC_A1	**1 TS at E-IF**	**R-MSC_B1**
MS_A1 (no VGCS / VBS subscriber)		MS_A2 (no VGCS / VBS subscriber)
MS_A3 (VGCS GID: 204)		MS_A4 (VGCS GID: 204)
CT_A2		

c) Test procedures

Step 1: Link between A-MSC and R-MSC of VGCS call is pre-empted at the E-IF between two networks by a PtP call. Group Call originated in A-MSC_A.

Step	Action	Expected result(s)
1.1	MS_A3 originates a 204 VGCS in A-MSC_A	MS_A4 receives the 204 VGCS All TS's at E-IF are BUSY
1.2	CT_A2 calls MS_A2 with Prio 3	The group channel of the inter MSC group call is pre-empted by MSC_A. CT_A2 connected with MS_A2 Group Call released in R-MSC_B Group Call **probably** existing in A-MSC_A MS_A3 can take the uplink.
1.3	MS_A3 releases the 204 VGCS CT_A2 releases the PtP to MS_A2	All participants and TS's at E-IF are IDLE
1.4	MS_A3 originates a 204 VGCS in A-MSC_A	MS_A4 receives the 204 VGCS All TS's at E-IF are BUSY
1.5	MS_A2 calls MS_A1 with Prio 3	The group channel of the inter MSC group call is pre-empted by MSC_B. MS_A2 connected with MS_A1 Group Call released in R-MSC_B Group Call **probably** existing in A-MSC_A MS_A3 can take the uplink.
1.6	MS_A3 releases the 204 VGCS MS_A2 releases the PtP to MS_A1	All participants and TS's at E-IF are IDLE

Test configuration for Step 2:



R-MSC_A1	**1 TS at E-IF**	**A-MSC_B1**
MS_A1 (no VGCS / VBS subscriber)		MS_A2 (no VGCS / VBS subscriber)
MS_A3 (VGCS GID: 204)		MS_A4 (VGCS GID: 204)
CT_A2		

Test procedure

Step 2: Link between A-MSC and R-MSC of VGCS call is pre-empted at the E-IF between two networks by a PtP call. Group Call originated in A-MSC_B.

Step	Action	Expected result(s)
2.1	MS_A4 originates a 204 VGCS in A-MSC_B	MS_A3 receives the 204 VGCS All TS's at E-IF are BUSY
2.2	CT_A2 calls MS_A2 with Prio 3	The group channel of the inter MSC group call is pre-empted by MSC_A. CT_A2 connected with MS_A2 Group Call released in R-MSC_A Group Call **probably** existing in A-MSC_B MS_A4 can take the uplink.
2.3	MS_A4 releases the 204 VGCS CT_A2 releases the PtP to MS_A2	All participants and TS's at E-IF are IDLE
2.4	MS_A4 originates a 204 VGCS in A-MSC_B	MS_A3 receives the 204 VGCS All TS's at E-IF are BUSY

Step	Action	Expected result(s)
2.5	MS_A2 calls MS_A1 with Prio 3	The group channel of the inter MSC group call is pre-empted by MSC_B. MS_A2 connected with MS_A1 Group Call released in R-MSC_A Group Call **probably** existing in A-MSC_B MS_A4 can take the uplink.
2.6	MS_A4 releases the 204 VGCS MS_A2 releases the PtP to MS_A1	All participants and TS's at E-IF are IDLE

d) Success criteria

The Link between A-MSC and R-MSC of VGCS at E-IF can be pre-empted from any side by a PtP call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

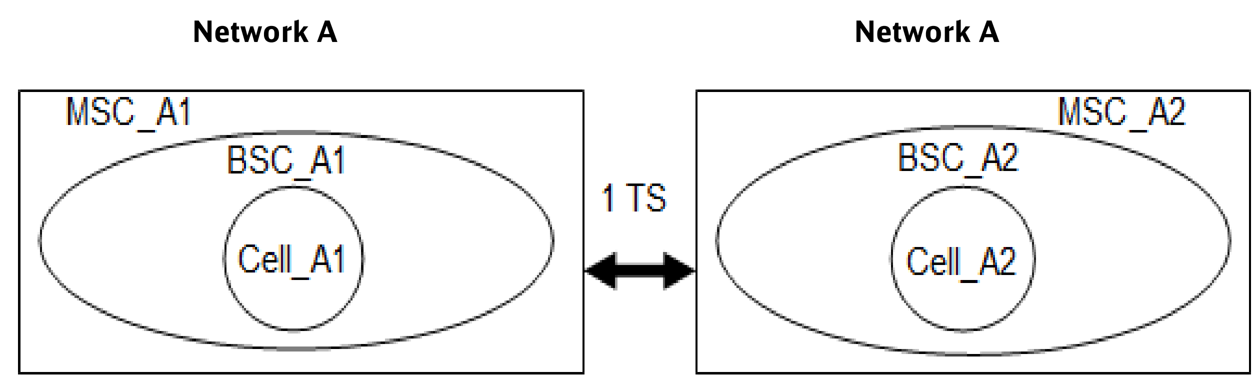
5.5.9 Inter MSC handover of a point to point voice call with MLPP pre-emption at E-IF

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.4.1		

a) Purpose:

Verify that the PtP connection at E-IF can be pre-empted during an **intra PLMN / inter MSC-HO** from any side by another PtP call with higher priority.

b) Test configuration / initial conditions



MSC_A1	**1 TS at E-IF**	**MSC_A2**
MS_A1		MS_A2
MS_A3		
MS_A4		

c) Test procedures

Step	Action	Expected result(s)
1	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2 There are no IDLE TS's at E-IF
2	MS_A3 calls MS_A4 with prio 2	MS_A3 connected with MS_A4
3	MS_A3 moves to Cell_A2 and than back to Cell_A1	The connection MS_A1 to MS_A2 is pre-empted at E-IF. MS_A3 connected with MS_A4

Step	Action	Expected result(s)
4	MS_A2 calls MS_A1 with prio 4	MS_A2 connected with MS_A1 There are no IDLE TS's at E-IF
5	MS_A3 moves to Cell_A2	The connection MS_A1 to MS_A2 is pre-empted at E-IF. MS_A3 connected with MS_A4
6	MS_A3 releases the call to MS_A4	All participants are IDLE
7	MS_A4 moves to Cell_A2	MS_A3 and MS_A4 are placed in Cell_A2
8	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2 There are no IDLE TS's at E-IF
9	MS_A3 calls MS_A4 with prio 2	MS_A3 connected with MS_A4
10	MS_A3 moves to Cell_A1 and than back to Cell_A2	The connection MS_A1 to MS_A2 is pre-empted at E-IF. MS_A3 connected with MS_A4
11	MS_A2 calls MS_A1 with prio 4	MS_A2 connected with MS_A1 There are no IDLE TS's at E-IF
12	MS_A3 moves to Cell_A1 and than back to Cell_A2	The connection MS_A1 to MS_A2 is pre-empted at E-IF. MS_A3 connected with MS_A4
13	MS_A3 releases the call to MS_A4	All participants are IDLE
14	Unlock the TS's at E-IF	All resources are IDLE

d) Success criteria

A PtP connection at E-IF can be pre-empted during an intra PLMN / inter MSC-HO from any side by another PtP call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.5.10 Inter MSC handover of a circuit switched data call with MLPP pre-emption at E-IF

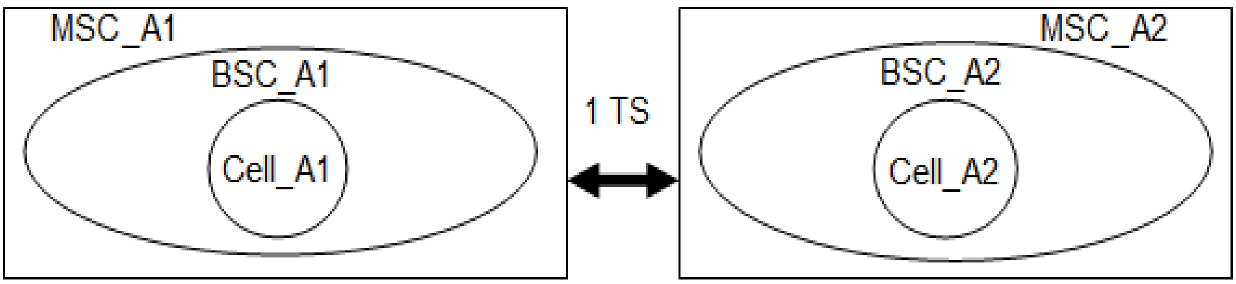
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.4.1		

a) Purpose:

Verify that the PtP connection at E-IF can be pre-empted during an **intra PLMN** / **inter MSC-HO** from any side by a data call with higher priority.

b) Test configuration / initial conditions

Network A **Network A**



MSC_A1	**1 TS at E-IF**	**MSC_A2**
MS_A1		MS_A2
MS_A3		
MS_A4		

c) Test procedures

Step	Action	Expected result(s)
1	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2
2	MS_A3 originates a data call (UDI, 9600 Bit/s, transparent) to MS_A4 with prio 1	MS_A3 connected with MS_A4

Step	Action	Expected result(s)
3	MS_A3 moves to Cell_A2 and than back to Cell_A1	**The connection MS_A1 to MS_A2 is pre-empted at E-IF.** MS_A3 connected with MS_A4
4	MS_A2 calls MS_A1 with prio 4	MS_A2 connected with MS_A1
5	MS_A3 moves to Cell_A2	**The connection MS_A1 to MS_A2 is pre-empted at E-IF.** MS_A3 connected with MS_A4
6	MS_A4 moves to Cell_A2	There is one TS IDLE at E-IF
7	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2
8	MS_A3 moves to Cell_A1 and than back to Cell_A2	**The connection MS_A1 to MS_A2 is pre-empted at E-IF.** MS_A3 connected with MS_A4
9	MS_A2 calls MS_A1 with prio 4	MS_A2 connected with MS_A1
10	MS_A3 moves to Cell_A1 and than back to Cell_A2	**The connection MS_A2 to MS_A1 is pre-empted at E-IF.** MS_A3 connected with MS_A4
11	MS_A3 releases the data call to MS_A4	All participants are IDLE
12	Unlock the TS's at E-IF	All resources are IDLE

d) Success criteria

A PtP connection at E-IF can be pre-empted during an intra PLMN / inter MSC-HO from any side by a data call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.5.11 Inter MSC handover of a railway emergency call originator with pre-emption at E-IF

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.4.1		

a) Purpose:

Verify that the PtP connection at E-IF can be pre-empted during an **intra PLMN / inter MSC-HO** of the REC DCH from any side.

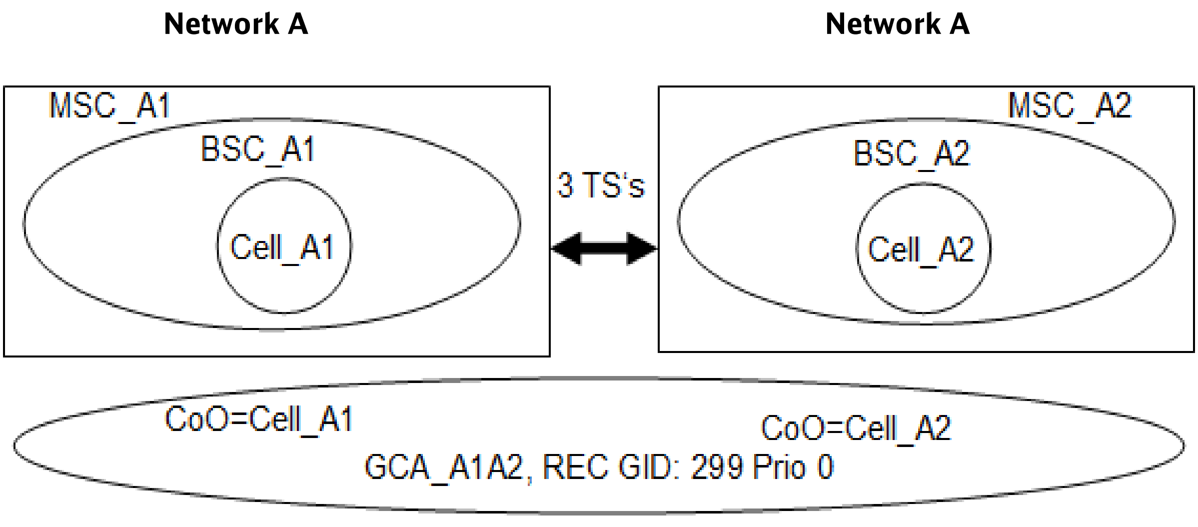
b) Test configuration/ initial conditions

This test case has been divided into the following steps:

Step 1: Inter MSC handover of a railway emergency call originator with pre-emption at E-IF. MSC_A1 is the A-MSC.

Step 2: Inter MSC handover of a railway emergency call originator with pre-emption at E-IF. MSC_A2 is the A-MSC.

Test configuration for Step 1



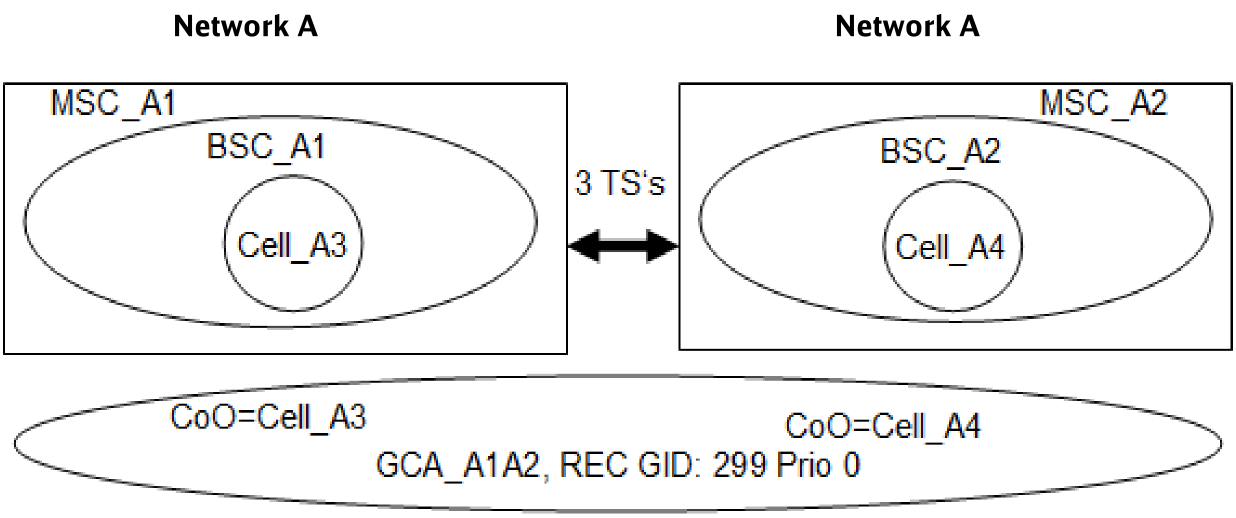
A-MSC_A1		R-MSC_A2
MS_A1 (no VGCS / VBS subscriber)	**3 TS at E-IF**	MS_A2 (no VGCS / VBS subscriber)
MS_A3 (no VGCS / VBS subscriber)		MS_A4 (no VGCS / VBS subscriber)
MS_A5 (REC GID: 299)		MS_A6 (REC GID: 299)

c) Test procedures

Step 1: Inter MSC handover of a railway emergency call originator with pre-emption at E-IF. MSC_A1 is the A-MSC.

Step	Action	Expected result(s)
1.1	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2
1.2	MS_A3 calls MS_A4 with prio 3	MS_A3 connected with MS_A4
1.3	MS_A5 originates the REC in A-MSC_A1 and keep the DCH	MS_A6 receives the REC All TS's are busy at E-IF
1.4	MS_A5 moves to Cell_A2 and than back to Cell_A1	**The connection MS_A1 to MS_A2 is pre-empted at E-IF.** MS_A3 connected with MS_A4
1.5	MS_A2 calls MS_A1 with prio 4	MS_A2 connected with MS_A1
1.6	MS_A5 moves to Cell_A2 and than back to Cell_A1	**The connection MS_A2 to MS_A1 is pre-empted at E-IF.** MS_A3 connected with MS_A4
1.7	MS_A5 releases the REC	MS_A5 and MS_A6 are IDLE
1.8	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2 MS_A3 connected with MS_A4
1.9	MS_A6 originates the REC in R-MSC_A2 and keep the DCH	MS_A5 receives the REC **The connection MS_A1 to MS_A2 is pre-empted at E-IF.** MS_A3 connected with MS_A4
1.10	MS_A6 moves to Cell_A1 and than back to Cell_A2	The connection MS_A3 to MS_A4 is pre-empted at E-IF. 1 TS is IDLE at E-IF.
1.11	MS_A2 calls MS_A1 with prio 4	MS_A2 connected with MS_A1
1.12	MS_A6 moves to Cell_A1 and than back to Cell_A2	The connection MS_A2 to MS_A1 is pre-empted at E-IF. 1 TS's are IDLE at E-IF.
1.13	MS_A6 releases the REC	All participants are IDLE
1.14	Unlock the TS's at E-IF	All resources are IDLE

Test configuration for step 2



R-MSC_A1		**A-MSC_A2**
MS_A1 (no VGCS / VBS subscriber)	**3 TS at E-IF**	MS_A2 (no VGCS / VBS subscriber)
MS_A3 (no VGCS / VBS subscriber)		MS_A4 (no VGCS / VBS subscriber)
MS_A5 (REC GID: 299)		MS_A6 (REC GID: 299)

Test procedure

Step 2: Inter MSC handover of a railway emergency call originator with pre-emption at E-IF. MSC_A2 is the A-MSC.

Step	Action	Expected result(s)
2.1	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2
2.2	MS_A3 calls MS_A4 with prio 3	MS_A3 connected with MS_A4
2.3	MS_A6 originates the REC in A-MSC_A2 and keep the DCH	MS_A5 receives the REC All TS's are busy at E-IF
2.4	MS_A6 moves to Cell_A2 and than back to Cell_A4	**The connection MS_A1 to MS_A2 is pre-empted at E-IF.** MS_A3 connected with MS_A4
2.5	MS_A2 calls MS_A1 with prio 4	MS_A2 connected with MS_A1
2.6	MS_A6 moves to Cell_A2 and than back to Cell_A4	**The connection MS_A2 to MS_A1 is pre-empted at E-IF.** MS_A3 connected with MS_A4

2.7	MS_A6 releases the REC	MS_A5 and MS_A6 are IDLE
2.8	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2 MS_A3 connected with MS_A4
2.9	MS_A5 originates the REC in R-MSC_A1 and keep the DCH	MS_A6 receives the REC **The connection MS_A1 to MS_A2 is pre-empted at E-IF.** MS_A3 is connected with MS_A4
2.10	MS_A5 moves to Cell_A4 and than back to Cell_A2	**The connection MS_A3 to MS_A4 is pre-empted at E-IF.** 1 TS is IDLE at E-IF.
2.11	MS_A2 calls MS_A1 with prio 4	MS_A2 connected with MS_A1
2.12	MS_A5 moves to Cell_A4 and than back to Cell_A2	**The connection MS_A2 to MS_A1 is pre-empted at E-IF.** 1 TS is IDLE at E-IF.
2.13	MS_A5 releases the REC	All participants are IDLE
2.14	Unlock the TS's at E-IF	All resources are IDLE

d) Success criteria

A PtP connection can be pre-empted from any side at E-IF during an intra PLMN / inter MSC-HO of the REC DCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.5.12 Inter MSC handover of a VGCS dedicated channel with MLPP pre-emption at E-IF

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.4.1		

a) Purpose:

Verify that the PtP connection at E-IF can be pre-empted during an **intra PLMN / inter MSC-HO** of the VGCS DCH from any side.

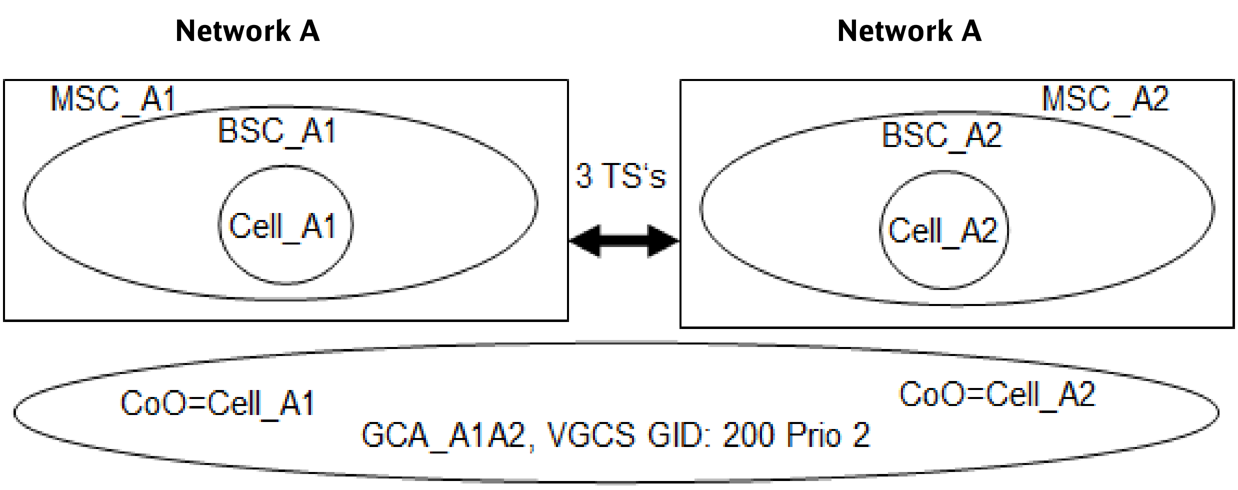
b) Test configuration

This test case has been divided into the following steps:

Step 1: Inter MSC / intra PLMN handover of a VGCS dedicated channel with MLPP pre-emption at E-IF. MSC_A1 is the A-MSC.

Step 2: Inter MSC / intra PLMN handover of a VGCS dedicated channel with MLPP pre-emption at E-IF. MSC_A2 is the A-MSC.

Test configuration / initial conditions for Step 1



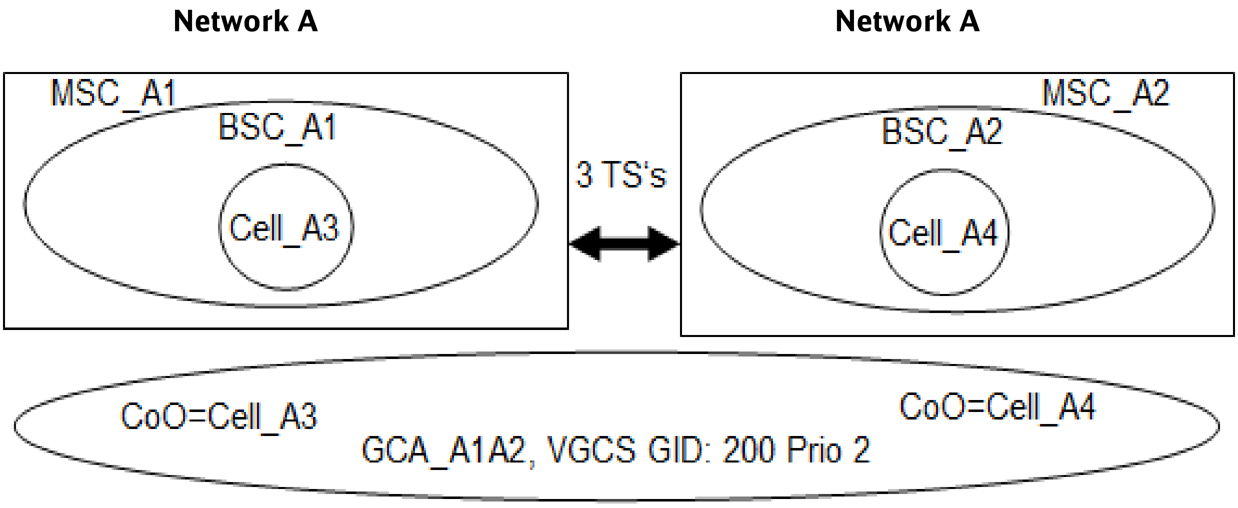
A-MSC_A1		R-MSC_A2
MS_A1 (no VGCS / VBS subscriber)	**3 TS at E-IF**	MS_A2 (no VGCS / VBS subscriber)
MS_A3 (no VGCS / VBS subscriber)		MS_A4 (no VGCS / VBS subscriber)
MS_A5 (VGCS GID: 200)		MS_A6 (VGCS GID: 200)

c) Test procedures

Step 1: Inter MSC handover of a VGCS dedicated channel with MLPP pre-emption at E-IF. MSC_A1 is the A-MSC.

Step	Action	Expected result(s)
1.1	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2
1.2	MS_A3 calls MS_A4 with prio 3	MS_A3 connected with MS_A4
1.3	MS_A5 originates the VGCS call in A-MSC_A1 and keep the DCH	MS_A6 receives the VGCS call
1.4	MS_A5 moves to Cell_A2 and than back to Cell_A1	**The connection MS_A1 to MS_A2 is pre-empted at E-IF.** MS_A3 connected with MS_A4
1.5	MS_A2 calls MS_A1 with prio 4	MS_A2 connected with MS_A1
1.6	MS_A5 moves to Cell_A2 and than back to Cell_A1	**The connection MS_A2 to MS_A1 is pre-empted at E-IF.** MS_A3 connected with MS_A4
1.7	MS_A5 releases the VGCS call	MS_A5 and MS_A6 are IDLE
1.8	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2 MS_A3 connected with MS_A4
1.9	MS_A6 originates the VGCS call in R-MSC_A2 and keep the DCH	MS_A5 receives the VGCS call **The connection MS_A1 to MS_A2 is pre-empted at E-IF.** MS_A3 connected with MS_A4
1.10	MS_A6 moves to Cell_A1 and than back to Cell_A2	The connection MS_A3 to MS_A4 is pre-empted at E-IF. 1 TS is IDLE at E-IF.
1.11	MS_A2 calls MS_A1 with prio 4	MS_A2 connected with MS_A1
1.12	MS_A6 moves to Cell_A1 and than back to Cell_A2	The connection MS_A2 to MS_A1 is pre-empted at E-IF. 1 TS's are IDLE at E-IF.
1.13	MS_A6 releases the VGCS call	All participants are IDLE
1.14	Unlock the TS's at E-IF	All resources are IDLE

Test configuration for Step 2



R-MSC_A1	**3 TS at E-IF**	**A-MSC_A2**
MS_A1 (no VGCS / VBS subscriber)		MS_A2 (no VGCS / VBS subscriber)
MS_A3 (no VGCS / VBS subscriber)		MS_A4 (no VGCS / VBS subscriber)
MS_A5 (VGCS GID: 200)		MS_A6 (VGCS GID: 200)

Test procedure

Step 2: Inter MSC handover of a VGCS dedicated channel with MLPP pre-emption at E-IF. MSC_A2 is the A-MSC.

Step	Action	Expected result(s)
2.1	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2
2.2	MS_A3 calls MS_A4 with prio 3	MS_A3 connected with MS_A4
2.3	MS_A6 originates the VGCS call in A-MSC_A2 and keep the DCH	MS_A5 receives the VGCS call
2.4	MS_A6 moves to Cell_A2 and than back to Cell_A4	**The connection MS_A1 to MS_A2 is pre-empted at E-IF.** MS_A3 connected with MS_A4
2.5	MS_A2 calls MS_A1 with prio 4	MS_A2 connected with MS_A1
2.6	MS_A6 moves to Cell_A2 and than back to Cell_A4	**The connection MS_A2 to MS_A1 is pre-empted at E-IF.** MS_A3 connected with MS_A4
2.7	MS_A6 releases the VGCS call	MS_A5 and MS_A6 are IDLE

Step	Action	Expected result(s)
2.8	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2 MS_A3 connected with MS_A4
2.9	MS_A5 originates the VGCS call in R-MSC_A1 and keep the DCH	MS_A6 receives the VGCS call **The connection MS_A1 to MS_A2 is pre-empted at E-IF.** MS_A3 connected with MS_A4
2.10	MS_A5 moves to Cell_A4 and than back to Cell_A2	**The connection MS_A3 to MS_A4 is pre-empted at E-IF.** 1 TS is IDLE at E-IF.
2.11	MS_A2 calls MS_A1 with prio 4	MS_A2 connected with MS_A1
2.12	MS_A5 moves to Cell_A4 and than back to Cell_A2	**The connection MS_A2 to MS_A1 is pre-empted at E-IF.** 1 TS is IDLE at E-IF.
2.13	MS_A5 releases the VGCS call	All participants are IDLE
2.14	Unlock the TS's at E-IF	All resources are IDLE

d) Success criteria

A PtP connection at E-IF can be pre-empted from any side during an intra PLMN / inter MSC-HO of the VGCS DCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.5.13 Inter MSC handover of a VBS originator channel with MLPP pre-emption at E-IF

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.4.1		

a) Purpose:

Verify that the PtP connection at E-IF can be pre-empted during an intra PLMN / inter MSC-HO of the VBS DCH from any side.

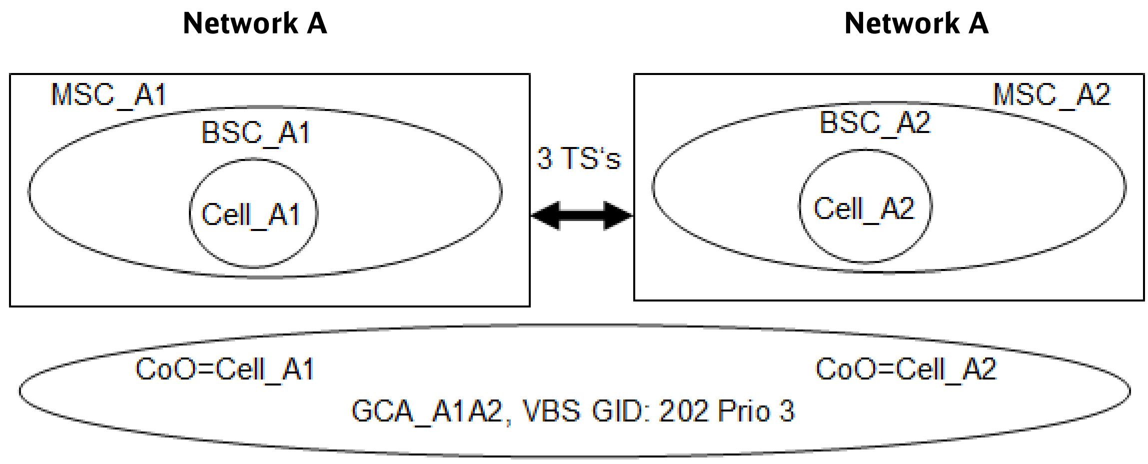
b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Intra PLMN / Inter MSC handover of a VBS originator channel with MLPP pre-emption at E-IF. MSC_A1 is the A-MSC.

Step 2: Intra PLMN / Inter MSC handover of a VBS originator channel with MLPP pre-emption at E-IF. MSC_A2 is the A-MSC.

Test configuration for Step 1



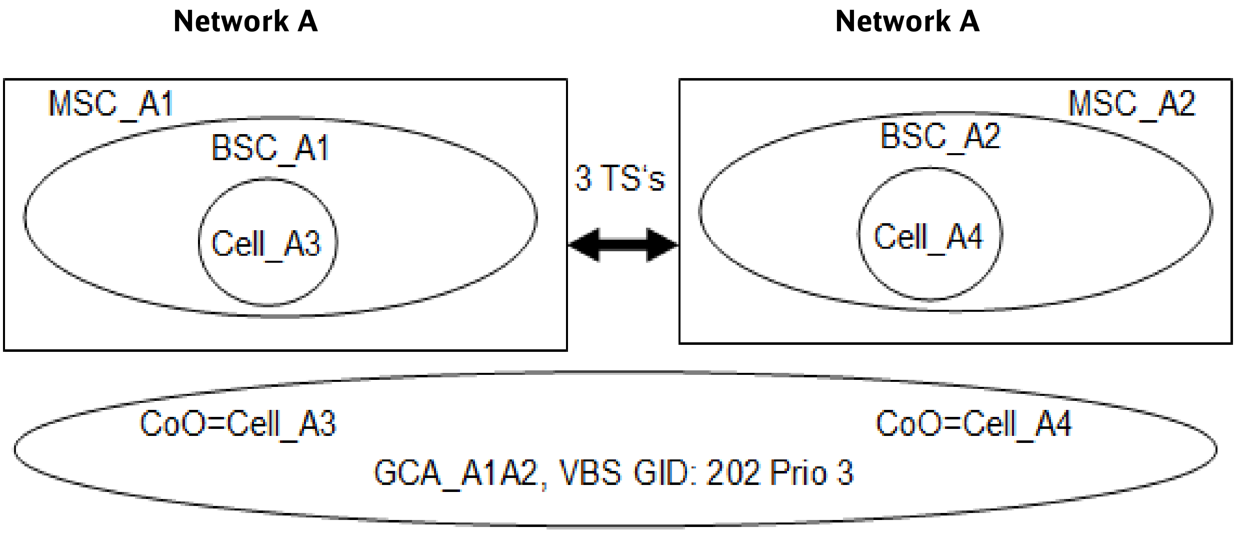
A-MSC_A1		R-MSC_A2
MS_A1 (no VGCS / VBS subscriber)	3 TS at E-IF	MS_A2 (no VGCS / VBS subscriber)
MS_A3 (no VGCS / VBS subscriber)		MS_A4 (no VGCS / VBS subscriber)
MS_A5 (VBS GID: 202)		MS_A6 (VBS GID: 202)

c) Test procedures

Step 1: Inter MSC handover of a VBS originator channel with MLPP pre-emption at E-IF. MSC_A1 is the A-MSC.

Step	Action	Expected result(s)
1.1	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2
1.2	MS_A3 calls MS_A4 with prio 3	MS_A3 connected with MS_A4
1.3	MS_A5 originates the VBS call in A-MSC_A1	MS_A6 receives the VBS call
1.4	MS_A5 moves to Cell_A2 and than back to Cell_A1	**The connection MS_A1 to MS_A2 is pre-empted at E-IF.** MS_A3 connected with MS_A4
1.5	MS_A2 calls MS_A1 with prio 4	MS_A2 connected with MS_A1
1.6	MS_A5 moves to Cell_A2 and than back to Cell_A1	**The connection MS_A2 to MS_A1 is pre-empted at E-IF.** MS_A3 connected with MS_A4
1.7	MS_A5 releases the VBS call	MS_A5 and MS_A6 are IDLE
1.8	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2 MS_A3 connected with MS_A4
1.9	MS_A6 originates the VBS call in R-MSC_A2	MS_A5 receives the VBS call **The connection MS_A1 to MS_A2 is pre-empted at E-IF.** MS_A3 connected with MS_A4
1.10	MS_A6 moves to Cell_A1 and than back to Cell_A2	**The connection MS_A3 to MS_A4 is pre-empted at E-IF.** 1 TS is IDLE at E-IF.
1.11	MS_A2 calls MS_A1 with prio 4	MS_A2 connected with MS_A1
1.12	MS_A6 moves to Cell_A1 and than back to Cell_A2	**The connection MS_A2 to MS_A1 is pre-empted at E-IF.** 1 TS's are IDLE at E-IF.
1.13	MS_A6 releases the VBS call	All participants are IDLE
1.14	Unlock the TS's at E-IF	All resources are IDLE

Test configuration for Step 2



R-MSC_A1	**3 TS at E-IF**	**A-MSC_A2**
MS_A1 (no VGCS / VBS subscriber)		MS_A2 (no VGCS / VBS subscriber)
MS_A3 (no VGCS / VBS subscriber)		MS_A4 (no VGCS / VBS subscriber)
MS_A5 (VBS GID: 202)		MS_A6 (VBS GID: 202)

Test procedure

Step 2: Inter MSC handover of a VBS originator channel with MLPP pre-emption at E-IF. MSC_A2 is the A-MSC.

Step	Action	Expected result(s)
2.1	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2
2.2	MS_A3 calls MS_A4 with prio 3	MS_A3 connected with MS_A4
2.3	MS_A6 originates the VBS call in A-MSC_A2	MS_A5 receives the VBS call
2.4	MS_A6 moves to Cell_A2 and than back to Cell_A4	**The connection MS_A1 to MS_A2 is pre-empted at E-IF.** MS_A3 connected with MS_A4
2.5	MS_A2 calls MS_A1 with prio 4	MS_A2 connected with MS_A1
2.6	MS_A6 moves to Cell_A2 and than back to Cell_A4	**The connection MS_A2 to MS_A1 is pre-empted at E-IF.** MS_A3 connected with MS_A4
2.7	MS_A6 releases the VBS call	MS_A5 and MS_A6 are IDLE

Step	Action	Expected result(s)
2.8	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2 MS_A3 connected with MS_A4
2.9	MS_A5 originates the VBS call in R-MSC_A1	MS_A6 receives the VBS call **The connection MS_A1 to MS_A2 is pre-empted at E-IF.** MS_A3 connected with MS_A4
2.10	MS_A5 moves to Cell_A4 and than back to Cell_A2	**The connection MS_A3 to MS_A4 is pre-empted at E-IF.** 1 TS is IDLE at E-IF.
2.11	MS_A2 calls MS_A1 with prio 4	MS_A2 connected with MS_A1
2.12	MS_A5 moves to Cell_A4 and than back to Cell_A2	**The connection MS_A2 to MS_A1 is pre-empted at E-IF.** 1 TS is IDLE at E-IF.
2.13	MS_A5 releases the VBS call	All participants are IDLE
2.14	Unlock the TS's at E-IF	All resources are IDLE

d) Success criteria

A PtP connection at E-IF can be pre-empted from any side during an intra PLMN / inter MSC-HO of the VBS DCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6 Railway Emergency Call (REC), Late Entry (LE)

5.6.1 REC call setup by a service subscriber (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 9.3.2 13.1.6 13.2.2.2 13.2.3.1 13.2.3.3 13.2.4.1	2.5.1 13.2.2 13.3.3	

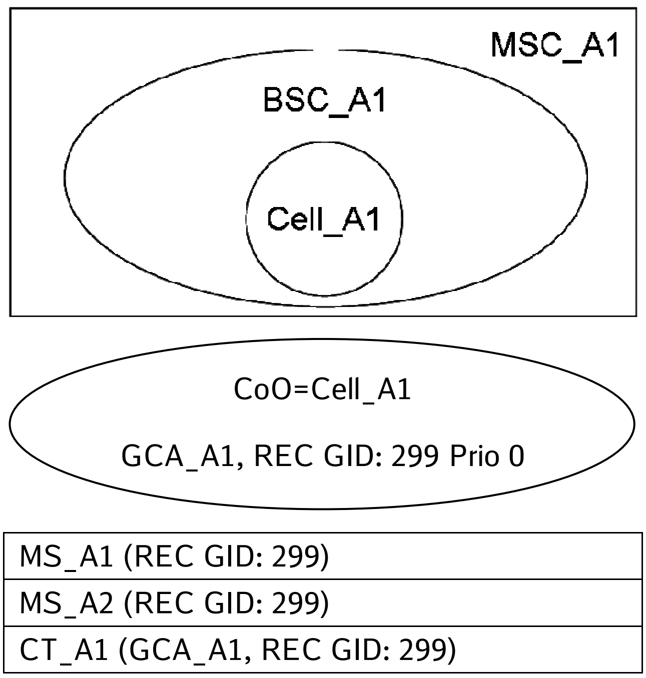
a) Purpose

Verify a service subscriber can originate and close a Railway Emergency Call (REC) with GID 299.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

Network A



c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. MS_A2 is notified about the incoming REC (GID 299) on the NCH. CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminal.
2)	CT_A1 automatically accepts the REC (GID 299).	CT_A1 automatically joins the REC (GID 299). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
3)	MS_A2 automatically accepts the REC (GID 299).	MS_A2 automatically joins the REC (GID 299) in group receive mode and is able to listen to the announcement of CT_A1.
4)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
5)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and the DCH is correctly released.
6)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
7)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
8)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
10)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.
11)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
12)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
13)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
14)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated.

d) Success criteria

MS_A1 is able to originate and close a Railway Emergency Call (REC) with GID 299.

MS_A1 is able to get the uplink on DCH and GCCH.

MS_A2 is able to receive the Railway Emergency Call (REC) with GID 299 and is able to get the uplink on GCCH.

CT_A1 is able to receive the Railway Emergency Call (REC) with GID 299 and able to un-mute / mute the downlink to the talking mobile subscriber on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.2 REC call setup by a controller

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 9.3.2 13.2.3.1 13.2.3.3 13.2.4.1	2.5.1 9.5.4 13.2.2 13.3.1 13.3.3	

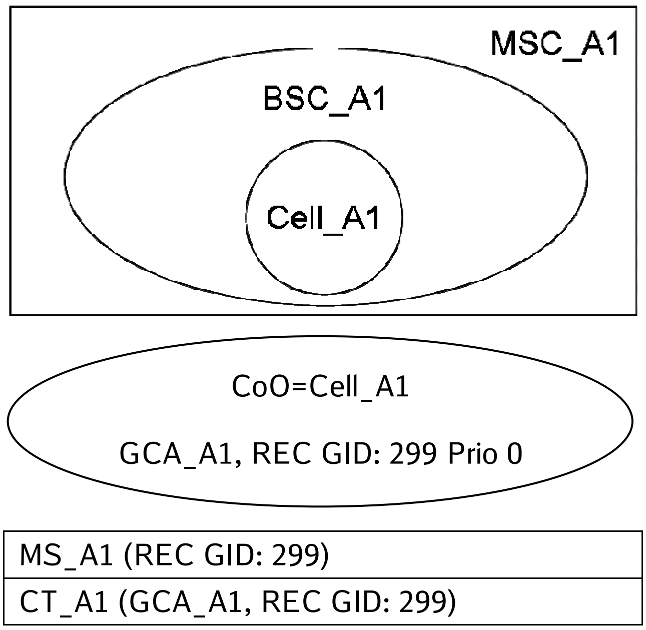
a) Purpose

Verify a controller can originate and close a Railway Emergency Call (REC) with GID 299.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

Network A



c) Test procedure

Step	Action	Expected result(s)
1)	CT_A1 originates a REC (GID 299) by dialling. 50 + <GCA> + <GID>	REC (GID 299) is correctly established. A group call channel (GCCH) is allocated in Cell_A1. Uplink still free in Cell_A1. MS_A1 is notified about the incoming REC (GID 299) on the NCH. CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
2)	MS_A1 automatically accept the REC (GID 299).	MS_A1 automatically joins the REC (GID 299) in group receive mode. CT_A1 has voice path and MS_A1 is able to listen to the announcement of CT_A1.
3)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. CT_A1 is able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1.
4)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 is able to listen to the announcement of CT_A1.
5)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
6)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
7)	CT_A1 releases the REC (GID 299) by using the kill sequence (dialling ***).	REC (GID 299) is released. All related resources are de-allocated.

d) Success criteria

CT_A1 is able to originate and close a Railway Emergency Call (REC) with GID 299 and able to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

MS_A1 is able to receive the Railway Emergency Call (REC) with GID 299 and able to get the uplink on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.3 REC notification and joining (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 9.3.2 13.1.6 13.2.2.2 13.2.3.1 13.2.3.3	2.5.1 9.5.4 13.2.2 13.3.1 13.3.3 13.4.1 13.4.2	

a) Purpose

Verify that mobile subscribers and controllers will be notified about incoming Railway Emergency Calls (REC) and can join them.

b) Test configuration / initial conditions

CT_A1, CT_A2 and CT_A3 are connected to network A.

MS_A3 and MS_A4 are shunting mobiles in shunting mode and not registered to a functional number (FN).

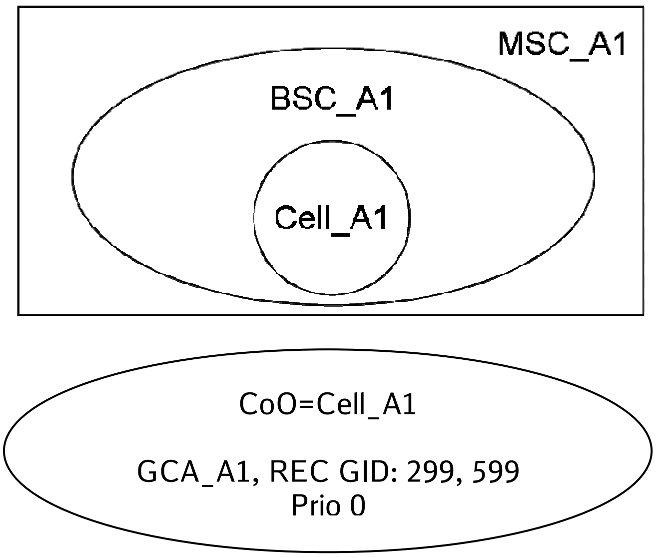
This test case has been divided into the following steps:

Step 1: REC (GID 299) call setup by service subscriber MS_A1.

Step 2: REC (GID 599) call setup by service subscriber MS_A3.

Test configuration for step 1 and 2

Network A



MS_A1 (REC GID: 299)
MS_A2 (REC GID: 299)
MS_A3 (REC GID: 599)
MS_A4 (REC GID: 599)
MS_A5 (no VGCS / VBS subscriber)
CT_A1 (GCA_A1, REC GID: 299)
CT_A2 (GCA_A1, REC GID: 599)
CT_A3 (no VGCS / VBS subscriber)

c) Test procedure

Step 1: REC (GID 299) call setup by service subscriber MS_A1.

Step	Action	Expected result(s)
1)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. MS_A2 is notified about the incoming REC (GID 299) on the NCH. All other MS will not respond to the NCH notification. CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminal. CT_A2 and CT_A3 did not receive the REC (GID 299).
2)	CT_A1 automatically accepts the REC (GID 299).	CT_A1 automatically joins the REC (GID 299). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
3)	MS_A2 automatically accepts the REC (GID 299).	MS_A2 automatically joins the REC (GID 299) in group receive mode. CT_A1 has voice path and MS_A2 is able to listen to the announcement of CT_A1.
4)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
5)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and the DCH is correctly released.
6)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
7)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
8)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announce-ment of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
10)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announce-ment of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.
11)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A2 and MS_A1 are able to listen to the announcement of CT_A1.
12)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announce-ment of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
13)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
14)	MS_A1 releases the REC (GID 299)	REC (GID 299) is released. All related re-sources are de-allocated.

Step 2: REC (GID 599) call setup by service subscriber MS_A3.

Step	Action	Expected result(s)
1)	MS_A3 originates a REC (GID 599).	REC (GID 599) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. MS_A4 is notified about the incoming REC (GID 599) on the NCH. All other MS will not respond to the NCH notification. CT_A2 is notified about the incoming REC (GID 599) and the Group Call Reference is displayed on the CT terminal. CT_A1 and CT_A3 did not receive the REC (GID 599).
2)	CT_A2 automatically accept the REC (GID 599).	CT_A2 automatically joins the REC (GID 599). CT_A2 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A2.
3)	MS_A4 automatically accept the REC (GID 599).	MS_A4 automatically joins the REC (GID 599) in group receive mode. CT_A2 has voice path and MS_A4 is able to listen to the announcement of CT_A2.
4)	MS_A3 takes the uplink on DCH.	MS_A3 has voice path on DCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3.
5)	MS_A3 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and the DCH is correctly released.
6)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2.
7)	CT_A2 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A3 un-mutes its downlink to get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.

Step	Action	Expected result(s)
8)	CT_A2 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A3.
9)	MS_A3 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
10)	MS_A4 takes the uplink on GCCH.	MS_A4 voice path on GCCH. MS_A3 and CT_A2 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A2. MS_A3 still able to listen to the announcement of CT_A2.
11)	CT_A2 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.
12)	CT_A2 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A2. MS_A3 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A4.
13)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
14)	MS_A3 releases the REC (GID 599).	REC (GID 599) is released. All related resources are de-allocated.

d) Success criteria

MS_A1 is able to establish and to close the Railway Emergency Call (REC) with GID 299 and able to get the uplink on DCH and GCCH. MS_A1 did not receive the Railway Emergency Call (REC) with GID 599.

MS_A2 is able to receive and join the Railway Emergency Call (REC) with GID 299 and able to get the uplink on GCCH. MS_A2 did not receive the Railway Emergency Call (REC) with GID 599.

MS_A3 is able to establish and to close the Railway Emergency Call (REC) with GID 599 and able to get the uplink on DCH and GCCH. MS_A3 did not receive the Railway Emergency Call (REC) with GID 299.

MS_A4 is able to receive and join the Railway Emergency Call (REC) with GID 599 and able to get the uplink on GCCH. MS_A4 did not receive the Railway Emergency Call (REC) with GID 299.

CT_A1 is able to receive and join the Railway Emergency Call (REC) with GID 299 and able to un-mute/mute the downlink to the talking mobile subscriber on GCCH. CT_A1 did not receive the Railway Emergency Call (REC) with GID 599.

CT_A2 is able to receive and join the Railway Emergency Call (REC) with GID 599 and able to un-mute/mute the downlink to the talking mobile subscriber on GCCH. CT_A2 did not receive the Railway Emergency Call (REC) with GID 299.

MS_A5 and CT_A3 did not receive the Railway Emergency Calls (REC) with GID 299 or GID 599.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.4 REC acknowledgement (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 13.4.5 13.4.6	2.5.1 13.5.3 13.5.5 13.5.7 13.5.9 13.5.10	

a) Purpose

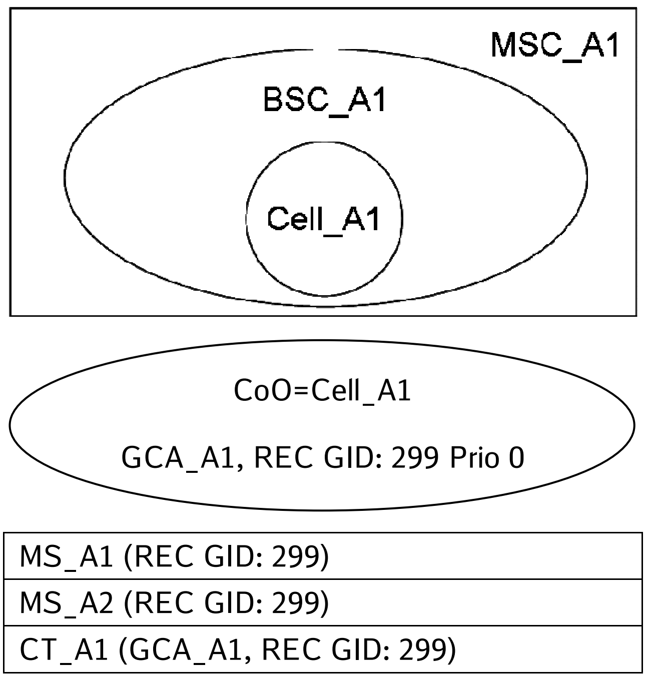
Verify the acknowledgements successfully send after Railway Emergency Call (REC) with GID 299 is closed. The acknowledgement center must receive acknowledgements from all mobile subscribers involved in Railway Emergency Call (REC) with GID 299.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

The acknowledgment center is configured and connected to MSC_A1.

Network A



c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. MS_A2 is notified about the incoming REC (GID 299) on the NCH.
2)	CT_A1 automatically accepts the REC (GID 299).	CT_A1 automatically joins the REC (GID 299). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
3)	MS_A2 automatically accepts the REC (GID 299).	MS_A2 automatically joins the REC (GID 299) in group receive mode.
4)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
5)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and the DCH is correctly released.
6)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.
7)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
8)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
9)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.

Step	Action	Expected result(s)
10)	MS_A1 releases the REC (GID 299)	REC (GID 299) is released. All related resources are de-allocated.
11)	MS_A1 and MS_A2 are sending acknowledgements to the acknowledgement center.	Acknowledgements successfully send to the acknowledgement center. Check the A-interface trace files for setup messages to "1612" from each mobile subscribe involved in REC (GID 299).
12)	Check the logs of the acknowledgement center	Acknowledgements successfully received with the right data such as talker flag from all mobile subscribers involved in REC (GID 299).

d) Success criteria

Acknowledgements successfully send to the acknowledgement center with the correct data inside from MS_A1 and MS_A2.

CT_A1 is able to receive and join the Railway Emergency Call (REC) with GID 299 and able to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.5 REC call setup by a service subscriber (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 9.3.2 13.1.6 13.2.2.2 13.2.3.1 13.2.3.3 13.2.4.1	2.5.1 13.2.2 13.3.3	

a) Purpose

Verify a roaming service subscriber can originate and close a Railway Emergency Call (REC) with GID 299.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

CT_B1 is connected to network B.

This test case has been divided into the following steps:

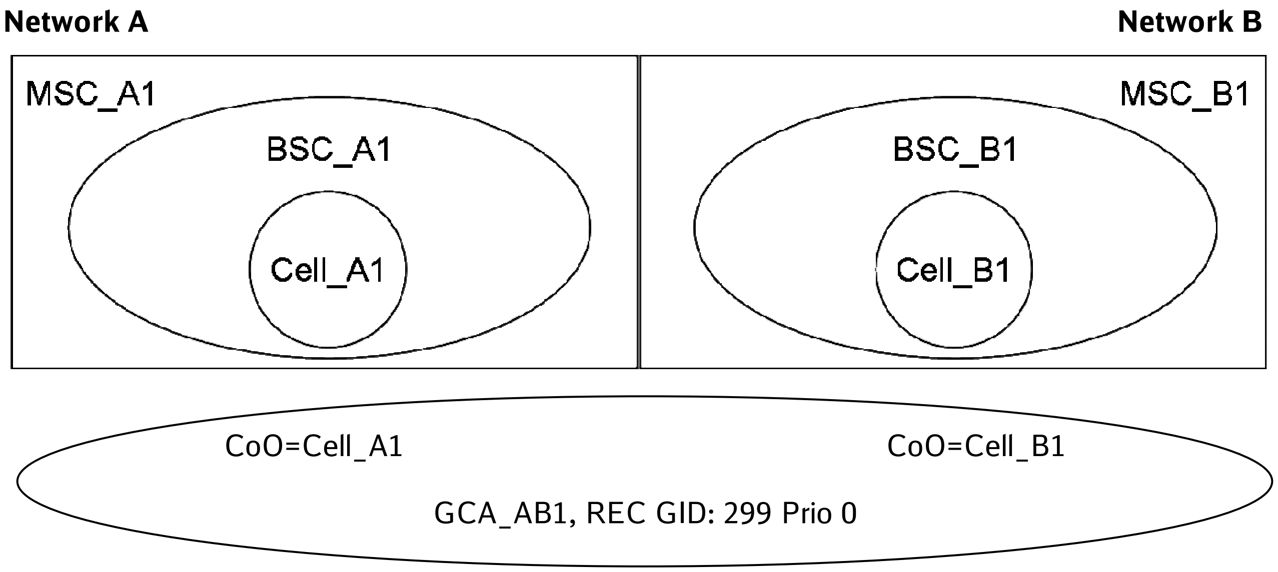
Step 1: REC (GID 299) call setup by service subscriber MS_B2 in network A (MSC_A1 Anchor).

Step 2: REC (GID 299) call setup by service subscriber MS_A2 in network B (MSC_A1 Anchor).

Step 3: REC (GID 299) call setup by service subscriber MS_B2 in network A (MSC_B1 Anchor).

Step 4: REC (GID 299) call setup by service subscriber MS_A2 in network B (MSC_B1 Anchor).

Test configuration for step 1 and 2



A-MSC_A1	**R-MSC_B1**
MS_A1 (REC GID: 299)	MS_B1 (REC GID: 299)
MS_B2 (REC GID: 299)	MS_A2 (REC GID: 299)
CT_A1 (GCA_AB1, REC GID: 299)	CT_B1 (GCA_AB1, REC GID: 299)

c) Test procedure

Step 1: REC (GID 299) call setup by service subscriber MS_B2 in network A (MSC_A1 Anchor)

Step	Action	Expected result(s)
1)	MS_B2 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. A group call channel (GCCH) is allocated in Cell_B1. MS_A1, MS_B1 and MS_A2 are notified about the incoming REC (GID 299) on the NCH. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminals.

Step	Action	Expected result(s)
2)	MS_A1, MS_B1 and MS_A2 automatically accepting the REC (GID 299).	MS_A1, MS_B1 and MS_A2 automatically joining the REC (GID 299) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_B2 takes the uplink on DCH.	MS_B2 has voice path on DCH. MS_A1, MS_B1 and MS_A2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.
5)	MS_B2 releases the uplink on DCH.	Uplink free message is send for REC (GID 299) in Cell_A1 and Cell_B1, the DCH in Cell_A1 is correctly released.
6)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_B1 and MS_A2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1.
7)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.

Step	Action	Expected result(s)
9)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2, MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
11)	MS_B2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 299) in Cell_A1 and Cell B1, the uplink is correctly released.
12)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1, MS_B1 and MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.
13)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.

Step	Action	Expected result(s)
15)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1, MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
17)	MS_A2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 299) in Cell_A1 and Cell B1, the uplink is correctly released.
18)	MS_B2 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated.

Step 2: REC (GID 599) call setup by service subscriber MS_A2 in network B (MSC_A1 Anchor).

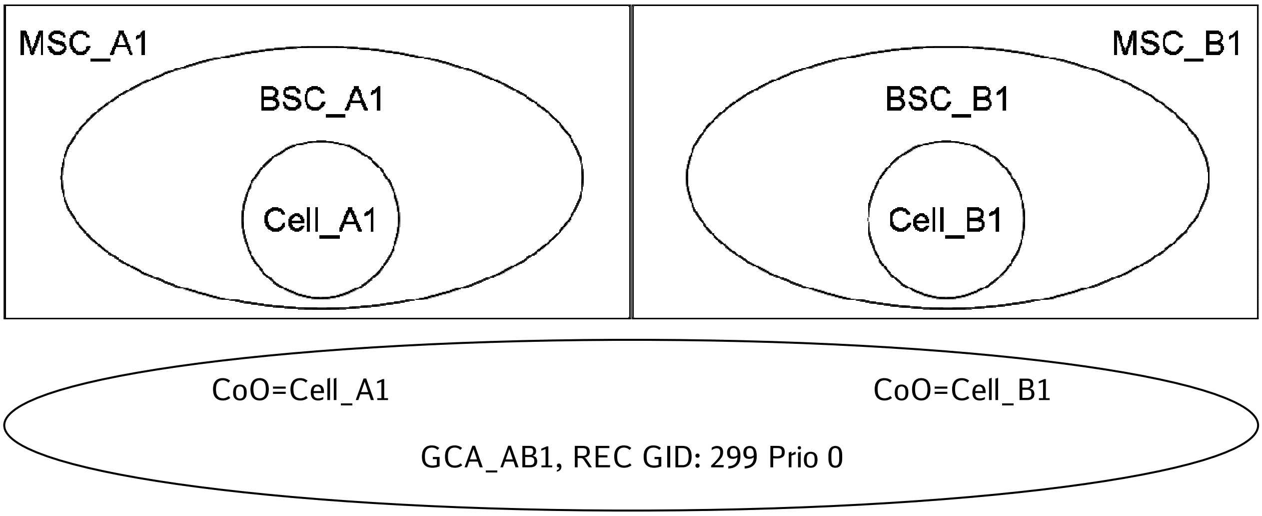
Step	Action	Expected result(s)
1)	MS_A2 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1. A group call channel (GCCH) is allocated in Cell_A1. MS_A1, MS_B1 and MS_B2 are notified about the incoming REC (GID 299) on the NCH. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminals.
2)	MS_A1, MS_B1 and MS_B2 automatically accepting the REC (GID 299).	MS_A1, MS_B1 and MS_B2 automatically joining the REC (GID 299) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_A2 takes the uplink on DCH.	MS_A2 has voice path on DCH. MS_A1, MS_B1 and MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.
5)	MS_A2 releases the uplink on DCH.	Uplink free message is send for REC (GID 299) in Cell_A1 and Cell_B1, the DCH in Cell_B1 is correctly released.
6)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1, MS_B1 and MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
7)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_A2 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
9)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_A2 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1, MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
11)	MS_A2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 299) in Cell_A1 and Cell B1, the uplink is correctly released.

Step	Action	Expected result(s)
12)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_B1 and MS_A2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announce-ment of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1.
13)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announce-ment of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
15)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announce-ment of CT_A1 and CT_B1. MS_A1, MS_B1, MS_A2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
17)	MS_B2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 299) in Cell_A1 and Cell B1, the uplink is cor-rectly released.
18)	MS_A2 releases the REC (GID 299).	REC (GID 299) is released. All related re-sources are de-allocated.

Test configuration for step 3 and 4

Network A **Network B**



R-MSC_A1	**A-MSC_B1**
MS_A1 (REC GID: 299)	MS_B1 (REC GID: 299)
MS_B2 (REC GID: 299)	MS_A2 (REC GID: 299)
CT_A1 (GCA_AB1, REC GID: 299)	CT_B1 (GCA_AB1, REC GID: 299)

Test procedure

Step 3: REC (GID 299) call setup by service subscriber MS_B2 in network A (MSC_B1 Anchor).

Step	Action	Expected result(s)
1)	MS_B2 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. A group call channel (GCCH) is allocated in Cell_B1. MS_A1, MS_B1 and MS_A2 are notified about the incoming REC (GID 299) on the NCH. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminals.
2)	MS_A1, MS_B1 and MS_A2 automatically accepting the REC (GID 299).	MS_A1, MS_B1 and MS_A2 automatically joining the REC (GID 299) in group receive mode.

Step	Action	Expected result(s)
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_B2 takes the uplink on DCH.	MS_B2 has voice path on DCH. MS_A1, MS_B1 and MS_A2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.
5)	MS_B2 releases the uplink on DCH.	Uplink free message is send for REC (GID 299) in Cell_A1 and Cell_B1, the DCH in Cell_A1 is correctly released.
6)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_B1 and MS_A2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1.
7)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.

Step	Action	Expected result(s)
9)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2, MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
11)	MS_B2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 299) in Cell_A1 and Cell B1, the uplink is correctly released.
12)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1, MS_B1 and MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.
13)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.

Step	Action	Expected result(s)
15)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1, MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
17)	MS_A2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 299) in Cell_A1 and Cell B1, the uplink is correctly released.
18)	MS_B2 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated.

Step 4: REC (GID 599) call setup by service subscriber MS_A2 in network B (MSC_B1 Anchor).

Step	Action	Expected result(s)
1)	MS_A2 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1. A group call channel (GCCH) is allocated in Cell_A1. MS_A1, MS_B1 and MS_B2 are notified about the incoming REC (GID 299) on the NCH. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminals.
2)	MS_A1, MS_B1 and MS_B2 automatically accepting the REC (GID 299).	MS_A1, MS_B1 and MS_B2 automatically joining the REC (GID 299) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_A2 takes the uplink on DCH.	MS_A2 has voice path on DCH. MS_A1, MS_B1 and MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.
5)	MS_A2 releases the uplink on DCH.	Uplink free message is send for REC (GID 299) in Cell_A1 and Cell_B1, the DCH in Cell_B1 is correctly released.
6)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1, MS_B1 and MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
7)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_A2 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
9)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_A2 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
11)	MS_A2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 299) in Cell_A1 and Cell B1, the uplink is correctly released.
12)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_B1 and MS_A2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
13)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
15)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
17)	MS_B2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 299) in Cell_A1 and Cell B1, the uplink is correctly released.
18)	MS_A2 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated.

d) Success criteria

MS_A2 is able to originate and close a Railway Emergency Call (REC) with GID 299 when roaming in network B.

MS_B2 is able to originate and close a Railway Emergency Call (REC) with GID 299 when roaming in network A.

CT_A1 is connected to MSC_A1 and is able to originate, receive and close Railway Emergency Call (REC) with GID 299. CT_A1 is also able to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

CT_B1 is connected to MSC_B1 and is able to originate, receive and close Railway Emergency Call (REC) with GID 299. CT_B1 is also able to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.6 REC notification and joining (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 9.3.2 13.1.6 13.2.2.2 13.2.3.1 13.2.3.3	2.5.1 13.2.2 13.2.3 13.3.1 13.3.3 13.4.1 13.4.2	

a) Purpose

Verify that roaming mobile subscribers and controllers will be notified about incoming Railway Emergency Calls (REC) and can join them.

b) Test configuration / initial conditions

MS_A2, MS_A5, MS_B2 and MS_B5 are shunting mobiles in shunting mode and not registered to a functional number (FN).

CT_A1, CT_A2 and CT_A3 are connected to network A.

CT_B1, CT_B2 and CT_B3 are connected to network B.

This test case has been divided into the following steps:

Step 1: REC (GID 299) call setup by service subscriber MS_A1 in network A (MSC_A1 Anchor).

Step 2: REC (GID 299) call setup by service subscriber MS_B4 in network A (MSC_A1 Anchor).

Step 3: REC (GID 299) call setup by service subscriber MS_B1 in network B (MSC_A1 Anchor).

Step 4: REC (GID 299) call setup by service subscriber MS_A4 in network B (MSC_A1 Anchor).

Step 5: REC (GID 299) call setup by CT_A1 in network A (MSC_A1 Anchor).

Step 6: REC (GID 299) call setup by CT_B1 in network B (MSC_A1 Anchor).

Step 7: REC (GID 299) call setup by service subscriber MS_A1 in network A (MSC_B1 Anchor).

Step 8: REC (GID 299) call setup by service subscriber MS_B4 in network A (MSC_B1 Anchor).

Step 9: REC (GID 299) call setup by service subscriber MS_B1 in network B (MSC_B1 Anchor).

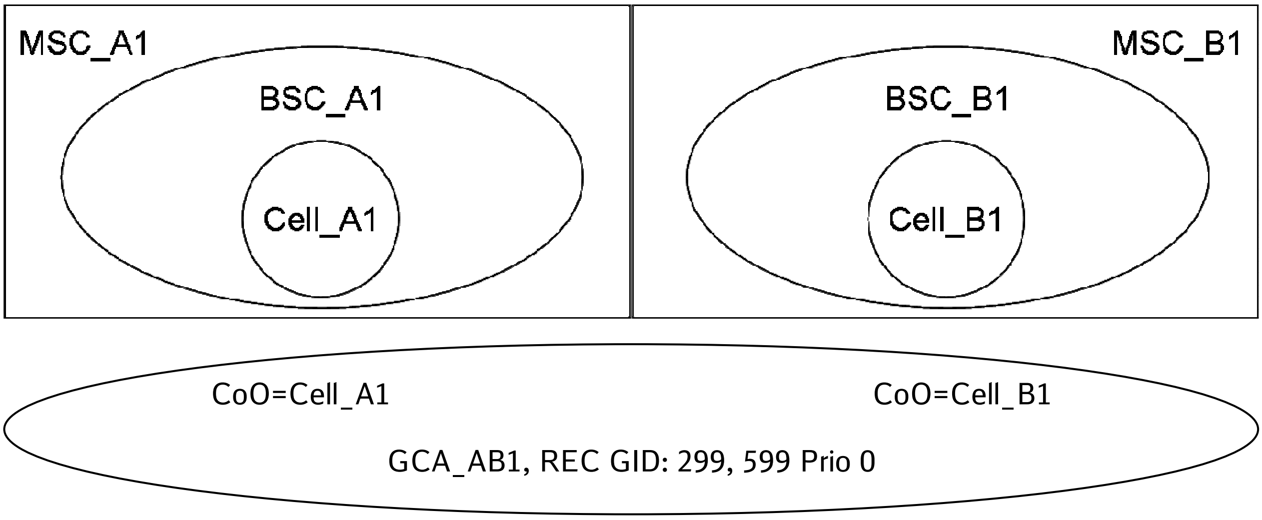
Step 10: REC (GID 299) call setup by service subscriber MS_A4 in network B (MSC_B1 Anchor).

Step 11: REC (GID 299) call setup by CT_A1 in network A (MSC_B1 Anchor).

Step 12: REC (GID 299) call setup by CT_B1 in network B (MSC_B1 Anchor).

Test configuration for step 1 to 6

Network A **Network B**



A-MSC_A1	**R-MSC_B1**
MS_A1 (REC GID: 299)	MS_B1 (REC GID: 299)
MS_A2 (REC GID: 599)	MS_B2 (REC GID: 599)
MS_A3 (no VGCS / VBS subscriber)	MS_B3 (no VGCS / VBS subscriber)
MS_B4 (REC GID: 299)	MS_A4 (REC GID: 299)
MS_B5 (REC GID: 599)	MS_A5 (REC GID: 599)
MS_B6 (no VGCS / VBS subscriber)	MS_A6 (no VGCS / VBS subscriber)
CT_A1 (GCA_AB1, REC GID: 299)	CT_B1 (GCA_AB1, REC GID: 299)
CT_A2 (GCA_AB1, REC GID: 599)	CT_B2 (GCA_AB1, REC GID: 599)
CT_A3 (no VGCS / VBS subscriber)	CT_B2 (no VGCS / VBS subscriber)

c) Test procedure

Step 1: REC (GID 299) call setup by service subscriber MS_A1 in network A (MSC_A1 Anchor).

Step	Action	Expected result(s)
1)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. A group call channel (GCCH) is allocated in Cell_B1. MS_A4, MS_B1 and MS_B4 are notified about the incoming REC (GID 299) on the NCH. All other MS will not respond to the NCH notification. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals. CT_A2, CT_A3, CT_B2 and CT_B3 did not receive the REC (GID 299).
2)	MS_A4, MS_B1 and MS_B4 automatically accepting the REC (GID 299).	MS_A4, MS_B1 and MS_B4 automatically joining the REC (GID 299) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.
5)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly released.

Step	Action	Expected result(s)
6)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
7)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
9)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
11)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.

Step	Action	Expected result(s)
12)	MS_B4 takes the uplink on GCCH.	MS_B4 has voice path on GCCH. MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1
13)	CT_A1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
15)	CT_B1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
17)	MS_B4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.

Step	Action	Expected result(s)
18)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1
19)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
21)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
22)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
23)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
24)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
25)	CT_A1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
26)	CT_A1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.

Step	Action	Expected result(s)
27)	CT_B1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
28)	CT_B1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
29)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
30)	MS_A1 releases the REC (GID 299)	REC (GID 299) is released. All related resources are de-allocated.

Step 2: REC (GID 299) call setup by service subscriber MS_B4 in network A (MSC_A1 Anchor).

Step	Action	Expected result(s)
1)	MS_B4 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. A group call channel (GCCH) is allocated in Cell_B1. MS_A1, MS_A4 and MS_B1 are notified about the incoming REC (GID 299) on the NCH. All other MS will not respond to the NCH notification. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals. CT_A2, CT_A3, CT_B2 and CT_B3 did not receive the REC (GID 299).

Step	Action	Expected result(s)
2)	MS_A1, MS_A4 and MS_B1 automatically accepting the REC (GID 299).	MS_A1, MS_A4 and MS_B1 automatically joining the REC (GID 299) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_B4 takes the uplink on DCH.	MS_B4 has voice path on DCH. MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4.
5)	MS_B4 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly released.
6)	MS_B4 takes the uplink on GCCH.	MS_B4 has voice path on GCCH. MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.
7)	CT_A1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.

Step	Action	Expected result(s)
9)	CT_B1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
11)	MS_B4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
12)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1
13)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
15)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
17)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
18)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1
19)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
21)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
22)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
23)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
24)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
25)	CT_A1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
26)	CT_A1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
27)	CT_B1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
28)	CT_B1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
29)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
30)	MS_B4 releases the REC (GID 299)	REC (GID 299) is released. All related resources are de-allocated.

Step 3: REC (GID 299) call setup by service subscriber MS_B1 in network B (MSC_B1 Anchor).

Step	Action	Expected result(s)
1)	MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1. A group call channel (GCCH) is allocated in Cell_A1. MS_A1, MS_A4 and MS_B4 are notified about the incoming REC (GID 299) on the NCH. All other MS will not respond to the NCH notification. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals. CT_A2, CT_A3, CT_B2 and CT_B3 did not receive the REC (GID 299).
2)	MS_A1, MS_A4 and MS_B4 automatically accepting the REC (GID 299).	MS_A1, MS_A4 and MS_B4 automatically joining the REC (GID 299) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_B1 takes the uplink on DCH.	MS_B1 has voice path on DCH. MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.
5)	MS_B1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly released.

Step	Action	Expected result(s)
6)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
7)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
9)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
10)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
11)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
12)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1
13)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
15)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
16)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
17)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
18)	MS_B4 takes the uplink on GCCH.	MS_B4 has voice path on GCCH. MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1
19)	CT_A1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_A1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
21)	CT_B1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
22)	CT_B1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
23)	MS_B4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
24)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
25)	CT_A1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
26)	CT_A1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.

Step	Action	Expected result(s)
27)	CT_B1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
28)	CT_B1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
29)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
30)	MS_B1 releases the REC (GID 299)	REC (GID 299) is released. All related resources are de-allocated.

Step 4: REC (GID 299) call setup by service subscriber MS_A4 in network B (MSC_A1 Anchor).

Step	Action	Expected result(s)
1)	MS_A4 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1. A group call channel (GCCH) is allocated in Cell_A1. MS_A1, MS_B1 and MS_B4 are notified about the incoming REC (GID 299) on the NCH. All other MS will not respond to the NCH notification. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals. CT_A2, CT_A3, CT_B2 and CT_B3 did not receive the REC (GID 299).

Step	Action	Expected result(s)
2)	MS_A1, MS_B1 and MS_B4 automatically accepting the REC (GID 299).	MS_A1, MS_B1 and MS_B4 automatically joining the REC (GID 299) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_A4 takes the uplink on DCH.	MS_A4 has voice path on DCH. MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4.
5)	MS_A4 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly released.
6)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
7)	CT_A1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
8)	CT_A1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
9)	CT_B1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
11)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
12)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1

Step	Action	Expected result(s)
13)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
15)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
17)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
18)	MS_B4 takes the uplink on GCCH.	MS_B4 has voice path on GCCH. MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1

Step	Action	Expected result(s)
19)	CT_A1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_A1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
21)	CT_B1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
22)	CT_B1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
23)	MS_B4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
24)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
25)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
26)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
27)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
28)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
29)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
30)	MS_A4 releases the REC (GID 299)	REC (GID 299) is released. All related resources are de-allocated.

Step 5: REC (GID 299) call setup by CT_A1 in network A (MSC_A1 Anchor).

Step	Action	Expected result(s)
1)	CT_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. Group call channels (GCCH) are allocated in Cell_A1 and Cell_B1. MS_A1, MS_A4, MS_B1 and MS_B4 are notified about the incoming REC (GID 299) on the NCH. All other MS will not respond to the NCH notification. CT_B1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals. CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1. CT_A2, CT_A3, CT_B2 and CT_B3 did not receive the REC (GID 299).
2)	MS_A1, MS_A4, MS_B1 and MS_B4 automatically accepting the REC (GID 299).	MS_A1, MS_A4, MS_B1 and MS_B4 automatically joining the REC (GID 299) in group receive mode.
3)	CT_B1 automatically accepts the REC (GID 299).	CT_B1 automatically joins the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path on GCCH. MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
5)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
6)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
7)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
10)	MS_B4 takes the uplink on GCCH.	MS_B4 has two-way voice path on GCCH. MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
11)	CT_A1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
12)	CT_A1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
13)	CT_B1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_B1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
15)	MS_B4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
16)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path on GCCH. MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
17)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
18)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
19)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
21)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.

Step	Action	Expected result(s)
22)	MS_A4 takes the uplink on GCCH.	MS_A4 has two-way voice path on GCCH. MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
23)	CT_A1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
24)	CT_A1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
25)	CT_B1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
26)	CT_B1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
27)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
28)	CT_A1 closes the REC (GID 299) using kill sequence (dialling ***).	REC (GID 299) is released. All related resources are de-allocated.

Step 6: REC (GID 299) call setup by CT_B1 in network B (MSC_A1 Anchor).

Step	Action	Expected result(s)
1)	CT_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. Group call channels (GCCH) are allocated in Cell_A1 and Cell_B1. MS_A1, MS_A4, MS_B1 and MS_B4 are notified about the incoming REC (GID 299) on the NCH. All other MS will not respond to the NCH notification. CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals. CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1. CT_A2, CT_A3, CT_B2 and CT_B3 did not receive the REC (GID 299).
2)	MS_A1, MS_A4, MS_B1 and MS_B4 automatically accepting the REC (GID 299).	MS_A1, MS_A4, MS_B1 and MS_B4 automatically joining the REC (GID 299) in group receive mode.

Step	Action	Expected result(s)
3)	CT_A1 automatically accepts the REC (GID 299).	CT_A1 automatically joins the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path on GCCH. MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
5)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
6)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
7)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
8)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
10)	MS_B4 takes the uplink on GCCH.	MS_B4 has two-way voice path on GCCH. MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.
11)	CT_A1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
12)	CT_A1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
13)	CT_B1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

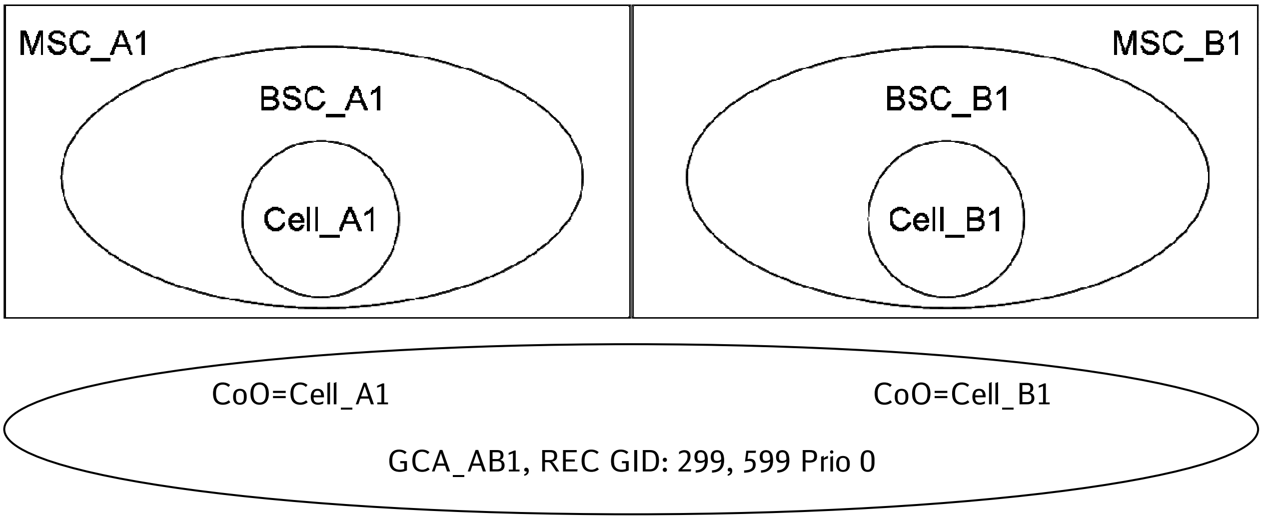
Step	Action	Expected result(s)
14)	CT_B1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
15)	MS_B4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
16)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path on GCCH. MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
17)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
18)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
19)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
21)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
22)	MS_A4 takes the uplink on GCCH.	MS_A4 has two-way voice path on GCCH. MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
23)	CT_A1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
24)	CT_A1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
25)	CT_B1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
26)	CT_B1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
27)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
28)	CT_B1 closes the REC (GID 299) using kill sequence (dialling ***).	REC (GID 299) is released. All related resources are de-allocated.

Test configuration for step 7 to 12

Network A **Network B**



R-MSC_A1	**A-MSC_B1**
MS_A1 (REC GID: 299)	MS_B1 (REC GID: 299)
MS_A2 (REC GID: 599)	MS_B2 (REC GID: 599)
MS_A3 (no VGCS / VBS subscriber)	MS_B3 (no VGCS / VBS subscriber)
MS_B4 (REC GID: 299)	MS_A4 (REC GID: 299)
MS_B5 (REC GID: 599)	MS_A5 (REC GID: 599)
MS_B6 (no VGCS / VBS subscriber)	MS_A6 (no VGCS / VBS subscriber)
CT_A1 (GCA_AB1, REC GID: 299)	CT_B1 (GCA_AB1, REC GID: 299)
CT_A2 (GCA_AB1, REC GID: 599)	CT_B2 (GCA_AB1, REC GID: 599)
CT_A3 (no VGCS / VBS subscriber)	CT_B2 (no VGCS / VBS subscriber)

Test procedure

Step 7: REC (GID 299) call setup by service subscriber MS_A1 in network A (MSC_B1 Anchor).

Step	Action	Expected result(s)
1)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. A group call channel (GCCH) is allocated in Cell_B1. MS_A4, MS_B1 and MS_B4 are notified about the incoming REC (GID 299) on the NCH. All other MS will not respond to the NCH notification. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals. CT_A2, CT_A3, CT_B2 and CT_B3 did not receive the REC (GID 299).
2)	MS_A4, MS_B1 and MS_B4 automatically accepting the REC (GID 299).	MS_A4, MS_B1 and MS_B4 automatically joining the REC (GID 299) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.
5)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly released.

Step	Action	Expected result(s)
6)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
7)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
9)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
10)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
11)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
12)	MS_B4 takes the uplink on GCCH.	MS_B4 has voice path on GCCH. MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1
13)	CT_A1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.

Step	Action	Expected result(s)
15)	CT_B1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
17)	MS_B4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
18)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1
19)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
21)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
22)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
23)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
24)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
25)	CT_A1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
26)	CT_A1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.

Step	Action	Expected result(s)
27)	CT_B1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
28)	CT_B1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
29)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
30)	MS_A1 releases the REC (GID 299)	REC (GID 299) is released. All related resources are de-allocated.

Step 8: REC (GID 299) call setup by service subscriber MS_B4 in network A (MSC_B1 Anchor).

Step	Action	Expected result(s)
1)	MS_B4 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. A group call channel (GCCH) is allocated in Cell_B1. MS_A1, MS_A4 and MS_B1 are notified about the incoming REC (GID 299) on the NCH. All other MS will not respond to the NCH notification. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals. CT_A2, CT_A3, CT_B2 and CT_B3 did not receive the REC (GID 299).
2)	MS_A1, MS_A4 and MS_B1 automatically accepting the REC (GID 299).	MS_A1, MS_A4 and MS_B1 automatically joining the REC (GID 299) in group receive mode.

Step	Action	Expected result(s)
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_B4 takes the uplink on DCH.	MS_B4 has voice path on DCH. MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4.
5)	MS_B4 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly released.
6)	MS_B4 takes the uplink on GCCH.	MS_B4 has voice path on GCCH. MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.
7)	CT_A1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.

Step	Action	Expected result(s)
9)	CT_B1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
11)	MS_B4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
12)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1
13)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
14)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
15)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
17)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
18)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1

Step	Action	Expected result(s)
19)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
21)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
22)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
23)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
24)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
25)	CT_A1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
26)	CT_A1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
27)	CT_B1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
28)	CT_B1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
29)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
30)	MS_B4 releases the REC (GID 299)	REC (GID 299) is released. All related resources are de-allocated.

Step 9: REC (GID 299) call setup by service subscriber MS_B1 in network B (MSC_B1 Anchor).

Step	Action	Expected result(s)
1)	MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1. A group call channel (GCCH) is allocated in Cell_A1. MS_A1, MS_A4 and MS_B4 are notified about the incoming REC (GID 299) on the NCH. All other MS will not respond to the NCH notification. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals. CT_A2, CT_A3, CT_B2 and CT_B3 did not receive the REC (GID 299).
2)	MS_A1, MS_A4 and MS_B4 automatically accepting the REC (GID 299).	MS_A1, MS_A4 and MS_B4 automatically joining the REC (GID 299) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_B1 takes the uplink on DCH.	MS_B1 has voice path on DCH. MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.
5)	MS_B1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly released.

Step	Action	Expected result(s)
6)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
7)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
9)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
11)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.

Step	Action	Expected result(s)
12)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1
13)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
15)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
16)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
17)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
18)	MS_B4 takes the uplink on GCCH.	MS_B4 has voice path on GCCH. MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1
19)	CT_A1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_A1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.

Step	Action	Expected result(s)
21)	CT_B1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
22)	CT_B1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
23)	MS_B4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
24)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
25)	CT_A1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
26)	CT_A1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.

Step	Action	Expected result(s)
27)	CT_B1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
28)	CT_B1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
29)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
30)	MS_B1 releases the REC (GID 299)	REC (GID 299) is released. All related resources are de-allocated.

Step 10: REC (GID 299) call setup by service subscriber MS_A4 in network B (MSC_B1 Anchor).

Step	Action	Expected result(s)
1)	MS_A4 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1. A group call channel (GCCH) is allocated in Cell_A1. MS_A1, MS_B1 and MS_B4 are notified about the incoming REC (GID 299) on the NCH. All other MS will not respond to the NCH notification. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals. CT_A2, CT_A3, CT_B2 and CT_B3 did not receive the REC (GID 299).
2)	MS_A1, MS_B1 and MS_B4 automatically accepting the REC (GID 299).	MS_A1, MS_B1 and MS_B4 automatically joining the REC (GID 299) in group receive mode.

Step	Action	Expected result(s)
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_A4 takes the uplink on DCH.	MS_A4 has voice path on DCH. MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4.
5)	MS_A4 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly released.
6)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
7)	CT_A1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.

Step	Action	Expected result(s)
9)	CT_B1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
11)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
12)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1
13)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
15)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
17)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
18)	MS_B4 takes the uplink on GCCH.	MS_B4 has voice path on GCCH. MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1
19)	CT_A1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
20)	CT_A1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
21)	CT_B1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
22)	CT_B1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
23)	MS_B4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
24)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
25)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
26)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
27)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
28)	CT_B1 mutes the downlink to MS_B1 by sing the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
29)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
30)	MS_A4 releases the REC (GID 299)	REC (GID 299) is released. All related resources are de-allocated.

Step 11: REC (GID 299) call setup by CT_A1 in network A (MSC_B1 Anchor).

Step	Action	Expected result(s)
1)	CT_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. Group call channels (GCCH) are allocated in Cell_A1 and Cell_B1. MS_A1, MS_A4, MS_B1 and MS_B4 are notified about the incoming REC (GID 299) on the NCH. All other MS will not respond to the NCH notification. CT_B1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals. CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1. CT_A2, CT_A3, CT_B2 and CT_B3 did not receive the REC (GID 299).
2)	MS_A1, MS_A4, MS_B1 and MS_B4 automatically accepting the REC (GID 299).	MS_A1, MS_A4, MS_B1 and MS_B4 automatically joining the REC (GID 299) in group receive mode.
3)	CT_B1 automatically accepts the REC (GID 299).	CT_B1 automatically joins the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path on GCCH. MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
5)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
6)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
7)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.

Step	Action	Expected result(s)
10)	MS_B4 takes the uplink on GCCH.	MS_B4 has two-way voice path on GCCH. MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.
11)	CT_A1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
12)	CT_A1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
13)	CT_B1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
14)	CT_B1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
15)	MS_B4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
16)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path on GCCH. MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
17)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
18)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
19)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
20)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
21)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
22)	MS_A4 takes the uplink on GCCH.	MS_A4 has two-way voice path on GCCH. MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
23)	CT_A1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
24)	CT_A1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
25)	CT_B1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
26)	CT_B1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
27)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
28)	CT_A1 closes the REC (GID 299) using kill sequence (dialling ***).	REC (GID 299) is released. All related resources are de-allocated.

Step 12: REC (GID 299) call setup by CT_B1 in network B (MSC_B1 Anchor).

Step	Action	Expected result(s)
1)	CT_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. Group call channels (GCCH) are allocated in Cell_A1 and Cell_B1. MS_A1, MS_A4, MS_B1 and MS_B4 are notified about the incoming REC (GID 299) on the NCH. All other MS will not respond to the NCH notification. CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals. CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1. CT_A2, CT_A3, CT_B2 and CT_B3 did not receive the REC (GID 299).
2)	MS_A1, MS_A4, MS_B1 and MS_B4 automatically accepting the REC (GID 299).	MS_A1, MS_A4, MS_B1 and MS_B4 automatically joining the REC (GID 299) in group receive mode.

Step	Action	Expected result(s)
3)	CT_A1 automatically accepts the REC (GID 299).	CT_A1 automatically joins the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path on GCCH. MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
5)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
6)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
7)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
8)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
10)	MS_B4 takes the uplink on GCCH.	MS_B4 has two-way voice path on GCCH. MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.
11)	CT_A1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
12)	CT_A1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.

Step	Action	Expected result(s)
13)	CT_B1 un-mutes the downlink to MS_B4 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_B1 mutes the downlink to MS_B4 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B4 mutes its downlink. MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B4.
15)	MS_B4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
16)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path on GCCH. MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
17)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
18)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
19)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
21)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
22)	MS_A4 takes the uplink on GCCH.	MS_A4 has two-way voice path on GCCH. MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.
23)	CT_A1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
24)	CT_A1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.

Step	Action	Expected result(s)
25)	CT_B1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A4, MS_B1 and MS_B4 are able to listen to the announcement of CT_A1 and CT_B1.
26)	CT_B1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A4.
27)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
28)	CT_B1 closes the REC (GID 299) using kill sequence (dialling ***).	REC (GID 299) is released. All related resources are de-allocated.

d) Success criteria

MS_A1 and MS_A4 are able to establish and to close the Railway Emergency Call (GID 299) and able to get the uplink on DCH and GCCH.

MS_A2 and MS_A5 did not receive the Railway Emergency Call (GID 299).

MS_B1 and MS_B4 are able to establish and to close the Railway Emergency Call (GID 299) and able to get the uplink on DCH and GCCH. MS_B1 and MS_B4 did not receive the Railway Emergency Call (GID 599).

MS_B2 and MS_B5 did not receive the Railway Emergency Call (GID 299).

CT_A1 is able to receive and join the Railway Emergency Call (GID 299) and is able to un-mute/mute the downlink to the talking mobile subscriber on GCCH. CT_A1 did not receive the Railway Emergency Call (GID 599).

CT_A2 did not receive the Railway Emergency Call (GID 299).

CT_B1 is able to receive and join the Railway Emergency Call (GID 299) and able to un-mute/mute the downlink to the talking mobile subscriber on GCCH. CT_B1 did not receive the Railway Emergency Call (GID 599).

CT_B2 did not receive the Railway Emergency Call (GID 299).

MS_A3, MS_A6, MS_B3, MS_B6, CT_A3 and CT_B3 did not receive the Railway Emergency Calls (GID 299, GID 599)

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.7 REC acknowledgement (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 13.4.5 13.4.6	2.5.1 13.5.3 13.5.5 13.5.7 13.5.9 13.5.10	

a) Purpose

Verify the acknowledgements successfully send after Railway Emergency Call (REC) with GID 299 is closed. The acknowledgement center must receive acknowledgements from all mobile subscribers involved in Railway Emergency Call (REC) with GID 299.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

CT_B1 is connected to network B.

The acknowledgment center of network A is configured and connected to MSC_A1.

The acknowledgment center of network B is configured and connected to MSC_B1.

This test case has been divided into the following steps:

Step 1: REC (GID 299) call setup by service subscriber MS_A1 in network A (MSC_A1 Anchor).

Step 2: REC (GID 299) call setup by service subscriber MS_B2 in network A (MSC_A1 Anchor).

Step 3: REC (GID 299) call setup by service subscriber MS_B1 in network B (MSC_A1 Anchor).

Step 4: REC (GID 299) call setup by service subscriber MS_A2 in network B (MSC_A1 Anchor).

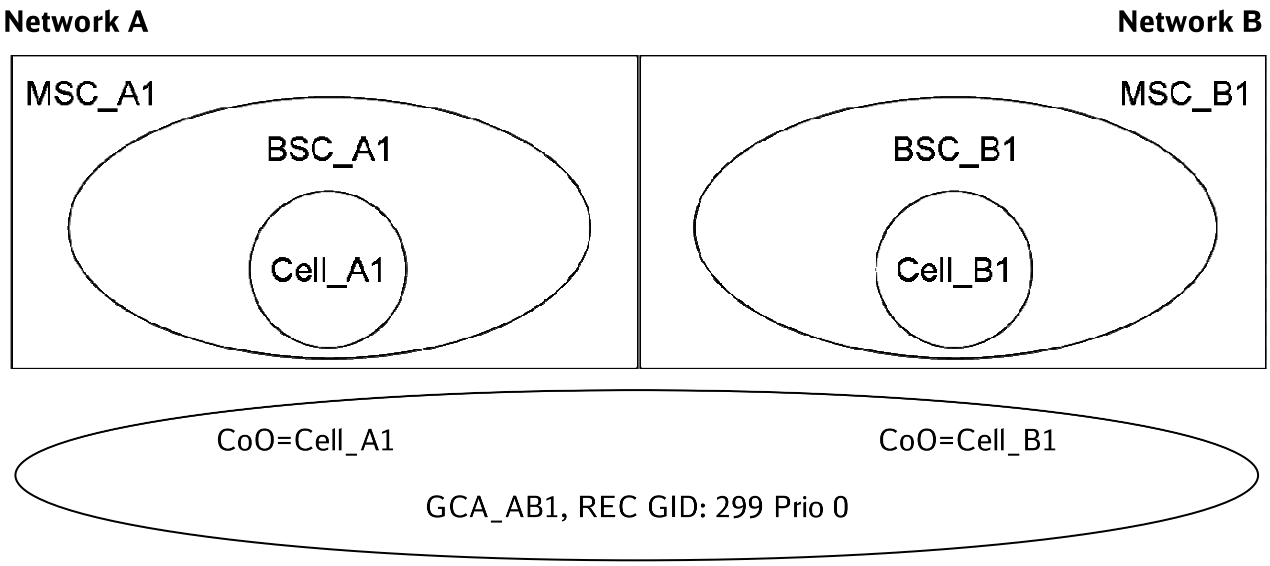
Step 5: REC (GID 299) call setup by service subscriber MS_A1 in network A (MSC_B1 Anchor).

Step 6: REC (GID 299) call setup by service subscriber MS_B2 in network A (MSC_B1 Anchor).

Step 7: REC (GID 299) call setup by service subscriber MS_B1 in network B (MSC_B1 Anchor).

Step 8: REC (GID 299) call setup by service subscriber MS_A2 in network B (MSC_B1 Anchor).

Test configuration for Step 1 to 4



A-MSC_A1	**R-MSC_B1**
MS_A1 (REC GID: 299)	MS_B1 (REC GID: 299)
MS_B2 (REC GID: 299)	MS_A2 (REC GID: 299)
CT_A1 (GCA_AB1, REC GID: 299)	CT_B1 (GCA_AB1, REC GID: 299)

c) Test procedure

Step 1: REC (GID 299) call setup by service subscriber MS_A1 in network A (MSC_A1 Anchor).

Step	Action	Expected result(s)
1)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. A group call channel (GCCH) is allocated in Cell_B1. MS_A2, MS_B1 and MS_B2 are notified about the incoming REC (GID 299) on the NCH. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.
2)	MS_A2, MS_B1 and MS_B2 automatically accepting the REC (GID 299).	MS_A2, MS_B1 and MS_B2 automatically joining the REC (GID 299) in group receive mode.

Step	Action	Expected result(s)
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.
5)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly released.
6)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.
7)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
9)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
11)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
12)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1
13)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.

Step	Action	Expected result(s)
15)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
17)	MS_B2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
18)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1
19)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
21)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
22)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
23)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
24)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.
25)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
26)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
27)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
28)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
29)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
30)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated.
31)	MS_A1 and MS_B2 are sending acknowledgements to the acknowledgement center of network A.	Acknowledgements successfully send to the acknowledgement center of network A. Check the A-interface trace files for setup messages to “1612” from each mobile subscribe involved in REC (GID 299).
32)	MS_B1 and MS_A2 are sending acknowledgements to the acknowledgement center of network B.	Acknowledgements successfully send to the acknowledgement center of network B. Check the A-interface trace files for setup messages to “1612” from each mobile subscribe involved in REC (GID 299).

Step	Action	Expected result(s)
33)	Check the logs of the acknowledgement center of Network A.	Acknowledgements successfully received with the right data such as talker/originator information from all mobile subscribers involved in REC (GID 299).
34)	Check the logs of the acknowledgement center of Network B.	Acknowledgements successfully received with the right data such as talker/originator information from all mobile subscribers involved in REC (GID 299).

Step 2: REC (GID 299) call setup by service subscriber MS_B2 in network A (MSC_A1 Anchor).

Step	Action	Expected result(s)
1)	MS_B2 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. A group call channel (GCCH) is allocated in Cell_B1. MS_A1, MS_A2 and MS_B1 are notified about the incoming REC (GID 299) on the NCH. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.
2)	MS_A1, MS_A2 and MS_B1 automatically accepting the REC (GID 299).	MS_A1, MS_A2 and MS_B1 automatically joining the REC (GID 299) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_B2 takes the uplink on DCH.	MS_B2 has voice path on DCH. MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.
5)	MS_B2 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly released.

Step	Action	Expected result(s)
6)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.
7)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
9)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
11)	MS_B2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.

Step	Action	Expected result(s)
12)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1
13)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
15)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
17)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.

Step	Action	Expected result(s)
18)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1
19)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
21)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
22)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
23)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
24)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.
25)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
26)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.

Step	Action	Expected result(s)
27)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
28)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
29)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
30)	MS_B2 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated.
31)	MS_A1 and MS_B2 are sending acknowledgements to the acknowledgement center of network A.	Acknowledgements successfully send to the acknowledgement center of network A. Check the A-interface trace files for setup messages to “1612” from each mobile subscribe involved in REC (GID 299).
32)	MS_B1 and MS_A2 are sending acknowledgements to the acknowledgement center of network B.	Acknowledgements successfully send to the acknowledgement center of network B. Check the A-interface trace files for setup messages to “1612” from each mobile subscribe involved in REC (GID 299).
33)	Check the logs of the acknowledgement center of Network A.	Acknowledgements successfully received with the right data such as talker/originator information from all mobile subscribers involved in REC (GID 299).
34)	Check the logs of the acknowledgement center of Network B.	Acknowledgements successfully received with the right data such as talker/originator information from all mobile subscribers involved in REC (GID 299).

Step 3: REC (GID 299) call setup by service subscriber MS_B1 in network B (MSC_A1 Anchor).

Step	Action	Expected result(s)
1)	MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1. A group call channel (GCCH) is allocated in Cell_A1. MS_A1, MS_A2 and MS_B2 are notified about the incoming REC (GID 299) on the NCH. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.
2)	MS_A1, MS_A2 and MS_B2 automatically accepting the REC (GID 299).	MS_A1, MS_A2 and MS_B2 automatically joining the REC (GID 299) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_B1 takes the uplink on DCH.	MS_B1 has voice path on DCH. MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.
5)	MS_B1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly released.
6)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
7)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
9)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
11)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.

Step	Action	Expected result(s)
12)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1
13)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
15)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
17)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.

Step	Action	Expected result(s)
18)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1
19)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
21)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
22)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
23)	MS_B2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.

Step	Action	Expected result(s)
24)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.
25)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
26)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
27)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
28)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
29)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
30)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated.
31)	MS_A1 and MS_B2 are sending acknowledgements to the acknowledgement center of network A.	Acknowledgements successfully send to the acknowledgement center of network A. Check the A-interface trace files for setup messages to “1612” from each mobile subscribe involved in REC (GID 299).
32)	MS_B1 and MS_A2 are sending acknowledgements to the acknowledgement center of network B.	Acknowledgements successfully send to the acknowledgement center of network B. Check the A-interface trace files for setup messages to “1612” from each mobile subscribe involved in REC (GID 299).
33)	Check the logs of the acknowledgement center of Network A.	Acknowledgements successfully received with the right data such as talker/originator information from all mobile subscribers involved in REC (GID 299).
34)	Check the logs of the acknowledgement center of Network B.	Acknowledgements successfully received with the right data such as talker/originator information from all mobile subscribers involved in REC (GID 299).

Step 4: REC (GID 299) call setup by service subscriber MS_A2 in network B (MSC_A1 Anchor).

Step	Action	Expected result(s)
1)	MS_A2 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1. A group call channel (GCCH) is allocated in Cell_A1. MS_A1, MS_B1 and MS_B2 are notified about the incoming REC (GID 299) on the NCH. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.
2)	MS_A1, MS_B1 and MS_B2 automatically accepting the REC (GID 299).	MS_A1, MS_B1 and MS_B2 automatically joining the REC (GID 299) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_A2 takes the uplink on DCH.	MS_A2 has voice path on DCH. MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.
5)	MS_A2 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly released.
6)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
7)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
9)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
11)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.

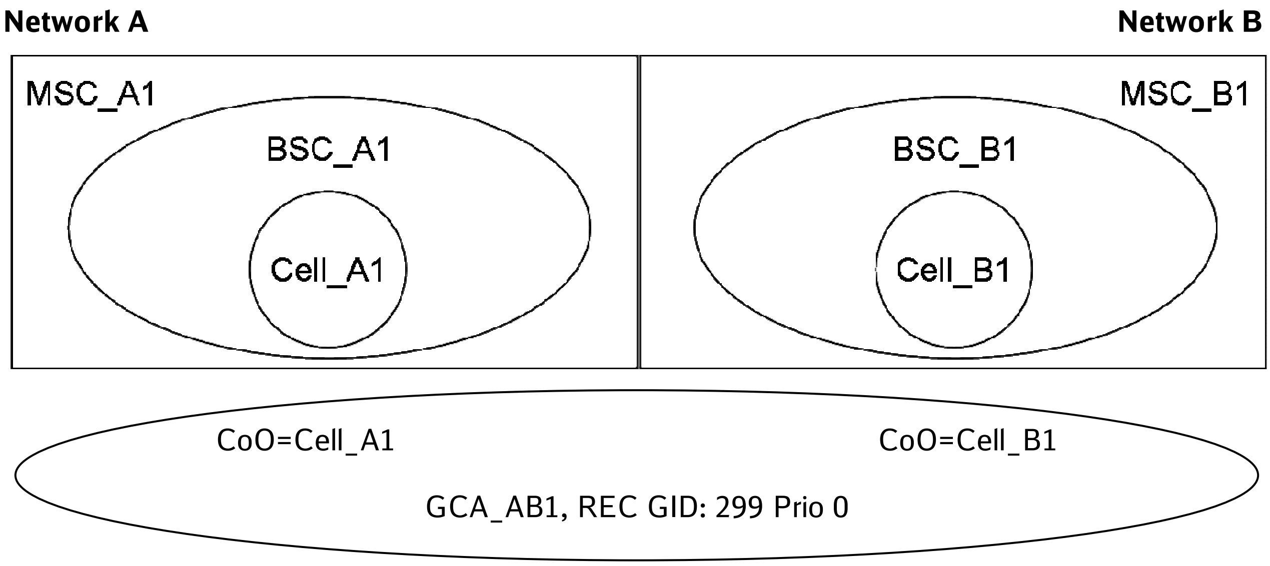
Step	Action	Expected result(s)
12)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1
13)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
15)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
17)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.

Step	Action	Expected result(s)
18)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1
19)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
21)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
22)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
23)	MS_B2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.

Step	Action	Expected result(s)
24)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.
25)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
26)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
27)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
28)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
29)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
30)	MS_A2 releases the REC (GID 299)	REC (GID 299) is released. All related resources are de-allocated.
31)	MS_A1 and MS_B2 are sending acknowledgements to the acknowledgement center of network A.	Acknowledgements successfully send to the acknowledgement center of network A. Check the A-interface trace files for setup messages to “1612” from each mobile subscribe involved in REC (GID 299).
32)	MS_B1 and MS_A2 are sending acknowledgements to the acknowledgement center of network B.	Acknowledgements successfully send to the acknowledgement center of network B. Check the A-interface trace files for setup messages to “1612” from each mobile subscribe involved in REC (GID 299).
33)	Check the logs of the acknowledgement center of Network A.	Acknowledgements successfully received with the right data such as talker/originator information from all mobile subscribers involved in REC (GID 299).
34)	Check the logs of the acknowledgement center of Network B.	Acknowledgements successfully received with the right data such as talker/originator information from all mobile subscribers involved in REC (GID 299).

Test configuration for step 5 to 8



R-MSC_A1	**A-MSC_B1**
MS_A1 (REC GID: 299)	MS_B1 (REC GID: 299)
MS_B2 (REC GID: 299)	MS_A2 (REC GID: 299)
CT_A1 (GCA_AB1, REC GID: 299)	CT_B1 (GCA_AB1, REC GID: 299)

Test procedure

Step 5: REC (GID 299) call setup by service subscriber MS_A1 in network A (MSC_B1 Anchor).

Step	Action	Expected result(s)
1)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. A group call channel (GCCH) is allocated in Cell_B1. MS_A2, MS_B1 and MS_B2 are notified about the incoming REC (GID 299) on the NCH. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.
2)	MS_A2, MS_B1 and MS_B2 automatically accepting the REC (GID 299).	MS_A2, MS_B1 and MS_B2 automatically joining the REC (GID 299) in group receive mode.

Step	Action	Expected result(s)
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.
5)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly released.
6)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.
7)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
9)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
11)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
12)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1
13)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
14)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
15)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
17)	MS_B2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
18)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1

Step	Action	Expected result(s)
19)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
21)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
22)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
23)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
24)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
25)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
26)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
27)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
28)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
29)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
30)	MS_A1 releases the REC (GID 299)	REC (GID 299) is released. All related resources are de-allocated.
31)	MS_A1 and MS_B2 are sending acknowledgements to the acknowledgement center of network A.	Acknowledgements successfully send to the acknowledgement center of network A. Check the A-interface trace files for setup messages to “1612” from each mobile subscribe involved in REC (GID 299).
32)	MS_B1 and MS_A2 are sending acknowledgements to the acknowledgement center of network B.	Acknowledgements successfully send to the acknowledgement center of network B. Check the A-interface trace files for setup messages to “1612” from each mobile subscribe involved in REC (GID 299).

Step	Action	Expected result(s)
33)	Check the logs of the acknowledgement center of Network A.	Acknowledgements successfully received with the right data such as talker/originator information from all mobile subscribers involved in REC (GID 299).
34)	Check the logs of the acknowledgement center of Network B.	Acknowledgements successfully received with the right data such as talker/originator information from all mobile subscribers involved in REC (GID 299).

Step 6: REC (GID 299) call setup by service subscriber MS_B2 in network A (MSC_B1 Anchor).

Step	Action	Expected result(s)
1)	MS_B2 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. A group call channel (GCCH) is allocated in Cell_B1. MS_A1, MS_A2 and MS_B1 are notified about the incoming REC (GID 299) on the NCH. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.
2)	MS_A1, MS_A2 and MS_B1 automatically accepting the REC (GID 299).	MS_A1, MS_A2 and MS_B1 automatically joining the REC (GID 299) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_B2 takes the uplink on DCH.	MS_B2 has voice path on DCH. MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.
5)	MS_B2 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly released.

Step	Action	Expected result(s)
6)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.
7)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
9)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
10)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
11)	MS_B2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
12)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1
13)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
15)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
17)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
18)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1
19)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
21)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
22)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
23)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
24)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.
25)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
26)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.

Step	Action	Expected result(s)
27)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
28)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
29)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
30)	MS_B2 releases the REC (GID 299)	REC (GID 299) is released. All related resources are de-allocated.
31)	MS_A1 and MS_B2 are sending acknowledgements to the acknowledgement center of network A.	Acknowledgements successfully send to the acknowledgement center of network A. Check the A-interface trace files for setup messages to “1612” from each mobile subscribe involved in REC (GID 299).
32)	MS_B1 and MS_A2 are sending acknowledgements to the acknowledgement center of network B.	Acknowledgements successfully send to the acknowledgement center of network B. Check the A-interface trace files for setup messages to “1612” from each mobile subscribe involved in REC (GID 299).
33)	Check the logs of the acknowledgement center of Network A.	Acknowledgements successfully received with the right data such as talker/originator information from all mobile subscribers involved in REC (GID 299).
34)	Check the logs of the acknowledgement center of Network B.	Acknowledgements successfully received with the right data such as talker/originator information from all mobile subscribers involved in REC (GID 299).

Step 7: REC (GID 299) call setup by service subscriber MS_B1 in network B (MSC_B1 Anchor).

Step	Action	Expected result(s)
1)	MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1. A group call channel (GCCH) is allocated in Cell_A1. MS_A1, MS_A2 and MS_B2 are notified about the incoming REC (GID 299) on the NCH. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.
2)	MS_A1, MS_A2 and MS_B2 automatically accepting the REC (GID 299).	MS_A1, MS_A2 and MS_B2 automatically joining the REC (GID 299) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_B1 takes the uplink on DCH.	MS_B1 has voice path on DCH. MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.
5)	MS_B1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly released.
6)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
7)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announce-ment of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
9)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announce-ment of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
11)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
12)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announce-ment of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1

Step	Action	Expected result(s)
13)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announce-ment of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
15)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announce-ment of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
17)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.

Step	Action	Expected result(s)
18)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1
19)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
21)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
22)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
23)	MS_B2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
24)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.
25)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
26)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
27)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
28)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
29)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
30)	MS_B1 releases the REC (GID 299)	REC (GID 299) is released. All related resources are de-allocated.
31)	MS_A1 and MS_B2 are sending acknowledgements to the acknowledgement center of network A.	Acknowledgements successfully send to the acknowledgement center of network A. Check the A-interface trace files for setup messages to "1612" from each mobile subscribe involved in REC (GID 299).
32)	MS_B1 and MS_A2 are sending acknowledgements to the acknowledgement center of network B.	Acknowledgements successfully send to the acknowledgement center of network B. Check the A-interface trace files for setup messages to "1612" from each mobile subscribe involved in REC (GID 299).
33)	Check the logs of the acknowledgement center of Network A.	Acknowledgements successfully received with the right data such as talker/originator information from all mobile subscribers involved in REC (GID 299).
34)	Check the logs of the acknowledgement center of Network B.	Acknowledgements successfully received with the right data such as talker/originator information from all mobile subscribers involved in REC (GID 299).

Step 8: REC (GID 299) call setup by service subscriber MS_A2 in network B (MSC_B1 Anchor).

Step	Action	Expected result(s)
1)	MS_A2 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1. A group call channel (GCCH) is allocated in Cell_A1. MS_A1, MS_B1 and MS_B2 are notified about the incoming REC (GID 299) on the NCH. CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.
2)	MS_A1, MS_B1 and MS_B2 automatically accepting the REC (GID 299).	MS_A1, MS_B1 and MS_B2 automatically joining the REC (GID 299) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 299).	CT_A1 and CT_B1 automatically joining the REC (GID 299). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_A2 takes the uplink on DCH.	MS_A2 has voice path on DCH. MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.
5)	MS_A2 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly released.
6)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
7)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
9)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
11)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
12)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1

Step	Action	Expected result(s)
13)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
15)	CT_B1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A1.
17)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.

Step	Action	Expected result(s)
18)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1
19)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
20)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
21)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
22)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.

Step	Action	Expected result(s)
23)	MS_B2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
24)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.
25)	CT_A1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
26)	CT_A1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
27)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
28)	CT_B1 mutes the downlink to MS_B1 by sing the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B1.
29)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink is correctly released.
30)	MS_A2 releases the REC (GID 299)	REC (GID 299) is released. All related resources are de-allocated.

Step	Action	Expected result(s)
31)	MS_A1 and MS_B2 are sending acknowledgements to the acknowledgement center of network A.	Acknowledgements successfully send to the acknowledgement center of network A. Check the A-interface trace files for setup messages to “1612” from each mobile subscribe involved in REC (GID 299).
32)	MS_B1 and MS_A2 are sending acknowledgements to the acknowledgement center of network B.	Acknowledgements successfully send to the acknowledgement center of network B. Check the A-interface trace files for setup messages to “1612” from each mobile subscribe involved in REC (GID 299).
33)	Check the logs of the acknowledgement center of Network A.	Acknowledgements successfully received with the right data such as talker/originator information from all mobile subscribers involved in REC (GID 299).
34)	Check the logs of the acknowledgement center of Network B.	Acknowledgements successfully received with the right data such as talker/originator information from all mobile subscribers involved in REC (GID 299).

d) Success criteria

Acknowledgements successfully send to the acknowledgement center of network A with the correct data inside from MS_A1 and MS_B2.

Acknowledgements successfully send to the acknowledgement center of network B with the correct data inside from MS_B1 and MS_A2.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.8 C-OTDI check

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.2.1 2.5.1 13.3.2	2.2.1 2.5.1 13.4.6 13.4.7	

a) Purpose

Verify that the compressed originator to dispatcher information (C-OTDI) is send correctly and displayed at the controller terminal (CT).

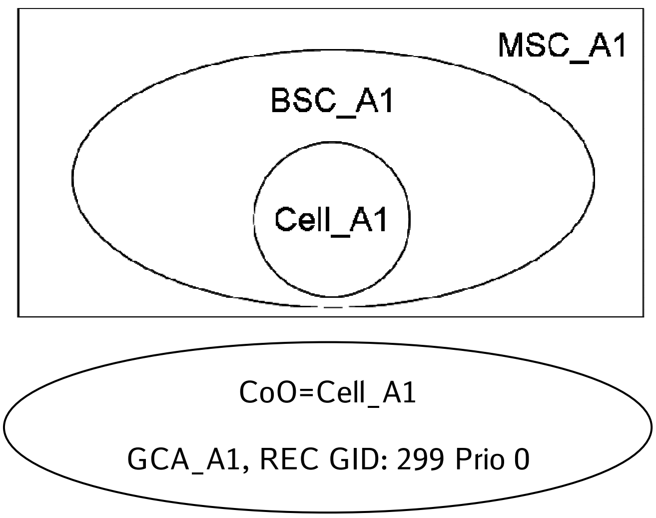
b) Test configuration / initial conditions

Network A is configured to support immediate setup 2 (Rel. 99) for Railway Emergency Calls (REC).

MS_A1 is registered to a functional number (FN).

CT_A1 is connected to network A.

Network A



MS_A1 (REC GID: 299)
MS_A2 (REC GID: 299)
CT_A1 (GCA_A1, REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a REC (GID 299).	MS_A1 originates the REC (GID 299) using immediate setup. REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. Check the immediate setup2 message content if it includes the functional number (FN) as compressed originator to dispatcher information (C-OTDI) at the user to user information element (UUIE) field. MS_A2 is notified about the incoming REC (GID 299) on the NCH. CT_A1 is notified about the incoming REC (GID 299) and the functional number (FN) taken from the user to user information element (UUIE) field is displayed on CT terminal.
2)	MS_A2 automatically accepts the REC (GID 299).	MS_A2 automatically joins the REC (GID 299) in group receive mode.
3)	CT_A1 automatically accepts the REC (GID 299).	CT_A1 automatically joins the REC (GID 299). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
4)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
5)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and the DCH is correctly released.
6)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
7)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
8)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
10)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.
11)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
12)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
13)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
14)	MS_A1 releases the REC (GID 299)	REC (GID 299) is released. All related resources are de-allocated.

d) Success criteria

The immediate setup2 message of MS_A1 includes the functional number (FN) as compressed originator to dispatcher information (C-OTDI) at the user to user information element (UUIE) field.

The compressed originator to dispatcher information (C-OTDI) is send correctly and displayed at the controller terminal (CT). CT_A1 is also able to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.9 LE idle mode (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 13.2.2.7	2.5.1	

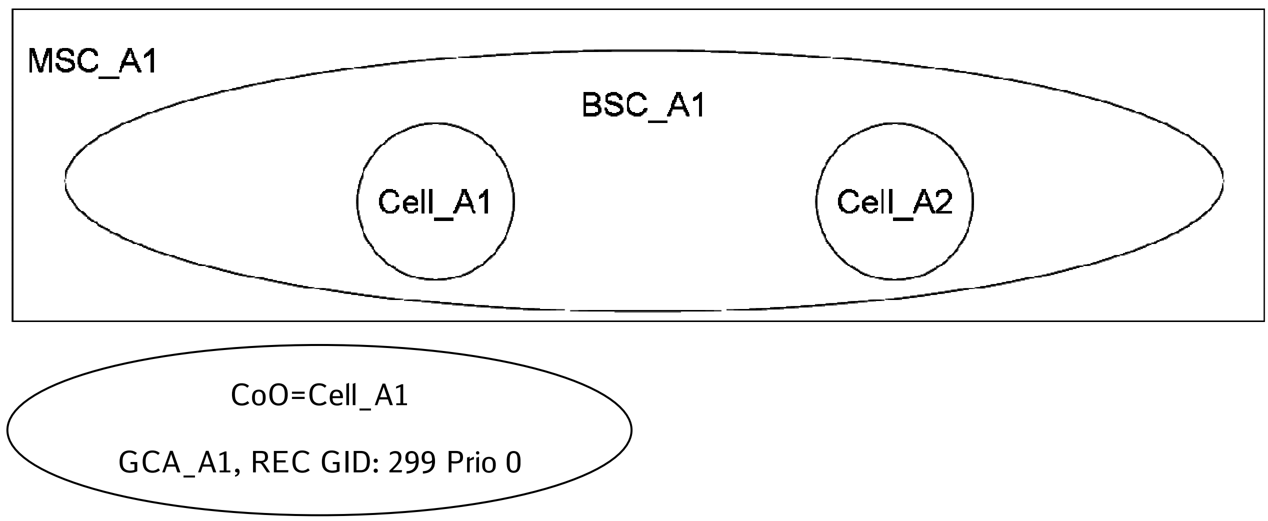
a) Purpose

Verify that mobile subscribers receive the notification on the NCH about ongoing Railway Emergency Calls (REC) and automatically join in group receive mode after successful cell reselection in idle mode.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

Network A



Cell_A1	Cell_A2
MS_A1 (REC GID: 299)	MS_A3 (REC GID: 299)
MS_A2 (REC GID: 299)	
CT_A1 (GCA_A1, REC GID: 299)	

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. MS_A2 is notified about the incoming REC (GID 299) on the NCH. CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminal.
2)	MS_A2 automatically accepts the REC (GID 299).	MS_A2 automatically joins the REC (GID 299) in group receive mode.
3)	CT_A1 automatically accepts the REC (GID 299).	CT_A1 automatically joins the REC (GID 299). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
4)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
5)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and the DCH is correctly released.
6)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
7)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
8)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
10)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.
11)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
12)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
13)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
14)	MS_A3 moves form Cell_A2 to Cell_A1.	MS_A3 performs a cell reselection from Cell_A2 to Cell_A1 and receives the notification on the NCH about the REC (GID 299) in Cell_A1.
15)	MS_A3 automatically accepts the REC (GID 299).	After successful cell reselection MS_A3 automatically joins the REC (GID 299) in group receive mode.

Step	Action	Expected result(s)
16)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A1, MS_A2 and CT_A1 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announcement of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1.
17)	CT_A1 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A3 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2 and MS_A3 are able to listen to the announcement of CT_A1.
18)	CT_A1 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announcement of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A3.
19)	MS_A3 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
20)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated.

d) Success criteria

MS_A3 receives the notification after successful cell reselection from Cell_A2 to Cell_A1 on the NCH about the REC (GID 299) in Cell_A1 and automatically joins the REC (GID 299) in group receive mode.

MS_A3 is also able to get the uplink on GCCH of the REC (GID 299) in Cell_A1.

CT_A1 is able to receive the Railway Emergency Call (REC) with GID 299 and to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.10 LE dedicated mode (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 13.2.2.7	2.5.1	

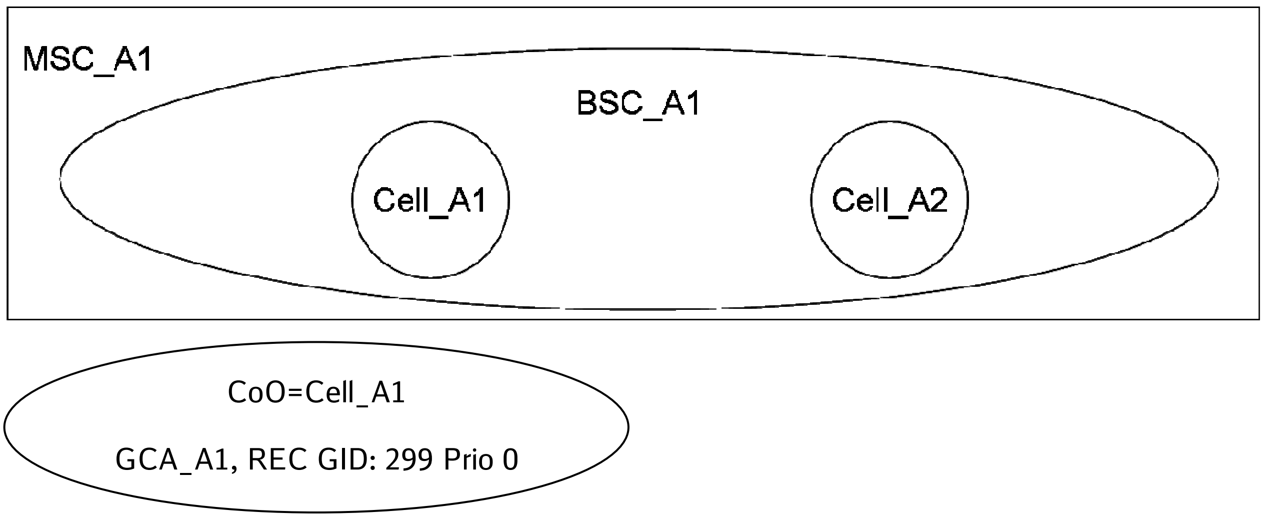
a) Purpose

Verify that mobile subscribers receive the in-band notification on the FACCH about ongoing Railway Emergency Calls (REC) and automatically join in group receive mode after successful handover in dedicated mode.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

Network A



Cell_A1	Cell_A2
MS_A1 (REC GID: 299)	MS_A3 (REC GID: 299)
MS_A2 (REC GID: 299)	MS_A4 (REC GID: 299)
CT_A1 (GCA_A1, REC GID: 299)	

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A3 establishes a PTP call to MS_A4	The PTP call is established successfully. The subscribers can talk to each other.
2)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. MS_A2 is notified about the incoming REC (GID 299) on the NCH. CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminal.
3)	MS_A2 automatically accepts the REC (GID 299).	MS_A2 automatically joins the REC (GID 299) in group receive mode.
4)	CT_A1 automatically accepts the REC (GID 299).	CT_A1 automatically joins the REC (GID 299). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
5)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
6)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and the DCH is correctly released.
7)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
8)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
9)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
10)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
11)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.
12)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
13)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
14)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
15)	MS_A3 moves form Cell_A2 to Cell_A1	MS_A3 performs a handover from Cell_A2 to Cell_A1 and receives the in-band notification on the FACCH about the REC (GID 299) in Cell_A1.
16)	MS_A3 automatically accepts the REC (GID 299).	After successful handover the PTP call between MS_A3 and MS_A4 will be pre-empted. All resources related to the PTP call are deallocated. MS_A3 automatically joins the REC (GID 299) in group receive mode.

Step	Action	Expected result(s)
17)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A1, MS_A2 and CT_A1 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announcement of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1.
18)	CT_A1 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A3 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2 and MS_A3 are able to listen to the announcement of CT_A1.
19)	CT_A1 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announcement of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A3.
20)	MS_A3 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
21)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated.

d) Success criteria

MS_A3 receives the in-band notification after successful handover from Cell_A2 to Cell_A1 on the FACCH about the REC (GID 299) in Cell_A1. The PTP call between MS_A3 and MS_A4 will be pre-empted. MS_A3 automatically joins the REC (GID 299) in group receive mode.

MS_A3 is also able to get the uplink on GCCH of the REC (GID 299) in Cell_A1.

CT_A1 is able to receive the Railway Emergency Call (REC) with GID 299 and to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.11 LE group receive mode (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 13.2.2.7	2.5.1	

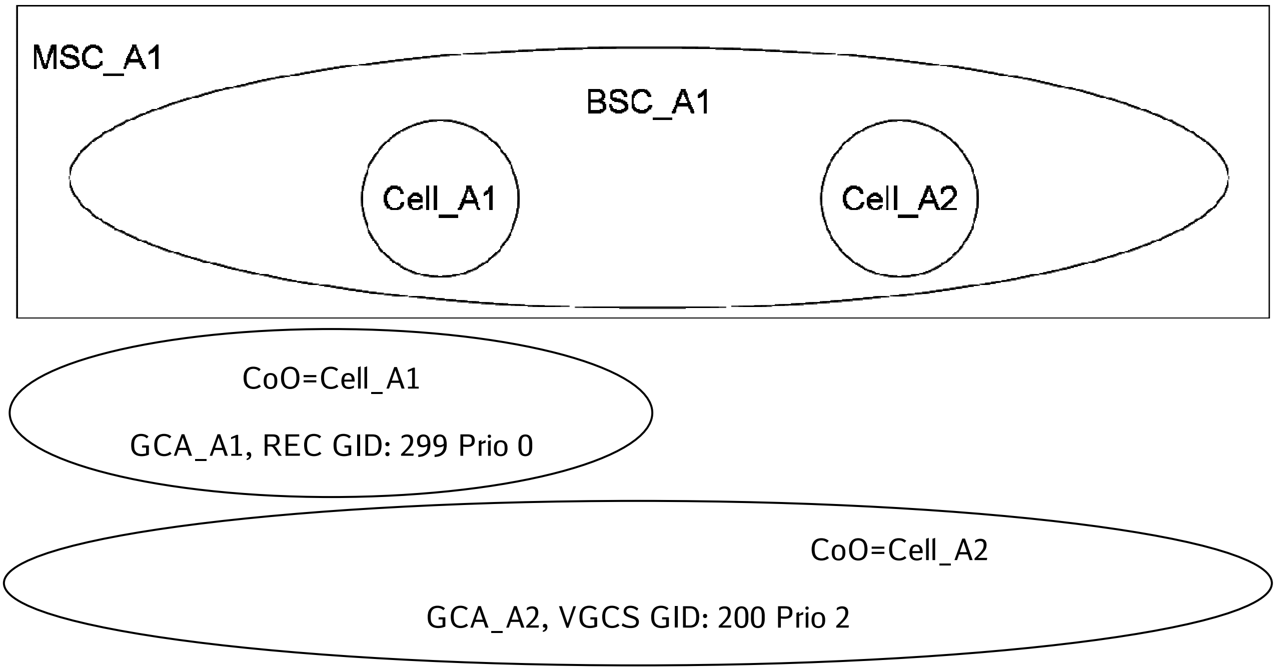
a) Purpose

Verify that mobile subscribers receive the notification on the NCH about ongoing Railway Emergency Calls (REC) and automatically join in group receive mode after successful cell reselection in group receive mode.

b) Test configuration / initial conditions

CT_A1 and CT_A2 are connected to network A.

Network A



Cell_A1	Cell_A2
MS_A1 (REC GID: 299)	MS_A3 (REC GID: 299, VGCS GID: 200)
MS_A2 (REC GID: 299)	MS_A4 (REC GID: 299, VGCS GID: 200)
CT_A1 (GCA_A1, REC GID: 299)	
CT_A2 (GCA_A2, VGCS GID: 200)	

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A3 originates a GC (GID 200).	GC (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A2. A group call channel (GCCH) is allocated in Cell_A1. MS_A4 is notified about the incoming GC (GID 200) on the NCH. CT_A2 is notified about the incoming GC (GID 200) and the Group Call Reference is displayed on CT terminal. CT_A1 is not notified about the incoming GC (GID 200). MS_A1 and MS_A2 not respond to the notification on the NCH about the GC (GID 200) in Cell_A2.
2)	MS_A4 automatically accepts the GC (GID 200).	MS_A4 automatically joins the GC (GID 200) in group receive mode.
3)	CT_A2 automatically accepts the GC (GID 200).	CT_A2 automatically joins the GC (GID 200). CT_A2 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A2.
4)	MS_A3 takes the uplink on DCH.	MS_A3 has voice path on DCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3.
5)	MS_A3 releases the uplink on DCH.	Uplink free message is send for GC (GID 200) in Cell_A1 and Cell_A2 and the DCH is correctly released.
6)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2.

Step	Action	Expected result(s)
7)	CT_A2 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A3 un-mutes its downlink to get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.
8)	CT_A2 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A3.
9)	MS_A3 releases the uplink on GCCH.	Uplink free message is send for GC (GID 200) in Cell_A1 and Cell_A2 and uplink is correctly released.
10)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. MS_A2 is notified about the incoming REC (GID 299) on the NCH. CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminal. CT_A2 is not notified about the incoming REC (GID 299).
11)	MS_A2 automatically accepts the REC (GID 299).	MS_A2 automatically joins the REC (GID 299) in group receive mode.
12)	CT_A1 automatically accepts the REC (GID 299).	CT_A1 automatically joins the REC (GID 299). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
13)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
14)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and the DCH is correctly released.

Step	Action	Expected result(s)
15)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
16)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
17)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
18)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
19)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.
20)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
21)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
22)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
23)	MS_A3 moves form Cell_A2 to Cell_A1	MS_A3 performs a cell reselection in group receive mode from Cell_A2 to Cell_A1 and receives the notification on the NCH about the REC (GID 299) in Cell_A1.
24)	MS_A3 automatically accepts the REC (GID 299).	After successful cell reselection MS_A3 automatically leaves the GC (GID 200) and joins the REC (GID 299) in group receive mode. GCCH in Cell_A1 and Cell_A2 for GC (GID 200) stay allocated.
25)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A1, MS_A2 and CT_A1 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announcement of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1.
26)	CT_A1 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A3 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2 and MS_A3 are able to listen to the announcement of CT_A1.
27)	CT_A1 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announcement of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A3.

Step	Action	Expected result(s)
28)	MS_A3 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
29)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. CT_A2 is able to listen to the announcement of MS_A4.
30)	CT_A2 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A4 is able to listen to the announcement of CT_A1.
31)	CT_A2 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announce-ment of CT_A1. CT_A2 still able to listen to the announcement of MS_A4.
32)	MS_A4 releases the uplink on GCCH.	Uplink free message is send for GC (GID 200) in Cell_A1 and Cell_A2 and uplink is correctly released.
33)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released. All related re-sources are de-allocated. MS_A3 is re-notified about the ongoing GC (GID 200) in Cell_A1 on the NCH.
34)	MS_A3 automatically accepts the GC (GID 200).	MS_A3 automatically joins the GC (GID 200) in group receive mode.
35)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announce-ment of CT_A1. MS_A4 still able to listen to the announcement of CT_A1. Talker flag is updated at MS_A3
36)	CT_A2 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A3 un-mutes its downlink to get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.

Step	Action	Expected result(s)
37)	CT_A2 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A3.
38)	MS_A3 releases the uplink on GCCH.	Uplink free message is send for GC (GID 200) in Cell_A1 and Cell_A2 and uplink is correctly released.
39)	MS_A3 releases the GC (GID 200).	GC (GID 200) is released. All related resources are de-allocated.

d) Success criteria

MS_A3 receives the notification after successful cell reselection from Cell_A2 to Cell_A1 on the NCH about the REC (GID 299) in Cell_A1. MS_A3 automatically joins the REC (GID 299) in group receive mode.

MS_A3 is able to get the uplink on GCCH of the REC (GID 299) in Cell_A1.

MS_A3 is also able to get the uplink on GCCH and to close the GC (GID 200) after the REC (GID 299) is released.

CT_A1 is able to receive the Railway Emergency Call (REC) with GID 299 and to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

CT_A2 is able to receive Group Calls (GC) with GID 200 and to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.12 LE group transmit mode (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 13.2.2.7	2.5.1	

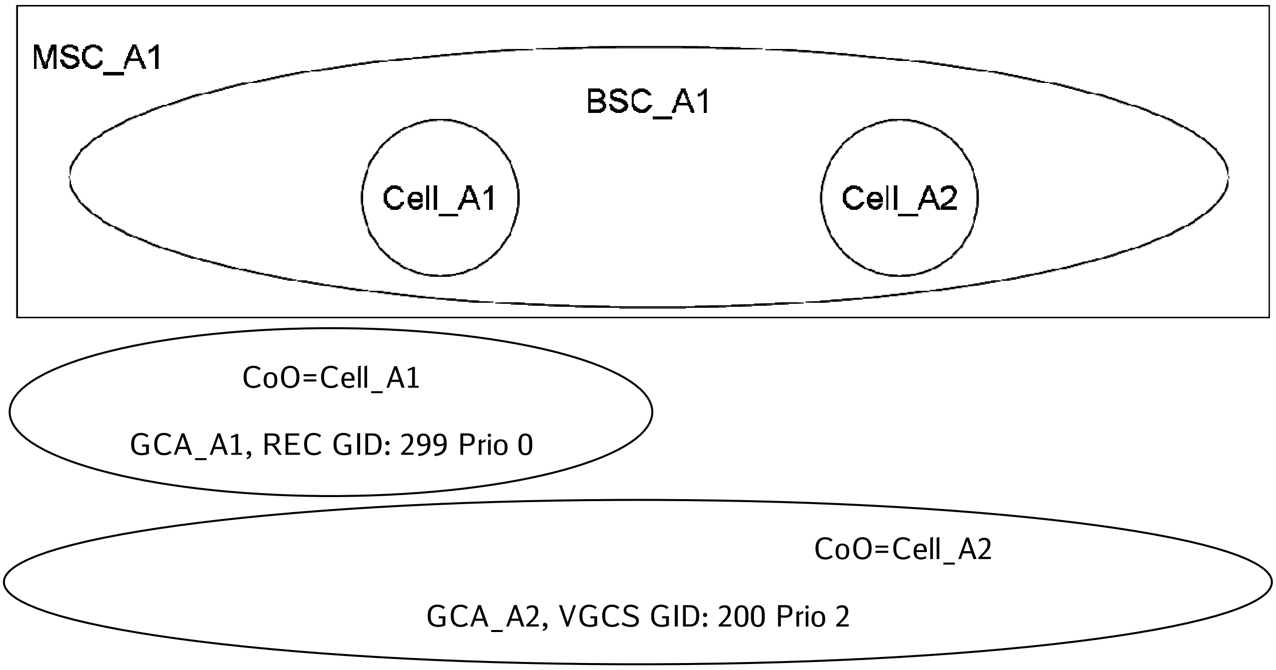
a) Purpose

Verify that mobile subscribers receive the in-band notification on the FACCH about ongoing Railway Emergency Calls (REC) and automatically join in group receive mode after successful handover in group transmit mode.

b) Test configuration / initial conditions

CT_A1 and CT_A2 are connected to network A.

Network A



Cell_A1	Cell_A2
MS_A1 (REC GID: 299)	MS_A3 (REC GID: 299, VGCS GID: 200)
MS_A2 (REC GID: 299)	MS_A4 (REC GID: 299, VGCS GID: 200)
CT_A1 (GCA_A1, REC GID: 299)	
CT_A2 (GCA_A2, VGCS GID: 200)	

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A3 originates a GC (GID 200).	GC (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A2. A group call channel (GCCH) is allocated in Cell_A1. MS_A4 is notified about the incoming GC (GID 200) on the NCH. CT_A2 is notified about the incoming GC (GID 200) and the Group Call Reference is displayed on CT terminal. CT_A1 is not notified about the incoming GC (GID 200). MS_A1 and MS_A2 not respond to the notification on the NCH about the GC (GID 200) in Cell_A2.
2)	MS_A4 automatically accepts the GC (GID 200).	MS_A4 automatically joins the GC (GID 200) in group receive mode.
3)	CT_A2 automatically accepts the GC (GID 200).	CT_A2 automatically joins the GC (GID 200). CT_A2 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A2.
4)	MS_A3 takes the uplink on DCH.	MS_A3 has voice path on DCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3.
5)	MS_A3 releases the uplink on DCH.	Uplink free message is send for GC (GID 200) in Cell_A1 and Cell_A2 and the DCH is correctly released.
6)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2.

Step	Action	Expected result(s)
7)	CT_A2 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A3 un-mutes its downlink to get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.
8)	CT_A2 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A3.
9)	MS_A3 releases the uplink on GCCH.	Uplink free message is send for GC (GID 200) in Cell_A1 and Cell_A2 and uplink is correctly released.
10)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. MS_A2 is notified about the incoming REC (GID 299) on the NCH. CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminal. CT_A2 is not notified about the incoming REC (GID 299).
11)	MS_A2 automatically accepts the REC (GID 299).	MS_A2 automatically joins the REC (GID 299) in group receive mode.
12)	CT_A1 automatically accepts the REC (GID 299).	CT_A1 automatically joins the REC (GID 299). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
13)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
14)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and the DCH is correctly released.

Step	Action	Expected result(s)
15)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announce-ment of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
16)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
17)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announce-ment of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
18)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
19)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announce-ment of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.
20)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
21)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
22)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
23)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2.
24)	MS_A3 moves form Cell_A2 to Cell_A1	MS_A3 performs a handover in group transmit mode from Cell_A2 to Cell_A1 and receives the notification on the FACCH about the REC (GID 299) in Cell_A1.
25)	MS_A3 automatically accepts the REC (GID 299).	After successful handover MS_A3 automatically leaves the GC (GID 200) and joins the REC (GID 299) in group receive mode. Uplink free message is send for GC (GID 200) in Cell_A1 and Cell_A2 and uplink is correctly released. GCCH in Cell_A1 and Cell_A2 for GC (GID 200) stay allocated.
26)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A1, MS_A2 and CT_A1 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announcement of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1.
27)	CT_A1 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A3 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2 and MS_A3 are able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
28)	CT_A1 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announce-ment of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A3.
29)	MS_A3 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
30)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. CT_A2 is able to listen to the announcement of MS_A4.
31)	CT_A2 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A4 is able to listen to the announcement of CT_A1.
32)	CT_A2 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announce-ment of CT_A1. CT_A2 still able to listen to the announcement of MS_A4.
33)	MS_A4 releases the uplink on GCCH.	Uplink free message is send for GC (GID 200) in Cell_A1 and Cell_A2 and uplink is correctly released.
34)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released. All related re-sources are de-allocated. MS_A3 is re-notified about the ongoing GC (GID 200) in Cell_A1 on the NCH.
35)	MS_A3 automatically accepts the GC (GID 200).	MS_A3 automatically joins the GC (GID 200) in group receive mode.
36)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announce-ment of CT_A1. MS_A4 still able to listen to the announcement of CT_A1. Talker flag is updated at MS_A3

Step	Action	Expected result(s)
37)	CT_A2 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A3 un-mutes its downlink to get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.
38)	CT_A2 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A3.
39)	MS_A3 releases the uplink on GCCH.	Uplink free message is send for GC (GID 200) in Cell_A1 and Cell_A2 and uplink is correctly released.
40)	MS_A3 releases the GC (GID 200).	GC (GID 200) is released. All related resources are de-allocated.

d) Success criteria

MS_A3 receives the in-band notification after successful handover in group transmit mode from Cell_A2 to Cell_A1 on the FACCH about the REC (GID 299) in Cell_A1. MS_A3 automatically joins the REC (GID 299) in group receive mode.

MS_A3 is able to get the uplink on GCCH of the REC (GID 299) in Cell_A1.

MS_A3 is also able to get the uplink on GCCH and to close the GC (GID 200) after the REC (GID 299) is released.

CT_A1 is able to receive the Railway Emergency Call (REC) with GID 299 and to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

CT_A2 is able to receive Group Calls (GC) with GID 200 and to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.13 LE group mode, dedicated channel (non-roaming case)

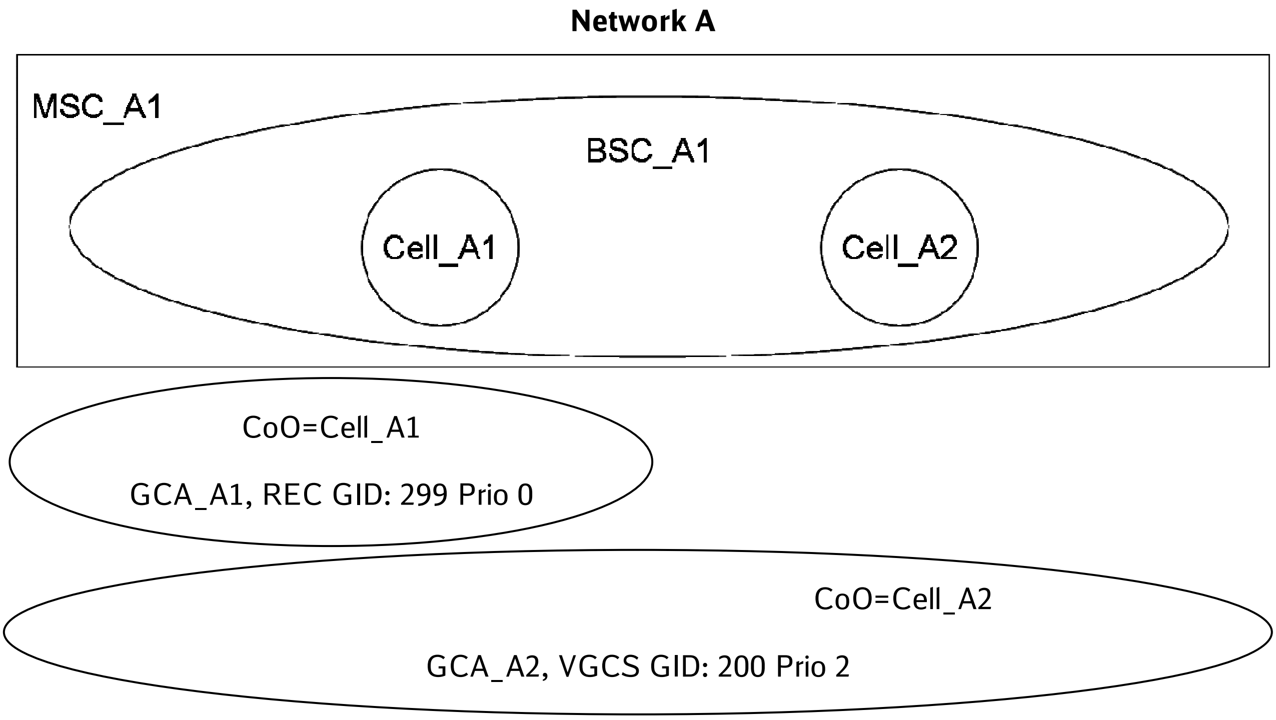
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 13.2.2.7	2.5.1	

a) Purpose

Verify that mobile subscribers receive the in-band notification on the FACCH about ongoing Railway Emergency Calls (REC) and automatically join in group receive mode after successful handover in group transmit mode on dedicated channel (DCH).

b) Test configuration / initial conditions

CT_A1 and CT_A2 are connected to network A.



Cell_A1	Cell_A2
MS_A1 (REC GID: 299)	MS_A3 (REC GID: 299, VGCS GID: 200)
MS_A2 (REC GID: 299)	MS_A4 (REC GID: 299, VGCS GID: 200)
CT_A1 (GCA_A1, REC GID: 299)	
CT_A2 (GCA_A2, VGCS GID: 200)	

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A3 originates a GC (GID 200).	GC (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A2. A group call channel (GCCH) is allocated in Cell_A1. MS_A4 is notified about the incoming GC (GID 200) on the NCH. CT_A2 is notified about the incoming GC (GID 200) and the Group Call Reference is displayed on CT terminal. CT_A1 is not notified about the incoming GC (GID 200). MS_A1 and MS_A2 not respond to the notification on the NCH about the GC (GID 200) in Cell_A2.
2)	MS_A4 automatically accepts the GC (GID 200).	MS_A4 automatically joins the GC (GID 200) in group receive mode.
3)	CT_A2 automatically accepts the GC (GID 200).	CT_A2 automatically joins the GC (GID 200). CT_A2 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A2.
4)	MS_A3 takes the uplink on DCH and keep it.	MS_A3 has voice path on DCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3.
5)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. MS_A2 is notified about the incoming REC (GID 299) on the NCH. CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminal. CT_A2 is not notified about the incoming REC (GID 299).
6)	MS_A2 automatically accepts the REC (GID 299).	MS_A2 automatically join the REC (GID 299) in group receive mode.

Step	Action	Expected result(s)
7)	CT_A1 automatically accepts the REC (GID 299).	CT_A1 automatically join the REC (GID 299). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
8)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and the DCH is correctly released.
10)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
11)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
12)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
13)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
14)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
15)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
16)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
17)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
18)	MS_A3 moves form Cell_A2 to Cell_A1.	MS_A3 performs a handover on DCH from Cell_A2 to Cell_A1 and receives the notification on the FACCH about the REC (GID 299) in Cell_A1.
19)	MS_A3 automatically accepts the REC (GID 299).	After successful handover MS_A3 automatically leaves the GC (GID 200) and joins the REC (GID 299) in group receive mode. Uplink free message is send for GC (GID 200) in Cell_A1 and Cell_A2 and uplink is correctly released. The dedicated channel (DCH) is released. All related resources are de-allocated. GCCH in Cell_A1 and Cell_A2 for GC (GID 200) stay allocated.
20)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A1, MS_A2 and CT_A1 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announcement of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1.
21)	CT_A1 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A3 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2 and MS_A3 are able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
22)	CT_A1 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announcement of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A3.
23)	MS_A3 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
24)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. CT_A2 is able to listen to the announcement of MS_A4.
25)	CT_A2 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A4 is able to listen to the announcement of CT_A1.
26)	CT_A2 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1. CT_A2 still able to listen to the announcement of MS_A4.
27)	MS_A4 releases the uplink on GCCH.	Uplink free message is send for GC (GID 200) in Cell_A1 and Cell_A2 and uplink is correctly released.
28)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated. MS_A3 is re-notified about the ongoing GC (GID 200) in Cell_A1 on the NCH.
29)	MS_A3 automatically accepts the GC (GID 200).	MS_A3 automatically join the GC (GID 200) in group receive mode.
30)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announcement of CT_A1. MS_A4 still able to listen to the announcement of CT_A1. Talker flag is updated at MS_A3

Step	Action	Expected result(s)
31)	CT_A2 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A3 un-mutes its downlink to get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.
32)	CT_A2 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A3.
33)	MS_A3 releases the uplink on GCCH.	Uplink free message is send for GC (GID 200) in Cell_A1 and Cell_A2 and uplink is correctly released.
34)	MS_A3 releases the GC (GID 200).	GC (GID 200) is released. All related resources are de-allocated.

d) Success criteria

MS_A3 receives the in-band notification after successful handover in group transmit mode on dedicated channel (DCH) from Cell_A2 to Cell_A1 on the FACCH about the REC (GID 299) in Cell_A1. MS_A3 automatically joins the REC (GID 299) in group receive mode.

MS_A3 is able to get the uplink on GCCH of the REC (GID 299) in Cell_A1.

MS_A3 is also able to get the uplink on GCCH and to close the GC (GID 200) after the REC (GID 299) is released.

CT_A1 is able to receive the Railway Emergency Call (REC) with GID 299 and to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

CT_A2 is able to receive Group Calls (GC) with GID 200 and to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.14 LE idle mode (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 13.2.2.7	2.5.1	

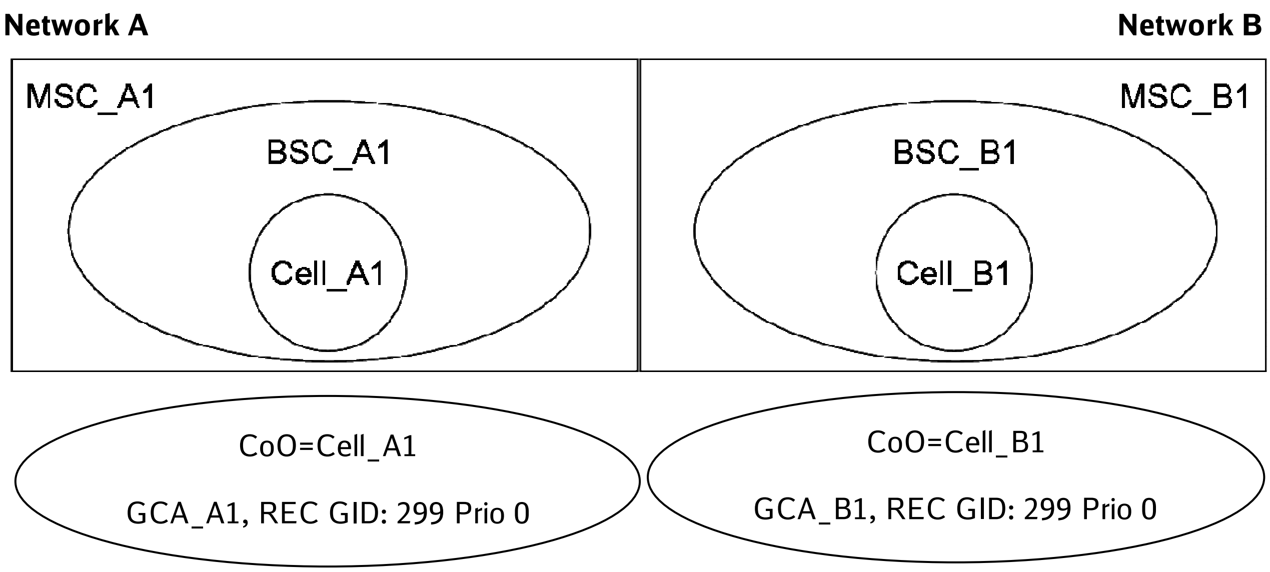
a) Purpose

Verify that mobile subscribers receive the notification on the NCH about ongoing Railway Emergency Calls (REC) and automatically join in group receive mode after successful cell reselection.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

CT_B1 is connected to network B.



A-MSC_A1	A-MSC_B1
MS_A1 (REC GID: 299)	MS_B1 (REC GID: 299)
MS_A2 (REC GID: 299)	MS_B2 (REC GID: 299)
CT_A1 (GCA_A1, REC GID: 299)	CT_B1 (GCA_B1, REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. MS_A2 is notified about the incoming REC (GID 299) on the NCH. CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminal. CT_A2 is not notified about the incoming REC (GID 299).
2)	MS_A2 automatically accepts the REC (GID 299).	MS_A2 automatically join the REC (GID 299) in group receive mode.
3)	CT_A1 automatically accepts the REC (GID 299).	CT_A1 automatically join the REC (GID 299). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
4)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
5)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and the DCH is correctly released.
6)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
7)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
8)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
10)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.
11)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
12)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
13)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
14)	MS_B2 moves form Cell_B1 to Cell_A1	After MS_B2 is out of coverage of Network B it performs a network reselection to Network A and receives the notification on the NCH about the REC (GID 299) in Cell_A1.
15)	MS_B2 automatically accepts the REC (GID 299).	After successful network reselection MS_B2 automatically joins the REC (GID 299) in group receive mode. GCCH in Cell_B1 for REC (GID 299) stay allocated.

Step	Action	Expected result(s)
16)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_A2 and CT_A1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1.
17)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2 and MS_B2 are able to listen to the announcement of CT_A1.
18)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_B2.
19)	MS_B2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
20)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated.
21)	MS_B2 moves form Cell_A1 to Cell_B1	After MS_B2 is out of coverage of Network A it performs a network reselection to Network B.
22)	MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1. MS_B2 is notified about the incoming REC (GID 299) on the NCH. CT_B1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminal.
23)	CT_B1 automatically accepts the REC (GID 299).	CT_B1 automatically joins the REC (GID 299). CT_B1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_B1.

Step	Action	Expected result(s)
24)	MS_B1 takes the uplink on DCH.	MS_B1 has voice path on DCH. MS_B2 and CT_B1 are able to listen to the announcement of MS_B1.
25)	MS_B1 releases the uplink on DCH.	Uplink free message is send for REC (GID 299) in Cell_B1 and the DCH is correctly released.
26)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_B2 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_B1. MS_B2 still able to listen to the announcement of CT_B1.
27)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_B1 and MS_B2 are able to listen to the announcement of CT_B1.
28)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_B1. MS_B2 still able to listen to the announcement of CT_B1. CT_B1 still able to listen to the announcement of MS_B1.
29)	MS_B1 releases the uplink on GCCH.	Uplink free message is send for REC (GID 299) in Cell_B1 and uplink is correctly released.
30)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_B1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_B1. MS_B1 still able to listen to the announcement of CT_B1.
31)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_B1 and MS_B2 are able to listen to the announcement of CT_B1.

Step	Action	Expected result(s)
32)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_B1. MS_B1 still able to listen to the announcement of CT_B1. CT_B1 still able to listen to the announcement of MS_B2.
33)	MS_B2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 299) in Cell_B1 and uplink is correctly released.
34)	MS_A2 moves form Cell_A1 to Cell_B1	After MS_A2 is out of coverage of Network A it performs a network reselection to Network B and receives the notification on the NCH about the REC (GID 299) in Cell_B1.
35)	MS_A2 automatically accepts the REC (GID 299).	After successful network reselection MS_A2 automatically joins the REC (GID 299) in group receive mode. GCCH in Cell_A1 for REC (GID 299) stay allocated.
36)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_B1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_B1. MS_B1 still able to listen to the announcement of CT_B1.
37)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_B1 and MS_A2 are able to listen to the announcement of CT_B1.
38)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_B1. MS_B1 still able to listen to the announcement of CT_B1. CT_B1 still able to listen to the announcement of MS_A2.
39)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_B1 and uplink is correctly released.

Step	Action	Expected result(s)
40)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released. All related re-sources are de-allocated.

d) Success criteria

MS_B2 receive the notification after successful network reselection from Network B to Network A on the NCH about the REC (GID 299) in Cell_A1 and automatically joins the REC (GID 299) in group receive mode.

MS_B2 is also able to get the uplink on GCCH of the REC (GID 299) in Cell_A1.

MS_A2 receive the notification after successful network reselection from Network A to Network B on the NCH about the REC (GID 299) in Cell_B1 and automatically joins the REC (GID 299) in group receive mode.

MS_A2 is also able to get the uplink on GCCH of the REC (GID 299) in Cell_B1.

CT_A1 and CT_B1 are able to receive the Railway Emergency Call (REC) with GID 299 and to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.15 LE dedicated mode (more than one MSC)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 13.2.2.7	2.5.1	

a) Purpose

Verify that mobile subscribers receive the in-band notification on the FACCH about ongoing Railway Emergency Calls (REC) and automatically join in group receive mode after successful handover in dedicated mode.

b) Test configuration / initial conditions

CT_A1 and CT_A2 are connected to network A.

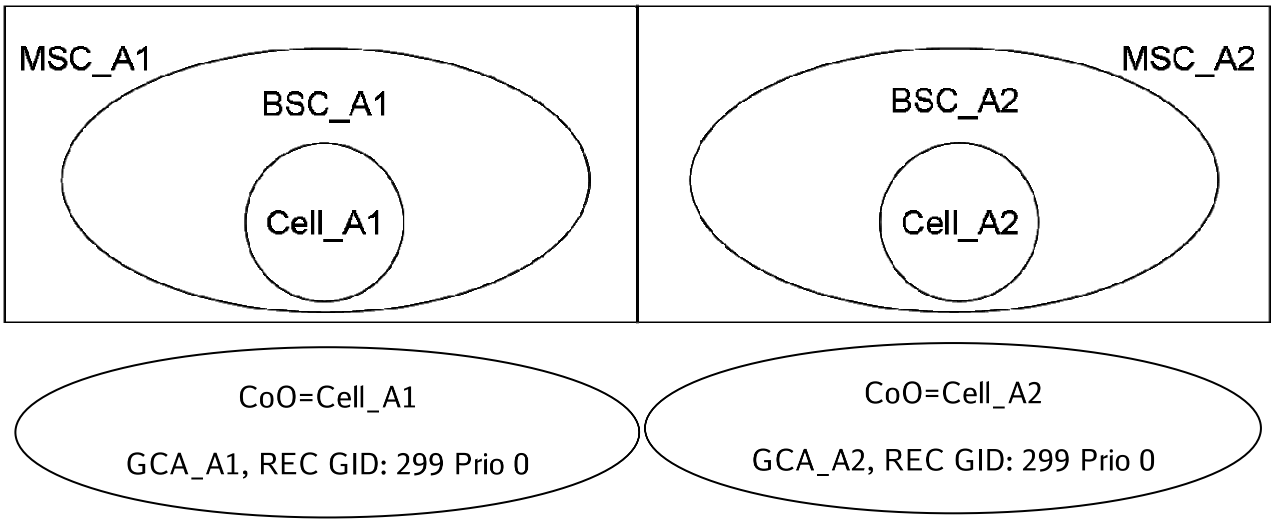
This test case has been divided into the following steps:

Step 1: LE of service subscriber MS_A4 during PTP call.

Step 2: LE of service subscriber MS_A2 during PTP call.

Test configuration for step 1 and 2

Network A



A-MSC_A1	**A-MSC_A2**
MS_A1 (REC GID: 299)	MS_A3 (REC GID: 299)
MS_A2 (REC GID: 299)	MS_A4 (REC GID: 299)
CT_A1 (GCA_A1, REC GID: 299)	CT_A2 (GCA_A2, REC GID: 299)

c) Test procedure

Step 1: LE of service subscriber MS_A4 during PTP call.

Step	Action	Expected result(s)
1)	MS_A3 establishes a PTP call to MS_A4.	The PTP call is established successfully. The subscribers can talk to each other.
2)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. MS_A2 is notified about the incoming REC (GID 299) on the NCH. CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminal.
3)	MS_A2 automatically accepts the REC (GID 299).	MS_A2 automatically join the REC (GID 299) in group receive mode.

Step	Action	Expected result(s)
4)	CT_A1 automatically accepts the REC (GID 299).	CT_A1 automatically join the REC (GID 299). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
5)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
6)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and the DCH is correctly released.
7)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
8)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
9)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
10)	MS_A1 releases the uplink on GCCH.	Uplink free message is sent in Cell_A1 and uplink is correctly released.
11)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
12)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
13)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announce-ment of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
14)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
15)	MS_A4 moves form Cell_A2 to Cell_A1	MS_A4 performs a handover from Cell_A2 to Cell_A1 and receives the in-band notification on the FACCH about the REC (GID 299) in Cell_A1.
16)	MS_A4 automatically accepts the REC (GID 299).	After successful handover the PTP call be-tween MS_A3 and MS_A4 will be pre-empted. All resources related to the PTP call are de-allocated. MS_A4 automatically joins the REC (GID 299) in group receive mode.
17)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. MS_A1, MS_A2 and CT_A1 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announce-ment of CT_A1. MS_A1 and MS_A2 are still able to listen to the announcement of CT_A1.
18)	CT_A1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on DCH. MS_A1, MS_A2 and MS_A4 are able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
19)	CT_A1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A4.
20)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
21)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated.

Step 2: LE of service subscriber MS_A2 during PTP call.

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2	The PTP call is established successfully. The subscribers can talk to each other.
2)	MS_A3 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A2. MS_A4 is notified about the incoming REC (GID 299) on the NCH. CT_A2 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminal.
3)	MS_A4 automatically accepts the REC (GID 299).	MS_A4 automatically join the REC (GID 299) in group receive mode.
4)	CT_A2 automatically accepts the REC (GID 299).	CT_A2 automatically join the REC (GID 299). CT_A2 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A2.
5)	MS_A3 takes the uplink on DCH.	MS_A3 has voice path on DCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3.
6)	MS_A3 releases the uplink on DCH.	Uplink free message is send in Cell_A2 and the DCH is correctly released.

Step	Action	Expected result(s)
7)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2.
8)	CT_A2 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A2 sends set parameter message and MS_A3 un-mutes its downlink to get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.
9)	CT_A2 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A2 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A3.
10)	MS_A3 releases the uplink on GCCH.	Uplink free message is send in Cell_A2 and uplink is correctly released.
11)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. MS_A3 and CT_A2 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A2. MS_A3 still able to listen to the announcement of CT_A2.
12)	CT_A2 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A2 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.

Step	Action	Expected result(s)
13)	CT_A2 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A2 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A2. MS_A3 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A4.
14)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A2 and uplink is correctly released.
15)	MS_A2 moves form Cell_A1 to Cell_A2.	MS_A2 performs a handover from Cell_A1 to Cell_A2 and receives the in-band notification on the FACCH about the REC (GID 299) in Cell_A2.
16)	MS_A2 automatically accepts the REC (GID 299).	After successful handover the PTP call between MS_A1 and MS_A2 will be pre-empted. All resources related to the PTP call are deallocated. MS_A2 automatically joins the REC (GID 299) in group receive mode.
17)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A3, MS_A4 and CT_A2 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A2. MS_A3 and MS_A4 still able to listen to the announcement of CT_A2.
18)	CT_A2 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A2 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A3, MS_A4 and MS_A2 are able to listen to the announcement of CT_A2.
19)	CT_A2 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A2 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A2. MS_A3 and MS_A4 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A2.
20)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A2 and uplink is correctly released.

Step	Action	Expected result(s)
21)	MS_A3 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated.

d) Success criteria

MS_A4 receives the notification after successful handover from Cell_A2 to Cell_A1 on the FACCH about the REC (GID 299) in Cell_A1 and automatically joins the REC (GID 299) in group receive mode. MS_A4 is also able to get the uplink on GCCH of the REC (GID 299) in Cell_A1.

MS_A2 receives the notification after successful handover from Cell_A1 to Cell_A2 on the FACCH about the REC (GID 299) in Cell_A2 and automatically joins the REC (GID 299) in group receive mode. MS_A2 is also able to get the uplink on GCCH of the REC (GID 299) in Cell_A2.

CT_A1 and CT_A2 are able to receive the Railway Emergency Call (REC) with GID 299 and to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.16 LE group receive mode (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 13.2.2.7	2.5.1	

a) Purpose

Verify that mobile subscribers receive the notification on the NCH about ongoing Railway Emergency Calls (REC) and automatically join in group receive mode after successful network selection in group receive mode.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

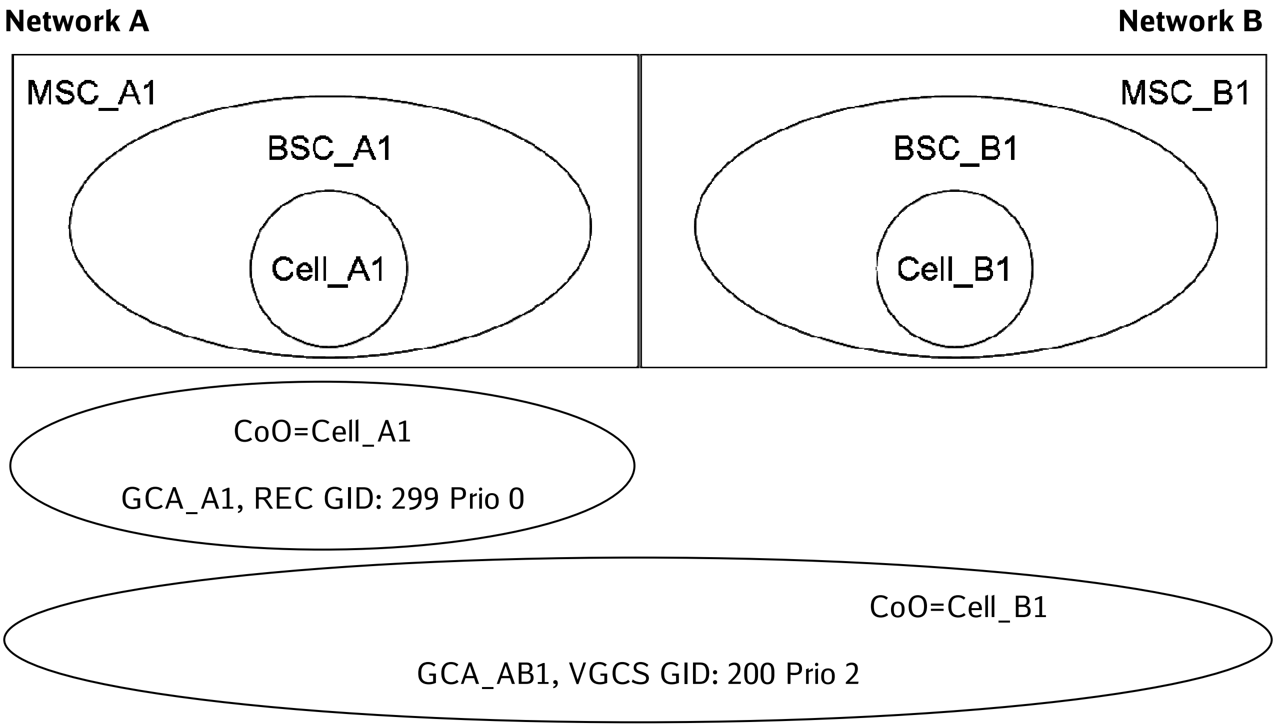
CT_B1 is connected to network B.

This test case has been divided into the following steps:

Step 1: LE of service subscriber MS_B2 in group receive mode.

Step 2: LE of service subscriber MS_A2 in group receive mode.

Test configuration for step 1



A-MSC_A1	A-MSC_B1
MS_A1 (REC GID: 299)	MS_B1 (REC GID: 299)
MS_A2 (REC GID: 299, VGCS GID: 200)	MS_B2 (REC GID: 299, VGCS GID: 200)
CT_A1 (GCA_A1, REC GID: 299)	CT_AB1 (GCA_B1, VGCS GID: 200)

c) Test procedure

Step 1: LE of service subscriber MS_B2 in group receive mode.

Step	Action	Expected result(s)
1)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. MS_A2 is notified about the incoming REC (GID 299) on the NCH. CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminal.
2)	MS_A2 automatically accepts the REC (GID 299).	MS_A2 automatically join the REC (GID 299) in group receive mode.

Step	Action	Expected result(s)
3)	CT_A1 automatically accepts the REC (GID 299).	CT_A1 automatically join the REC (GID 299). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
4)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
5)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and the DCH is correctly released.
6)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
7)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
8)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
10)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.

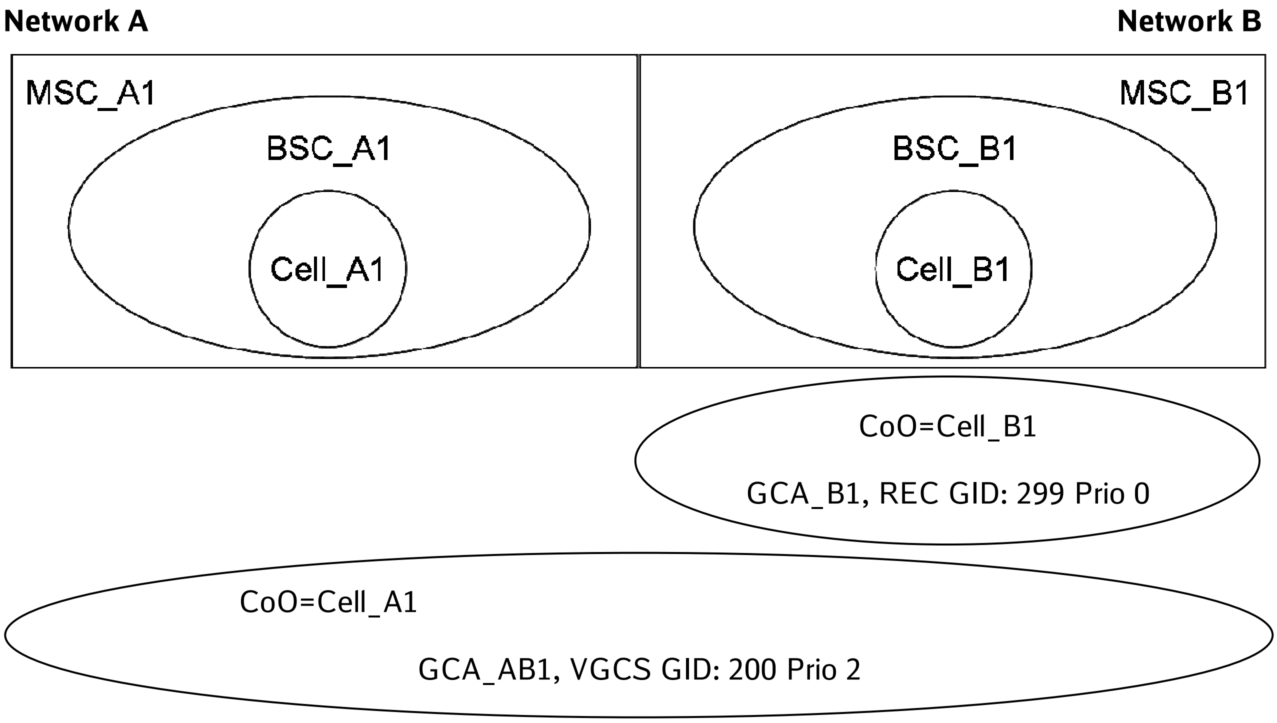
Step	Action	Expected result(s)
11)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
12)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
13)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
14)	MS_B1 originates a GC (GID 200).	GC (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1. A group call channel (GCCH) is allocated in Cell_A1. MS_B2 is notified about the incoming GC (GID 200) on the NCH. CT_B1 is notified about the incoming GC (GID 200) and the Group Call Reference is displayed on CT terminal. MS_A2 receives an in-band notification on FACCH about the incoming GC (GID 200). MS_A2 did not respond to the notification, the priority of the GC (GID 200) is lower than the priority of the REC (GID 299).
15)	MS_B2 automatically accepts the GC (GID 200).	MS_B2 automatically joins the GC (GID 200) in group receive mode.
16)	CT_B1 automatically accepts the GC (GID 200).	CT_B1 automatically joins the GC (GID 200). CT_B1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_B1.
17)	MS_B1 takes the uplink on DCH.	MS_B1 has voice path on DCH. MS_B2 and CT_B1 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
18)	MS_B1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_B1 is correctly released.
19)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_B2 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_B1. MS_B2 still able to listen to the announcement of CT_B1.
20)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_B1 and MS_B2 are able to listen to the announcement of CT_B1.
21)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_B1. MS_B2 still able to listen to the announcement of CT_B1. CT_B1 still able to listen to the announcement of MS_B1.
22)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_B1 and Cell_A1. The uplink in Cell_B1 is correctly released.
23)	MS_B2 moves form Cell_B1 to Cell_A1	After MS_B2 is out of coverage of Network B it performs a network reselection to Network A and receives the notification on the NCH about the REC (GID 299) in Cell_A1.
24)	MS_B2 automatically accepts the REC (GID 299).	After successful network reselection MS_B2 automatically joins the REC (GID 299) in group receive mode. GCCH in Cell_B1 and Cell_A1 for GC (GID 200) stays allocated.
25)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_A2 and CT_A1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
26)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2 and MS_B2 are able to listen to the announcement of CT_A1.
27)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_B2.
28)	MS_B2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
29)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated. MS_B2 is re-notified about the ongoing GC (GID 200) in Cell_A1 on the NCH.
30)	MS_B2 automatically accepts the GC (GID 200).	MS_B2 automatically joins the GC (GID 200) in group receive mode.
31)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_B1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_B1. MS_B1 still able to listen to the announcement of CT_B1.
32)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink get two-way voice path on GCCH. MS_B1 and MS_B2 are able to listen to the announcement of CT_B1.

Step	Action	Expected result(s)
33)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**)	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_B1. MS_B1 still able to listen to the announcement of CT_B1. CT_B1 still able to listen to the announcement of MS_B2.
34)	MS_B2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink in Cell_A1 is correctly released.
35)	MS_B1 releases the GC (GID 200).	GC (GID 200) is released. All related resources are de-allocated.

Test configuration for step 2



A-MSC_A1	**A-MSC_B1**
MS_A1 (REC GID: 299)	MS_B1 (REC GID: 299)
MS_A2 (REC GID: 299, VGCS GID: 200)	MS_B2 (REC GID: 299, VGCS GID: 200)
CT_A1 (GCA_AB1, VGCS GID: 200)	CT_B1 (GCA_B1, REC GID: 299)

Test procedure

Step 2: LE of service subscriber MS_A2 in group receive mode.

Step	Action	Expected result(s)
1)	MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1. MS_B2 is notified about the incoming REC (GID 299) on the NCH. CT_B1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminal.
2)	MS_B2 automatically accepts the REC (GID 299).	MS_B2 automatically join the REC (GID 299) in group receive mode.

Step	Action	Expected result(s)
3)	CT_B1 automatically accepts the REC (GID 299).	CT_B1 automatically join the REC (GID 299). CT_B1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_B1.
4)	MS_B1 takes the uplink on DCH.	MS_B1 has voice path on DCH. MS_B2 and CT_B1 are able to listen to the announcement of MS_B1.
5)	MS_B1 releases the uplink on DCH.	Uplink free message is send in Cell_B1 and the DCH is correctly released.
6)	MS_B1 takes the uplink on GCCH.	MS_B1 has voice path on GCCH. MS_B2 and CT_B1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_B1. MS_B2 still able to listen to the announcement of CT_B1.
7)	CT_B1 un-mutes the downlink to MS_B1 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH. MS_B1 and MS_B2 are able to listen to the announcement of CT_B1.
8)	CT_B1 mutes the downlink to MS_B1 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B1 mutes its downlink. MS_B1 is not able to listen to the announcement of CT_B1. MS_B2 still able to listen to the announcement of CT_B1. CT_B1 still able to listen to the announcement of MS_B1.
9)	MS_B1 releases the uplink on GCCH.	Uplink free message is send in Cell_B1 and uplink is correctly released.
10)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_B1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_B1. MS_B1 still able to listen to the announcement of CT_B1.

Step	Action	Expected result(s)
11)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_B1 and MS_B2 are able to listen to the announcement of CT_B1.
12)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_B1. MS_B1 still able to listen to the announcement of CT_B1. CT_B1 still able to listen to the announcement of MS_B2.
13)	MS_B2 releases the uplink on GCCH.	Uplink free message is send in Cell_B1 and uplink is correctly released.
14)	MS_A1 originates a GC (GID 200).	GC (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. A group call channel (GCCH) is allocated in Cell_B1. MS_A2 is notified about the incoming GC (GID 200) on the NCH. CT_A1 is notified about the incoming GC (GID 200) and the Group Call Reference is displayed on CT terminal. MS_B2 receives an in-band notification on FACCH about the incoming GC (GID 200). MS_A2 did not respond to the notification, the priority of the GC (GID 200) is lower than the priority of the REC (GID 299).
15)	MS_A2 automatically accepts the GC (GID 200).	MS_A2 automatically joins the GC (GID 200) in group receive mode.
16)	CT_A1 automatically accepts the GC (GID 200).	CT_A1 automatically joins the GC (GID 200). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
17)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
18)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_B1. The DCH in Cell_A1 is correctly re-leased.
19)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announce-ment of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
20)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
21)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announce-ment of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
22)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_B1 and Cell_A1. The uplink in Cell_A1 is correctly re-leased.
23)	MS_A2 moves form Cell_A1 to Cell_A1	After MS_A2 is out of coverage of Network A it performs a network reselection to Network B and receives the notification on the NCH about the REC (GID 299) in Cell_B1.
24)	MS_A2 automatically accepts the REC (GID 299).	After successful network reselection MS_A2 automatically joins the REC (GID 299) in group receive mode. GCCH in Cell_A1 and Cell_B1 for GC (GID 200) stays allocated.
25)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_B1, MS_B2 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announce-ment of CT_B1. MS_B1 and MS_B2 still able to listen to the announcement of CT_B1.

Step	Action	Expected result(s)
26)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_B1, MS_B2 and MS_A2 are able to listen to the announcement of CT_B1.
27)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_B1. MS_B1 and MS_B2 still able to listen to the announcement of CT_B1. CT_B1 still able to listen to the announcement of MS_A2.
28)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_B1 and uplink is correctly released.
29)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated. MS_A2 is re-notified about the ongoing GC (GID 200) in Cell_B1 on the NCH.
30)	MS_A2 automatically accepts the GC (GID 200).	MS_A2 automatically joins the GC (GID 200) in group receive mode.
31)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.
32)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
33)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
34)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_B1. The uplink in Cell_B1 is correctly released.
35)	MS_A1 releases the GC (GID 200).	GC (GID 200) is released. All related resources are de-allocated.

d) Success criteria

MS_B2 receives the notification after successful network selection from Network B to Network A on NCH about the REC (GID 299) in Cell_A1. MS_B2 automatically joins the REC (GID 299) in group receive mode.

MS_B2 is able to get the uplink on GCCH of the REC (GID 299) in Cell_A1.

MS_B2 is also able to get the uplink on GCCH of the GC (GID 200) in Cell_A1 after the REC (GID 299) is released.

MS_A2 receives the notification after successful network selection from Network A to Network B on NCH about the REC (GID 299) in Cell_B1. MS_A2 automatically joins the REC (GID 299) in group receive mode.

MS_A2 is able to get the uplink on GCCH of the REC (GID 299) in Cell_B1.

MS_A2 is also able to get the uplink on GCCH of the GC (GID 200) in Cell_B1 after the REC (GID 299) is released.

CT_A1 and CT_B1 are able to receive the Railway Emergency Call (REC) with GID 299 and Group Calls (GC) with GID 200. CT_A1 and CT_B1 are also able to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.17 LE group transmit mode (more than one MSC)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 13.2.2.7	2.5.1	

a) Purpose

Verify that mobile subscribers receive the in-band notification on the FACCH about ongoing Railway Emergency Calls (REC) and automatically join in group receive mode after successful handover in group transmit mode.

b) Test configuration / initial conditions

CT_A1 and CT_A2 are connected to network A.

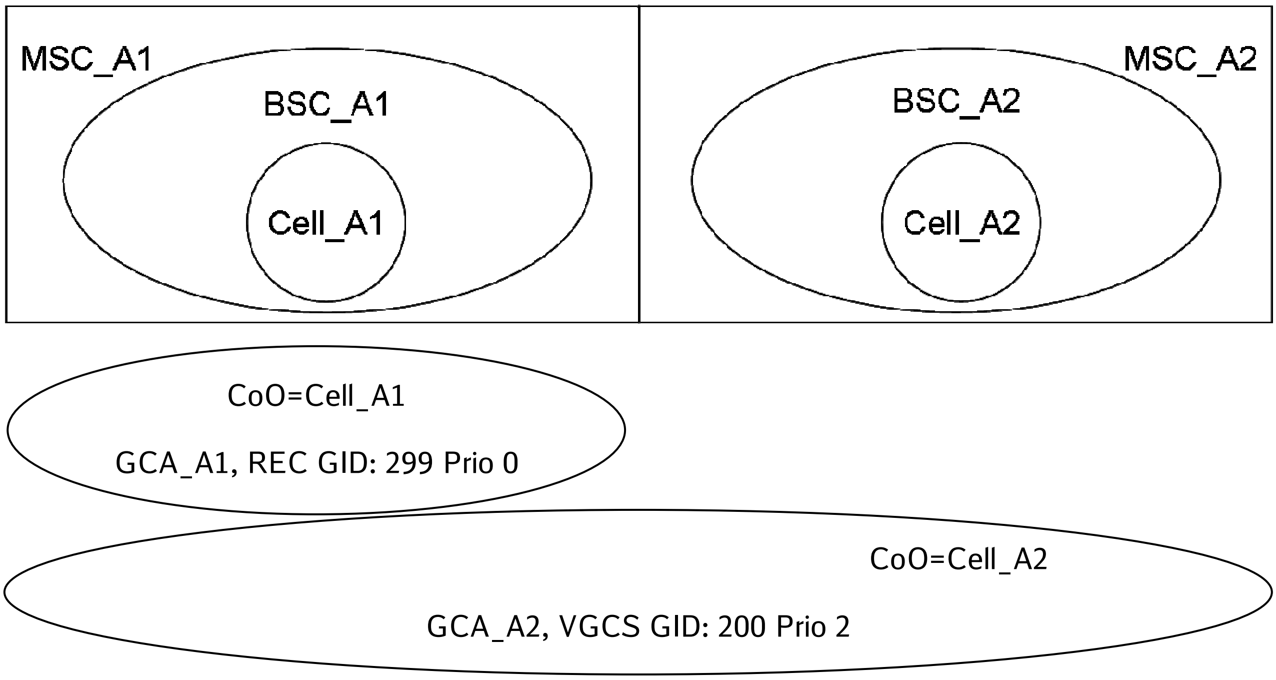
This test case has been divided into the following steps:

Step 1: LE in group transmit mode from MSC_A2 to MSC_A1.

Step 2: LE to group transmit mode from MSC_A1 to MSC_A2.

Test configuration for step 1

Network A



A-MSC_A1 (GCA_A1)	
R-MSC_A1 (GCA_A2)	**A-MSC_A2 (GCA_A2)**
MS_A1 (REC GID: 299)	MS_A3 (VGCS GID: 200)
MS_A2 (REC GID: 299)	MS_A4 (REC GID: 299, VGCS GID: 200)
CT_A1 (GCA_A1, REC GID: 299)	CT_A2 (GCA_A2, VGCS GID: 200)

c) Test procedure

Step 1: LE in group transmit mode from MSC_A2 to MSC_A1.

Step	Action	Expected result(s)
1)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. MS_A2 is notified about the incoming REC (GID 299) on the NCH. CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminal.
2)	MS_A2 automatically accepts the REC (GID 299).	MS_A2 automatically join the REC (GID 299) in group receive mode.

Step	Action	Expected result(s)
3)	CT_A1 automatically accepts the REC (GID 299).	CT_A1 automatically joins the REC (GID 299). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
4)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
5)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and the DCH is correctly released.
6)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
7)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
8)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
10)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.

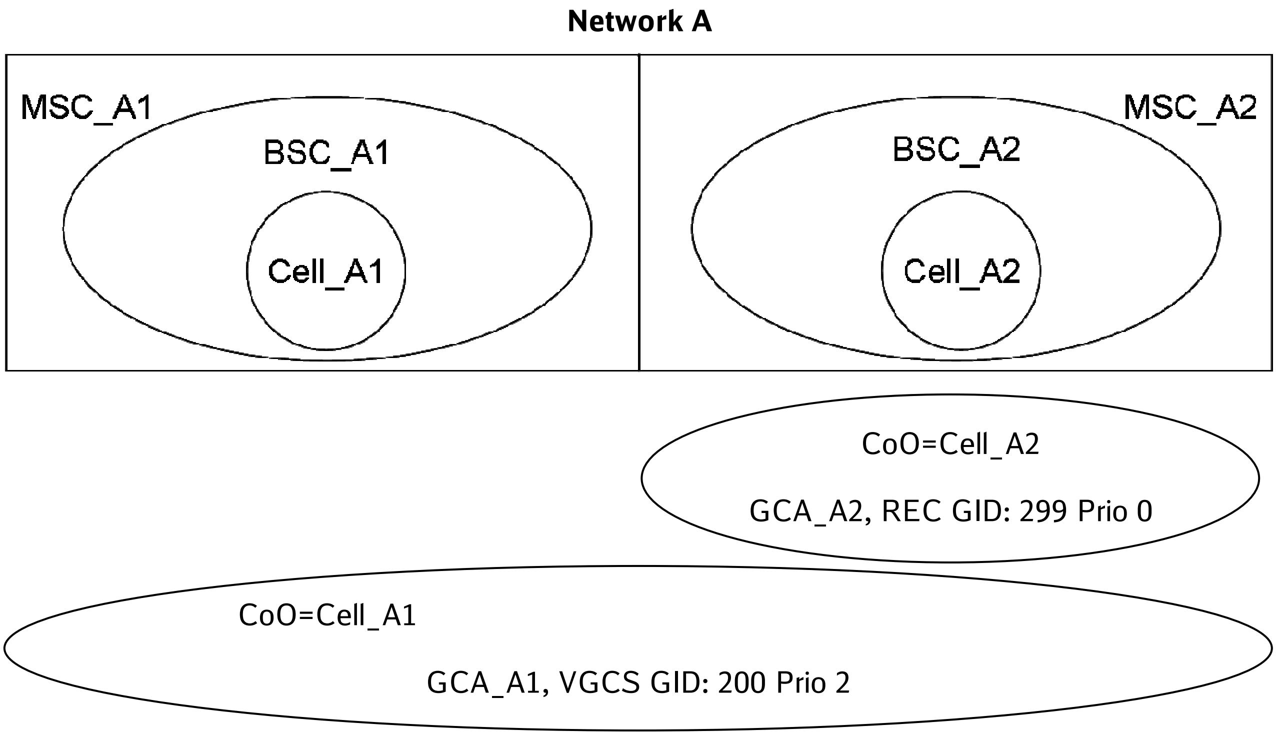
Step	Action	Expected result(s)
11)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
12)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
13)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
14)	MS_A3 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A2. A group call channel (GCCH) is allocated in Cell_A1. MS_A4 is notified about the incoming VGCS (GID 200) on the NCH. CT_A2 is notified about the incoming VGCS (GID 200) and the Group Call Reference is displayed on CT terminal. MS_A2 receives an in-band notification on FACCH about the incoming VGCS call (GID 200). MS_A2 did not respond to the notification, the priority of the VGCS call (GID 200) is lower than the priority of the REC (GID 299).
15)	MS_A4 automatically accepts the VGCS call (GID 200).	MS_A4 automatically joins the VGCS call (GID 200) in group receive mode.
16)	CT_A3 automatically accepts the VGCS call (GID 200).	CT_A2 automatically joins the VGCS call (GID 200). CT_A2 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A2.

Step	Action	Expected result(s)
17)	MS_A3 takes the uplink on DCH.	MS_A3 has voice path on DCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3.
18)	MS_A3 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_A2. The DCH in Cell_A2 is correctly re-leased.
19)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announce-ment of CT_A2. MS_A4 still able to listen to the announcement of CT_A2.
20)	CT_A2 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A2 sends set parameter message and MS_A3 un-mutes its downlink to get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.
21)	CT_A2 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A2 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announce-ment of CT_A2. MS_A4 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A3.
22)	MS_A3 releases the uplink on GCCH.	Uplink free message is sent in Cell_A2 and Cell_A1. The uplink in Cell_A2 is correctly re-leased.
23)	MS_A4 takes the uplink on GCCH and keep it.	MS_A4 has voice path on GCCH. MS_A3 and CT_A2 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announce-ment of CT_A2. MS_A3 still able to listen to the announcement of CT_A2.
24)	CT_A2 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A2 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.

Step	Action	Expected result(s)
25)	CT_A2 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A2 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A2. MS_A3 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A4.
26)	MS_A4 moves form Cell_A2 to Cell_A1	MS_A4 performs a handover from Cell_A2 to Cell_A1 and receives the in-band notification on the FACCH about the REC (GID 299) in Cell_A1.
27)	MS_A4 automatically accepts the REC (GID 299).	After successful handover MS_A4 automatically leaves the VGCS call (GID 200) and joins the REC (GID 299) in group receive mode. Uplink free message is sent for VGCS call (GID 200) in Cell_A1 and Cell_A2 and uplink is correctly released. GCCH in Cell_A1 and Cell_A2 for VGCS call (GID 200) stays allocated.
28)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. MS_A1, MS_A2 and CT_A1 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1.
29)	CT_A1 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2 and MS_A4 are able to listen to the announcement of CT_A1.
30)	CT_A1 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A4.
31)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.

Step	Action	Expected result(s)
32)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated. MS_A4 is re-notified about the ongoing VGCS call (GID 200) in Cell_A1 on the NCH.
33)	MS_A4 automatically accepts the VGCS call (GID 200).	MS_A4 automatically joins the VGCS call (GID 200) in group receive mode.
34)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. MS_A3 and CT_A2 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A2. MS_A3 still able to listen to the announcement of CT_A2.
35)	CT_A2 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A2 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A4 un-mutes its downlink get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.
36)	CT_A2 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A2 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A2. MS_A3 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A4.
37)	MS_A4 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_A2. The uplink in Cell_A1 is correctly released.
38)	MS_A3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released. All related resources are de-allocated.

Test configuration for step 2



	A-MSC_A2 (CGA_A2)
A-MSC_A1 (CGA_A1)	**R-MSC_A2 (CGA_A1)**
MS_A1 (VGCS GID: 200)	MS_A3 (REC GID: 299)
MS_A2 (REC GID: 299, VGCS GID: 200)	MS_A4 (REC GID: 299)
CT_A1 (GCA_A1, VGCS GID: 200)	CT_A2 (GCA_A2, REC GID: 299)

Test procedure

Step 2: LE to group transmit mode from MSC_A1 to MSC_A2.

Step	Action	Expected result(s)
1)	MS_A3 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A2. MS_A4 is notified about the incoming REC (GID 299) on the NCH. CT_A2 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminal.
2)	MS_A4 automatically accepts the REC (GID 299).	MS_A4 automatically joins the REC (GID 299) in group receive mode.

Step	Action	Expected result(s)
3)	CT_A2 automatically accepts the REC (GID 299).	CT_A2 automatically joins the REC (GID 299). CT_A2 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A2.
4)	MS_A3 takes the uplink on DCH.	MS_A3 has voice path on DCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3.
5)	MS_A3 releases the uplink on DCH.	Uplink free message is send in Cell_A2 and the DCH is correctly released.
6)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2.
7)	CT_A2 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A2 sends set parameter message and MS_A3 un-mutes its downlink to get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.
8)	CT_A2 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A2 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A3.
9)	MS_A3 releases the uplink on GCCH.	Uplink free message is send in Cell_A2 and uplink is correctly released.
10)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. MS_A3 and CT_A2 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A2. MS_A3 still able to listen to the announcement of CT_A2.

Step	Action	Expected result(s)
11)	CT_A2 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A2 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.
12)	CT_A2 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A2 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A2. MS_A3 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A4.
13)	MS_A4 releases the uplink on GCCH.	Uplink free message is sent in Cell_A2 and uplink is correctly released.
14)	MS_A1 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. A group call channel (GCCH) is allocated in Cell_A2. MS_A2 is notified about the incoming VGCS call (GID 200) on the NCH. CT_A1 is notified about the incoming VGCS call (GID 200) and the Group Call Reference is displayed on CT terminal. MS_A4 receives an in-band notification on FACCH about the incoming VGCS call (GID 200). MS_A2 did not respond to the notification, the priority of the GC (GID 200) is lower than the priority of the REC (GID 299).
15)	MS_A2 automatically accepts the VGCS call (GID 200).	MS_A2 automatically joins the VGCS call (GID 200) in group receive mode.
16)	CT_A1 automatically accepts the VGC S call (GID 200).	CT_A1 automatically joins the VGCS call (GID 200). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
17)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
18)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and Cell_A2. The DCH in Cell_A1 is correctly released.
19)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
20)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
21)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
22)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A2 and Cell_A1. The uplink in Cell_A1 is correctly released.
23)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.
24)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
25)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
26)	MS_A2 moves form Cell_A1 to Cell_A2.	MS_A2 performs a handover from Cell_A1 to Cell_A2 and receives the in-band notification on the FACCH about the REC (GID 299) in Cell_A2.
27)	MS_A2 automatically accepts the REC (GID 299).	After successful handover MS_A2 automatically leaves the VGCS call (GID 200) and joins the REC (GID 299) in group receive mode. Uplink free message is send for VGCS call (GID 200) in Cell_A1 and Cell_A2 and uplink is correctly released. GCCH in Cell_A1 and Cell_A2 for VGCS call (GID 200) stays allocated.
28)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A3, MS_A4 and CT_A2 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A2. MS_A3 and MS_A4 still able to listen to the announcement of CT_A2.
29)	CT_A2 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A2 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A3, MS_A4 and MS_A2 are able to listen to the announcement of CT_A2.
30)	CT_A2 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A2 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A2. MS_A3 and MS_A4 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A2.
31)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A2 and uplink is correctly released.

Step	Action	Expected result(s)
32)	MS_A3 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated. MS_A2 is re-notified about the ongoing VGCS call (GID 200) in Cell_A2 on the NCH.
33)	MS_A2 automatically accepts the VGCS call (GID 200).	MS_A2 automatically joins the VGCS call (GID 200) in group receive mode.
34)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.
35)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_A2. MSC_A2 sends set parameter message and MS_A2 un-mutes its downlink get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
36)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_A2. MSC_A2 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
37)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_A2. The uplink in Cell_A2 is correctly released.
38)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released. All related resources are de-allocated.

d) Success criteria

MS_A4 receives the in-band notification after successful handover from Cell_A2 to Cell_A1 on the FACCH about the REC (GID 299) in Cell_A1. MS_A4 automatically joins the REC (GID 299) in group receive mode.

MS_A4 is able to get the uplink on GCCH of the REC (GID 299) in Cell_A1.

MS_A4 is also able to get the uplink on GCCH.

MS_A3 is able to close the VGCS call (GID 200) after the REC (GID 299) is released.

MS_A2 receives the in-band notification after successful handover from Cell_A1 to Cell_A2 on the FACCH about the REC (GID 299) in Cell_A2. MS_A2 automatically joins the REC (GID 299) in group receive mode.

MS_A2 is able to get the uplink on GCCH of the REC (GID 299) in Cell_A2.

MS_A2 is also able to get the uplink on GCCH.

MS_A1 is able to close the VGCS call (GID 200) after the REC (GID 299) is released.

CT_A1 and CT_A2 are able to receive the Railway Emergency Call (REC) with GID 299 and VGCS calls with GID 200. CT_A1 and CT_A2 are also able to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.18 LE group mode, dedicated channel (more than one MSC)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 13.2.2.7	2.5.1	

a) Purpose

Verify that mobile subscribers receive the in-band notification on the FACCH about ongoing Railway Emergency Calls (REC) and automatically join in group receive mode after successful handover in group transmit mode on dedicated channel (DCH).

b) Test configuration / initial conditions

CT_A1 and CT_A2 are connected to network A.

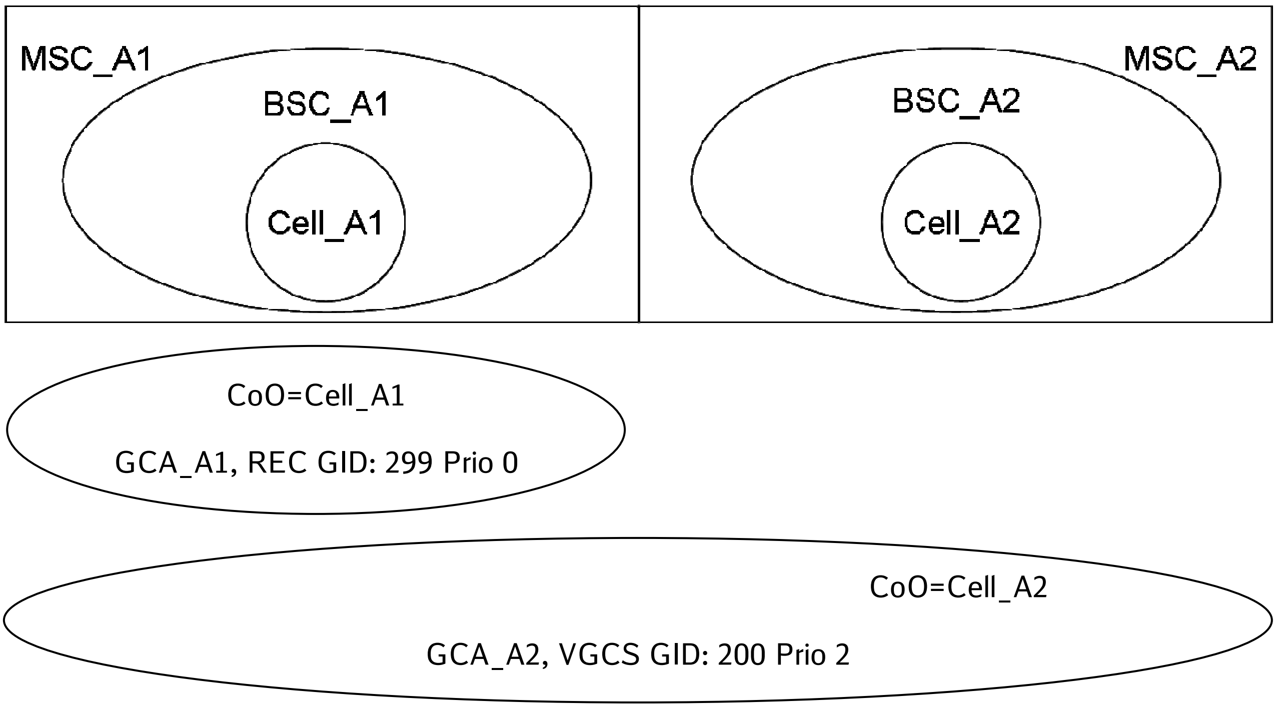
This test case has been divided into the following steps:

Step 1: LE in group mode on DCH from MSC_A2 to MSC_A1.

Step 2: LE to group mode on DCH from MSC_A1 to MSC_A2.

Test configuration for step 1

Network A



A-MSC_A1 (GCA_A1)	
R-MSC_A1 (GCA_A2)	**A-MSC_A2 (GCA_A2)**
MS_A1 (REC GID: 299)	MS_A3 (REC GID: 299. VGCS GID: 200)
MS_A2 (REC GID: 299)	MS_A4 (VGCS GID: 200)
CT_A1 (GCA_A1, REC GID: 299)	CT_A2 (GCA_A2, VGCS GID: 200)

c) Test procedure

Step 1: LE in group mode on DCH from MSC_A2 to MSC_A1.

Step	Action	Expected result(s)
1)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. MS_A2 is notified about the incoming REC (GID 299) on the NCH. CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminal.

Step	Action	Expected result(s)
2)	MS_A2 automatically accepts the REC (GID 299).	MS_A2 automatically joins the REC (GID 299) in group receive mode.
3)	CT_A1 automatically accepts the REC (GID 299).	CT_A1 automatically joins the REC (GID 299). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
4)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
5)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and the DCH is correctly released.
6)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
7)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
8)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.

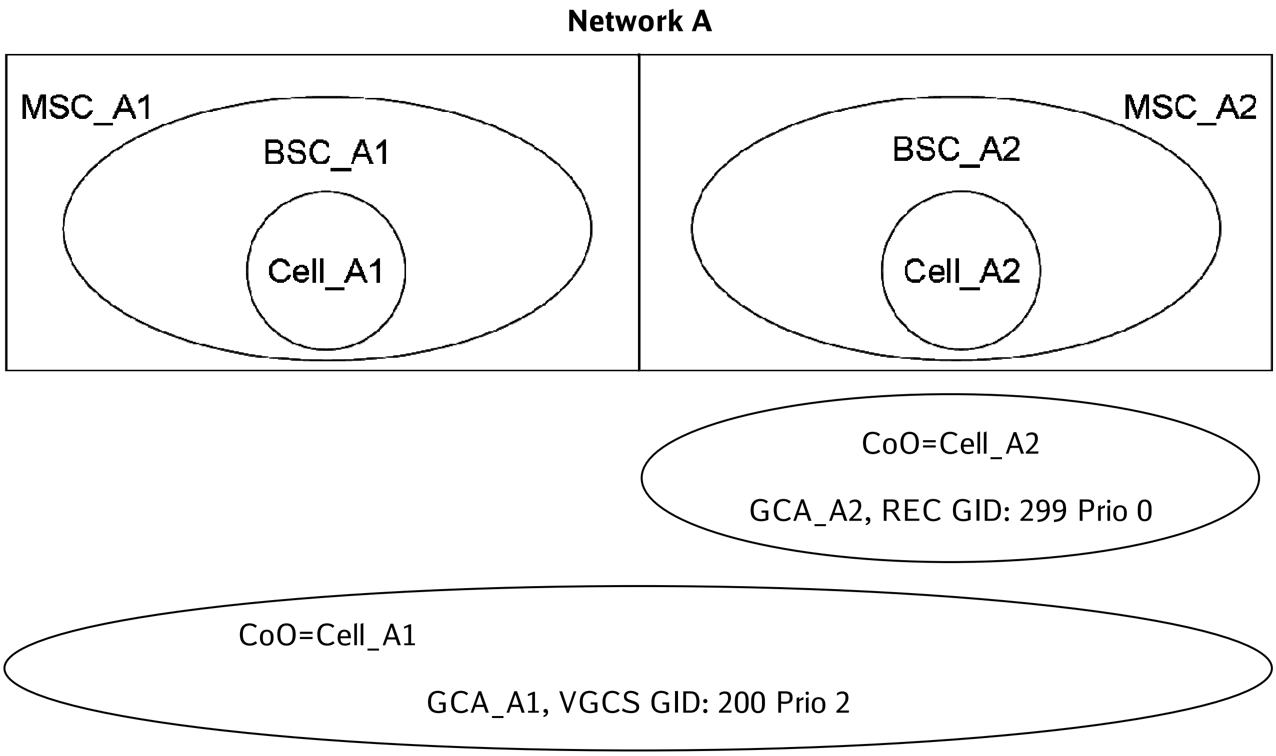
Step	Action	Expected result(s)
10)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.
11)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
12)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
13)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
14)	MS_A3 originates a GC (GID 200).	GC (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A2. A group call channel (GCCH) is allocated in Cell_A1. MS_A4 is notified about the incoming GC (GID 200) on the NCH. CT_A2 is notified about the incoming GC (GID 200) and the Group Call Reference is displayed on CT terminal.
15)	MS_A4 automatically accepts the GC (GID 200).	MS_A4 automatically joins the GC (GID 200) in group receive mode.
16)	CT_A2 automatically accepts the GC (GID 200).	CT_A2 automatically joins the GC (GID 200). CT_A2 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A2.

Step	Action	Expected result(s)
17)	MS_A3 takes the uplink on DCH and keeps it.	MS_A3 has voice path on DCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3.
18)	MS_A3 moves form Cell_A2 to Cell_A1	MS_A3 performs a handover on DCH from Cell_A2 to Cell_A1 and receives the in-band notification on the FACCH about the REC (GID 299) in Cell_A1.
19)	MS_A3 automatically accepts the REC (GID 299).	After successful handover on DCH, MS_A3 automatically leaves the GC (GID 200) and joins the REC (GID 299) in group receive mode. Uplink free message is sent for GC (GID 200) in Cell_A1 and Cell_A2. The DCH is correctly released. GCCH in Cell_A1 and Cell_A2 for GC (GID 200) stays allocated.
20)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A1, MS_A2 and CT_A1 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announce-ment of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1.
21)	CT_A1 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A3 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2 and MS_A3 are able to listen to the announcement of CT_A1.
22)	CT_A1 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announce-ment of CT_A1. MS_A1 and MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A3.
23)	MS_A3 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
24)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released. All related re-sources are de-allocated. MS_A3 is re-notified about the ongoing GC (GID 200) in Cell_A1 on the NCH.

Step	Action	Expected result(s)
25)	MS_A3 automatically accepts the GC (GID 200).	MS_A3 automatically joins the GC (GID 200) in group receive mode.
26)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. Talker flag is updated at MS_A3. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2.
27)	CT_A2 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A2 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A3 un-mutes its downlink and get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.
28)	CT_A2 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A2 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A3.
29)	MS_A3 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_A2. The uplink in Cell_A1 is correctly released.
30)	MS_A4 takes the uplink on GCCH and keep it.	MS_A4 has voice path on GCCH. MS_A3 and CT_A2 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A2. MS_A3 still able to listen to the announcement of CT_A2.
31)	CT_A2 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A2 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.

Step	Action	Expected result(s)
32)	CT_A2 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A2 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A2. MS_A3 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A4.
33)	MS_A3 releases the uplink on GCCH.	Uplink free message is sent in Cell_A1 and Cell_A2. The uplink in Cell_A1 is correctly released.
34)	MS_A3 releases the GC (GID 200).	GC (GID 200) is released. All related resources are de-allocated.

Test configuration for step 2



	A-MSC_A2 (GCA_A2)
A-MSC_A1 (GCA_A1)	**R-MSC_A2 (GCA_A1)**
MS_A1 (REC GID: 299, VGCS GID: 200)	MS_A3 (REC GID: 299)
MS_A2 (VGCS GID: 200)	MS_A4 (REC GID: 299)
CT_A1 (GCA_A1, VGCS GID: 200)	CT_A2 (GCA_A2, REC GID: 299)

Test procedure

Step 2: LE to group mode on DCH from MSC_A1 to MSC_A2.

Step	Action	Expected result(s)
1)	MS_A3 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A2. MS_A4 is notified about the incoming REC (GID 299) on the NCH. CT_A2 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on CT terminal.

Step	Action	Expected result(s)
2)	MS_A4 automatically accepts the REC (GID 299).	MS_A4 automatically joins the REC (GID 299) in group receive mode.
3)	CT_A2 automatically accepts the REC (GID 299).	CT_A2 automatically joins the REC (GID 299). CT_A3 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A2.
4)	MS_A3 takes the uplink on DCH.	MS_A3 has voice path on DCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3.
5)	MS_A3 releases the uplink on DCH.	Uplink free message is sent in Cell_A3 and the DCH is correctly released.
6)	MS_A3 takes the uplink on GCCH.	MS_A3 has voice path on GCCH. MS_A4 and CT_A2 are able to listen to the announcement of MS_A3. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A2.
7)	CT_A2 un-mutes the downlink to MS_A3 by using the un-mute sequence (dialling ###).	MSC_A2 sends set parameter message and MS_A3 un-mutes its downlink to get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.
8)	CT_A2 mutes the downlink to MS_A3 by using the mute sequence (dialling #**).	MSC_A2 sends set parameter message and MS_A3 mutes its downlink. MS_A3 is not able to listen to the announcement of CT_A2. MS_A4 still able to listen to the announcement of CT_A3. CT_A2 still able to listen to the announcement of MS_A3.
9)	MS_A3 releases the uplink on GCCH.	Uplink free message is sent in Cell_A2 and uplink is correctly released.

Step	Action	Expected result(s)
10)	MS_A4 takes the uplink on GCCH.	MS_A4 has voice path on GCCH. MS_A3 and CT_A2 are able to listen to the announcement of MS_A4. MS_A4 is not able to listen to the announcement of CT_A2. MS_A3 still able to listen to the announcement of CT_A2.
11)	CT_A2 un-mutes the downlink to MS_A4 by using the un-mute sequence (dialling ###).	MSC_A2 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH. MS_A3 and MS_A4 are able to listen to the announcement of CT_A2.
12)	CT_A2 mutes the downlink to MS_A4 by using the mute sequence (dialling #**).	MSC_A2 sends set parameter message and MS_A4 mutes its downlink. MS_A4 is not able to listen to the announcement of CT_A2. MS_A3 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A4.
13)	MS_A4 releases the uplink on GCCH.	Uplink free message is sent in Cell_A2 and uplink is correctly released.
14)	MS_A1 originates a GC (GID 200).	GC (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. A group call channel (GCCH) is allocated in Cell_A2. MS_A2 is notified about the incoming GC (GID 200) on the NCH. CT_A1 is notified about the incoming GC (GID 200) and the Group Call Reference is displayed on CT terminal.
15)	MS_A2 automatically accepts the GC (GID 200).	MS_A2 automatically joins the GC (GID 200) in group receive mode.
16)	CT_A1 automatically accepts the GC (GID 200).	CT_A1 automatically joins the GC (GID 200). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
17)	MS_A1 takes the uplink on DCH and keep it.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
18)	MS_A1 moves form Cell_A1 to Cell_A2	MS_A1 performs a handover from Cell_A1 to Cell_A2 and receives the in-band notification on the FACCH about the REC (GID 299) in Cell_A2.
19)	MS_A1 automatically accepts the REC (GID 299).	After successful handover on DCH, MS_A1 automatically leaves the GC (GID 200) and joins the REC (GID 299) in group receive mode. Uplink free message is send for GC (GID 200) in Cell_A1 and Cell_A2. The DCH is correctly released. GCCH in Cell_A1 and Cell_A2 for GC (GID 200) stays allocated.
20)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A3, MS_A4 and CT_A2 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A2. MS_A3 and MS_A4 still able to listen to the announcement of CT_A2.
21)	CT_A2 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A2 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A3, MS_A4 and MS_A1 are able to listen to the announcement of CT_A2.
22)	CT_A2 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A2 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A2. MS_A3 and MS_A4 still able to listen to the announcement of CT_A2. CT_A2 still able to listen to the announcement of MS_A1.
23)	MS_A1 releases the uplink on GCCH.	Uplink free message is sent in Cell_A2 and uplink is correctly released.
24)	MS_A3 releases the REC (GID 299).	REC (GID 299) is released. All related resources are de-allocated. MS_A1 is re-notified about the ongoing GC (GID 200) in Cell_A2 on the NCH.

Step	Action	Expected result(s)
25)	MS_A1 automatically accepts the GC (GID 200).	MS_A1 automatically joins the GC (GID 200) in group receive mode.
26)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. Talker flag is updated at MS_A1. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
27)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_A2. MSC_A2 sends set parameter message and MS_A1 un-mutes its downlink get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
28)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_A2. MSC_A2 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
29)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and Cell_A2. The uplink in Cell_A2 is correctly released.
30)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.
31)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
32)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
33)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
34)	MS_A1 releases the GC (GID 200).	GC (GID 200) is released. All related resources are de-allocated.

d) Success criteria

MS_A3 receives the in-band notification after successful handover from Cell_A2 to Cell_A1 on the FACCH about the REC (GID 299) in Cell_A1. MS_A3 automatically joins the REC (GID 299) in group receive mode.

MS_A3 is able to get the uplink on GCCH of the REC (GID 299) in Cell_A1.

MS_A3 is also able to get the uplink on GCCH and to close the GC (GID 200) after the REC (GID 299) is released.

MS_A1 receives the in-band notification after successful handover from Cell_A1 to Cell_A2 on the FACCH about the REC (GID 299) in Cell_A2. MS_A1 automatically joins the REC (GID 299) in group receive mode.

MS_A1 is able to get the uplink on GCCH of the REC (GID 299) in Cell_A2.

MS_A1 is also able to get the uplink on GCCH and to close the GC (GID 200) after the REC (GID 299) is released.

CT_A1 and CT_A2 are able to receive the Railway Emergency Call (REC) with GID 299 and Group Calls (GC) with GID 200. CT_A1 and CT_A2 are also able to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.19 REC call is taken down due to expiry of 'No activity' timer.

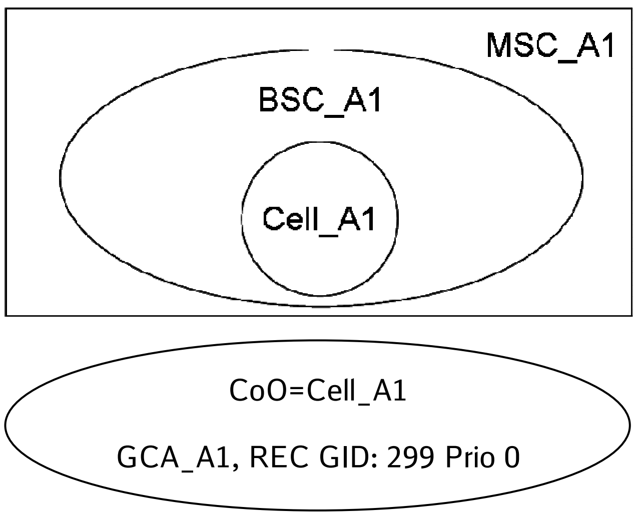
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.5.1 13.2.4.1		

a) Purpose

Verify that a Railway Emergency Call (REC) is released after expiration of the 'No activity' timer.

b) Test configuration / initial conditions

Network A



MS_A1 (REC GID: 299)
MS_A2 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. MS_A2 receives notification of the incoming REC (GID 299) on the NCH. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 automatically accepts the incoming REC (GID 299).	MS_A2 automatically join the REC (GID 299).
3)	MS_A1 takes the uplink on the group call channel.	MS_A1 has two-way voice path, MS_A2 is only listener.
4)	MS_A1 releases the uplink.	The uplink is correctly released.
5)	Wait until expiration of ‘No activity’ timer.	The REC (GID 299) is released after expiration of the ‘No activity’ timer and all resources are correctly de-allocated.

d) Success criteria

The Railway Emergency Call (REC) with GID 299 is correctly released after expiration of the ‘No activity’ timer.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

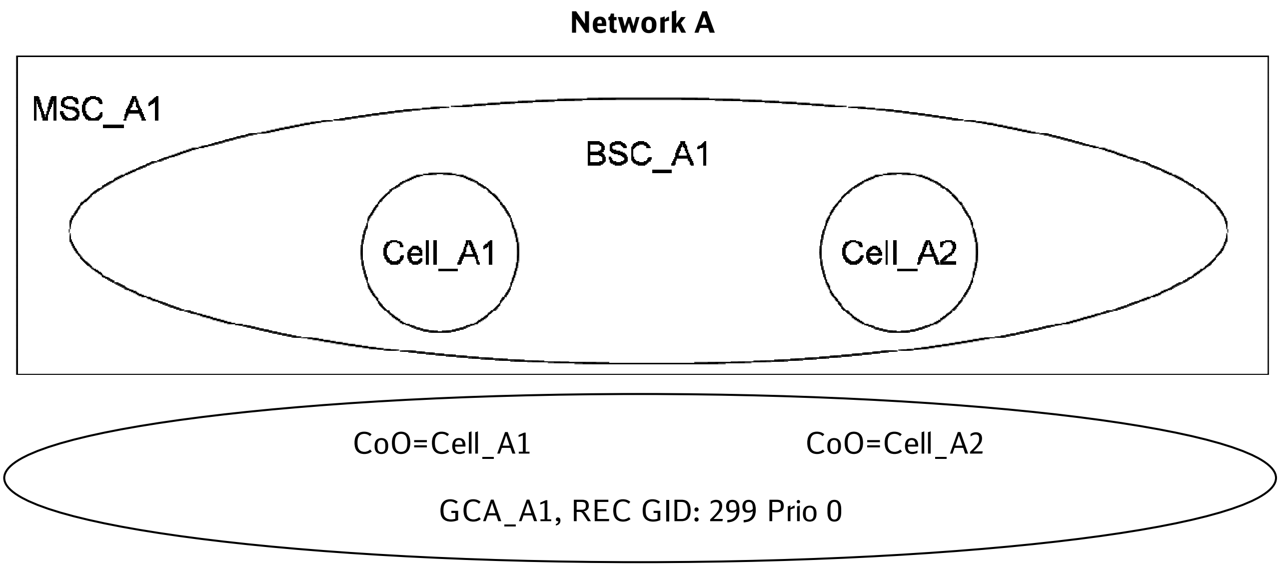
5.6.20 REC first talker notification (MS dedicated mode, incoming PTP call, non roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.5.1 5.2.2.43	5.5.19 5.5.20 5.5.21 14.3.3	

a) Purpose

Verify that a REC (GID 299) first talker on dedicated channel get a notification about an incoming PTP call.

b) Test configuration / initial conditions



Cell_A1	Cell_A2
MS_A1 (REC GID: 299)	MS_A3 (REC GID: 299)
MS_A2 (REC GID: 299)	MS_A4 (no VGCS / VBS subscriber)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2, MS_A3 receives a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2, MS_A3 automatically accepts the incoming REC (GID 299).	MS_A2, MS_A3 joins REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_A3 is able to listen to the announcement of MS_A1.
4)	MS_A4 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A4. MS_A1 advertise the incoming PTP call from MS_A4 optically and acoustically.
5)	MS_A1 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
6)	MS_A1 releases the uplink.	The uplink is correctly released.
7)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
8)	Repeat from step 1 to 7 with priority 3 for the PTP call.	

d) Success criteria

The REC (GID 299) first talker on the dedicated channel is able to receive notification about an incoming PTP call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.21 REC first talker notification (MS dedicated mode, incoming VGCS call, non roaming case)

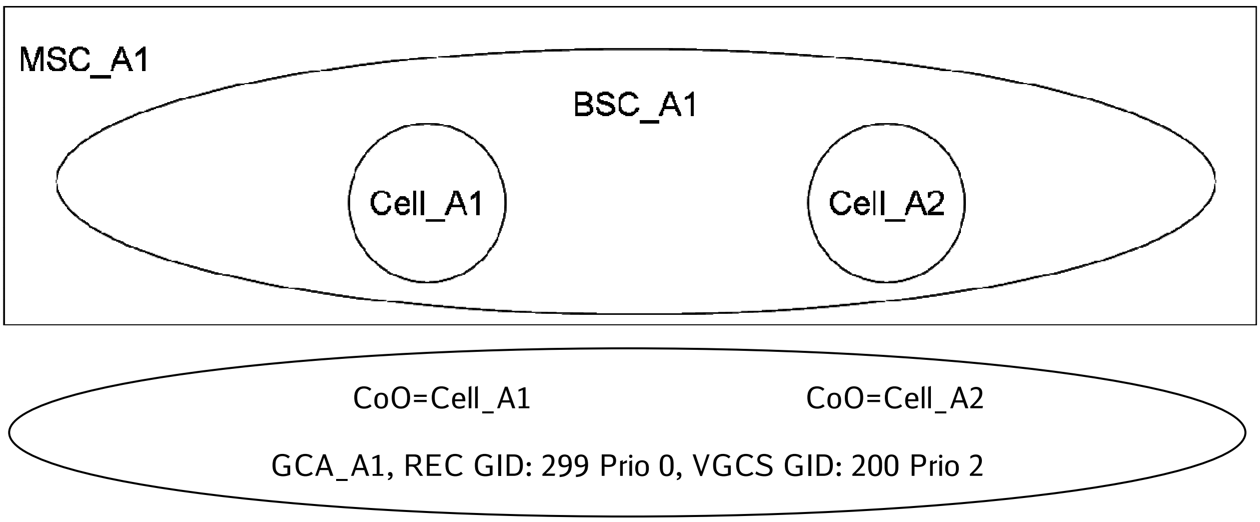
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.5.1 5.2.2.47	5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a REC (GID 299) first talker on dedicated channel get a notification about an incoming VGCS call.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (REC GID: 299, VGCS GID: 200)	MS_A3 (VGCS GID: 200)
MS_A2 (REC GID: 299)	

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 receives a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 automatically accepts the incoming REC (GID 299).	MS_A2 joins REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2 is able to listen to the announcement of MS_A1.
4)	Service subscriber MS_A3 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1. MS_A1 receives an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A1 don't accept the incoming VGCS call (GID 200).	
6)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_A2.
7)	MS_A3 terminates the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_A2.
9)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priorities 3 and 4 for the VGCS call.	

d) Success criteria

The REC (GID 299) first talker on the dedicated channel is able to receive notification about an incoming VGCS call (GID 200).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.22 REC first talker notification (MS dedicated mode, incoming VBS call, non roaming case)

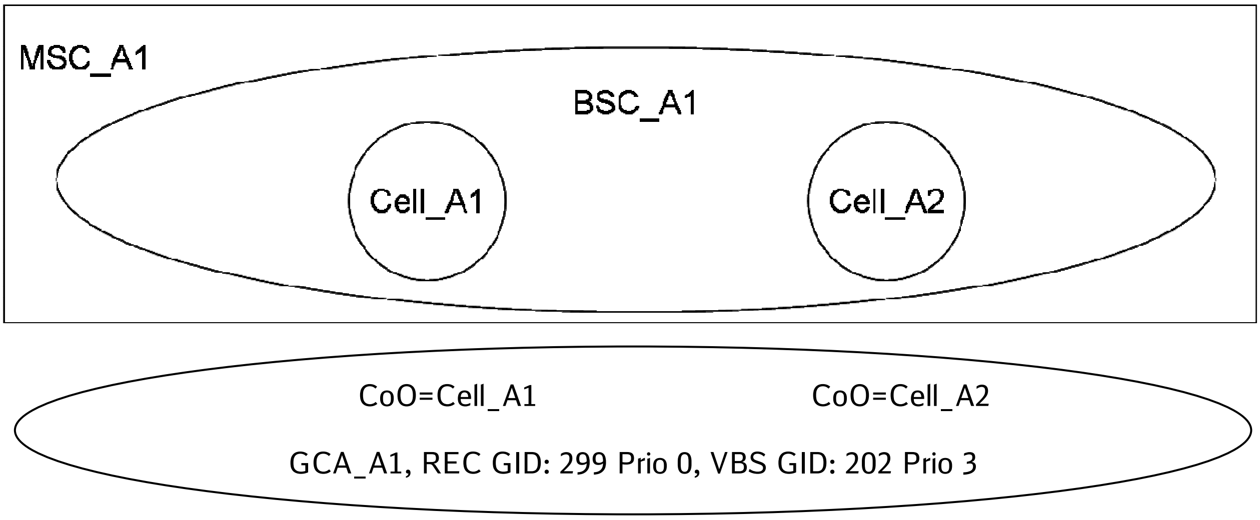
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.5.1 5.2.2.47	5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a REC (GID 299) first talker on dedicated channel get a notification about an incoming VBS call (GID 202).

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (REC GID: 299, VBS GID: 202)	MS_A3 (VBS GID: 202)
MS_A2 (REC GID: 299)	

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 receives a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 automatically accepts the incoming REC (GID 299).	MS_A2 joins REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2 is able to listen to the announcement of MS_A1.
4)	Service subscriber MS_A3 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A2. MS_A1 receive an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A1 don't accept the incoming VBS call (GID 202).	
6)	MS_A3 terminates the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_A2.
8)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
9)	Repeat from step 1 to 8 with priority 4 for the VBS call (GID 202).	

d) Success criteria

The REC (GID 299) first talker on the dedicated channel is able to receive notification about an incoming VBS call (GID 202).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.23 REC first talker notification (MS dedicated mode, incoming PTP call, roaming)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.5.1 5.2.2.43	5.5.19 5.5.20 5.5.21 14.3.3	

a) Purpose

Verify that a REC (GID 299) first talker on dedicated channel get a notification about an incoming PTP call. This should be verified in different networks (roaming).

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: MS of network A in HPLMN call MS of network A (REC originator) in HPLMN (MSC_A1 anchor).

Step 2: MS of network A in HPLMN call MS of network B (REC originator) in VPLMN (MSC_A1 anchor).

Step 3: MS of network A in HPLMN call MS of network B (REC originator) in HPLMN (MSC_A1 anchor).

Step 4: MS of network A in HPLMN call MS of network A (REC originator) in VPLMN (MSC_A1 anchor).

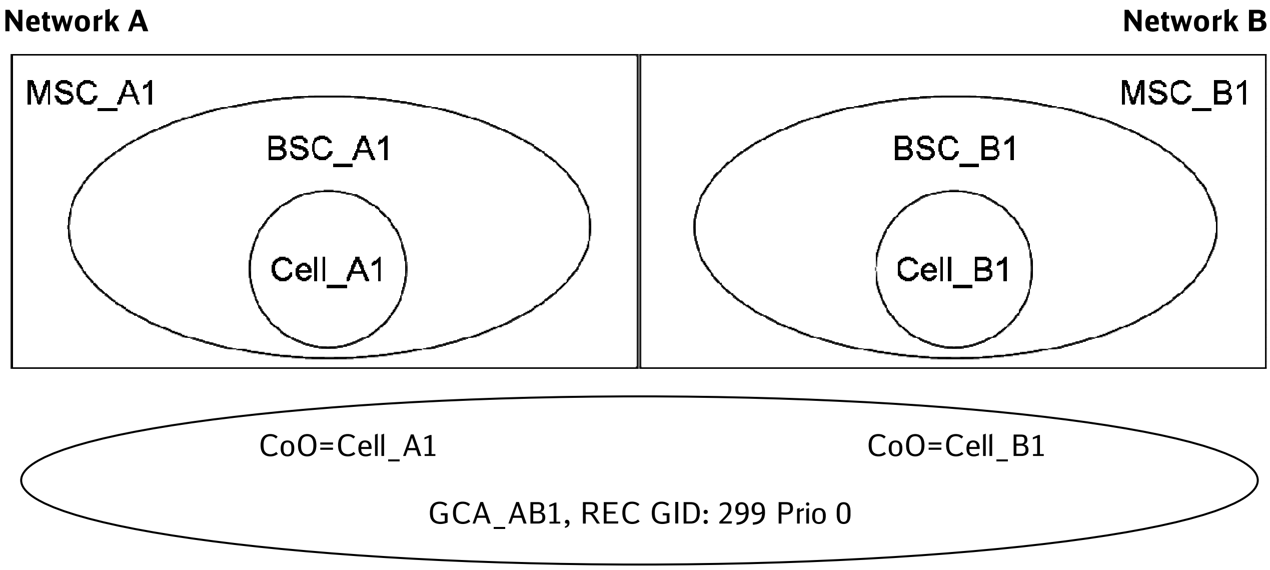
Step 5: MS of network A in HPLMN call MS of network A (REC originator) in HPLMN (MSC_B1 anchor).

Step 6: MS of network A in HPLMN call MS of network B (REC originator) in VPLMN (MSC_B1 anchor).

Step 7: MS of network A in HPLMN call MS of network B (REC originator) in HPLMN (MSC_B1 anchor).

Step 8: MS of network A in HPLMN call MS of network A (REC originator) in VPLMN (MSC_B1 anchor).

Test configuration for step 1 to 4



A-MSC_A1	**R-MSC_B1**
MS_A1 (REC GID: 299)	MS_B1 (REC GID: 299)
MS_A2 (no VGCS / VBS subscriber)	MS_B2 (no VGCS / VBS subscriber)
MS_B3 (REC GID: 299)	MS_A3 (REC GID: 299)
MS_B4 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)

c) Test procedure

Step 1: MS of network A in HPLMN call MS of network A (REC originator) in HPLMN (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).

Step	Action	Expected result(s)
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_A2 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A2. MS_A1 advertise the incoming PTP call from MS_A2 optically and acoustically.
5)	MS_A1 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
6)	MS_B4 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_B4. MS_A1 advertise the incoming PTP call from MS_B4 optically and acoustically.
7)	MS_A1 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
8)	MS_B2 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_B2. MS_A1 advertise the incoming PTP call from MS_B2 optically and acoustically.
9)	MS_A1 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
10)	MS_A4 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A4. MS_A1 advertise the incoming PTP call from MS_A4 optically and acoustically.
11)	MS_A1 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
12)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
13)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
14)	Repeat from step 1 to 13 with priority 3 for the PTP calls.	

Step 2: MS of network A in HPLMN call MS of network B (REC originator) in VPLMN (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_B1 and MS_A3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_A3 automatically accept the incoming REC (GID 299).	MS_A1, MS_B1 and MS_A3 join REC (GID 299).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_B1 and MS_A3 are able to listen to the announcement of MS_B3.
4)	MS_A2 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A2. MS_B3 advertise the incoming PTP call from MS_A2 optically and acoustically.
5)	MS_B3 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
6)	MS_B4 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_B4. MS_B3 advertise the incoming PTP call from MS_B4 optically and acoustically.
7)	MS_B3 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
8)	MS_B2 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_B2. MS_B3 advertise the incoming PTP call from MS_B2 optically and acoustically.
9)	MS_B3 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.

Step	Action	Expected result(s)
10)	MS_A4 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A4. MS_B3 advertise the incoming PTP call from MS_A4 optically and acoustically.
11)	MS_B3 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
12)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
13)	MS_B3 releases the REC call.	REC (GID 299) is released successfully and all resources are correctly de-allocated.
14)	Repeat from step 1 to 13 with priority 3 for the PTP calls.	

Step 3: MS of network A in HPLMN call MS of network B (REC originator) in HPLMN (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_A2 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A2. MS_B1 advertise the incoming PTP call from MS_A2 optically and acoustically.
5)	MS_B1 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.

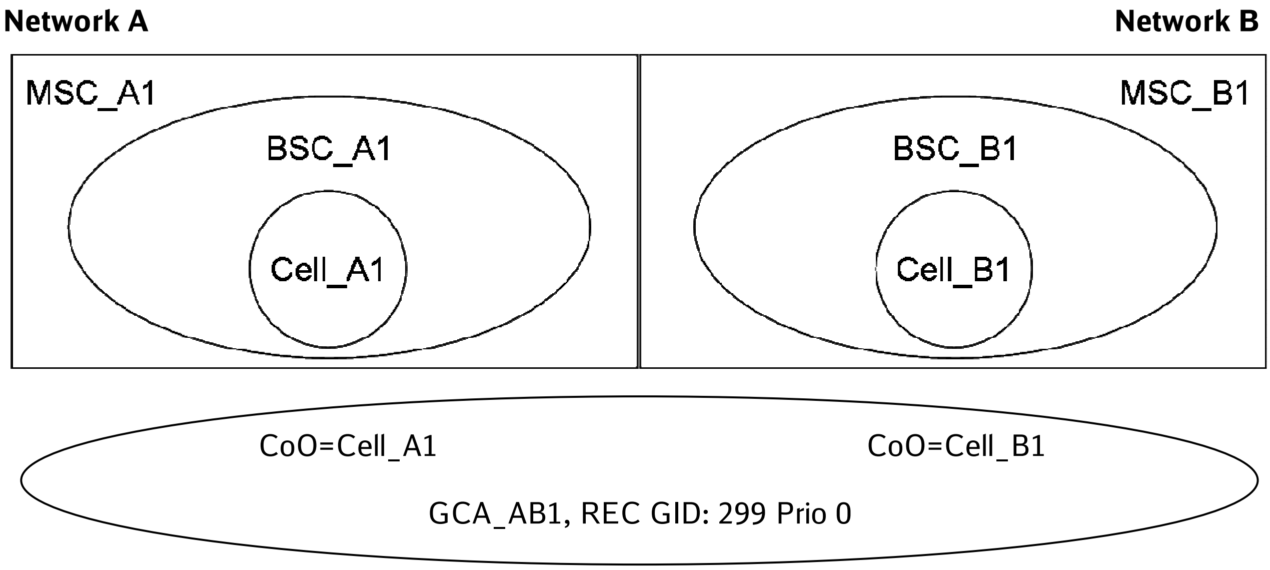
Step	Action	Expected result(s)
6)	MS_B4 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_B4. MS_B1 advertise the incoming PTP call from MS_B4 optically and acoustically.
7)	MS_B1 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
8)	MS_B2 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_B2. MS_B1 advertise the incoming PTP call from MS_B2 optically and acoustically.
9)	MS_B1 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
10)	MS_A4 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A4. MS_B1 advertise the incoming PTP call from MS_A4 optically and acoustically.
11)	MS_B1 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
12)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
13)	MS_B1 releases the REC call.	REC (GID 299) is released successfully and all resources are correctly de-allocated.
14)	Repeat from step 1 to 13 with priority 3 for the PTP calls.	

Step 4: MS of network A in HPLMN call MS of network A (REC originator) in VPLMN (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B3 and MS_B1 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B3 and MS_B1 automatically accept the incoming REC (GID 299).	MS_A1, MS_B3 and MS_B1 join REC (GID 299).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B3 and MS_B1 are able to listen to the announcement of MS_A3.
4)	MS_A2 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A2. MS_A3 advertise the incoming PTP call from MS_A2 optically and acoustically.
5)	MS_A3 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
6)	MS_B4 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_B4. MS_A3 advertise the incoming PTP call from MS_B4 optically and acoustically.
7)	MS_A3 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
8)	MS_B2 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_B2. MS_A3 advertise the incoming PTP call from MS_B2 optically and acoustically.
9)	MS_A3 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.

Step	Action	Expected result(s)
10)	MS_A4 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A4. MS_A3 advertise the incoming PTP call from MS_A4 optically and acoustically.
11)	MS_A3 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
12)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
13)	MS_A3 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
14)	Repeat from step 1 to 13 with priority 3 for the PTP calls.	

Test configuration for step 5 to 8



R-MSC_A1	**A-MSC_B1**
MS_A1 (REC GID: 299)	MS_B1 (REC GID: 299)
MS_A2 (no VGCS / VBS subscriber)	MS_B2 (no VGCS / VBS subscriber)
MS_B3 (REC GID: 299)	MS_A3 (REC GID: 299)
MS_B4 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)

Test procedure

Step 5: MS of network A in HPLMN call MS of network A (REC originator) in HPLMN (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).

Step	Action	Expected result(s)
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_A2 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A2. MS_A1 advertise the incoming PTP call from MS_A2 optically and acoustically.
5)	MS_A1 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
6)	MS_B4 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_B4. MS_A1 advertise the incoming PTP call from MS_B4 optically and acoustically.
7)	MS_A1 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
8)	MS_B2 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_B2. MS_A1 advertise the incoming PTP call from MS_B2 optically and acoustically.
9)	MS_A1 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
10)	MS_A4 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A4. MS_A1 advertise the incoming PTP call from MS_A4 optically and acoustically.
11)	MS_A1 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
12)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
13)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
14)	Repeat from step 1 to 13 with priority 3 for the PTP calls.	

Step 6: MS of network A in HPLMN call MS of network B (REC originator) in VPLMN (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_B1 and MS_A3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_A3 automatically accept the incoming REC (GID 299).	MS_A1, MS_B1 and MS_A3 join REC (GID 299).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_B1 and MS_A3 are able to listen to the announcement of MS_B3.
4)	MS_A2 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A2. MS_B3 advertise the incoming PTP call from MS_A2 optically and acoustically.
5)	MS_B3 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
6)	MS_B4 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_B4. MS_B3 advertise the incoming PTP call from MS_B4 optically and acoustically.
7)	MS_B3 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
8)	MS_B2 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_B2. MS_B3 advertise the incoming PTP call from MS_B2 optically and acoustically.
9)	MS_B3 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.

Step	Action	Expected result(s)
10)	MS_A4 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A4. MS_B3 advertise the incoming PTP call from MS_A4 optically and acoustically.
11)	MS_B3 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
12)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
13)	MS_B3 releases the REC call.	REC (GID 299) is released successfully and all resources are correctly de-allocated.
14)	Repeat from step 1 to 13 with priority 3 for the PTP calls.	

Step 7: MS of network A in HPLMN call MS of network B (REC originator) in HPLMN (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_A2 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A2. MS_B1 advertise the incoming PTP call from MS_A2 optically and acoustically.
5)	MS_B1 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.

Step	Action	Expected result(s)
6)	MS_B4 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_B4. MS_B1 advertise the incoming PTP call from MS_B4 optically and acoustically.
7)	MS_B1 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
8)	MS_B2 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_B2. MS_B1 advertise the incoming PTP call from MS_B2 optically and acoustically.
9)	MS_B1 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
10)	MS_A4 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A4. MS_B1 advertise the incoming PTP call from MS_A4 optically and acoustically.
11)	MS_B1 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
12)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
13)	MS_B1 releases the REC call.	REC (GID 299) is released successfully and all resources are correctly de-allocated.
14)	Repeat from step 1 to 13 with priority 3 for the PTP calls.	

Step 8: MS of network A in HPLMN call MS of network A (REC originator) in VPLMN (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B3 and MS_B1 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B3 and MS_B1 automatically accept the incoming REC (GID 299).	MS_A1, MS_B3 and MS_B1 join REC (GID 299).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B3 and MS_B1 are able to listen to the announcement of MS_A3.
4)	MS_A2 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A2. MS_A3 advertise the incoming PTP call from MS_A2 optically and acoustically.
5)	MS_A3 don’t accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
6)	MS_B4 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_B4. MS_A3 advertise the incoming PTP call from MS_B4 optically and acoustically.
7)	MS_A3 don’t accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
8)	MS_B2 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_B2. MS_A3 advertise the incoming PTP call from MS_B2 optically and acoustically.
9)	MS_A3 don’t accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.

Step	Action	Expected result(s)
10)	MS_A4 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on the FACCH channel about the incoming PTP call from MS_A4. MS_A3 advertise the incoming PTP call from MS_A4 optically and acoustically.
11)	MS_A3 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
12)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
13)	MS_A3 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
14)	Repeat from step 1 to 13 with priority 3 for the PTP calls.	

d) Success criteria

The REC (GID 299) first talker on the dedicated channel is able to receive notification about an incoming PTP call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.24 REC first talker notification (MS dedicated mode, incoming VGCS call, roaming)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.5.1 5.2.2.47	5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a REC (REC) first talker on dedicated channel get a notification about an incoming VGCS CALL (GID 200) call. This should be verified in different networks (roaming).

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: MS of network A in HPLMN originates a REC and MS of network A in HPLMN originates a VGCS (MSC_A1 anchor).

Step 2: MS of network B in VPLMN originates a REC and MS of network A in HPLMN originates a VGCS (MSC_A1 anchor).

Step 3: MS of network A in HPLMN originates a REC and MS of network B in VPLMN originates a VGCS (MSC_A1 anchor).

Step 4: MS of network B in VPLMN originates a REC and MS of network B in VPLMN originates a VGCS (MSC_A1 anchor).

Step 5: MS of network B in HPLMN originates a REC and MS of network B in HPLMN originates a VGCS (MSC_A1 anchor).

Step 6: MS of network A in VPLMN originates a REC and MS of network B in HPLMN originates a VGCS (MSC_A1 anchor).

Step 7: MS of network B in HPLMN originates a REC and MS of network A in VPLMN originates a VGCS (MSC_A1 anchor).

Step 8: MS of network A in VPLMN originates a REC and MS of network A in VPLMN originates a VGCS (MSC_A1 anchor).

Step 9: MS of network A in HPLMN originates a REC and MS of network A in VPLMN originates a VGCS (MSC_A1 anchor).

Step 10: MS of network A in HPLMN originates a REC and MS of network B in HPLMN originates a VGCS (MSC_A1 anchor).

Step 11: MS of network B in HPLMN originates a REC and MS of network B in VPLMN originates a VGCS (MSC_A1 anchor).

Step 12: MS of network B in HPLMN originates a REC and MS of network A in HPLMN originates a VGCS (MSC_A1 anchor).

Step 13: MS of network A in HPLMN originates a REC and MS of network A in HPLMN originates a VGCS (MSC_B1 anchor).

Step 14: MS of network B in VPLMN originates a REC and MS of network A in HPLMN originates a VGCS (MSC_B1 anchor).

Step 15: MS of network A in HPLMN originates a REC and MS of network B in VPLMN originates a VGCS (MSC_B1 anchor).

Step 16: MS of network B in VPLMN originates a REC and MS of network B in VPLMN originates a VGCS (MSC_B1 anchor).

Step 17: MS of network B in HPLMN originates a REC and MS of network B in HPLMN originates a VGCS (MSC_B1 anchor).

Step 18: MS of network A in VPLMN originates a REC and MS of network B in HPLMN originates a VGCS (MSC_B1 anchor).

Step 19: MS of network B in HPLMN originates a REC and MS of network A in VPLMN originates a VGCS (MSC_B1 anchor).

Step 20: MS of network A in VPLMN originates a REC and MS of network A in VPLMN originates a VGCS (MSC_B1 anchor).

Step 21: MS of network A in HPLMN originates a REC and MS of network A in VPLMN originates a VGCS (MSC_B1 anchor).

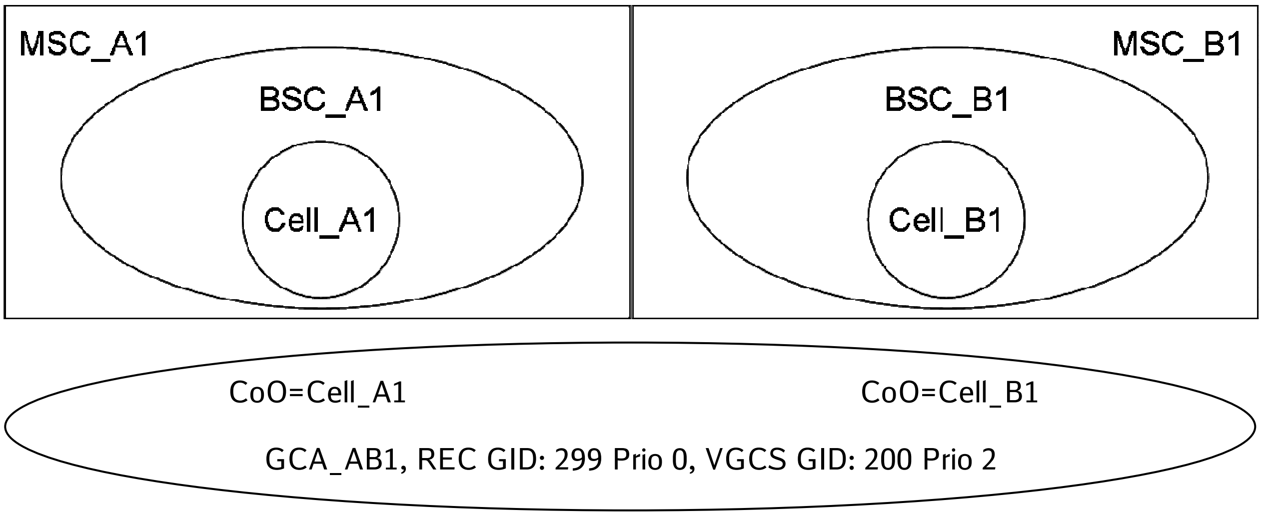
Step 22: MS of network A in HPLMN originates a REC and MS of network B in HPLMN originates a VGCS (MSC_B1 anchor).

Step 23: MS of network B in HPLMN originates a REC and MS of network B in VPLMN originates a VGCS (MSC_B1 anchor).

Step 24: MS of network B in HPLMN originates a REC and MS of network A in HPLMN originates a VGCS (MSC_B1 anchor).

Test configuration for step 1 to 12

Network A **Network B**



A-MSC_A1	**R-MSC_B1**
MS_A1 (REC GID: 299, VGCS GID:200)	MS_B1 (REC GID: 299, VGCS GID:200)
MS_A2 (VGCS GID:200)	MS_B2 (VGCS GID:200)
MS_B3 (REC GID: 299, VGCS GID:200)	MS_A3 (REC GID: 299, VGCS GID:200)
MS_B4 (VGCS GID:200)	MS_A4 (VGCS GID:200)

c) Test procedure

Step 1: MS of network A in HPLMN originates a REC and MS of network A in HPLMN originates a VGCS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).

Step	Action	Expected result(s)
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_A2 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_A1 don't accept the incoming VGCS call (GID 200).	
7)	MS_A2 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A2 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3, and 4 for the VGCS call (GID 200).	

Step 2: MS of network B in VPLMN originates a REC and MS of network A in HPLMN originates a VGCS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates REC (299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B1 join REC (GID 299).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
4)	MS_A2 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A1, MS_A3 and MS_B1 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_B3 don’t accept the incoming VGCS call (GID 200).	

Step	Action	Expected result(s)
7)	MS_A2 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A2 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_B3 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3 and 4 for the VGCS call (GID 200).	

Step 3: MS of network A in HPLMN originates a REC and MS of network B in VPLMN originates a VGCS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
4)	MS_B4 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2 MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user as to accept the VGCS call (GID 200) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_A1 don't accept the incoming VGCS call (GID 200).	
7)	MS_B4 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B4 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3 and 4 for the VGCS call (GID 200).	

Step 4: MS of network B in VPLMN originates a REC and MS of network B in VPLMN originates a VGCS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B1 join REC (GID 299).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
4)	MS_B4 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A1, MS_A3 and MS_B1 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_B3 don't accept the incoming VGCS call (GID 200).	

Step	Action	Expected result(s)
7)	MS_B4 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B4 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_B3 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3 and 4 for the VGCS call (GID 200).	

Step 5: MS of network B in HPLMN originates a REC and MS of network B in HPLMN originates a VGCS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
4)	MS_B2 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A1, MS_A3 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_B1 don’t accept the incoming VGCS call (GID 200).	
7)	MS_B2 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B2 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3 and 4 for the VGCS call (GID 200).	

Step 6: MS of network A in VPLMN originates a REC and MS of network B in HPLMN originates a VGCS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_B2 automatically accept the incoming REC (GID 299).	MS_A1, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
4)	MS_B2 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A1, MS_B1 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_A3 don't accept the incoming VGCS call (GID 200).	

Step	Action	Expected result(s)
7)	MS_B2 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B2 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_A3 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3 and 4 for the VGCS call (GID 200).	

Step 7: MS of network B in HPLMN originates a REC and MS of network A in VPLMN originates a VGCS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
4)	MS_A4 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2 MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A1, MS_A3 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_B1 don't accept the incoming VGCS call (GID 200).	
7)	MS_A4 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A4 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 6 to 15 with priorities 3 and 4 for the VGCS call (GID 200).	

Step 8: MS of network A in VPLMN originates a REC and MS of network A in VPLMN originates a VGCS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
4)	MS_A4 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A1, MS_B1 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_A3 don't accept the incoming VGCS call (GID 200).	

Step	Action	Expected result(s)
7)	MS_A4 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A4 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_A3 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3 and 4 for the VGCS call (GID 200).	

Step 9: MS of network A in HPLMN originates a REC and MS of network A in VPLMN originates a VGCS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
4)	MS_A4 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_42 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_A1 don't accept the incoming VGCS call (GID 200).	
7)	MS_A4 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A4 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3, and 4 for the VGCS call (GID 200).	

Step 10: MS of network A in HPLMN originates a REC and MS of network B in HPLMN originates a VGCS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_B2 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_A1 don’t accept the incoming VGCS call (GID 200).	

Step	Action	Expected result(s)
7)	MS_B2 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B2 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3, and 4 for the VGCS call (GID 200).	

Step 11: MS of network B in HPLMN originates a REC and MS of network B in VPLMN originates a VGCS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
4)	MS_B4 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS CALL (GID 200). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A1, MS_A3 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_B1 don't accept the incoming VGCS call (GID 200).	
7)	MS_B4 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B4 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3 and 4 for the VGCS call (GID 200).	

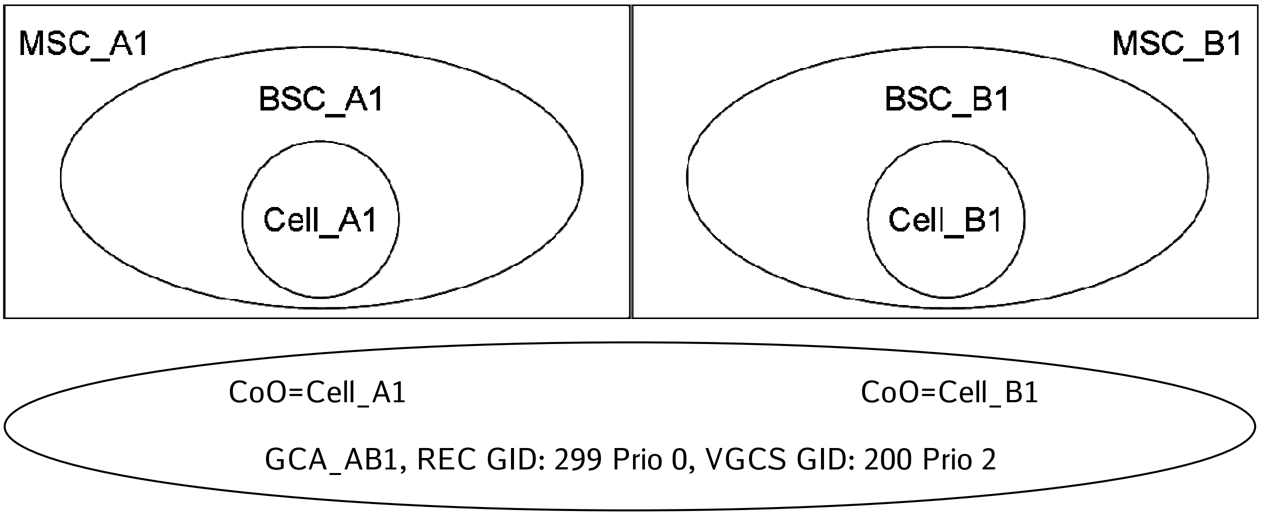
Step 12: MS of network B in HPLMN originates a REC and MS of network A in HPLMN originates a VGCS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_A2 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A1, MS_A3 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_B1 don't accept the incoming VGCS call (GID 200).	

Step	Action	Expected result(s)
7)	MS_A2 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A2 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3 and 4 for the VGCS call (GID 200).	

Test configuration for step 13 to 24

Network A **Network B**



A-MSC_A1	**R-MSC_B1**
MS_A1 (REC GID: 299, VGCS GID:200)	MS_B1 (REC GID: 299, VGCS GID:200)
MS_A2 (VGCS GID:200)	MS_B2 (VGCS GID:200)
MS_B3 (REC GID: 299, VGCS GID:200)	MS_A3 (REC GID: 299, VGCS GID:200)
MS_B4 (VGCS GID:200)	MS_A4 (VGCS GID:200)

Test procedure

Step 13: MS of network A in HPLMN originates a REC and MS of network A in HPLMN originates a VGCS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).

Step	Action	Expected result(s)
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_A2 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_A1 don't accept the incoming VGCS call (GID 200).	
7)	MS_A2 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A2 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3, and 4 for the VGCS call (GID 200).	

Step 14: MS of network B in VPLMN originates a REC and MS of network A in HPLMN originates a VGCS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates REC (299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B1 join REC (GID 299).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
4)	MS_A2 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A1, MS_A3 and MS_B1 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_B3 don't accept the incoming VGCS call (GID 200).	

Step	Action	Expected result(s)
7)	MS_A2 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A2 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_B3 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3 and 4 for the VGCS call (GID 200).	

Step 15: MS of network A in HPLMN originates a REC and MS of network B in VPLMN originates a VGCS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
4)	MS_B4 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2 MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user as to accept the VGCS call (GID 200) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_A1 don't accept the incoming VGCS call (GID 200).	
7)	MS_B4 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B4 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3 and 4 for the VGCS call (GID 200).	

Step 16: MS of network B in VPLMN originates a REC and MS of network B in VPLMN originates a VGCS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B1 join REC (GID 299).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
4)	MS_B4 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A1, MS_A3 and MS_B1 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_B3 don't accept the incoming VGCS call (GID 200).	

Step	Action	Expected result(s)
7)	MS_B4 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B4 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_B3 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3 and 4 for the VGCS call (GID 200).	

Step 17: MS of network B in HPLMN originates a REC and MS of network B in HPLMN originates a VGCS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
4)	MS_B2 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A1, MS_A3 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_B1 don't accept the incoming VGCS call (GID 200).	
7)	MS_B2 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B2 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3 and 4 for the VGCS call (GID 200).	

Step 18: MS of network A in VPLMN originates a REC and MS of network B in HPLMN originates a VGCS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_B2 automatically accept the incoming REC (GID 299).	MS_A1, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
4)	MS_B2 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A1, MS_B1 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_A3 don't accept the incoming VGCS call (GID 200).	

Step	Action	Expected result(s)
7)	MS_B2 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B2 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_A3 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3 and 4 for the VGCS call (GID 200).	

Step 19: MS of network B in HPLMN originates a REC and MS of network A in VPLMN originates a VGCS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
4)	MS_A4 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2 MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A1, MS_A3 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_B1 don't accept the incoming VGCS call (GID 200).	
7)	MS_A4 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A4 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3 and 4 for the VGCS call (GID 200).	

Step 20: MS of network A in VPLMN originates a REC and MS of network A in VPLMN originates a VGCS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
4)	MS_A4 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A1, MS_B1 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_A3 don’t accept the incoming VGCS call (GID 200).	

Step	Action	Expected result(s)
7)	MS_A4 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A4 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_A3 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3 and 4 for the VGCS call (GID 200).	

Step 21: MS of network A in HPLMN originates a REC and MS of network A in VPLMN originates a VGCS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
4)	MS_A4 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_42 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_A1 don't accept the incoming VGCS call (GID 200).	
7)	MS_A4 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A4 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3, and 4 for the VGCS call (GID 200).	

Step 22: MS of network A in HPLMN originates a REC and MS of network B in HPLMN originates a VGCS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_B2 originates a VGCS call (GID 200) with priority 2.	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_A1 don't accept the incoming VGCS call (GID 200).	

Step	Action	Expected result(s)
7)	MS_B2 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B2 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3, and 4 for the VGCS call (GID 200).	

Step 23: MS of network B in HPLMN originates a REC and MS of network B in VPLMN originates a VGCS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
4)	MS_B4 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS CALL (GID 200). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A1, MS_A3 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).
6)	MS_B1 don't accept the incoming VGCS call (GID 200).	
7)	MS_B4 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B4 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 1 to 10 with priorities 3 and 4 for the VGCS call (GID 200).	

Step 24: MS of network B in HPLMN originates a REC and MS of network A in HPLMN originates a VGCS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_A2 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 get an inband notification over the FACCH channel about the incoming VGCS call (GID 200). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 200) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call (GID 200) manually.	MS_A1, MS_A3 and MS_B3 can not accept the VGCS call (GID 200); the priority of the VGCS call (GID 200) is lower than the priority of REC (GID 299).

Step	Action	Expected result(s)
6)	MS_B1 don't accept the incoming VGCS call (GID 200).	
7)	MS_A2 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A2 terminates the VGCS call (GID 200).	The VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
10)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
11)	Repeat from step 6 to 15 with priorities 3 and 4 for the VGCS call (GID 200).	

d) Success criteria

The REC (GID 299) first talker on the dedicated channel is able to receive notification about an incoming VGCS call (GID 200). This should succeed in different networks (roaming).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.25 REC first talker notification (MS dedicated mode, incoming VBS call, roaming)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.5.1 5.2.2.47	5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a REC (GID 299) first talker on dedicated channel get a notification about an incoming VBS call (GID 202). This should be verified in different networks (roaming).

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: MS of network A in HPLMN originates a REC and MS of network A in HPLMN originates a VBS (MSC_A1 anchor).

Step 2: MS of network B in VPLMN originates a REC and MS of network A in HPLMN originates a VBS (MSC_A1 anchor).

Step 3: MS of network A in HPLMN originates a REC and MS of network B in VPLMN originates a VBS (MSC_A1 anchor).

Step 4: MS of network B in VPLMN originates a REC and MS of network B in VPLMN originates a VBS (MSC_A1 anchor).

Step 5: MS of network B in HPLMN originates a REC and MS of network B in HPLMN originates a VBS (MSC_A1 anchor).

Step 6: MS of network A in VPLMN originates a REC and MS of network B in HPLMN originates a VBS (MSC_A1 anchor).

Step 7: MS of network B in HPLMN originates a REC and MS of network A in VPLMN originates a VBS (MSC_A1 anchor).

Step 8: MS of network A in VPLMN originates a REC and MS of network A in VPLMN originates a VBS (MSC_A1 anchor).

Step 9: MS of network A in HPLMN originates a REC and MS of network A in VPLMN originates a VBS (MSC_A1 anchor).

Step 10: MS of network A in HPLMN originates a REC and MS of network B in HPLMN originates a VBS (MSC_A1 anchor).

Step 11: MS of network B in HPLMN originates a REC and MS of network B in VPLMN originates a VBS (MSC_A1 anchor).

Step 12: MS of network B in HPLMN originates a REC and MS of network A in HPLMN originates a VBS (MSC_A1 anchor).

Step 13: MS of network A in HPLMN originates a REC and MS of network A in HPLMN originates a VBS (MSC_B1 anchor).

Step 14: MS of network B in VPLMN originates a REC and MS of network A in HPLMN originates a VBS (MSC_B1 anchor).

Step 15: MS of network A in HPLMN originates a REC and MS of network B in VPLMN originates a VBS (MSC_B1 anchor).

Step 16: MS of network B in VPLMN originates a REC and MS of network B in VPLMN originates a VBS (MSC_B1 anchor).

Step 17: MS of network B in HPLMN originates a REC and MS of network B in HPLMN originates a VBS (MSC_B1 anchor).

Step 18: MS of network A in VPLMN originates a REC and MS of network B in HPLMN originates a VBS (MSC_B1 anchor).

Step 19: MS of network B in HPLMN originates a REC and MS of network A in VPLMN originates a VBS (MSC_B1 anchor).

Step 20: MS of network A in VPLMN originates a REC and MS of network A in VPLMN originates a VBS (MSC_B1 anchor).

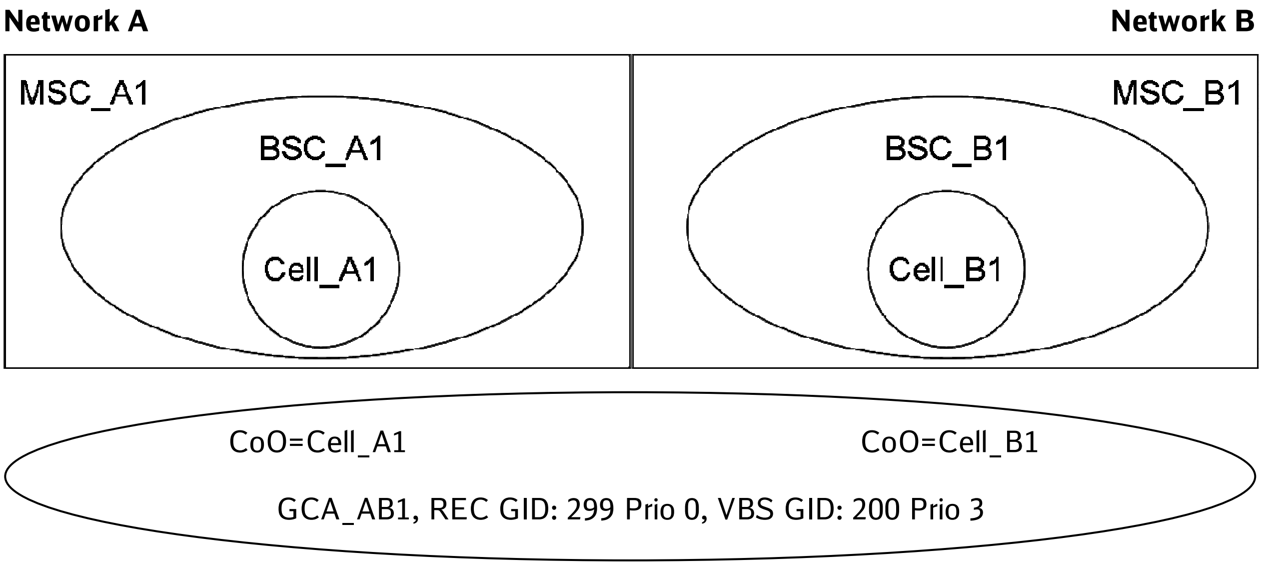
Step 21: MS of network A in HPLMN originates a REC and MS of network A in VPLMN originates a VBS (MSC_B1 anchor).

Step 22: MS of network A in HPLMN originates a REC and MS of network B in HPLMN originates a VBS (MSC_B1 anchor).

Step 23: MS of network B in HPLMN originates a REC and MS of network B in VPLMN originates a VBS (MSC_B1 anchor).

Step 24: MS of network B in HPLMN originates a REC and MS of network A in HPLMN originates a VBS (MSC_B1 anchor).

Test configuration for step 1 to 12



A-MSC_A1	**R-MSC_B1**
MS_A1 (REC GID: 299, VBS GID:202)	MS_B1 (REC GID: 299, VBS GID:202)
MS_A2 (VBS GID:202)	MS_B2 (VBS GID:202)
MS_B3 (REC GID: 299, VBS GID:202)	MS_A3 (REC GID: 299, VBS GID:202)
MS_B4 (VBS GID:202)	MS_A4 (VBS GID:202)

c) Test procedure

Step 1: MS of network A in HPLMN originates a REC and MS of network A in HPLMN originates a VBS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).

Step	Action	Expected result(s)
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_A2 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_A1 don't accept the incoming VBS call (GID 202).	
7)	MS_A2 terminates the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_A1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 2: MS of network B in VPLMN originates a REC and MS of network A in HPLMN originates a VBS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates REC (299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B1 join REC (GID 299).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
4)	MS_A2 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A1, MS_A3 and MS_B1 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_B3 don't accept the incoming VBS call (GID 202).	
7)	MS_A2 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
8)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_B3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 3: MS of network A in HPLMN originates a REC and MS of network B in VPLMN originates a VBS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_B4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A2 MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user as to accept the VBS call (GID 202) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_A1 don't accept the incoming VBS call (GID 202).	
7)	MS_B4 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_A1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 4: MS of network B in VPLMN originates a REC and MS of network B in VPLMN originates a VBS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B1 join REC (GID 299).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.

Step	Action	Expected result(s)
4)	MS_B4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A1, MS_A3 and MS_B1 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_B3 don't accept the incoming VBS call (GID 202).	
7)	MS_B4 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly de-allocated.
8)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_B3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 5: MS of network B in HPLMN originates a REC and MS of network B in HPLMN originates a VBS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_B2 originates a VBS call (GID 202) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A1, MS_A3 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_B1 don't accept the incoming VBS call (GID 202).	
7)	MS_B2 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly de-allocated.

Step	Action	Expected result(s)
8)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_B1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 6: MS of network A in VPLMN originates a REC and MS of network B in HPLMN originates a VBS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_B2 automatically accept the incoming REC (GID 299).	MS_A1, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
4)	MS_B2 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID	MS_A1, MS_B1 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC

Step	Action	Expected result(s)
	202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	(GID 299).
6)	MS_A3 don't accept the incoming VBS call (GID 202).	
7)	MS_B2 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly de-allocated.
8)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_A3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 7: MS of network B in HPLMN originates a REC and MS of network A in VPLMN originates a VBS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
4)	MS_A4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2 MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A1, MS_A3 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_B1 don't accept the incoming VBS call (GID 202).	
7)	MS_A4 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_B1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 8: MS of network A in VPLMN originates a REC and MS of network A in VPLMN originates a VBS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
4)	MS_A4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 get an inband notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A1, MS_B1 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_A3 don't accept the incoming VBS call (GID 202).	
7)	MS_A4 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
8)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_A3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 9: MS of network A in HPLMN originates a REC and MS of network A in VPLMN originates a VBS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_A4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_A1 don't accept the incoming VBS call (GID 202).	
7)	MS_A4 terminates the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_A1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 10: MS of network A in HPLMN originates a REC and MS of network B in HPLMN originates a VBS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
4)	MS_B2 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_A1 don't accept the incoming VBS call (GID 202).	
7)	MS_B2 terminates the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_A1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 11: MS of network B in HPLMN originates a REC and MS of network B in VPLMN originates a VBS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_B4 originates a VBS call (GID 202) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A1, MS_A3 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_B1 don't accept the incoming VBS call (GID 202).	

Step	Action	Expected result(s)
7)	MS_B4 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_B1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

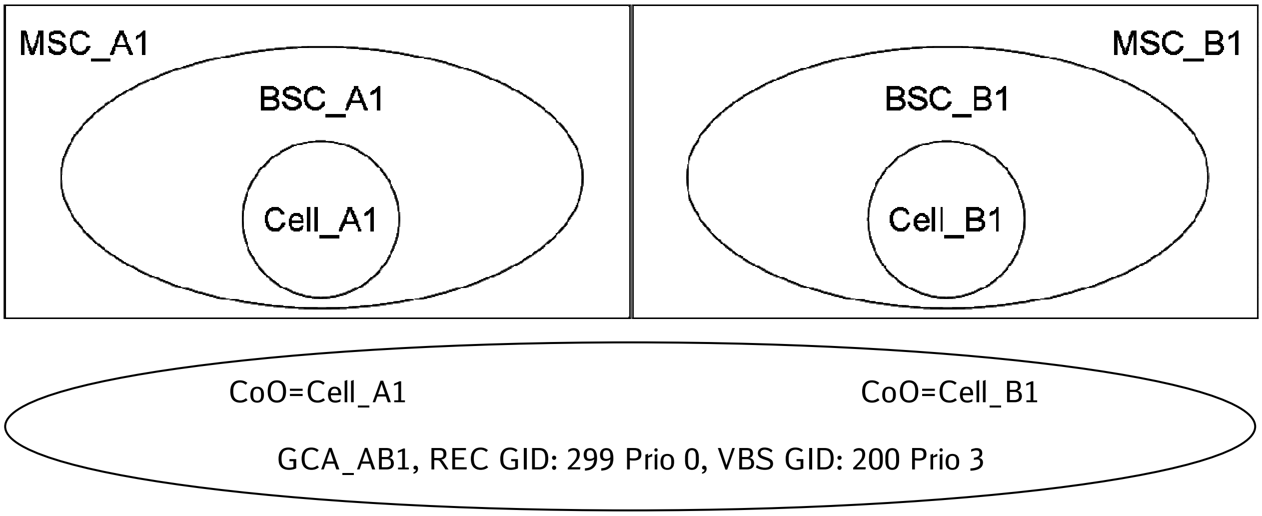
Step 12: MS of network B in HPLMN originates a REC and MS of network A in HPLMN originates a VBS (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_A2 originates a VBS call (GID 202) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A1, MS_A3 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_B1 don't accept the incoming VBS call (GID 202).	
7)	MS_A2 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_B1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Test configuration for step 13 to 24

Network A **Network B**



R-MSC_A1	**A-MSC_B1**
MS_A1 (REC GID: 299, VBS GID:202)	MS_B1 (REC GID: 299, VBS GID:202)
MS_A2 (VBS GID:202)	MS_B2 (VBS GID:202)
MS_B3 (REC GID: 299, VBS GID:202)	MS_A3 (REC GID: 299, VBS GID:202)
MS_B4 (VBS GID:202)	MS_A4 (VBS GID:202)

Test procedure

Step 13: MS of network A in HPLMN originates a REC and MS of network A in HPLMN originates a VBS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).

Step	Action	Expected result(s)
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_A2 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_A1 don't accept the incoming VBS call (GID 202).	
7)	MS_A2 terminates the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_A1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 14: MS of network B in VPLMN originates a REC and MS of network A in HPLMN originates a VBS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates REC (299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B1 join REC (GID 299).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
4)	MS_A2 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A1, MS_A3 and MS_B1 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_B3 don't accept the incoming VBS call (GID 202).	
7)	MS_A2 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly de-allocated.

Step	Action	Expected result(s)
8)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_B3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 15: MS of network A in HPLMN originates a REC and MS of network B in VPLMN originates a VBS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_B4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A2 MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user as to accept the VBS call (GID 202) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_A1 don't accept the incoming VBS call (GID 202).	
7)	MS_B4 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_A1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 6 to 14 with priorities 3 and 4 for the VBS call (GID 202).	

Step 16: MS of network B in VPLMN originates a REC and MS of network B in VPLMN originates a VBS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B1 join REC (GID 299).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.

Step	Action	Expected result(s)
4)	MS_B4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A1, MS_A3 and MS_B1 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_B3 don’t accept the incoming VBS call (GID 202).	
7)	MS_B4 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly de-allocated.
8)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_B3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 17: MS of network B in HPLMN originates a REC and MS of network B in HPLMN originates a VBS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_B2 originates a VBS call (GID 202) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A1, MS_A3 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_B1 don't accept the incoming VBS call (GID 202).	
7)	MS_B2 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly de-allocated.

Step	Action	Expected result(s)
8)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_B1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 18: MS of network A in VPLMN originates a REC and MS of network B in HPLMN originates a VBS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_B2 automatically accept the incoming REC (GID 299).	MS_A1, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
4)	MS_B2 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 get an inband notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A1, MS_B1 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_A3 don't accept the incoming VBS call (GID 202).	
7)	MS_B2 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly de-allocated.
8)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_A3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 19: MS of network B in HPLMN originates a REC and MS of network A in VPLMN originates a VBS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_A4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2 MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A1, MS_A3 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_B1 don't accept the incoming VBS call (GID 202).	
7)	MS_A4 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly de-allocated.

Step	Action	Expected result(s)
8)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_B1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 20: MS of network A in VPLMN originates a REC and MS of network A in VPLMN originates a VBS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
4)	MS_A4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A1, MS_B1 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_A3 don't accept the incoming VBS call (GID 202).	
7)	MS_A4 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly de-allocated.
8)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_A3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 21: MS of network A in HPLMN originates a REC and MS of network A in VPLMN originates a VBS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
4)	MS_A4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_A1 don't accept the incoming VBS call (GID 202).	
7)	MS_A4 terminates the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_A1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priorities 3, and 4 for the VBS call (GID 202).	

Step 22: MS of network A in HPLMN originates a REC and MS of network B in HPLMN originates a VBS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A3, MS_B1 and MS_B3 join REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_B2 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_A1 don’t accept the incoming VBS call (GID 202).	
7)	MS_B2 terminates the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
8)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_A1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 23: MS of network B in HPLMN originates a REC and MS of network B in VPLMN originates a VBS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_B4 originates a VBS call (GID 202) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 get an inband notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A1, MS_A3 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_B1 don't accept the incoming VBS call (GID 202).	
7)	MS_B4 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_B1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

Step 24: MS of network B in HPLMN originates a REC and MS of network A in HPLMN originates a VBS (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming REC (GID 299).	MS_A1, MS_A3 and MS_B3 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
4)	MS_A2 originates a VBS call (GID 202) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 get an in-band notification over the FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call (GID 202) manually.	MS_A1, MS_A3 and MS_B3 can not accept the VBS call (GID 202); the priority of the VBS call (GID 202) is lower than the priority of REC (GID 299).
6)	MS_B1 don't accept the incoming VBS call (GID 202).	
7)	MS_A2 terminates the VBS call (GID 202).	The VBS (GID 202) call is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
9)	MS_B1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with priority 4 for the VBS call (GID 202).	

d) Success criteria

The REC (GID 299) first talker on the dedicated channel is able to receive notification about an incoming VBS call (GID 202). This should succeed in different networks (roaming).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.26 REC first talker notification (MS dedicated mode, incoming second REC, non roaming case)

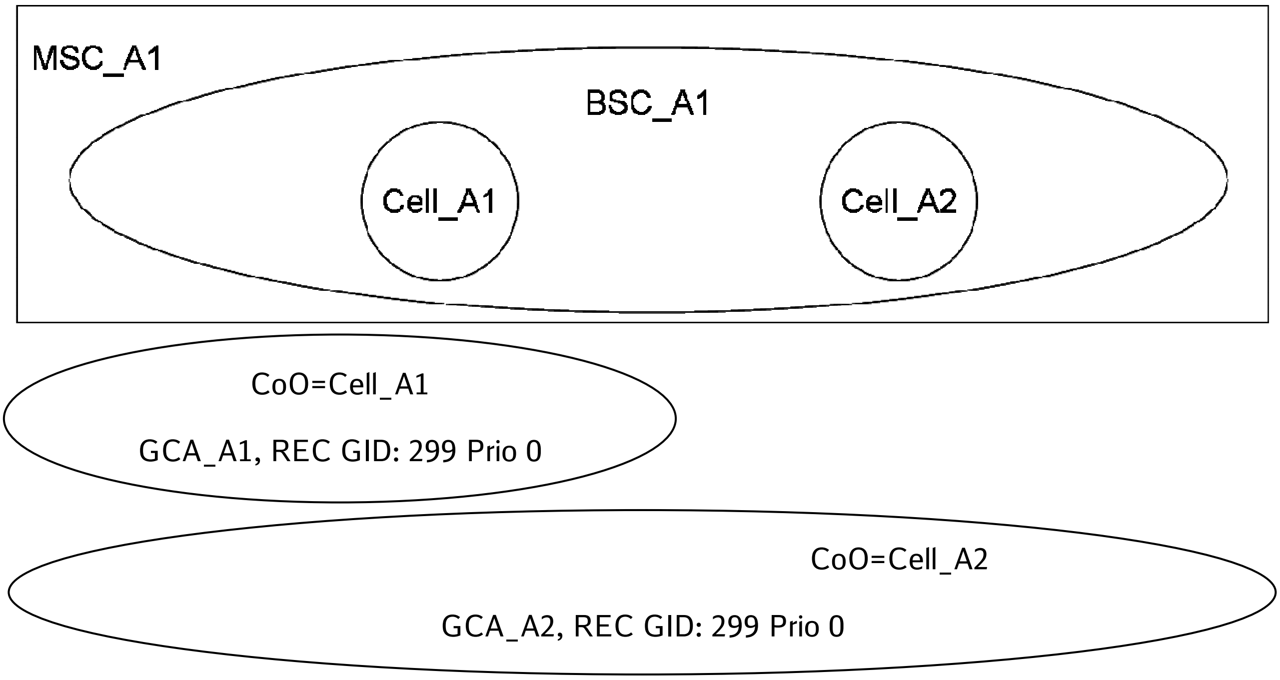
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.5.1 5.2.2.47 13.3.1	5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a REC (GID 299) first talker on dedicated channel get a notification about an incoming second REC (GID 299).

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (REC GID: 299)	MS_A3 (REC GID: 299)
MS_A2 (REC GID: 299)	MS_A4 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2 receives a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 automatically accepts the incoming REC (GID 299).	MS_A2 joins REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2 is able to listen to the announcement of MS_A1.
4)	Service subscriber MS_A3 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1. MS_A4 receives a notification about the incoming REC (GID 299). MS_A1 and MS_A2 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_A1 and MS_A2 advertise the incoming second REC (GID 299) optically and acoustically.
5)	MS_A4 automatically accepts the incoming REC (GID 299).	MS_A4 joins REC (GID 299).
6)	MS_A1 and MS_A2 don't accept the incoming second REC (GID 299).	
7)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_A2.
8)	MS_A3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
9)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1.
10)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

d) Success criteria

The REC (GID 299) first talker on the dedicated channel is able to receive notification about an incoming second REC (GID 299).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.27 REC first talker notification (MS dedicated mode, incoming second REC, roaming)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.5.1 5.2.2.47 13.3.1	5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a REC (REC) first talke0r on dedicated channel get a notification about an incoming second REC (GID 299) call. This should be verified in different networks (roaming).

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: MS of network A in HPLMN originates a REC and MS of network B in HPLMN originates a second REC (MSC_A1 anchor for both GCAs).

Step 2: MS of network B in VPLMN originates a REC and MS of network B in HPLMN originates a second REC (MSC_A1 anchor for both GCAs).

Step 3: MS of network A in HPLMN originates a REC and MS of network A in VPLMN originates a second REC (MSC_A1 anchor for both GCAs).

Step 4: MS of network B in VPLMN originates a REC and MS of network A in VPLMN originates a second REC (MSC_A1 anchor for both GCAs).

Step 5: MS of network B in HPLMN originates a REC and MS of network A in HPLMN originates a second REC (MSC_B1 anchor for both GCAs).

Step 6: MS of network A in VPLMN originates a REC and MS of network A in HPLMN originates a second REC (MSC_B1 anchor for both GCAs).

Step 7: MS of network B in HPLMN originates a REC and MS of network B in VPLMN originates a second REC (MSC_B1 anchor for both GCAs).

Step 8: MS of network A in VPLMN originates a REC and MS of network B in VPLMN originates a second REC (MSC_B1 anchor for both GCAs).

Step 9: MS of network A in HPLMN originates a REC and MS of network B in HPLMN originates a second REC (MSC_A1 anchor for GCA_A1 and MSC_B1 anchor for GCA_AB1).

Step 10: MS of network B in VPLMN originates a REC and MS of network B in HPLMN originates a second REC (MSC_A1 anchor for GCA_A1 and MSC_B1 anchor for GCA_AB1).

Step 11: MS of network A in HPLMN originates a REC and MS of network A in VPLMN originates a second REC (MSC_A1 anchor for GCA_A1 and MSC_B1 anchor for GCA_AB1).

Step 12: MS of network B in VPLMN originates a REC and MS of network A in VPLMN originates a second REC (MSC_A1 anchor for GCA_A1 and MSC_B1 anchor for GCA_AB1).

Step 13: MS of network B in HPLMN originates a REC and MS of network A in HPLMN originates a second REC (MSC_A1 anchor for GCA_AB1 and MSC_B1 anchor for GCA_B1).

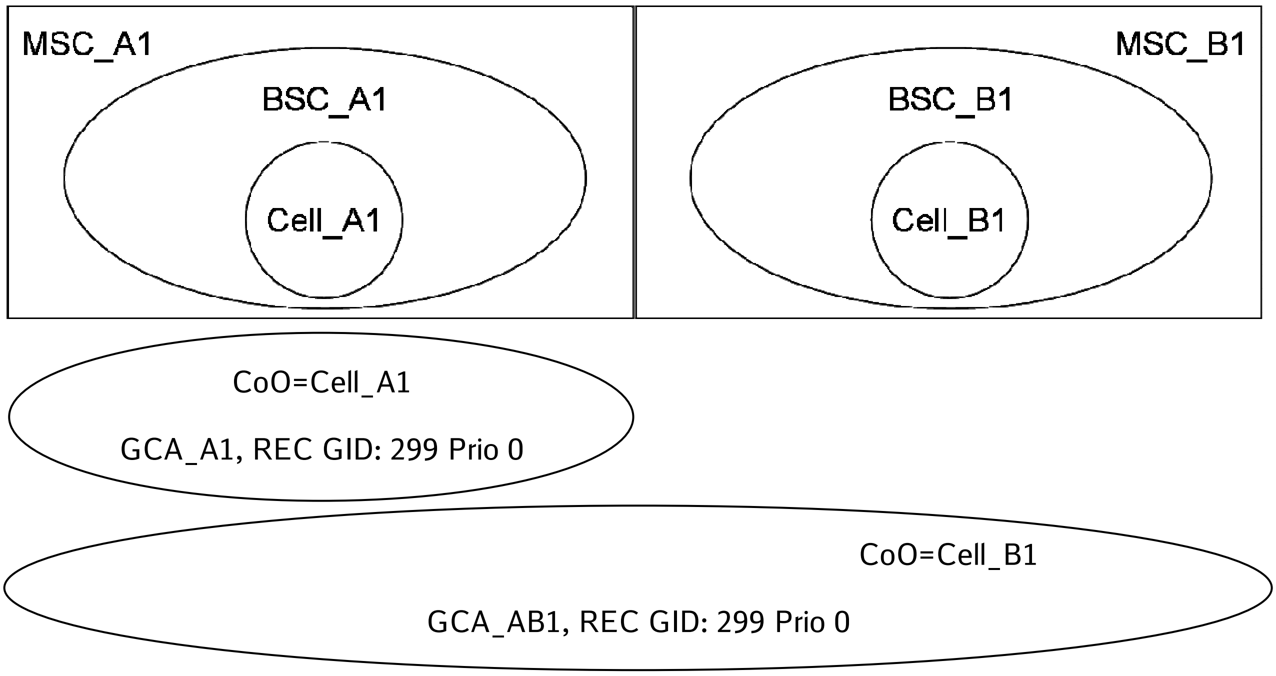
[Step 14:](#) MS of network A in VPLMN originates a REC and MS of network A in HPLMN originates a second REC (MSC_A1 anchor for GCA_AB1 and MSC_B1 anchor for GCA_B1).

[Step 15:](#) MS of network B in HPLMN originates a REC and MS of network B in VPLMN originates a second REC (MSC_A1 anchor for GCA_AB1 and MSC_B1 anchor for GCA_B1).

[Step 16:](#) MS of network A in VPLMN originates a REC and MS of network B in VPLMN originates a second REC (MSC_A1 anchor for GCA_AB1 and MSC_B1 anchor for GCA_B1).

Test configuration for step 1 to 4

Network A **Network B**



A-MSC_A1	**R-MSC_B1**
MS_A1 (REC GID: 299)	MS_B1 (REC GID: 299)
MS_A2 (REC GID: 299)	MS_B2 (REC GID: 299)
MS_B3 (REC GID: 299)	MS_A3 (REC GID: 299)
MS_B4 (REC GID: 299)	MS_A4 (REC GID: 299)

c) Test procedure

Step 1: MS of network A in HPLMN originates a REC and MS of network B in HPLMN originates a second REC (MSC_A1 anchor for both GCAs).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2 MS_B3 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2, MS_B3 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A2, MS_B3 and MS_B4 join REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
4)	MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_B2, MS_A3 and MS_A4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path. MS_A1, MS_A2, MS_B3 and MS_B4 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_A1, MS_A2, MS_B3 and MS_B4 advertise the incoming second REC (GID 299) optically and acoustically.
5)	MS_B2, MS_A3 and MS_A4 automatically accept the incoming REC (GID 299).	MS_B2, MS_A3 and MS_A4 join REC (GID 299).
6)	MS_A1, MS_A2, MS_B3 and MS_B4 don't accept the incoming second REC (GID 299).	
7)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B1 terminates the REC (GID 299).	The REC (GID 299) is released successfully and all resources are correctly de-allocated.

Step	Action	Expected result(s)
9)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1.
10)	MS_A1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

Step 2: MS of network B in VPLMN originates a REC and MS of network B in HPLMN originates a second REC (MSC_A1 anchor for both GCAs).

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A1 MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A2 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A1, MS_A2 and MS_B4 join REC (GID 299).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A2 and MS_B4 are able to listen to the announcement of MS_B3.
4)	MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_B2, MS_A3 and MS_A4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path. MS_A1, MS_A2, MS_B3 and MS_B4 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_A1, MS_A2, MS_B3 and MS_B4 advertise the incoming second REC (GID 299) optically and acoustically.
5)	MS_B2, MS_A3 and MS_A4 automatically accept the incoming REC (GID 299).	MS_B2, MS_A3 and MS_A4 join REC (GID 299).
6)	MS_A1, MS_A2, MS_B3 and MS_B4 don't accept the incoming second REC (GID 299).	

Step	Action	Expected result(s)
7)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B1 terminates the REC (GID 299).	The REC (GID 299) is released successfully and all resources are correctly de-allocated.
9)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1.
10)	MS_B3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

Step 3: MS of network A in HPLMN originates a REC and MS of network A in VPLMN originates a second REC (MSC_A1 anchor for both GCAs).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2 MS_B3 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2, MS_B3 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A2, MS_B3 and MS_B4 join REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
4)	MS_A3 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_B1, MS_B2 and MS_A4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A3 has two-way voice path. MS_A1, MS_A2, MS_B3 and MS_B4 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_A1, MS_A2, MS_B3 and MS_B4 advertise the incoming second REC (GID 299) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_B1, MS_B2 and MS_A4 automatically accept the incoming REC (GID 299).	MS_B1, MS_B2 and MS_A4 join REC (GID 299).
6)	MS_A1, MS_A2, MS_B3 and MS_B4 don't accept the incoming second REC (GID 299).	
7)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A3 terminates the REC (GID 299).	The REC (GID 299) is released successfully and all resources are correctly de-allocated.
9)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1.
10)	MS_A1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

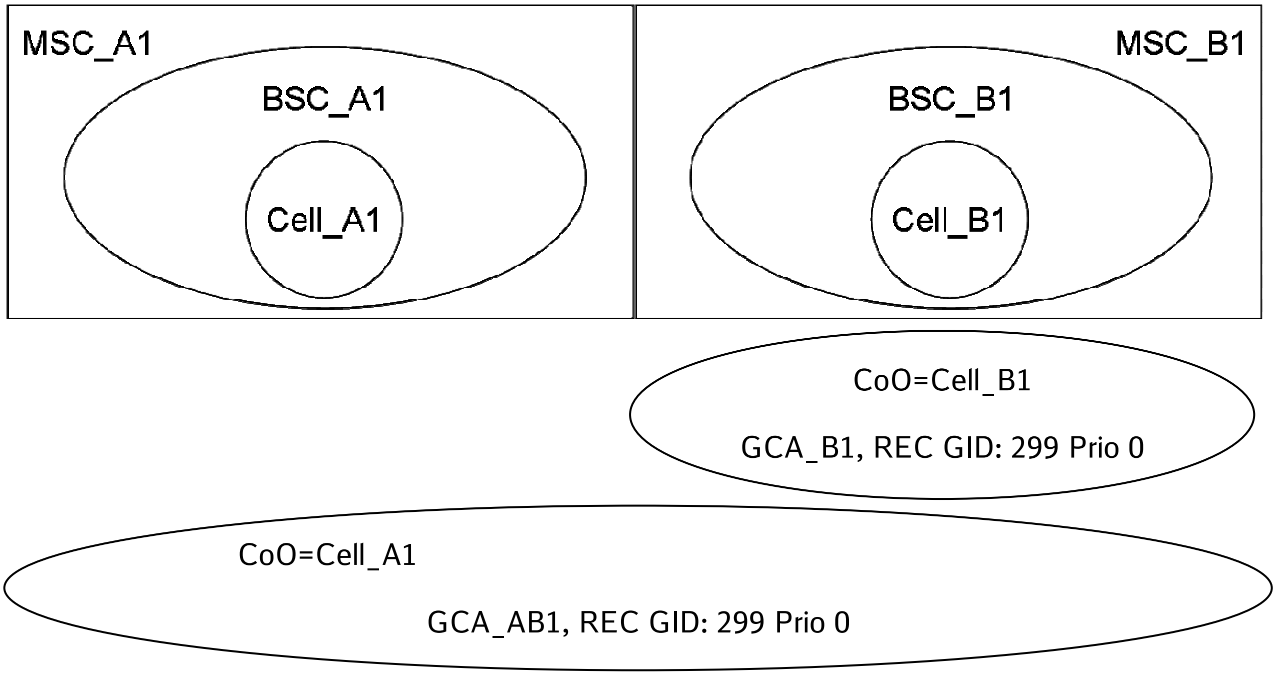
Step 4: MS of network B in VPLMN originates a REC and MS of network A in VPLMN originates a second REC (MSC_A1 anchor for both GCAs).

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A1 MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A2 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A1, MS_A2 and MS_B4 join REC (GID 299).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A2 and MS_B4 are able to listen to the announcement of MS_B3.

Step	Action	Expected result(s)
4)	MS_A3 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_B1, MS_B2 and MS_A4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A3 has two-way voice path. MS_A1, MS_A2, MS_B3 and MS_B4 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_A1, MS_A2, MS_B3 and MS_B4 advertise the incoming second REC (GID 299) optically and acoustically.
5)	MS_B1, MS_B2 and MS_A4 automatically accept the incoming REC (GID 299).	MS_B1, MS_B2 and MS_A4 join REC (GID 299).
6)	MS_A1, MS_A2, MS_B3 and MS_B4 don't accept the incoming second REC (GID 299).	
7)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A3 terminates the REC (GID 299).	The REC (GID 299) is released successfully and all resources are correctly de-allocated.
9)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1.
10)	MS_B3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

Test configuration for test step 5 to 8

Network A **Network B**



R-MSC_A1	**A-MSC_B1**
MS_A1 (REC GID: 299)	MS_B1 (REC GID: 299)
MS_A2 (REC GID: 299)	MS_B2 (REC GID: 299)
MS_B3 (REC GID: 299)	MS_A3 (REC GID: 299)
MS_B4 (REC GID: 299)	MS_A4 (REC GID: 299)

Test procedure

Step 5: MS of network B in HPLMN originates a REC and MS of network A in HPLMN originates a second REC (MSC_B1 anchor for both GCAs).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. MS_B2 MS_A3 and MS_A4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.

Step	Action	Expected result(s)
2)	MS_B2, MS_A3 and MS_A4 automatically accept the incoming REC (GID 299).	MS_B2, MS_A3 and MS_A4 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_B2, MS_A3 and MS_A4 are able to listen to the announcement of MS_B1.
4)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_B3 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path. MS_B1, MS_B2, MS_A3 and MS_A4 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_B1, MS_B2, MS_A3 and MS_A4 advertise the incoming second REC (GID 299) optically and acoustically.
5)	MS_A2, MS_B3 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A2, MS_B3 and MS_B4 join REC (GID 299).
6)	MS_B1, MS_B2, MS_A3 and MS_A4 don’t accept the incoming second REC (GID 299).	
7)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A1 terminates the REC (GID 299).	The REC (GID 299) is released successfully and all resources are correctly de-allocated.
9)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_B1.
10)	MS_B1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

Step 6: MS of network A in VPLMN originates a REC and MS of network A in HPLMN originates a second REC (MSC_B1 anchor for both GCAs).

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. MS_A1 MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A2 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A1, MS_A2 and MS_B4 join REC (GID 299).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_B1, MS_B2 and MS_A4 are able to listen to the announcement of MS_A3.
4)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_B3 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path. MS_B1, MS_B2, MS_A3 and MS_A4 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_B1, MS_B2, MS_A3 and MS_A4 advertise the incoming second REC (GID 299) optically and acoustically.
5)	MS_A2, MS_B3 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A2, MS_B3 and MS_B4 join REC (GID 299).
6)	MS_A1, MS_A2, MS_B3 and MS_B4 don't accept the incoming second REC (GID 299).	
7)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A1 terminates the REC (GID 299).	The REC (GID 299) is released successfully and all resources are correctly de-allocated.

Step	Action	Expected result(s)
9)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_B1.
10)	MS_A3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

Step 7: MS of network B in HPLMN originates a REC and MS of network B in VPLMN originates a second REC (MSC_B1 anchor for both GCAs).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. MS_B2 MS_A3 and MS_A4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_B2, MS_A3 and MS_A4 automatically accept the incoming REC (GID 299).	MS_B2, MS_A3 and MS_A4 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_B2, MS_A3 and MS_A4 are able to listen to the announcement of MS_B1.
4)	MS_B3 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_a1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path. MS_B1, MS_B2, MS_A3 and MS_A4 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_B1, MS_B2, MS_A3 and MS_A4 advertise the incoming second REC (GID 299) optically and acoustically.
5)	MS_A1, MS_A2 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A1, MS_A2 and MS_B4 join REC (GID 299).
6)	MS_B1, MS_B2, MS_A3 and MS_A4 don't accept the incoming second REC (GID 299).	

Step	Action	Expected result(s)
7)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B3 terminates the REC (GID 299).	The REC (GID 299) is released successfully and all resources are correctly de-allocated.
9)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_B1.
10)	MS_B1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

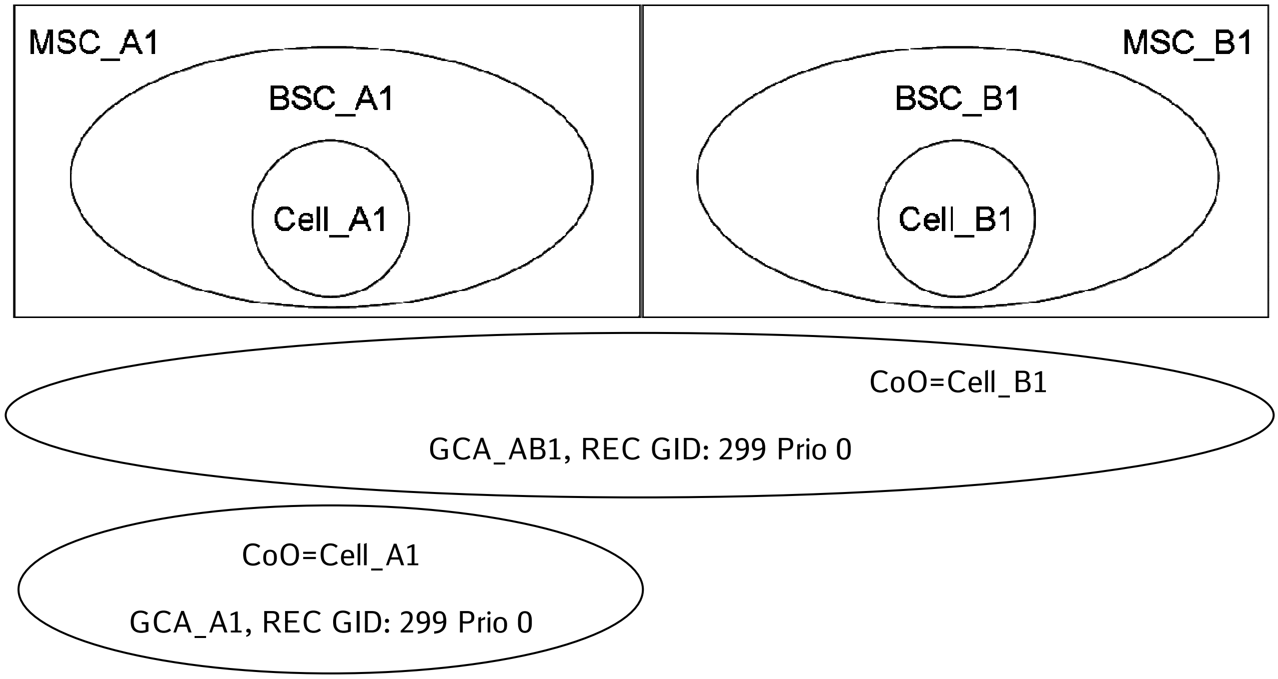
Step 8: MS of network A in VPLMN originates a REC and MS of network B in VPLMN originates a second REC (MSC_B1 anchor for both GCAs).

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. MS_B1 MS_B2 and MS_A4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_B1, MS_B2 and MS_A4 automatically accept the incoming REC (GID 299).	MS_B1, MS_B2 and MS_A4 join REC (GID 299).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_B1, MS_B2 and MS_A4 are able to listen to the announcement of MS_A3.
4)	MS_B3 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path. MS_B1, MS_B2, MS_A3 and MS_A4 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_B1, MS_B2, MS_A3 and MS_A4 advertise the incoming second REC (GID 299) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A1, MS_A2 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A1, MS_A2 and MS_B4 join REC (GID 299).
6)	MS_B1, MS_B2, MS_A3 and MS_A4 don't accept the incoming second REC (GID 299).	
7)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B3 terminates the REC (GID 299).	The REC (GID 299) is released successfully and all resources are correctly de-allocated.
9)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_B1.
10)	MS_A3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

Test configuration for test step 9 to 12

Network A **Network B**



R-MSC_A1 (GCA_AB1)	**A-MSC_B1 (GCA_AB1)**
A-MSC_A1 (GCA_A1)	
MS_A1 (REC GID: 299)	MS_B1 (REC GID: 299)
MS_A2 (REC GID: 299)	MS_B2 (REC GID: 299)
MS_B3 (REC GID: 299)	MS_A3 (REC GID: 299)
MS_B4 (REC GID: 299)	MS_A4 (REC GID: 299)

Test procedure

Step 9: MS of network A in HPLMN originates a REC and MS of network B in HPLMN originates a second REC (MSC_A1 anchor for GCA_A1 and MSC_B1 anchor for GCA_AB1).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2 MS_B3 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.

Step	Action	Expected result(s)
2)	MS_A2, MS_B3 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A2, MS_B3 and MS_B4 join REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
4)	MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_B2, MS_A3 and MS_A4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path. MS_A1, MS_A2, MS_B3 and MS_B4 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_A1, MS_A2, MS_B3 and MS_B4 advertise the incoming second REC (GID 299) optically and acoustically.
5)	MS_B2, MS_A3 and MS_A4 automatically accept the incoming REC (GID 299).	MS_B2, MS_A3 and MS_A4 join REC (GID 299).
6)	MS_A1, MS_A2, MS_B3 and MS_B4 don't accept the incoming second REC (GID 299).	
7)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B1 terminates the REC (GID 299).	The REC (GID 299) is released successfully and all resources are correctly de-allocated.
9)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1.
10)	MS_A1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

Step 10: MS of network B in VPLMN originates a REC and MS of network B in HPLMN originates a second REC (MSC_A1 anchor for GCA_A1 and MSC_B1 anchor for GCA_AB1).

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A1 MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A2 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A1, MS_A2 and MS_B4 join REC (GID 299).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A2 and MS_B4 are able to listen to the announcement of MS_B3.
4)	MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_B2, MS_A3 and MS_A4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path. MS_A1, MS_A2, MS_B3 and MS_B4 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_A1, MS_A2, MS_B3 and MS_B4 advertise the incoming second REC (GID 299) optically and acoustically.
5)	MS_B2, MS_A3 and MS_A4 automatically accept the incoming REC (GID 299).	MS_B2, MS_A3 and MS_A4 join REC (GID 299).
6)	MS_A1, MS_A2, MS_B3 and MS_B4 don't accept the incoming second REC (GID 299).	
7)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B1 terminates the REC (GID 299).	The REC (GID 299) is released successfully and all resources are correctly de-allocated.

Step	Action	Expected result(s)
9)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1.
10)	MS_B3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

Step 11: MS of network A in HPLMN originates a REC and MS of network A in VPLMN originates a second REC (MSC_A1 anchor for GCA_A1 and MSC_B1 anchor for GCA_AB1).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2 MS_B3 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2, MS_B3 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A2, MS_B3 and MS_B4 join REC (GID 299).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
4)	MS_A3 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_B1, MS_B2 and MS_A4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A3 has two-way voice path. MS_A1, MS_A2, MS_B3 and MS_B4 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_A1, MS_A2, MS_B3 and MS_B4 advertise the incoming second REC (GID 299) optically and acoustically.
5)	MS_B1, MS_B2 and MS_A4 automatically accept the incoming REC (GID 299).	MS_B1, MS_B2 and MS_A4 join REC (GID 299).

Step	Action	Expected result(s)
6)	MS_A1, MS_A2, MS_B3 and MS_B4 don't accept the incoming second REC (GID 299).	
7)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A3 terminates the REC (GID 299).	The REC (GID 299) is released successfully and all resources are correctly de-allocated.
9)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1.
10)	MS_A1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

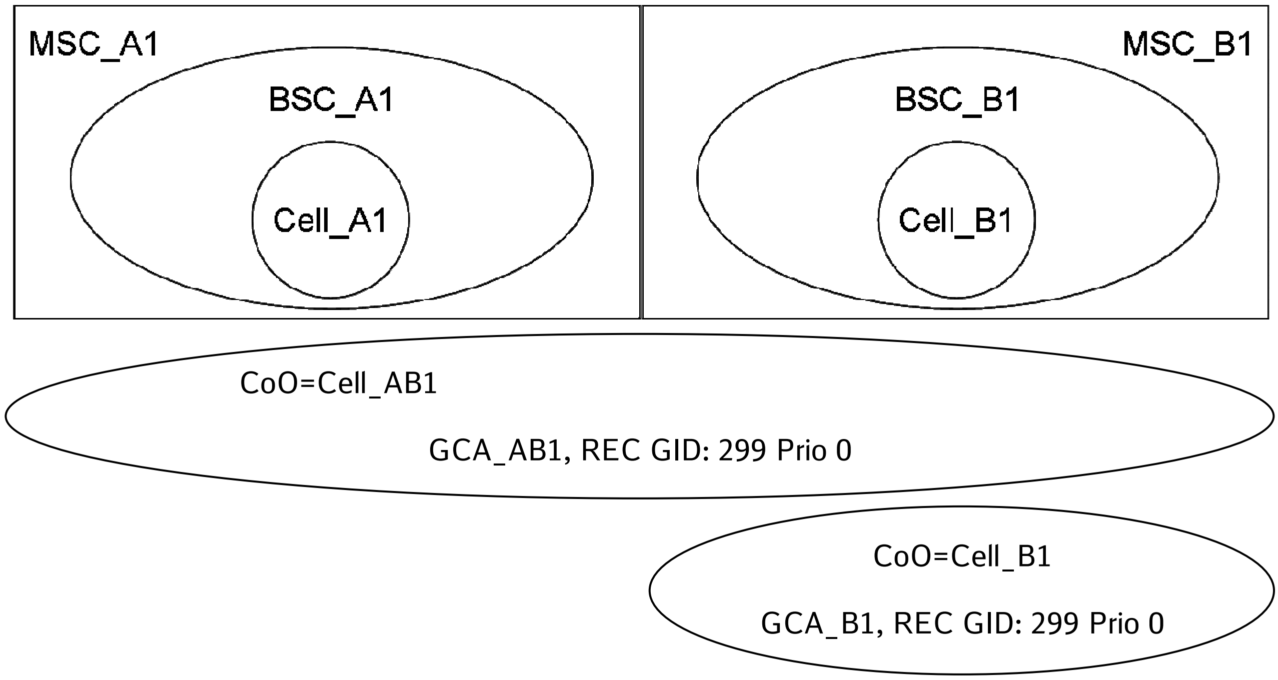
Step 12: MS of network B in VPLMN originates a REC and MS of network A in VPLMN originates a second REC (MSC_A1 anchor for GCA_A1 and MSC_B1 anchor for GCA_AB1).

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A1 MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A2 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A1, MS_A2 and MS_B4 join REC (GID 299).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A2 and MS_B4 are able to listen to the announcement of MS_B3.

Step	Action	Expected result(s)
4)	MS_A3 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_B1, MS_B2 and MS_A4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A3 has two-way voice path. MS_A1, MS_A2, MS_B3 and MS_B4 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_A1, MS_A2, MS_B3 and MS_B4 advertise the incoming second REC (GID 299) optically and acoustically.
5)	MS_B1, MS_B2 and MS_A4 automatically accept the incoming REC (GID 299).	MS_B1, MS_B2 and MS_A4 join REC (GID 299).
6)	MS_A1, MS_A2, MS_B3 and MS_B4 don’t accept the incoming second REC (GID 299).	
7)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A3 terminates the REC (GID 299).	The REC (GID 299) is released successfully and all resources are correctly de-allocated.
9)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1.
10)	MS_B3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

Test configuration for test step 13 to 16

Network A **Network B**



A-MSC_A1 (GCA_AB1)	**R-MSC_B1 (GCA_AB1)**
	A-MSC_B1 (GCA_B1)
MS_A1 (REC GID: 299)	MS_B1 (REC GID: 299)
MS_A2 (REC GID: 299)	MS_B2 (REC GID: 299)
MS_B3 (REC GID: 299)	MS_A3 (REC GID: 299)
MS_B4 (REC GID: 299)	MS_A4 (REC GID: 299)

Test procedure

Step 13: MS of network B in HPLMN originates a REC and MS of network A in HPLMN originates a second REC (MSC_A1 anchor for GCA_AB1 and MSC_B1 anchor for GCA_B1).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. MS_B2 MS_A3 and MS_A4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_B2, MS_A3 and MS_A4 automatically accept the incoming REC (GID 299).	MS_B2, MS_A3 and MS_A4 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_B2, MS_A3 and MS_A4 are able to listen to the announcement of MS_B1.
4)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_B3 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path. MS_B1, MS_B2, MS_A3 and MS_A4 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_B1, MS_B2, MS_A3 and MS_A4 advertise the incoming second REC (GID 299) optically and acoustically.
5)	MS_A2, MS_B3 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A2, MS_B3 and MS_B4 join REC (GID 299).
6)	MS_B1, MS_B2, MS_A3 and MS_A4 don’t accept the incoming second REC (GID 299).	
7)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A1 terminates the REC (GID 299).	The REC (GID 299) is released successfully and all resources are correctly de-allocated.
9)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_B1.

Step	Action	Expected result(s)
10)	MS_B1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

Step 14: MS of network A in VPLMN originates a REC and MS of network A in HPLMN originates a second REC (MSC_A1 anchor for GCA_AB1 and MSC_B1 anchor for GCA_B1).

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. MS_A1 MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A2 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A1, MS_A2 and MS_B4 join REC (GID 299).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_B1, MS_B2 and MS_A4 are able to listen to the announcement of MS_A3.
4)	MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_B3 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A1 has two-way voice path. MS_B1, MS_B2, MS_A3 and MS_A4 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_B1, MS_B2, MS_A3 and MS_A4 advertise the incoming second REC (GID 299) optically and acoustically.
5)	MS_A2, MS_B3 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A2, MS_B3 and MS_B4 join REC (GID 299).
6)	MS_A1, MS_A2, MS_B3 and MS_B4 don’t accept the incoming second REC (GID 299).	

Step	Action	Expected result(s)
7)	MS_A1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_A1 terminates the REC (GID 299).	The REC (GID 299) is released successfully and all resources are correctly de-allocated.
9)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_B1.
10)	MS_A3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

Step 15: MS of network B in HPLMN originates a REC and MS of network B in VPLMN originates a second REC (MSC_A1 anchor for GCA_AB1 and MSC_B1 anchor for GCA_B1).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. MS_B2 MS_A3 and MS_A4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_B2, MS_A3 and MS_A4 automatically accept the incoming REC (GID 299).	MS_B2, MS_A3 and MS_A4 join REC (GID 299).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_B2, MS_A3 and MS_A4 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
4)	MS_B3 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_a1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path. MS_B1, MS_B2, MS_A3 and MS_A4 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_B1, MS_B2, MS_A3 and MS_A4 advertise the incoming second REC (GID 299) optically and acoustically.
5)	MS_A1, MS_A2 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A1, MS_A2 and MS_B4 join REC (GID 299).
6)	MS_B1, MS_B2, MS_A3 and MS_A4 don't accept the incoming second REC (GID 299).	
7)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B3 terminates the REC (GID 299).	The REC (GID 299) is released successfully and all resources are correctly de-allocated.
9)	MS_B1 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_B1.
10)	MS_B1 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

Step 16: MS of network A in VPLMN originates a REC and MS of network B in VPLMN originates a second REC (MSC_A1 anchor for GCA_AB1 and MSC_B1 anchor for GCA_B1).

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. MS_B1 MS_B2 and MS_A4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_B1, MS_B2 and MS_A4 automatically accept the incoming REC (GID 299).	MS_B1, MS_B2 and MS_A4 join REC (GID 299).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_B1, MS_B2 and MS_A4 are able to listen to the announcement of MS_A3.
4)	MS_B3 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299). So long the dedicated channel is not released, MS_B3 has two-way voice path. MS_B1, MS_B2, MS_A3 and MS_A4 receive an in-band notification over the FACCH channel about the incoming second REC (GID 299). MS_B1, MS_B2, MS_A3 and MS_A4 advertise the incoming second REC (GID 299) optically and acoustically.
5)	MS_A1, MS_A2 and MS_B4 automatically accept the incoming REC (GID 299).	MS_A1, MS_A2 and MS_B4 join REC (GID 299).
6)	MS_B1, MS_B2, MS_A3 and MS_A4 don't accept the incoming second REC (GID 299).	
7)	MS_B3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1.
8)	MS_B3 terminates the REC (GID 299).	The REC (GID 299) is released successfully and all resources are correctly de-allocated.
9)	MS_A3 releases the uplink.	The uplink is correctly released. Uplink free message is send in cell_B1.

Step	Action	Expected result(s)
10)	MS_A3 terminates the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.

d) Success criteria

The REC (GID 299) first talker on the dedicated channel is able to receive notification about an incoming second REC (GID 299). This should succeed in different networks (roaming).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.28 Shunting emergency call (non-roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 13.1.7 13.1.8 13.2.4.1	2.5.1 9.5.4 13.2.2 13.3.1 13.3.3	

a) Purpose

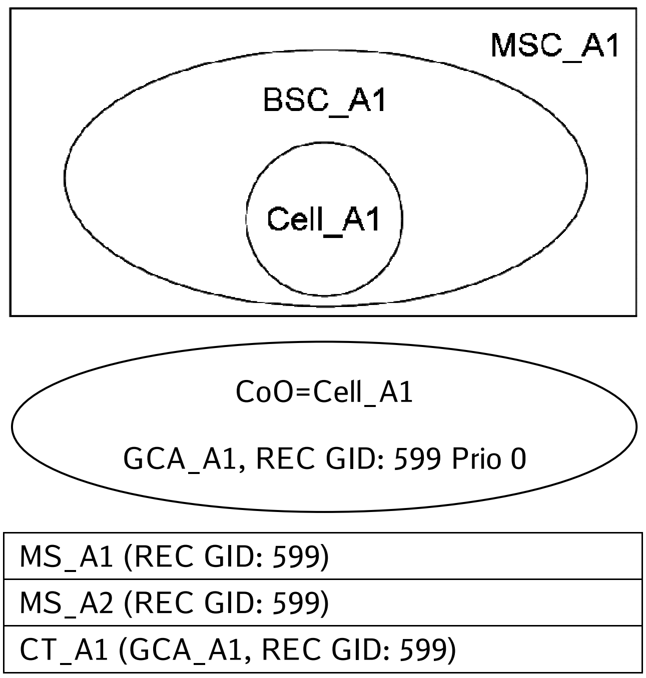
Verify a service subscriber in shunting mode can originate and close a Railway Emergency Call (REC) with GID 599.

b) Test configuration / initial conditions

MS_A1 and MS_A2 are shunting mobiles in shunting mode and not registered to a functional number (FN).

CT_A1 is connected to network A.

Network A



c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a REC (GID 599).	REC (GID 599) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. MS_A2 is notified about the incoming REC (GID 599) on the NCH. CT_A1 is notified about the incoming REC (GID 599) and the Group Call Reference is displayed on CT terminal.
2)	CT_A1 automatically accepts the REC (GID 599).	CT_A1 automatically joins the REC (GID 599). CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
3)	MS_A2 automatically accepts the REC (GID 599).	MS_A2 automatically joins the REC (GID 599) in group receive mode and is able to listen to the announcement of CT_A1.
4)	MS_A1 takes the uplink on DCH.	MS_A1 has voice path on DCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.
5)	MS_A1 releases the uplink on DCH.	Uplink free message is send in Cell_A1 and the DCH is correctly released.
6)	MS_A1 takes the uplink on GCCH.	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
7)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.

Step	Action	Expected result(s)
8)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announce-ment of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
10)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1 and CT_A1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announce-ment of CT_A1. MS_A1 still able to listen to the announcement of CT_A1.
11)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
12)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announce-ment of CT_A1. MS_A1 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A2.
13)	MS_A2 releases the uplink on GCCH.	Uplink free message is send in Cell_A1 and uplink is correctly released.
14)	MS_A1 releases the REC (GID 599).	REC (GID 599) is released. All related re-sources are de-allocated.

d) Success criteria

MS_A1 was able to originate and close a Railway Emergency Call (REC) with GID 599.

MS_A1 was able to get the uplink on DCH and GCCH.

MS_A2 was able to receive the Railway Emergency Call (REC) with GID 599 and able to get the uplink on GCCH.

CT_A1 is able to receive the Railway Emergency Call (REC) with GID 599 and is able to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.6.29 Shunting emergency call (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.5.1 13.1.7 13.1.8 13.2.4.1	2.5.1 9.5.4 13.2.2 13.3.1 13.3.3	

a) Purpose

Verify a roaming service subscriber can originate and close a Railway Emergency Call (REC) with GID 599.

b) Test configuration / initial conditions

MS_A1, MS_A2, MS_B1 and MS_B2 are shunting mobiles in shunting mode and not registered to a functional number (FN).

CT_A1 is connected to network A.

CT_B1 is connected to network B.

This test case has been divided into the following steps:

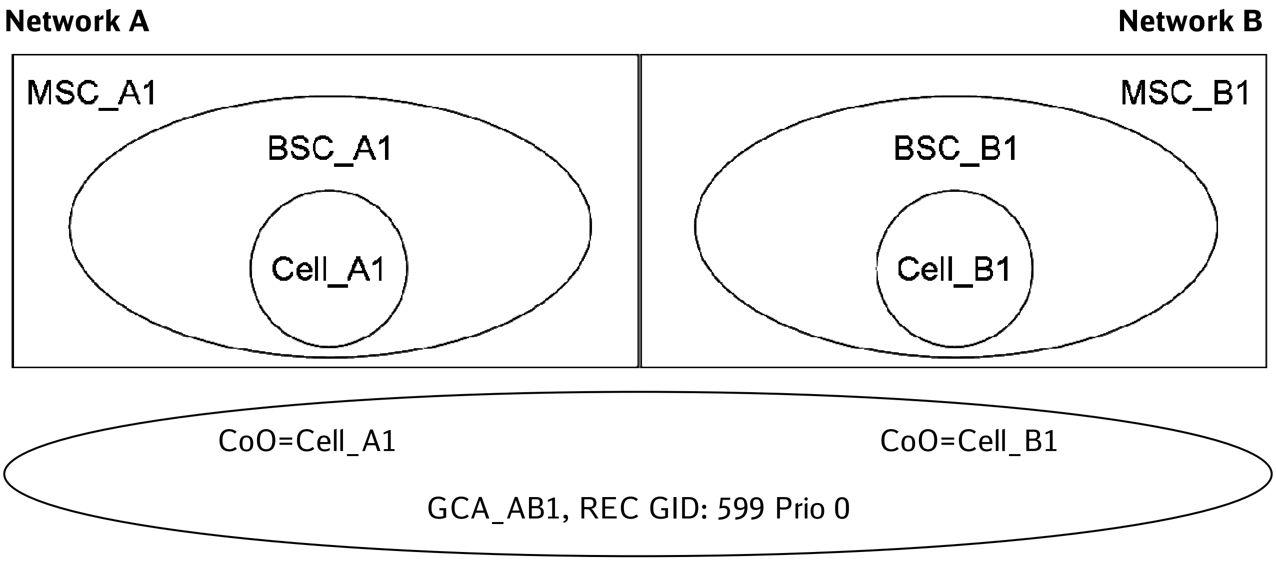
Step 1: REC setup by roaming subscriber in network A (MSC_A1 anchor).

Step 2: REC setup by roaming subscriber in network B (MSC_A1 anchor).

Step 3: REC setup by roaming subscriber in network A (MSC_B1 anchor).

Step 4: REC setup by roaming subscriber in network B (MSC_B1 anchor).

Test configuration for step 1 and 2



A-MSC_A1	**R-MSC_B1**
MS_A1 (REC GID: 599)	MS_B1 (REC GID: 599)
MS_B2 (REC GID: 599)	MS_A2 (REC GID: 599)
CT_A1 (GCA_AB1, REC GID: 599)	CT_B1 (GCA_AB1, REC GID: 599)

c) Test procedure

Step 1: REC setup by roaming subscriber in network A (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	MS_B2 originates a REC (GID 599).	REC (GID 599) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. A group call channel (GCCH) is allocated in Cell_B1. MS_A1, MS_B1 and MS_A2 are notified about the incoming REC (GID 599) on the NCH. CT_A1 and CT_B1 are notified about the incoming REC (GID 599) and the Group Call Reference is displayed on CT terminals.
2)	MS_A1, MS_B1 and MS_A2 automatically accepting the REC (GID 599).	MS_A1, MS_B1 and MS_A2 automatically joining the REC (GID 599) in group receive mode.

Step	Action	Expected result(s)
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 599).	CT_A1 and CT_B1 automatically joining the REC (GID 599). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_B2 takes the uplink on DCH.	MS_B2 has voice path on DCH. MS_A1, MS_B1 and MS_A2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.
5)	MS_B2 releases the uplink on DCH.	Uplink free message is send for REC (GID 599) in Cell_A1 and Cell_B1, the DCH in Cell_A1 is correctly released.
6)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_B1 and MS_A2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1.
7)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.

Step	Action	Expected result(s)
9)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2, MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
11)	MS_B2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 599) in Cell_A1 and Cell B1, the uplink is correctly released.
12)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1, MS_B1 and MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.
13)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.

Step	Action	Expected result(s)
15)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1, MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
17)	MS_A2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 599) in Cell_A1 and Cell B1, the uplink is correctly released.
18)	MS_B2 releases the REC (GID 599).	REC (GID 599) is released. All related resources are de-allocated.

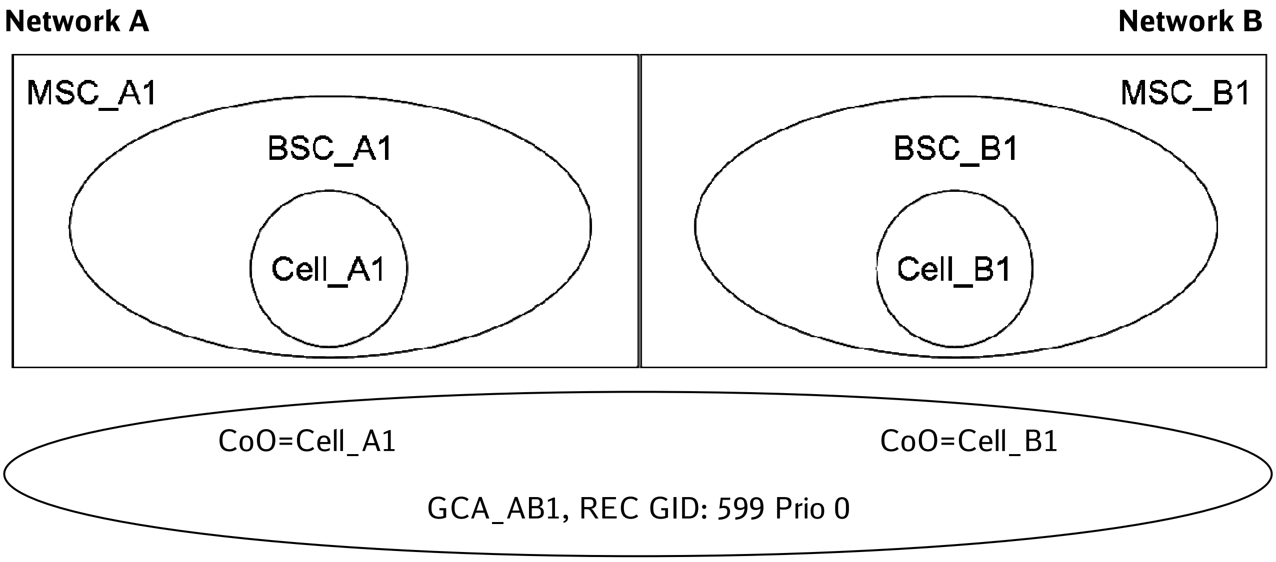
Step 2: REC setup by roaming subscriber in network B (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	MS_A2 originates a REC (GID 599).	REC (GID 599) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1. A group call channel (GCCH) is allocated in Cell_A1. MS_A1, MS_B1 and MS_B2 are notified about the incoming REC (GID 599) on the NCH. CT_A1 and CT_B1 are notified about the incoming REC (GID 599) and the Group Call Reference is displayed on CT terminals.
2)	MS_A1, MS_B1 and MS_B2 automatically accepting the REC (GID 599).	MS_A1, MS_B1 and MS_B2 automatically joining the REC (GID 599) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 599).	CT_A1 and CT_B1 automatically joining the REC (GID 599). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_A2 takes the uplink on DCH.	MS_A2 has voice path on DCH. MS_A1, MS_B1 and MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.
5)	MS_A2 releases the uplink on DCH.	Uplink free message is send for REC (GID 599) in Cell_A1 and Cell_B1, the DCH in Cell_B1 is correctly released.
6)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1, MS_B1 and MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
7)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_A2 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
9)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_A2 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1, MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
11)	MS_A2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 599) in Cell_A1 and Cell B1, the uplink is correctly released.

Step	Action	Expected result(s)
12)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_B1 and MS_A2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1.
13)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
15)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1, MS_A2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
17)	MS_B2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 599) in Cell_A1 and Cell B1, the uplink is correctly released.
18)	MS_A2 releases the REC (GID 599).	REC (GID 599) is released. All related resources are de-allocated.

Test configuration for step 3 and 4



R-MSC_A1	**A-MSC_B1**
MS_A1 (REC GID: 599)	MS_B1 (REC GID: 599)
MS_B2 (REC GID: 599)	MS_A2 (REC GID: 599)
CT_A1 (GCA_AB1, REC GID: 599)	CT_B1 (GCA_AB1, REC GID: 599)

Test procedure

Step 3: REC setup by roaming subscriber in network A (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	MS_B2 originates a REC (GID 599).	REC (GID 599) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1. A group call channel (GCCH) is allocated in Cell_B1. MS_A1, MS_B1 and MS_A2 are notified about the incoming REC (GID 599) on the NCH. CT_A1 and CT_B1 are notified about the incoming REC (GID 599) and the Group Call Reference is displayed on CT terminals.
2)	MS_A1, MS_B1 and MS_A2 automatically accepting the REC (GID 599).	MS_A1, MS_B1 and MS_A2 automatically joining the REC (GID 599) in group receive mode.

Step	Action	Expected result(s)
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 599).	CT_A1 and CT_B1 automatically joining the REC (GID 599). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_B2 takes the uplink on DCH.	MS_B2 has voice path on DCH. MS_A1, MS_B1 and MS_A2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.
5)	MS_B2 releases the uplink on DCH.	Uplink free message is send for REC (GID 599) in Cell_A1 and Cell_B1, the DCH in Cell_A1 is correctly released.
6)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_B1 and MS_A2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1.
7)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.

Step	Action	Expected result(s)
9)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_A2, MS_B1 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
11)	MS_B2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 599) in Cell_A1 and Cell B1, the uplink is correctly released.
12)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1, MS_B1 and MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.
13)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.

Step	Action	Expected result(s)
15)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1, MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
17)	MS_A2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 599) in Cell_A1 and Cell B1, the uplink is correctly released.
18)	MS_B2 releases the REC (GID 599).	REC (GID 599) is released. All related resources are de-allocated.

Step 4: REC setup by roaming subscriber in network B (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	MS_A2 originates a REC (GID 599).	REC (GID 599) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1. A group call channel (GCCH) is allocated in Cell_A1. MS_A1, MS_B1 and MS_B2 are notified about the incoming REC (GID 599) on the NCH. CT_A1 and CT_B1 are notified about the incoming REC (GID 599) and the Group Call Reference is displayed on CT terminals.
2)	MS_A1, MS_B1 and MS_B2 automatically accepting the REC (GID 599).	MS_A1, MS_B1 and MS_B2 automatically joining the REC (GID 599) in group receive mode.
3)	CT_A1 and CT_B1 automatically accepting the REC (GID 599).	CT_A1 and CT_B1 automatically joining the REC (GID 599). CT_A1 and CT_B1 have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1 and CT_B1.
4)	MS_A2 takes the uplink on DCH.	MS_A2 has voice path on DCH. MS_A1, MS_B1 and MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.
5)	MS_A2 releases the uplink on DCH.	Uplink free message is send for REC (GID 599) in Cell_A1 and Cell_B1, the DCH in Cell_B1 is correctly released.
6)	MS_A2 takes the uplink on GCCH.	MS_A2 has voice path on GCCH. MS_A1, MS_B1 and MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
7)	CT_A1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_A2 are able to listen to the announcement of CT_A1 and CT_B1.
8)	CT_A1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
9)	CT_B1 un-mutes the downlink to MS_A2 by using the un-mute sequence (dialling ###).	MSC_B1 sends set parameter message and MS_A2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_A2 are able to listen to the announcement of CT_A1 and CT_B1.
10)	CT_B1 mutes the downlink to MS_A2 by using the mute sequence (dialling #**).	MSC_B1 sends set parameter message and MS_A2 mutes its downlink. MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_A2.
11)	MS_A2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 599) in Cell_A1 and Cell B1, the uplink is correctly released.
12)	MS_B2 takes the uplink on GCCH.	MS_B2 has voice path on GCCH. MS_A1, MS_B1 and MS_A2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1.

Step	Action	Expected result(s)
13)	CT_A1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
14)	CT_A1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
15)	CT_B1 un-mutes the downlink to MS_B2 by using the un-mute sequence (dialling ###).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 un-mutes its downlink to get two-way voice path on GCCH. MS_A1, MS_A2, MS_B1 and MS_B2 are able to listen to the announcement of CT_A1 and CT_B1.
16)	CT_B1 mutes the downlink to MS_B2 by using the mute sequence (dialling #**).	MSC_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_B2 mutes its downlink. MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1. MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1. CT_A1 and CT_B1 still able to listen to the announcement of MS_B2.
17)	MS_B2 releases the uplink on GCCH.	Uplink free message is send for REC (GID 599) in Cell_A1 and Cell B1, the uplink is correctly released.
18)	MS_A2 releases the REC (GID 599).	REC (GID 599) is released. All related resources are de-allocated.

d) Success criteria

MS_A2 was able to originate and close a Railway Emergency Call (REC) with GID 599 when roaming in network B.

MS_A2 was able to get the uplink on DCH and GCCH

MS_B2 was able to originate and close a Railway Emergency Call (REC) with GID 599 when roaming in network A.

MS_B2 was able to get the uplink on DCH and GCCH.

CT_A1 and CT_B1 are able to receive the Railway Emergency Call (REC) with GID 599 and they are also able to un-mute/mute the downlink to the talking mobile subscriber on GCCH.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7 eMLPP

Reference to EIRENE FRS V7:

Chapter:	Text
2.4.1	The EIRENE network will support the following call related services: - display of identity of called/calling user; (M) - restriction of display of called/calling user; (O) - priority and pre-emption; (M) - closed user group; (M) - call forwarding; (M) - call hold; (M) - call waiting; (M) - charging information; (O) - call barring. (M) Display of identity
2.4.5	The network shall provide a mechanism whereby calls may be assigned one of a number of different priority levels. (M)
2.4.6	This mechanism shall allow calls with a higher assigned priority to override (pre-empt) existing calls of a lower priority. (M)
2.4.7	Pre-empted calls will be discontinued and the new call of a higher priority shall be connected instead. (M)
10.2.1	A number of levels of priority shall be required in order to offer different grades of service to different users and calls. Five levels of priority shall be defined: (M) - Railway emergency; - control-command (safety); - public emergency and group calls between drivers in the same area; - railway operation; - railway information.
10.2.2	In order to provide interoperability, priorities shall be allocated consistently across all EIRENE networks, as shown in the following table. (M)

UIC Priority	Automatic answering*	Pre-emption (of)
Railway emergency	Y	Control-command (safety) and below
Control-command (safety)	Y	Public emergency, group calls between drivers in the same area and below
Public emergency and group calls between drivers in the same area	Y	Railway operation, Control-command information and below
Railway operation (eg calls from or for drivers and controllers) and Control-command information	Y**	Railway information and below
Railway information and all other calls	N	-

* Automatic call answering applies only to voice calls
** Mandatory for Cab radio, optional for other user equipment

Table 10-1: Allocation of priorities

10.2.3	The lowest priority ongoing call shall be pre-empted before that of a higher priority. (M)

Reference to EIRENE SRS 15:

Chapter:	Text
2.4.1	The GSM supplementary services [EN 301 515, Index [9]] to be supported are listed in table 2-3. The applicability of these supplementary services to GSM basic services will be as indicated in [GSM 02.81-02.89 and EN 301 515, Index [28]]. (I)
9.8.5	In addition, the network shall support the special short codes as defined in table 9-11. (M)

Code	Description
112	European emergency number

General Purpose:

Verify the call related service eMLPP in GSM-R Network

Verify that a mobile subscriber can be subscribed with a default and a maximal priority

Verify that pre-emption of calls on the Um take place, when there are not enough traffic channels available.

Verify that the network allows the call with the highest priority in case of lack of resources.

Verify that pre-emption applies also in case of handover.

To verify called party pre-emption based on the transmitted eMLPP priority.

Preconditions:

Fast Call Setup is configured for high priority calls on SIM.

Not all subscribers and controllers are subscribed for the REC.

The function of the subscribers and controllers can change from step to step and from case to case.

All subscribers have the default priority 4 and max priority 0 subscribed in HLR.

Cab Radios are used for the test of the eMLPP priority transmitted to the MS based on Automatic Answering.

Cab Radios are prepared for VGCS and VBS.

The priorities assigned to the GID's are as follows:

VGCS GID: 299 => Priority=0

VGCS GID: 200 => Priority=2

VGCS GID: 203 => Priority=3

VGCS GID: 204 => Priority=4

VBS GID: 202 => Priority=3

VBS GID: 203 => Priority=4

5.7.1 MS in VBS call as listener, pre-emption on MS by higher prio PtP call

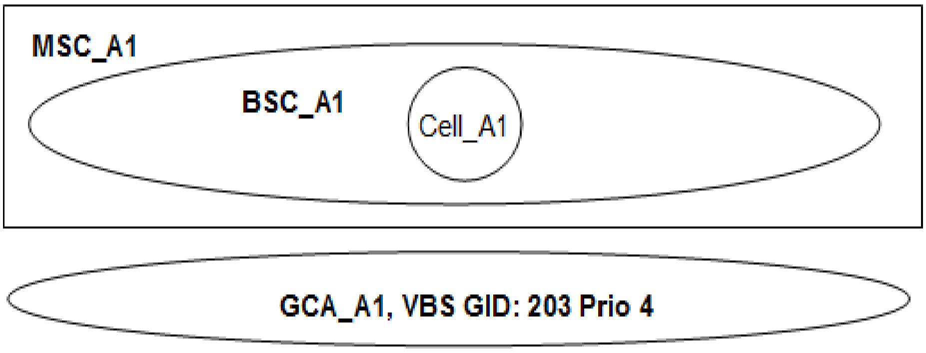
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 3.2.3 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

To verify pre-emption on MS based on the transmitted eMLPP priority.

b) Test configuration / initial conditions

Network A



MS_A1 (VBS GID: 203)
MS_A2 (VBS GID: 203)
MS_A3 (no VGCS / VBS subscriber)

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates the 203 VBS	MS_A2 receives the 203 VBS
2	MS_A3 calls MS_A2 with Prio 3	**MS_A2 answers automatically the PtP call**
3	MS_A3 releases the PtP call	MS_A2 receives the 203 VBS
4	MS_A1 releases the VBS call	All participants are IDLE

d) Success criteria

The pre-emption on MS based on the transmitted eMLPP priority has taken place in the mobile. The expected priorities have been used at Um.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.2 MS in VGCS call on DCH, pre-emption on Um by higher prio PtP call

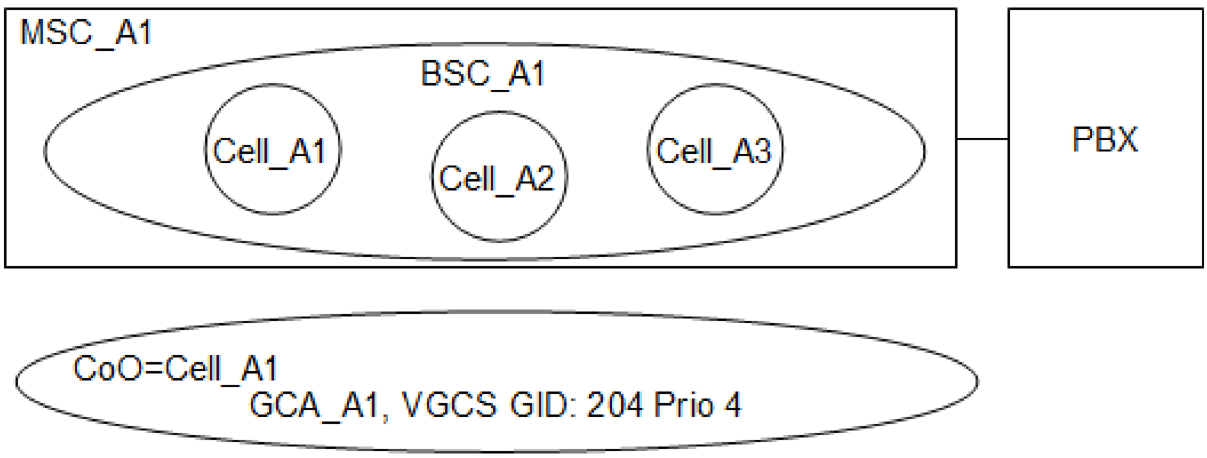
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 3.2.3 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that the dedicated channel of a VGCS can be pre-empted on Um by a PtP call.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2	Cell_A3
MS_A1 (VGCS GID: 204, Cell_A1)		
MS_A2 (VGCS GID: 204, Cell_A1)		
		MS_A3 (VGCS GID: 204, Cell_A3)
MS_A4 (Cell_A1, no VGCS / VBS subscriber)		
MS_A5 (Cell_A1, no VGCS / VBS subscriber)		
CT_A1		
The Capacity on the Um in Cell_A1 is reduced to two TS's		

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates the 204 VGCS and keep the dedicated link (DCH)	MS_A2 receives the 204 VGCS MS_A3 receives the 204 VGCS CT_A1 receives the 204 VGCS
2	MS_A4 calls MS_A5 with Prio 4	The call is unsuccessful
3	MS_A4 calls MS_A5 with Prio 3	**The DCH and the group channel is pre-empted on Um in Cell_A1** MS_A4 is connected with MS_A5 MS_A1 and MS_A2 are IDLE MS_A3 can take the uplink and speak to CT_A1
4	CT_A1 terminates the group call	MS_A3 is IDLE
5	MS_A4 releases the PtP call	All participants are IDLE
6	Unblock/unlock the blocked/locked TS's in Cell_A1	All resources are IDLE

d) Success criteria

The dedicated channel of a VGCS call can be pre-empted on Um by a PtP call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.3 MS in VGCS call having the UL of the GCH, pre-emption on A IF by higher prio PtP call

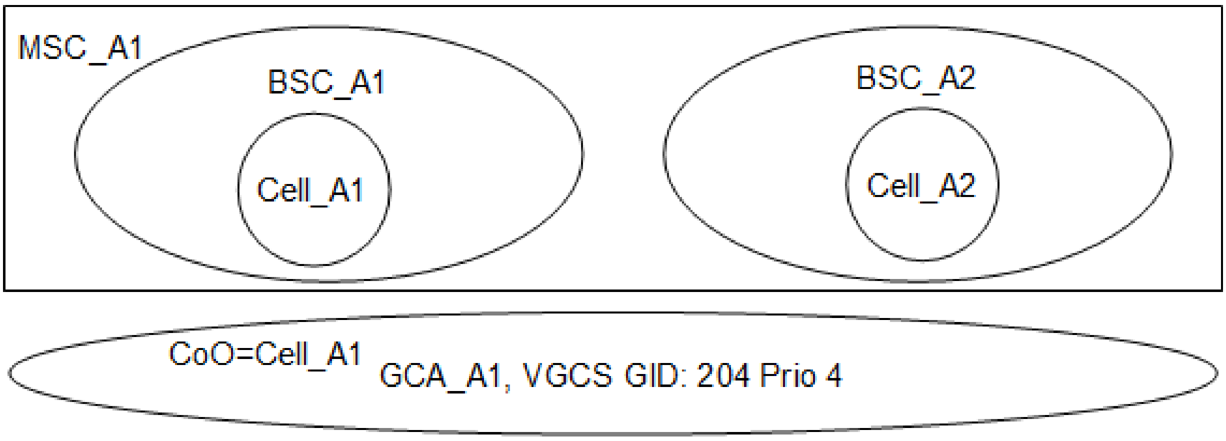
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a group channel of a VGCS can be pre-empted on A IF by a PtP call.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1 (VGCS GID: 204, Cell_A1)	MS_A2 (VGCS GID: 204, Cell_A2)
MS_A3 (VGCS GID: 204, Cell_A1)	
MS_A4 (Cell_A1, no VGCS / VBS subscriber)	MS_A5 (Cell_A2, no VGCS / VBS subscriber)
The Capacity on the A IF to BSC_A2 <u>is reduced to one TS</u> **Only the Cell_A2 belongs to the GCA in BSC_A2**	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates the 204 VGCS and do not keep the dedicated link (DCH)	MS_A2 receives the 204 VGCS MS_A3 receives the 204 VGCS
2	MS_A2 requests the uplink	MS_A2 can speak to MS_A1 and MS_A3
3	MS_**A4** calls MS_A5 with Prio 4	The call is unsuccessful
4	MS_**A4** calls MS_A5 with Prio 3	**The group channel is pre-empted on A IF of BSC_A2** MS_A4 is connected with MS_A5 MS_A2 are IDLE MS_A3 can take the uplink and speak to MS_A1
5	MS_A1 releases the group call MS_A4 releases the PtP	All participants are IDLE
6	MS_A1 originates the 204 VGCS and do not keep the dedicated link (DCH)	MS_A2 receives the 204 VGCS MS_A3 receives the 204 VGCS
7	MS_A2 requests the uplink	MS_A2 can speak to MS_A1 and MS_A3
8	MS_**A5** calls MS_A4 with Prio 4	The call is unsuccessful
9	MS_**A5** calls MS_A4 with Prio 3	**The group channel is pre-empted on A IF of BSC_A2** MS_A5 is connected with MS_A4 MS_A2 are IDLE MS_A3 can take the uplink and speak to MS_A1
10	MS_A1 releases the group call MS_A4 releases the PtP	All participants are IDLE
11	Unblock/unlock the blocked/locked TS's on A IF to BSC_A2	All resources are IDLE

d) Success criteria

The group channel of a VGCS call can be pre-empted on A IF by a PtP call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.4 MS in PEC, pre-emption on A-IF by higher prio PtP call

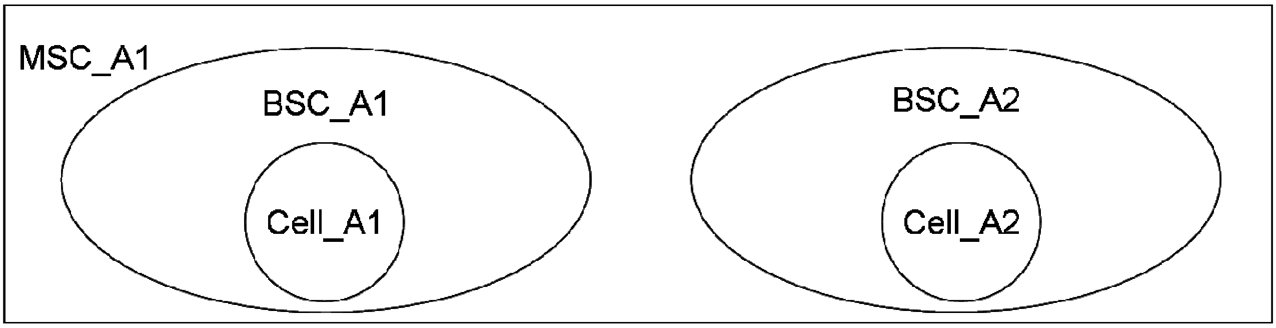
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1 9.8.5	

a) Purpose

Verify that a MS in PEC can be pre-empted on A-IF by a PtP call.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1 (Cell_A1, no VGCS / VBS subscriber)	MS_A2 (Cell_A2, no VGCS / VBS subscriber)
	MS_A3 (Cell_A2, no VGCS / VBS subscriber)
The Capacity on the A IF to BSC_A2 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A2 originates a 112 PEC	MS_A2 is connected with emergency operator
2	MS_A1 calls MS_A3 with Prio 2	Call is unsuccessful

Step	Action	Expected result(s)
3	MS_A1 calls MS_A3 with Prio 1	**MS_A2 is pre-empted at A-IF** MS_A2 is IDLE MS_A1 is connected with MS_A3
4	MS_A1 releases the PtP call	All participants are IDLE
5	MS_A2 originates a 112 PEC	MS_A2 is connected with emergency operator
6	MS_A3 calls MS_A1 with Prio 2	Call is unsuccessful
7	MS_A3 calls MS_A1 with Prio 1 (e.g. data call)	**MS_A2 is pre-empted at A-IF** MS_A2 is IDLE MS_A3 is connected with MS_A1
8	MS_A1 releases the PtP call	All participants are IDLE
9	Unblock the TS's to BCS_A2 at A-IF	All resources are IDLE

d) Success criteria

A MS in PEC can be pre-empted on A-IF by a PtP call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.5 MS in PtP call, pre-emption on MS by higher prio VBS call

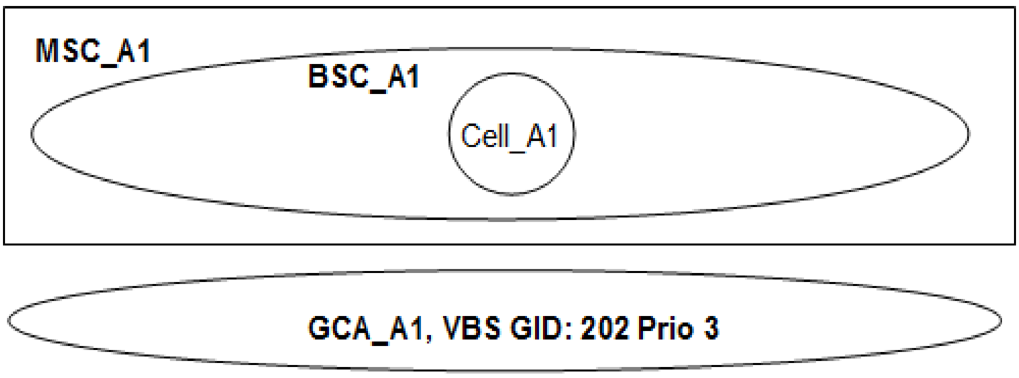
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

To verify pre-emption on MS based on the transmitted eMLPP priority.

b) Test configuration / initial conditions

Network A



MS_A1 (VBS GID: 202)
MS_A2 (VBS GID: 202)
MS_A3 (VBS GID: 202)
MS_A4 (VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1	MS_A3 calls MS_A4 with Prio 4	MS_A3 is connected with MS_A4

Step	Action	Expected result(s)
2	MS_A1 originates the 202 VBS	MS_A2 receives the 202 VBS **MS_A3 receives automatically the 202 VBS** **MS_A4 receives automatically the 202 VBS** The PtP call is released
3	MS_A1 releases the VBS call	All participants are IDLE

d) Success criteria

A PtP call can be pre-empted in mobile by a VBS call with higher priority. The pre-emption is based on the transmitted eMLPP priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.6 MS in VBS call as originator, pre-emption on A IF by higher prio VBS call

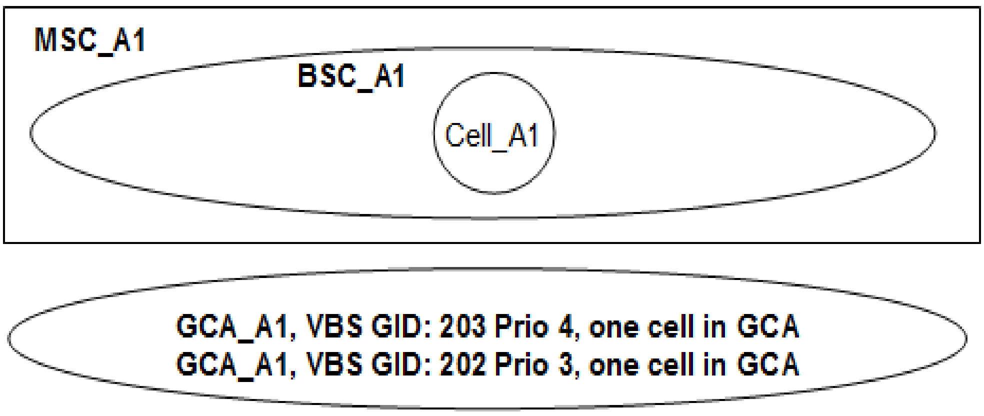
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.9 2.4.1 2,4,5 2.4.6 2.4.7 20.1.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VBS-Call can be pre-empted on A-Interface by another VBS-Call with higher priority.

b) Test configuration / initial conditions

Network A



MS_A1 (VBS GID: 203)
MS_A2 (VBS GID: 203)
MS_A3 (VBS GID: 202)
MS_A4 (VBS GID: 202)
The Capacity on the A-IF to BSC_A1 is <u>reduced to two TS's</u>

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates the 203 VBS	MS_A2 receives the 203 VBS All TS's at A-IF are BUSY
2	MS_A3 originates the 202 VBS	MS_A4 receives the 202 VBS **The 203 VBS-Call is terminated** MS_A1 and MS_A2 are IDLE
3	MS_A3 releases the VBS call	All participants are IDLE
4	Unblock all TS'S at A-IF	All resources are IDLE

d) Success criteria

A VBS-Call can be pre-empted on A-Interface by another VBS-Call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.7 MS in VBS call as listener, pre-emption on Um by higher prio VBS call

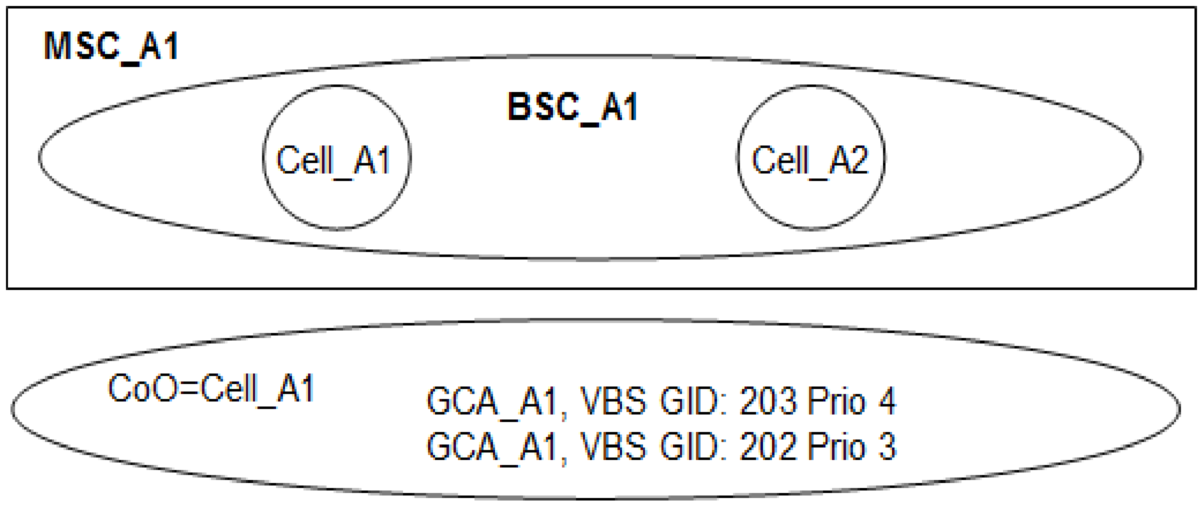
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VBS-group channel can be pre-empted on Um by another VBS-Call with higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 203, Cell_A1)	MS_A2 (VBS GID: 203, Cell_A2)
MS_A3 (VBS GID: **202**, Cell_A1)	MS_A4 (VBS GID: **202**, Cell A2)
The Capacity on the Um in Cell_A2 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates the 203 VBS	MS_A2 receives the 203 VBS All TS's at Um in Cell_A2 are BUSY
2	MS_A3 originates the **202** VBS	MS_A4 receives the **202** VBS in Cell_A2 **The 203 VBS-group channel in Cell_A2 is pre-empted** MS_A2 is IDLE
3	MS_A1 and MS_A3 releases the VBS calls	All participants are IDLE
4	Unblock all TS'S at Um in Cell_A2	All resources are IDLE

d) Success criteria

A VBS-group channel can be pre-empted on Um by another VBS-Call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.8 MS in VGCS call on DCH, pre-emption on MS by higher prio VBS call

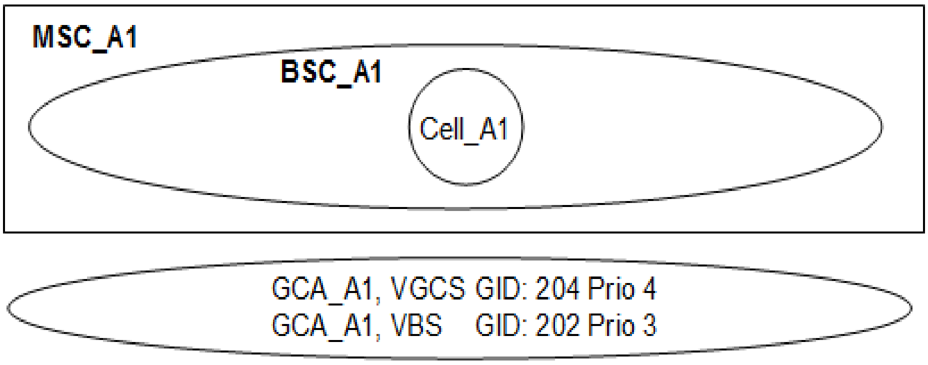
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

To verify pre-emption on MS based on the transmitted eMLPP priority.

b) Test configuration / initial conditions

Network A



MS_A1 (VGCS GID: 204, VBS GID: 211)
MS_A2 (VGCS GID: 204)
MS_A3 (VBS GID: 202)
MS_A4 (VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates the **204** VGCS and keeps the DCH	MS_A2 receives the **204** VGCS

Step	Action	Expected result(s)
2	MS_A3 originates the **202** VBS	MS_A4 receives the **202** VBS **MS_A1 receives the 202 VBS** MS_A2 can take the uplink in the **204** VGCS
3	MS_A1 and MS_A3 releases the VGCS and the VBS call	All participants are IDLE

d) Success criteria

The DCH of en VGCS call can be pre-empted in the mobile by a VBS call with higher priority. The pre-emption is based on the transmitted eMLPP priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.9 MS in VGCS call having the UL of the GCH, pre-emption on Um by higher prio VBS call

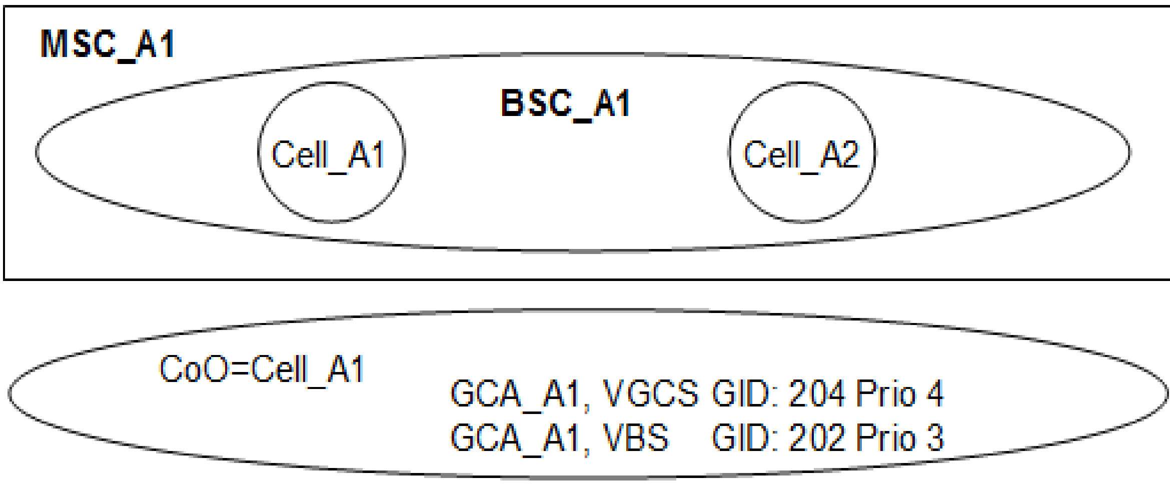
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VGCS-group channel can be pre-empted on Um by another VBS-Call with higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: **204**, Cell_A1)	MS_A2 (VGCS GID: **204**, Cell_A2)
MS_A3 (VBS GID: **202**, Cell_A1)	MS_A4 (VBS GID: **202**, Cell A2)
The Capacity on the Um in Cell_A2 is reduced to one TS	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates the **204** VGCS	MS_A2 receives the **204** VGCS and take the uplink All TS's at Um in Cell_A2 are BUSY
2	MS_A3 originates the **202** VBS	MS_A4 receives the **202** VBS in Cell_A2 **The 204 VGCS-group channel in Cell_A2 is pre-empted by the VBS group channel** MS_A2 is IDLE MS_A1 can take the uplink of the VGCS-call
3	MS_A1 and MS_A3 releases the VGCS and the VBS calls	All participants are IDLE
4	Unblock all TS'S at Um in Cell_A2	All resources are IDLE

d) Success criteria

A VGCS-group channel with an active UL can be pre-empted on Um by a VBS-call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.10 MS in data call, pre-emption on A IF by higher prio VBS call

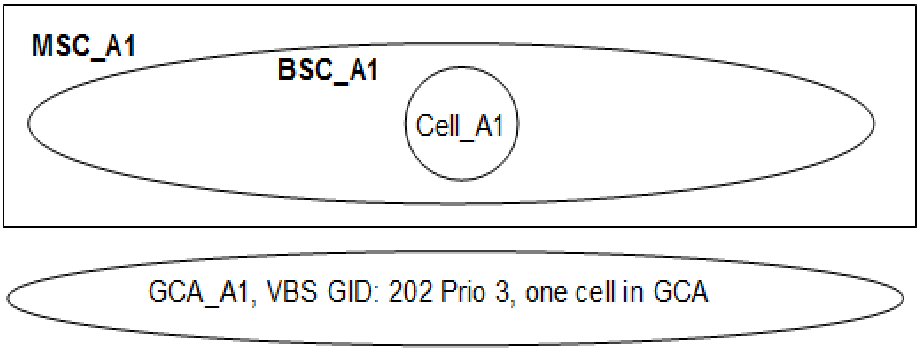
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a data call can be pre-empted on Um by another VBS-Call with higher priority.

b) Test configuration / initial conditions

Network A



MS_A1 (no VGCS / VBS subscriber)
MS_A2 (no VGCS / VBS subscriber)
MS_A3 (VBS GID: **202)**
MS_A4 (VBS GID: **202)**
The Capacity on the A-IF in BSC_A1 is <u>reduced to two TS's</u>

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) to MS_A2 with Prio 4	MS_1 connected with MS_A2 All TS'S at A-IF are BUSY
2	MS_A3 originates the **202** VBS	MS_A4 receives the **202** VBS **MS_A1 and MS_A2 are pre-empted at A-IF** MS_A1 and MS_A2 are IDLE
3	MS_A3 releases the VBS call	All participants are IDLE
4	Unblock the TS's at Um	All resources are IDLE

d) Success criteria

A data call can be pre-empted on Um by a VBS-Call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.11 MS in PEC, pre-emption on Um by REC

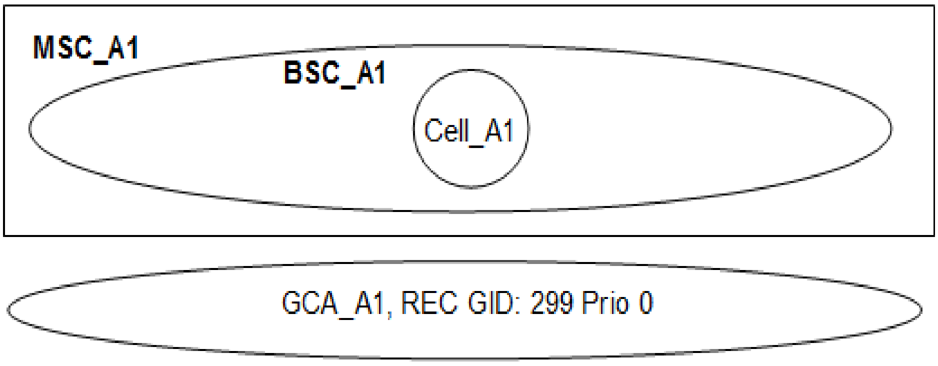
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3		

a) Purpose

Verify that the priority two is assigned by the network to a PEC and that the PEC can be pre-empted on Um by a REC.

b) Test configuration / initial conditions

Network A



MS_A1 (no VGCS / VBS subscriber)
MS_A2 (no VGCS / VBS subscriber)
MS_A3 (REC GID: 299)
CT_A1 (GCA_A1, REC GID: 299)
The Capacity on the Um in Cell_A1 is <u>reduced to one TS</u>

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a 112 PEC	MS_1 is connected with the emergency control manager
2	CT_A1 originates the REC	**MS_A1 is pre-empted at Um** MS_A3 receives the REC
3	CT_A1 releases the REC	All participants are IDLE
4	Unblock the TS’s at Um	All resources are IDLE

d) Success criteria

The priority two is assigned by the network to a PEC and the PEC can be pre-empted on Um by a REC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.12 MS in PtP call, pre-emption on A IF by higher prio PtP call

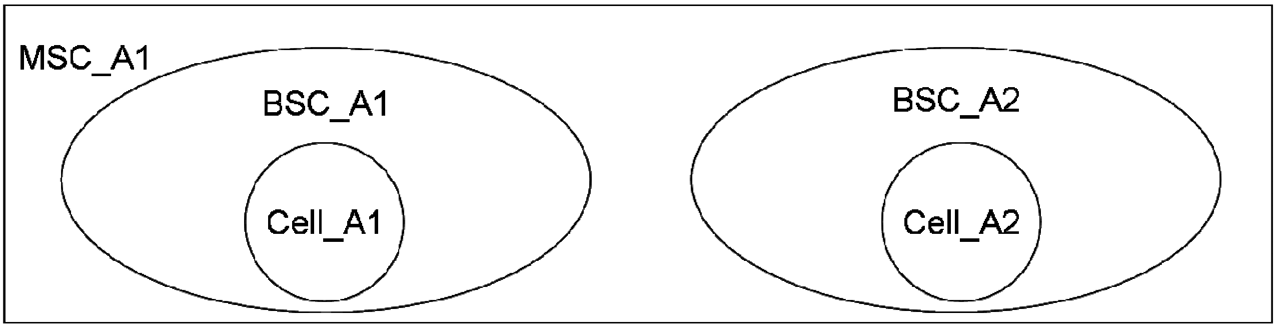
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a PtP call can be pre-empted on A-Interface by another PtP-Call with higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1	MS_A2
MS_A3	MS_A4
The Capacity on the A-IF to BSC_A2 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 calls MS_A2 with Prio 4	MS_A1 is connected with MS_A2
2	MS_A3 calls MS_A4 with Prio 4	Call is unsuccessful

Step	Action	Expected result(s)
3	MS_A3 calls MS_A4 with Prio 3	**MS_A1 is disconnected from MS_A2** MS_A1 and MS_A2 are IDLE MS_A3 is connected with MS_A4 with Prio 3
4	MS_A2 releases the call	All participants are IDLE
5	Unblock the TS's to BSC_A2	All resources are IDLE

d) Success criteria

A PtP call can be pre-empted on A-Interface by another PtP-Call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.13 MS in PtP call, pre-emption on MS by higher prio VGCS call (REC)

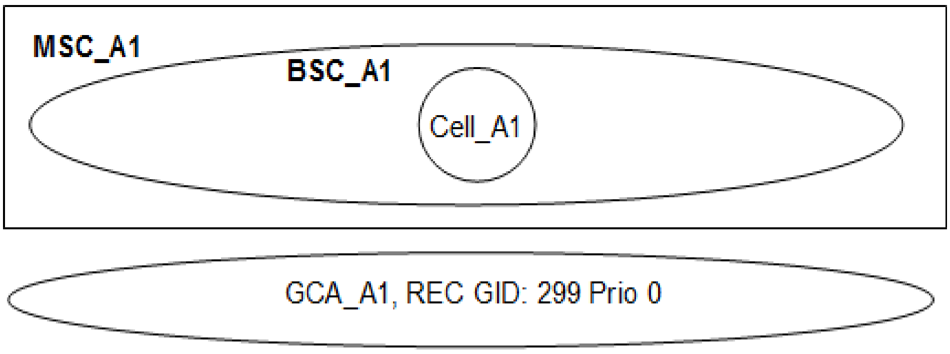
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

To verify pre-emption on MS based on the transmitted eMLPP priority.

b) Test configuration / initial conditions

Network A



MS_A1 (REC GID: 299)
MS_A2 (REC GID: 299)
MS_A3 (REC GID: 299)
MS_A4 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 calls MS_A2 with Prio 3	MS_1 is connected MS_A2
2	MS_A3 originates the REC	MS_A4 receives the REC **MS_A1 and MS_A2 receives the REC** All Mobiles are involved in the REC
3	MS_A3 releases the REC	All participants are IDLE

d) Success criteria

The pre-emption on MS takes place in the mobile. The pre-emption is based on the transmitted eMLPP priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.14 MS in VBS call as originator, pre-emption on Um by higher prio VGCS call (REC)

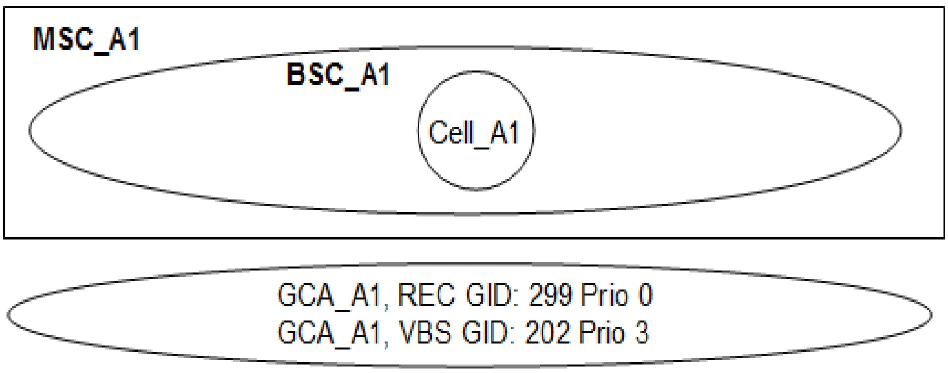
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that the DCH of a VBS call can be pre-empted on A-Interface by a REC

b) Test configuration / initial conditions

Network A



MS_A1 (VBS GID: **202)**
MS_A2 (VBS GID: **202)**
MS_A3 (REC GID: 299)
MS_A4 (REC GID: 299)
The Capacity on the Um in Cell_A1 is <u>reduced to two TS's</u>

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates the **202** VBS	MS_2 receives the VBS
2	MS_A3 originates the 299 REC	MS_A4 receives the 299 REC **The VBS DCH and the group channel are pre-empted by the REC** MS_A1 and MS_A2 are IDLE
3	MS_A3 releases the REC	All participants are IDLE
4	Unblock the TS's at Um	All resources are IDLE

d) Success criteria

The DCH of a VBS call can be pre-empted on A-Interface by a REC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.15 MS in VBS call as listener, pre-emption on A IF by higher prio VGCS call (REC)

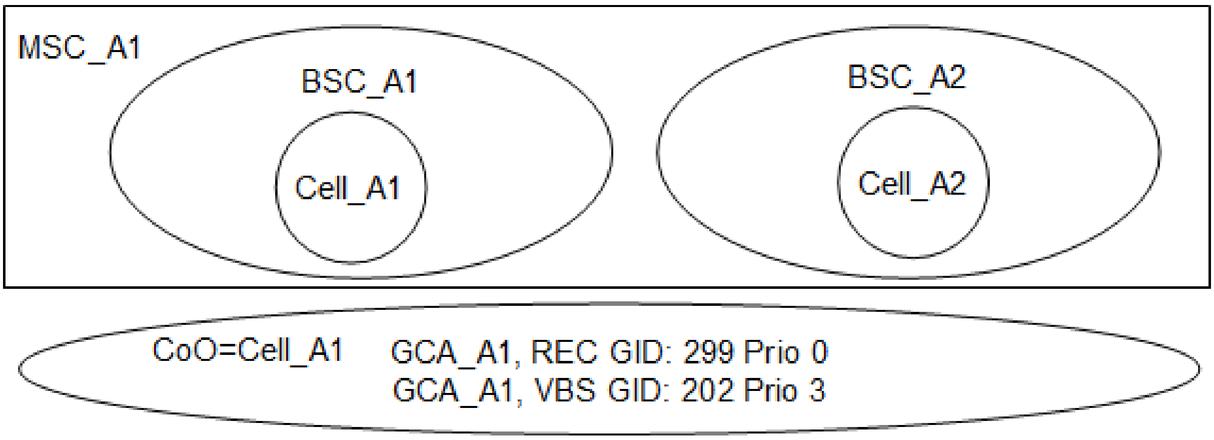
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that the group channel of a VBS call can be pre-empted on A-Interface by a REC.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1 (VBS GID: **202)**	MS_A2 (VBS GID: **202)**
MS_A3 (REC GID: 299)	MS_A4 (REC GID: 299)
The Capacity on the A-IF of BSC_A2 is <u>reduced to one TS</u> **Only one cell of BSC_A2 belongs to the GCA**	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates the **202** VBS	MS_A2 receives the **202** VBS
2	MS_A3 originates the 299 REC	MS_A4 receives the 299 REC **The group channel of the VBS is pre-empted at A-IF of BSC_A2** MS_A2 is IDLE
3	MS_A3 releases the REC	All participants are IDLE
4	Unblock the TS's to BSC_A2	All resources are IDLE

d) Success criteria

The group channel of a VBS call can be pre-empted on A-Interface by a REC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.16 MS in VGCS call having the UL of the GCH, pre-emption on MS by higher prio VGCS call (REC)

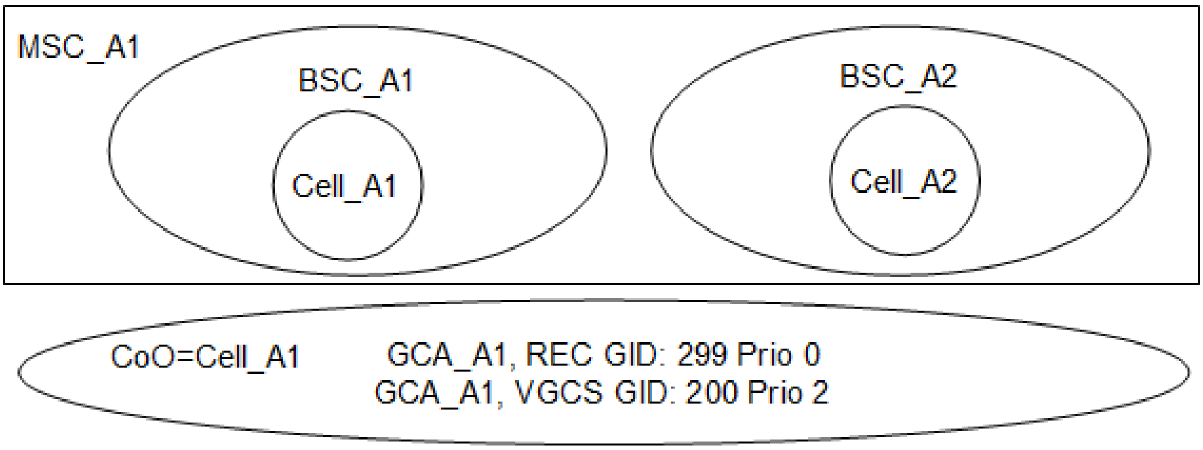
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3		

a) Purpose

To verify pre-emption on MS based on the transmitted eMLPP priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200, REC GID: 299)
MS_A3 (REC GID: 299)	MS_A4 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates the 200 VGCS	MS_A2 receives the 200 VGCS and take the uplink
2	MS_A3 originates the 299 REC	MS_A4 receives the 299 REC MS_A2 receives the 299 REC MS_A1 can take the uplink of the 200 VGCS
3	MS_A3 releases the REC MS_A1 releases the 200 VGCS	All participants are IDLE

d) Success criteria

Mobile keeping the uplink of a VGCS call is notified about a REC. The VGCS call with the lower priority is pre-empted at the mobile. The pre-emption in the mobile is based on the transmitted eMLPP priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.17 MS in VGCS call as listener, pre-emption on A IF by higher prio VGCS call (REC)

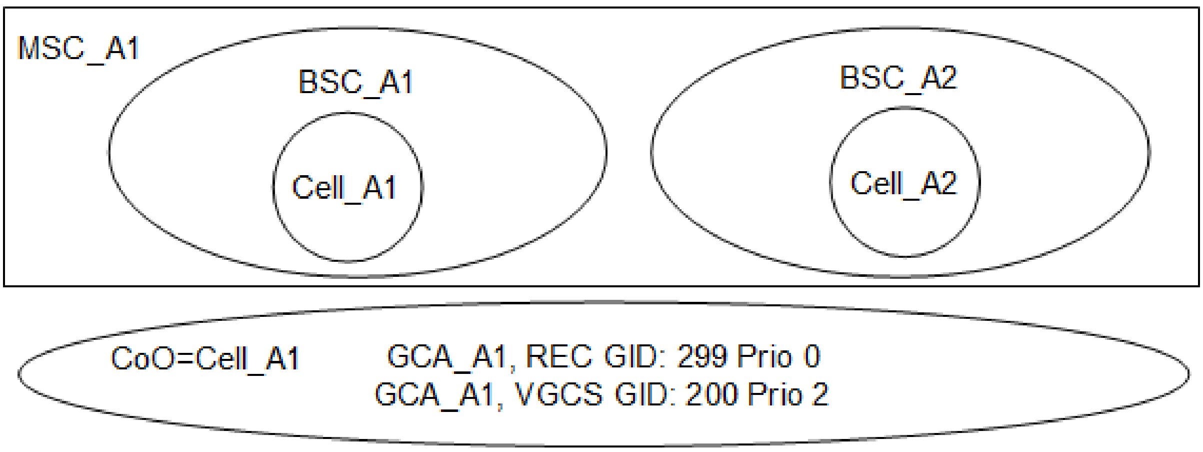
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.14 2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VGCS group channel call can be pre-empted on A-Interface by a VGCS-Call with higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A3 (REC GID: 299)	MS_A4 (REC GID: 299)
The Capacity on the A-IF to BSC_A2 is <u>reduced to one TS</u> **Only one cell of BSC_A2 belongs to the GCA**	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates the 200 VGCS and take the uplink	MS_A2 receives the 200 VGCS
2	MS_A3 originates the 299 REC	MS_A4 receives the 299 REC **The group channel of the 200 VGCS is pre-empted** MS_A2 is disconnected from the 200 VGCS
3	MS_A3 releases the REC MS_A1 releases the 200 VGCS	All participants are IDLE
4	Unblock the A-IF TS's to BSC_A2	All resources are IDLE

d) Success criteria

A VGCS group channel call can be pre-empted on A-Interface by a REC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.18 MS in data call, pre-emption on Um by higher prio VGCS call (REC)

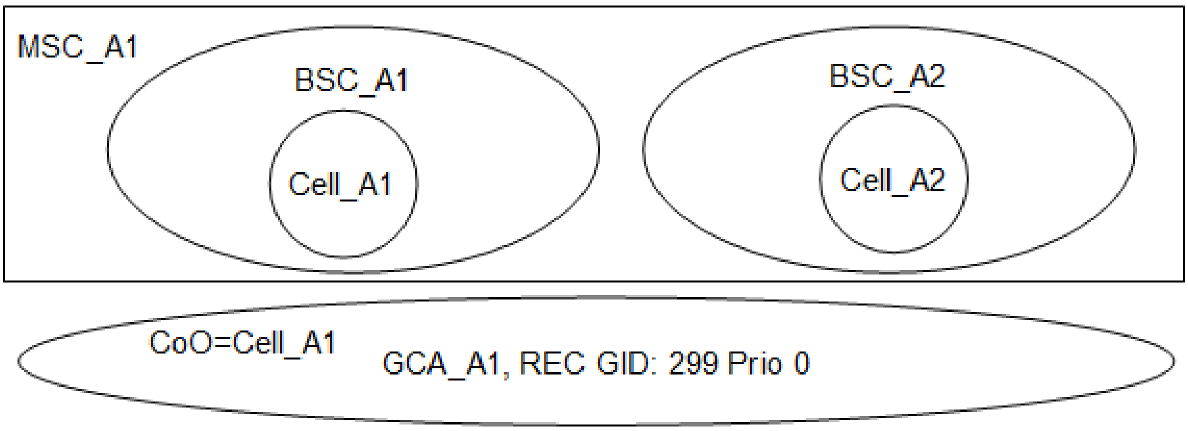
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a data call can be pre-empted on Um by VGCS-Call with higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (REC GID: 299)	MS_A2 (REC GID: 299)
MS_A3 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)
The Capacity on the Um of Cell_A1 is <u>reduced to two TS's</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A3 originates a data call with Prio 1 (transparent, 2.4, 4.8 or 9.6 kbit/s) to MS_A4	MS_A3 is connected with MS_A4 One TS in Cell_A1 is BUSY, one TS is IDLE
2	MS_A1 originates the 299 REC	MS_A2 receives the 299 REC **MS_A3 is pre-empted in Cell_A1** MS_A3 and MS_A4 are IDLE
3	MS_A1 releases the REC	All participants are IDLE
4	Unblock the Um TS's in Cell_A1	All resources are IDLE

d) Success criteria

A data call can be pre-empted on Um by a REC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.19 MS in PtP call, pre-emption on Um by higher prio data call (4.8 kbit/s, transparent)

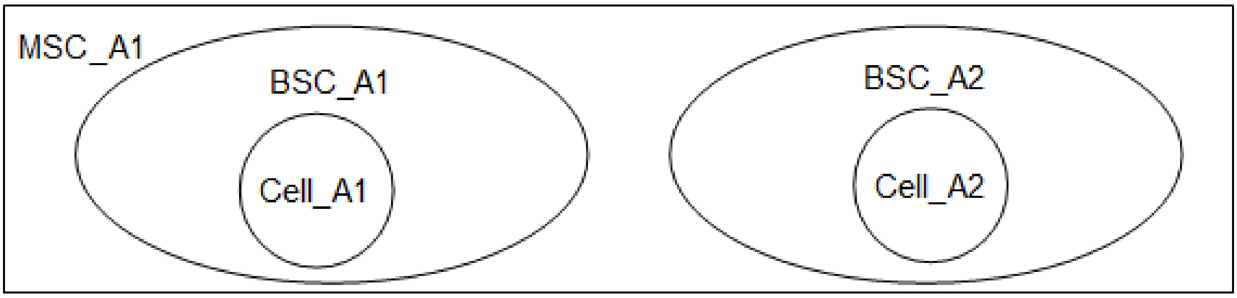
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a PtP call can be pre-empted on Um by a data call with higher priority

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1	MS_A2
MS_A3	MS_A4
The Capacity on the Um of Cell_A1 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 calls MS_A2 with Prio 4	MS_A1 is connected with MS_A2 All TS's in Cell_A1 are BUSY
2	MS_A3 originates a data call (transparent, 4.8 kbit/s) with Prio 4 to MS_A4	Call is unsuccessful

Step	Action	Expected result(s)
3	MS_A3 originates a data call with Prio 1 to MS_A4 (transparent, 4.8 kbit/s)	**MS_A3 is connected with MS_A4** **MS_A1 is pre-empted in Cell_A1** MS_A1 and MS_A2 are IDLE
4	MS_A3 releases the data call	All participants are IDLE
5	MS_A1 calls MS_A2 with Prio 3	MS_A1 is connected with MS_A2 All TS's in Cell_A1 are BUSY
6	MS_A4 originates a data call with Prio 1 to MS_A3 (transparent, 4.8 kbit/s)	**MS_A4 is connected with MS_A3** **MS_A1 is pre-empted in Cell_A1** MS_A1 and MS_A2 are IDLE
7	MS_A4 releases the data call	All participants are IDLE
8	Unblock the Um TS's in Cell_A1	All resources are IDLE

d) Success criteria

A PtP call can be pre-empted on Um by a data call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.20 MS in VBS call as originator, pre-emption on Um by higher prio data call (9.6 kbit/s, transparent)

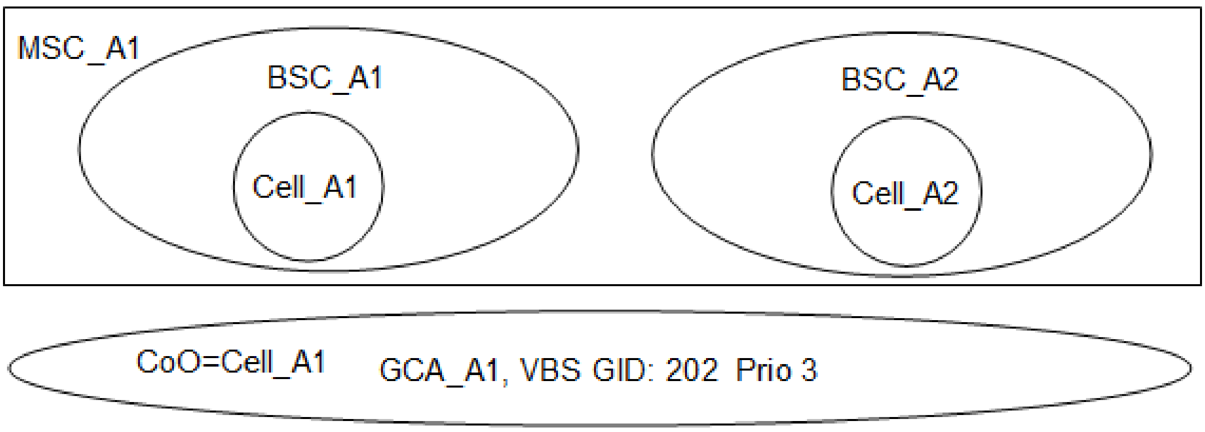
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that the DCH of a VBS call can be pre-empted on Um by a data call with higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1 (VBS GID: **202**)	MS_A2 (VBS GID: **202)**
MS_A3 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)
MS_A5 (no VGCS / VBS subscriber)	
The Capacity on the Um of Cell_A1 is <u>reduced to two TS's</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a **202** VBS call	MS_A2 receives the **202** VBS call
2	MS_A3 originates a data call with Prio 3 to MS_A4 (9.6 kbit/s, transparent)	Call is unsuccessful
3	MS_A3 originates a data call with Prio 1 to MS_A4 (9.6 kbit/s, transparent)	**MS_A3 is connected with MS_A4** **The DCH or the group channel of the VBS call is pre-empted:** - DCH => VBS call is terminated - Group Channel => VBS may be terminated
4	MS_A1 releases the VBS call (if still ex-isting) MS_A3 releases the data call	All participants are IDLE
5	MS_A1 originates a **202** VBS call	MS_A2 receives the **202** VBS call
6	MS_A4 originates a data call with Prio 1 to MS_A3 (9.6 kbit/s, transparent)	**MS_A4 is connected with MS_A3** **The DCH or the group channel of the VBS call is pre-empted:** - DCH => VBS call is terminated - Group Channel => VBS may be terminated
7	MS_A1 releases the VBS call (if still ex-isting) MS_A3 releases the data call	All participants are IDLE
8	MS_A1 originates a **202** VBS call	MS_A2 receives the **202** VBS call
9	MS_A3 originates a data call with Prio 1 to MS_A5 (9.6 kbit/s, transparent)	**MS_A3 is connected with MS_A5** **The VBS call is terminated (DCH and group channel are pre-empted)**
10	MS_A3 releases the data call	All participants are IDLE
11	Unblock the Um TS's in Cell_A1	All resources are IDLE

d) Success criteria

The DCH of a VBS call can be pre-empted on Um by a data call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.21 MS in VGCS call on DCH, pre-emption on A IF by higher prio data call (9.6 kbit/s, transparent)

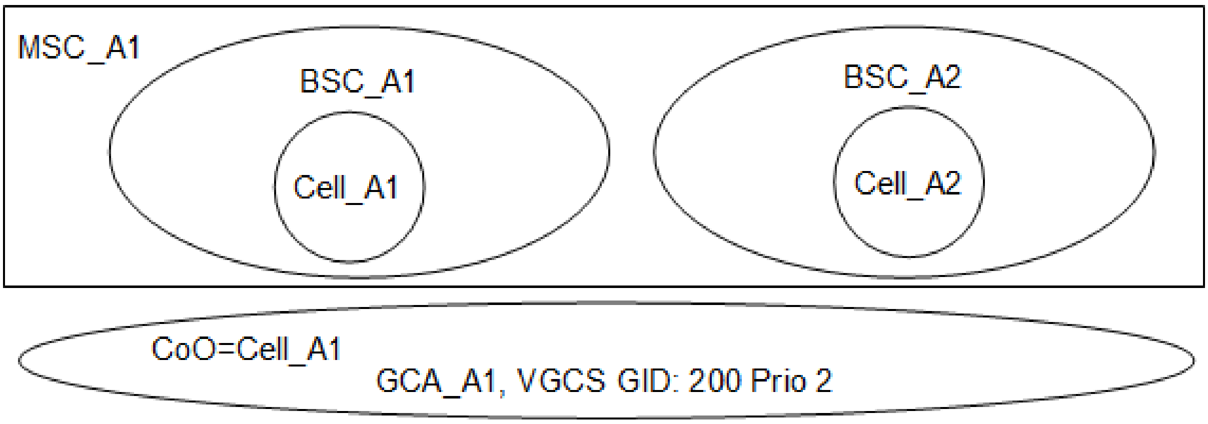
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that the DCH of a VGCS call can be pre-empted on A-Interface by a data call with higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A3 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)
MS_A5 (no VGCS / VBS subscriber)	
CT_A1 (GCA_A1, VGCS GID: 200)	
The Capacity on the A-IF to BSC_A1 is <u>reduced to two TS's</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a 200 VGCS call and keep the DCH	MS_A2 and CT_A1 receives the 200 VGCS call
2	MS_A3 originates a data call with Prio 2 to MS_A4 (transparent, 9.6 kbit/s)	Call is unsuccessful
3	MS_A3 originates a data call with Prio 1 to MS_A4 (9600 baud tr.)	**MS_A3 is connected with MS_A4** **The DCH or the group channel of the VGCS call is pre-empted:** - DCH => VGCS call is continued - Group Channel => VGCS may be terminated
4	CT_A1 terminates the VGCS call (if existing) MS_A3 releases the data call	All participants are IDLE
5	MS_A1 originates a 200 VGCS call and keep the DCH	MS_A2 and CT_A1 receive the 200 VGCS call
6	MS_A3 originates a data call with Prio 1 to MS_A5 (transparent, 9.6 kbit/s)	**MS_A3 is connected with MS_A5** **The DCH and the group channel are pre-empted in Cell_A1** The VGCS call may be terminated in BSC_A1 or in all BSC's
7	CT_A1 terminates the VGCS call (if existing) MS_A3 releases the data call	All participants are IDLE
8	Unblock the A-IF TS's to BSC_A1	All resources are IDLE

d) Success criteria

The DCH of a VGCS call can be pre-empted on A-Interface by a data call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.22 MS in VGCS as listener, pre-emption on Um by data call (4.8 kbit/s, transparent)

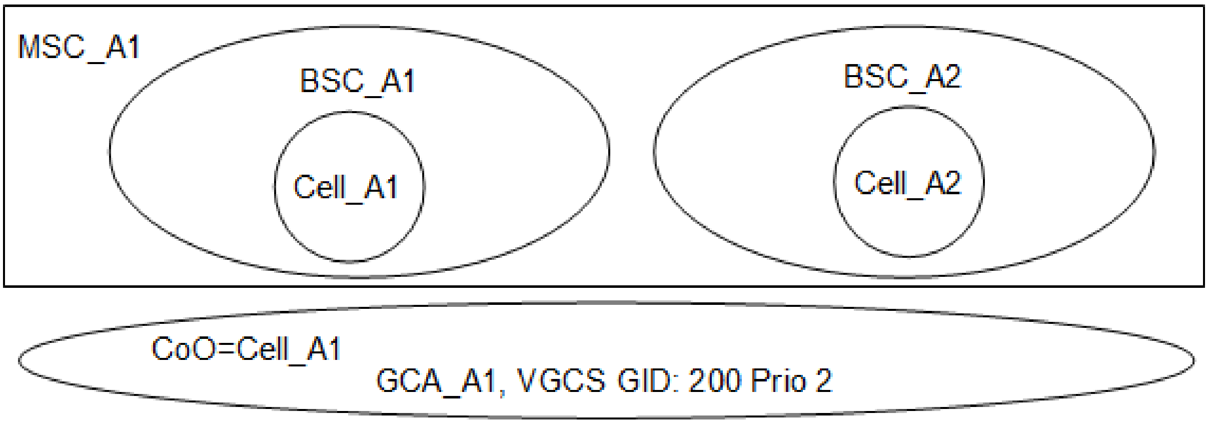
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VGCS group channel can be pre-empted on Um by a data call with higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A3 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)
MS_A5 (VGCS GID: 200)	
The Capacity on the Um of Cell_A2 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a 200 VGCS call	MS_A2 and MS_A5 receive the 200 VGCS call
2	MS_A3 originates a data call with Prio 2 to MS_A4 (4.8 kbit/s, transparent)	Call is unsuccessful
3	MS_A3 originates a data call with Prio 1 to MS_A4 (4.8 kbit/s, transparent)	**MS_A3 is connected with MS_A4** **The group channel is pre-empted in Cell_A2** MS_A2 is IDLE MS_A1 and MS_A5 are still in the VGCS call
4	MS_A1 releases the VGCS call MS_A3 releases the data call	All participants are IDLE
5	MS_A1 originates a 200 VGCS call	MS_A2 and MS_A5 receive the 200 VGCS call
6	MS_A4 originates a data call with Prio 1 to MS_A3 (4.8 kbit/s, transparent)	**MS_A4 is connected with MS_A3** **The group channel is pre-empted in Cell_A2** MS_A2 is IDLE MS_A1 and MS_A5 are still in the VGCS call
7	MS_A1 releases the VGCS call MS_A3 releases the data call	All participants are IDLE
8	Unblock the Um TS's in Cell_A2	All resources are IDLE

d) Success criteria

A VGCS group channel can be pre-empted on Um by a data call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.23 MS in VBS call as originator, pre-emption on A IF by higher prio data call (2.4 kbit/s, transparent)

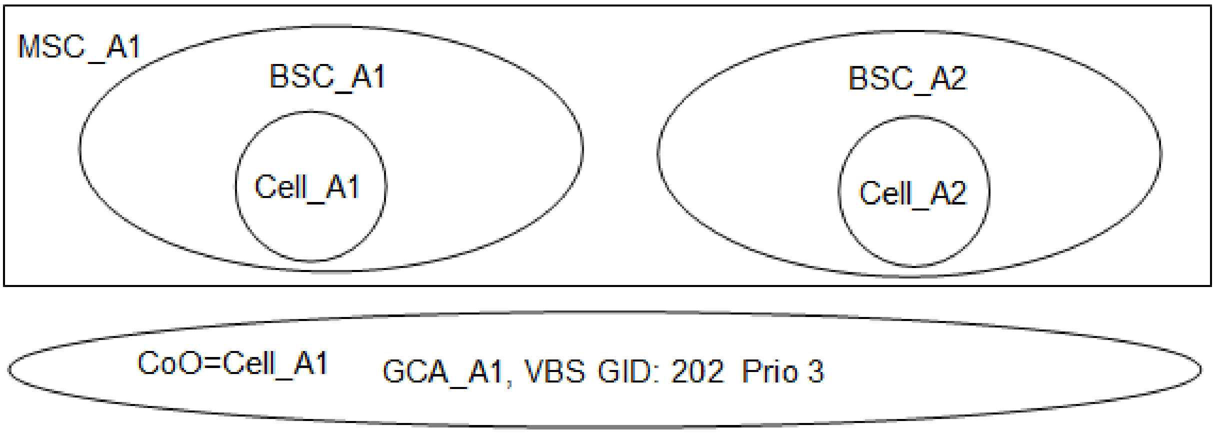
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that the group channel and the connection to the originator of a VBS call can be pre-empted on A-Interface by a data call with higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: **202)**	MS_A2 (VBS GID: **202)**
MS_A3 (no VGCS / VBS subscriber)	
MS_A4 (no VGCS / VBS subscriber)	
MS_A5 (VBS GID: **202**)	
The Capacity on the A-IF to BSC_A1 is <u>reduced to two TS's</u> **Only the Cell_A1 in BSC_A1 belongs to the GCA.**	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A5 originates a **202** VBS call	MS_A1 and MS_A2 receive the **202** VBS call
2	MS_A3 originates a data call with Prio 3 to MS_A4 (2.4 kbit/s, transparent)	Call is unsuccessful
3	MS_A3 originates a data call with Prio 1 to MS_A4 (2.4 kbit/s, transparent)	**MS_A3 is connected with MS_A4** **The VBS group call is terminated. The group channel and the connection to the originator are preempted.**
4	MS_A3 releases the data call	All participants are IDLE
5	Unblock the A-IF TS's to BSC_A1	All resources are IDLE

d) Success criteria

The group channel and the connection to the originator of a VBS call can be pre-empted on A-Interface by a data call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

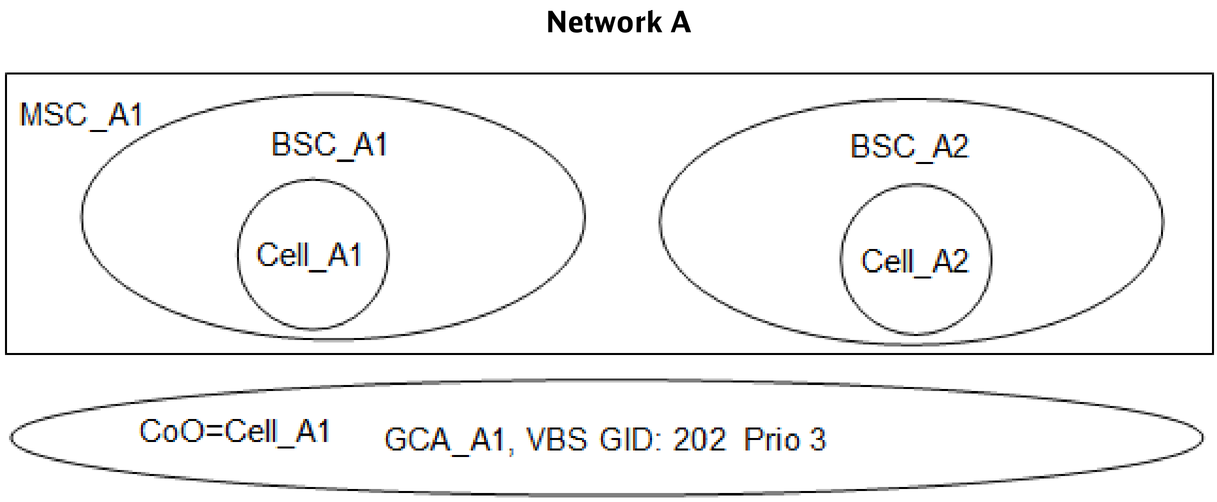
5.7.24 MS in VBS call as originator, pre-emption on A IF by lower prio PtP call does not take place

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that the DCH of a VBS call can not be pre-empted on A-Interface by a PtP call with lower priority.

b) Test configuration / initial conditions



Cell_A1	**Cell_A2**
MS_A1 (VBS GID: **202)**	MS_A2 (VBS GID: **202)**
MS_A3 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)
The Capacity on the A-IF to BSC_A1 is <u>reduced to two TS's</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a **202** VBS call	MS_A2 receives the **202** VBS call
2	MS_**A3** originates a data call with Prio 3 to MS_**A4**	**Call is unsuccessful**
3	MS_**A4** originates a data call ((transparent, 2.4, 4.8 or 9.6 kbit/s) with Prio 4 to MS_**A3**	**Call is unsuccessful**
4	MS_A1 releases the VBS call	All participants are IDLE
5	Unblock the A-IF TS's to BSC_A1	All resources are IDLE

d) Success criteria

The DCH of a VBS call can not be pre-empted on A-Interface by a PtP call with lower priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.25 MS in VBS call as listener, pre-emption on Um by lower prio PtP call does not take place

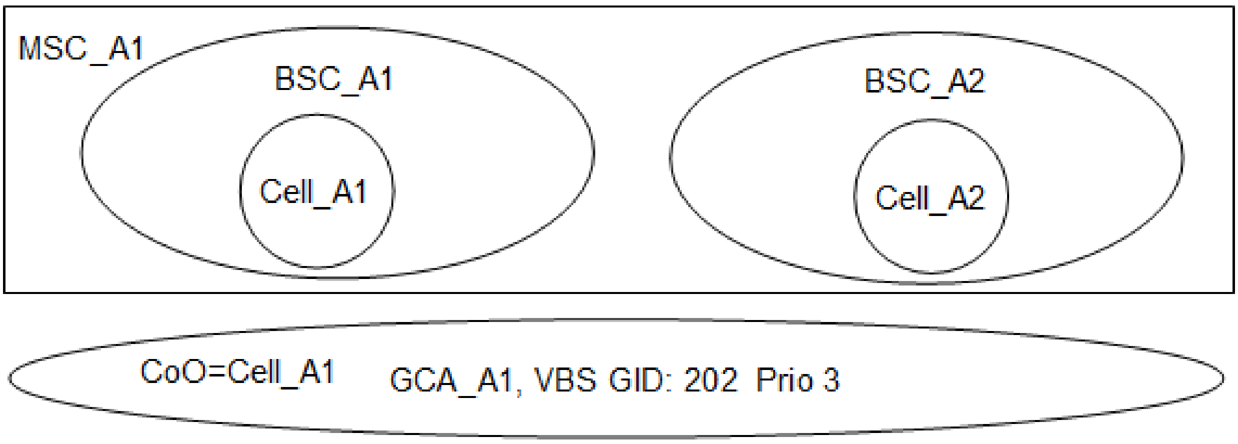
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.5	

a) Purpose

Verify that a VBS group channel can not be pre-empted on Um by a PtP call with lower priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: **202)**	MS_A2 (VBS GID: **202)**
MS_A3 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)
The Capacity on the Um in Cell_A2 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a **202** VBS call	MS_A2 receives the **202** VBS call
2	MS_**A3** originates a data call ((transparent, 2.4, 4.8 or 9.6 kbit/s) with Prio 3 to MS_**A4**	**Call is unsuccessful**
3	MS_**A3** originates a data call with Prio 4 to MS_**A4**	**Call is unsuccessful**
4	MS_A1 releases the VBS call	All participants are IDLE
5	Unblock the Um TS's to Cell_A1	All resources are IDLE

d) Success criteria

A VBS group channel can not be pre-empted on Um by a PtP call with lower priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.26 MS in VGCS call as listener, pre-emption on Um by lower prio PtP call does not take place

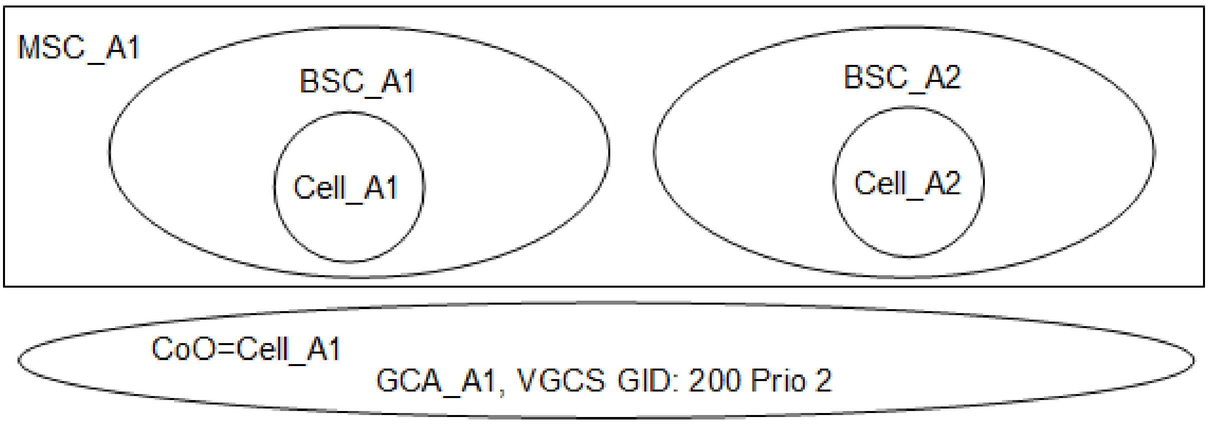
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VGCS group channel ca not be pre-empted on Um by a PtP call with lower priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A3 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)
The Capacity on the Um in Cell_A2 is reduced to one TS!!!	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a 200 VGCS call	MS_A2 receives the 200 VGCS call
2	MS_**A4** originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) with Prio 3 to MS_**A3**	**Call is unsuccessful**
3	MS_**A3** originates a data call with Prio 4 to MS_**A4**	**Call is unsuccessful**
4	MS_A1 releases the VGCS call	All participants are IDLE
5	Unblock the A-IF TS's to BSC_A1	All resources are IDLE

d) Success criteria

A VGCS group channel can not be pre-empted on Um by a PtP call with lower priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.27 MS in data call, pre-emption on A IF by lower prio PtP call does not take place

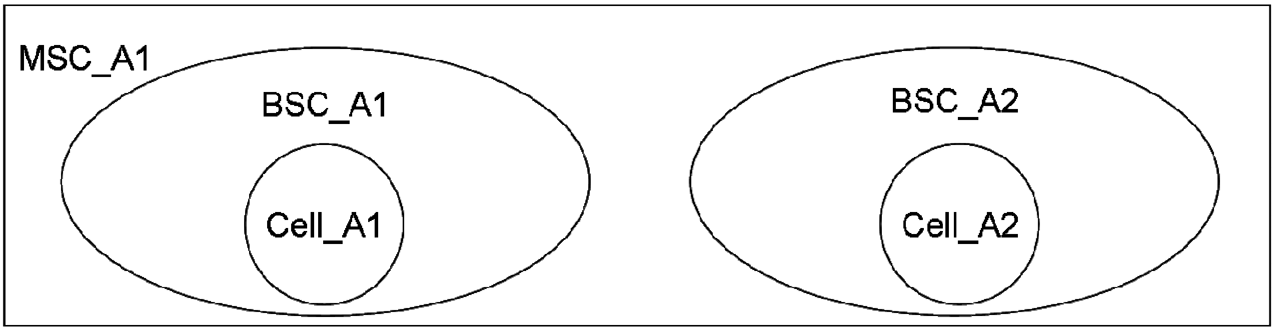
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a data call can not be pre-empted on A-Interface by a PtP-Call with lower priority.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1	MS_A2
MS_A3	MS_A4
The Capacity on the A-IF of BSC_A2 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a data call ((transparent, 2.4, 4.8 or 9.6 kbit/s) with Prio 1 to MS_A2	MS_A1 is connected with MS_A2 There are no IDLE TS's to BSC_A2
2	MS_A3 calls MS_A4 with Prio 3	**Call is unsuccessful**
3	MS_A4 calls MS_A3 with Prio 4	**Call is unsuccessful**

Step	Action	Expected result(s)
4	MS_A1 releases the PtP call	All participants are IDLE
5	Unblock the TS's to BSC_A2	All resources are IDLE

d) Success criteria

A data call can not be pre-empted on A-Interface by a PtP-Call with lower priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.28 MS in VGCS call, pre-emption on Um by lower prio VBS call does not take place

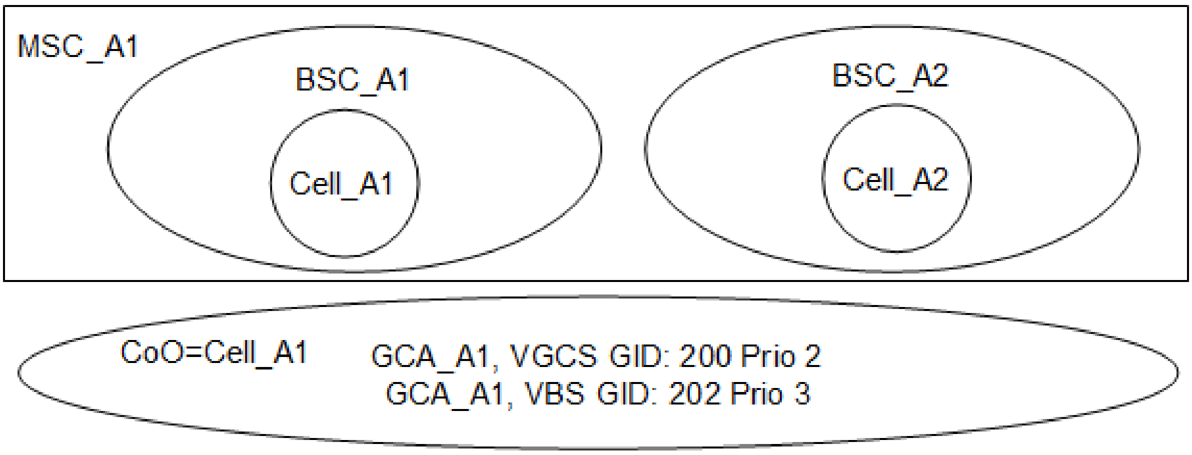
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VGCS group channel can not be pre-empted on Um by a VBS call with lower priority.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A3 (VBS GID: 202)	MS_A4 (VBS GID: 202)
The Capacity on the Um in Cell_A2 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a 200 VGCS call	MS_A2 receives the 200 VGCS call
2	MS_**A3** originates a **202** VBS call	**The VBS group channel in Cell_A2 is not established.** The VBS is established in Cell_A1
3	MS_A3 releases the VBS call	
4	The Capacity on the Um in Cell_A1 is reduced to two TS's!!! All TS's in Cell_A2 are unblocked!!	The test conditions have changed. 200 VGCS is still active
5	MS_**A3** originates a **202** VBS call	**The VBS DCH and the group channel in Cell_A1 are not established.**
6	MS_A1 releases the VGCS call	All participants are IDLE
7	Unblock the Um TS's in Cell_A1	All resources are IDLE

d) Success criteria

A VGCS group channel can not be pre-empted on Um by a VBS call with lower priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.29 MS in VGCS call as listener, pre-emption on A IF by lower prio VBS call does not take place

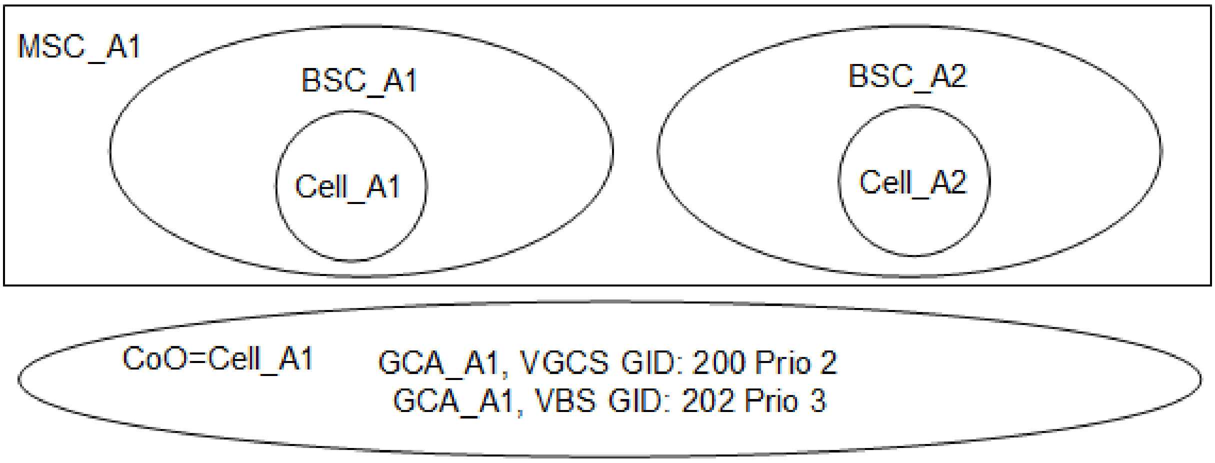
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VGCS group channel can not be pre-empted on A-Interface by a VBS call with lower priority.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A3 (VBS GID: **202)**	MS_A4 (VBS GID: **202)**
The Capacity on the A-IF to BSC_A2 is <u>reduced to one TS</u> **Only the Cell_A2 in BSC_A2 belongs to the GCA.**	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a 200 VGCS call	MS_A2 receives the 200 VGCS call
2	MS_**A3** originates a **202** VBS call	**The VBS group channel in Cell_A2 is not established.** The VBS is established in Cell_A1 MS_A2 is still in the 200 VGCS call.
3	MS_A1 releases the VGCS call MS_A3 releases the VBS call	All participants are IDLE
4	Unblock the A-IF TS's to BSC_A2	All resources are IDLE

d) Success criteria

A VGCS group channel can not be pre-empted on A-Interface by a VBS call with lower priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.30 MS in VGCS call on DCH, pre-emption on A IF by lower prio VGCS call does not take place

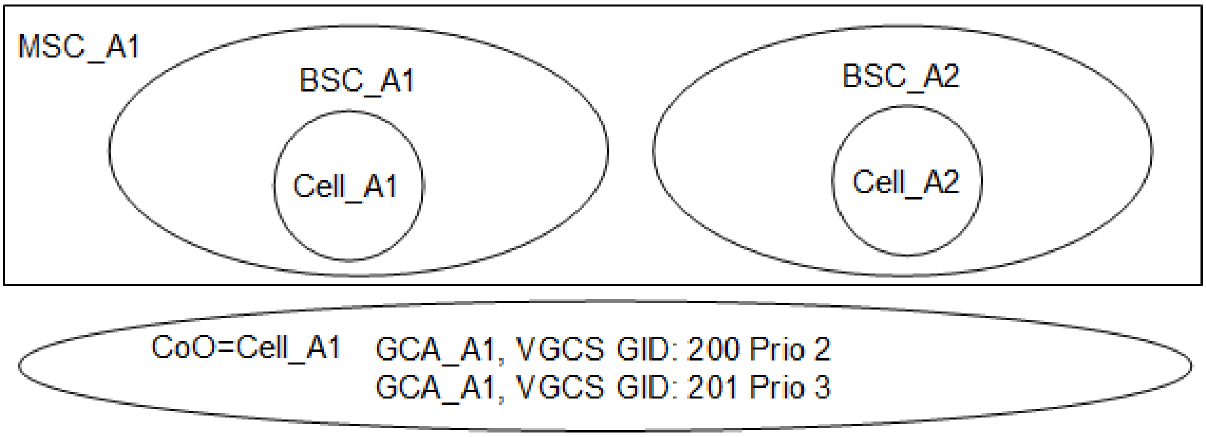
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VGCS DCH can not be pre-empted on A-Interface by a VGCS call with lower priority.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A3 (VGCS GID: **201)**	MS_A4 (VGCS GID: **201)**

The Capacity on the A-IF to BSC_A1 is reduced to two TS's
Only the Cell_A1 in BSC_A1 belongs to the GCA.

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a 200 VGCS call and keeps the DCH	MS_A2 receives the 200 VGCS call
2	MS_**A3** originates a **201** VGCS call	**The VGCS call is not established.** MS_A3 get a proper release cause. MS_A2 is still in the 200 VGCS call.
3	MS_A1 releases the VGCS call	All participants are IDLE
4	Unblock the A-IF TS's to BSC_A1	All resources are IDLE

d) Success criteria

A VGCS DCH can not be pre-empted on A-Interface by a VGCS call with lower priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.31 MS in VGCS call having the UL on the GCH, pre-emption on Um by lower prio VGCS all does not take place

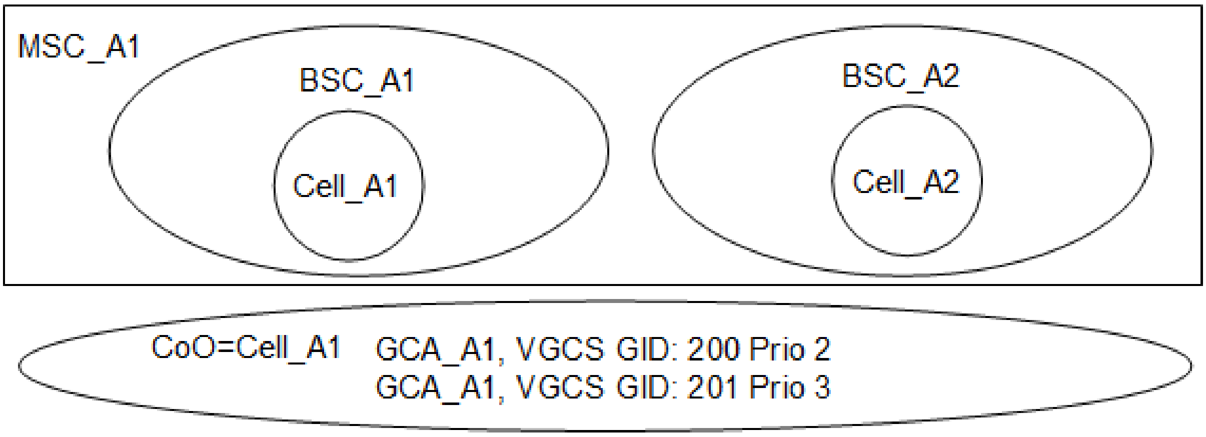
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VGCS group channel with uplink can not be pre-empted on Um by a VGCS call with lower priority.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A3 (VGCS GID: **201)**	MS_A4 (VGCS GID: **201)**
The Capacity on the Um in Cell_A2 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a 200 VGCS call	MS_A2 receives the 200 VGCS call
2	MS_A2 takes the uplink	MS_A1 is listening to MS_A2
3	MS_**A3** originates a **201** VGCS call	**The 201 VGCS group channel in Cell_A2 is not established.** The 200 VGCS group channel is not pre-empted The **201** VGCS call is established in Cell_A1
4	MS_A1 releases the 200 VGCS call MS_A3 releases the **201** VGCS call	All participants are IDLE
5	Unblock the Um TS's in Cell_A2	All resources are IDLE

d) Success criteria

A VGCS group channel with active uplink can not be pre-empted on Um by a VGCS call with lower priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.32 MS in PEC, pre-emption on Um by lower prio VGCS call does not take place

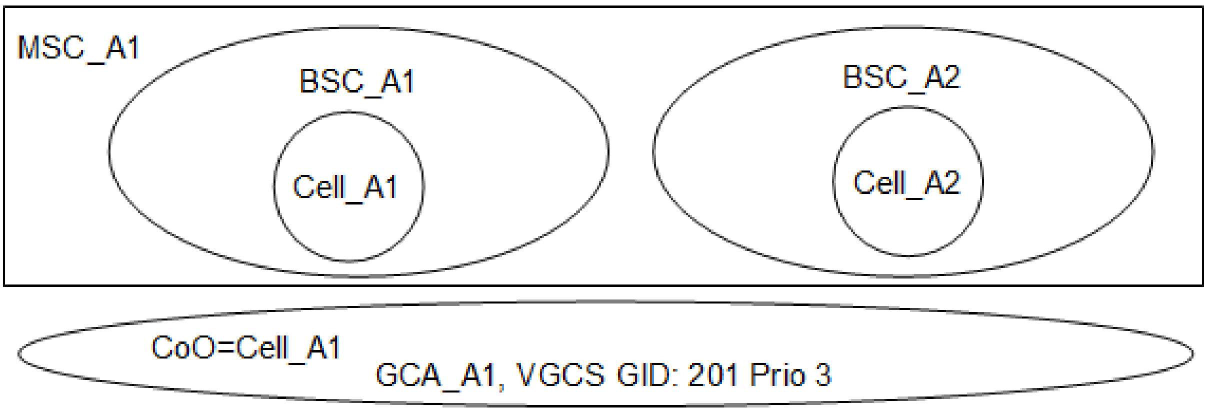
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1 9.8.5	

a) Purpose

Verify that a PEC can not be pre-empted on Um by a VGCS call with lower priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: **201)**	MS_A2 (VGCS GID: **201)**
	MS_A3 (no VGCS / VBS subscriber)
The Capacity on the Um in Cell_A2 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A3 originates a 112 PEC	MS_A3 is connected to the emergency center
2	MS_**A1** originates a **201** VGCS call	**The 201 VGCS group channel in Cell_A2 is not established.** The **201** VGCS call is established in Cell_A1
3	MS_A1 releases the **201** VGCS call MS_A3 releases the PEC	All participants are IDLE
4	Unblock the Um TS's in Cell_A2	All resources are IDLE

d) Success criteria

A PEC can not be pre-empted on Um by a VGCS call with lower priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.33 MS in VBS call as originator, pre-emption on Um by lower prio data call does not take place

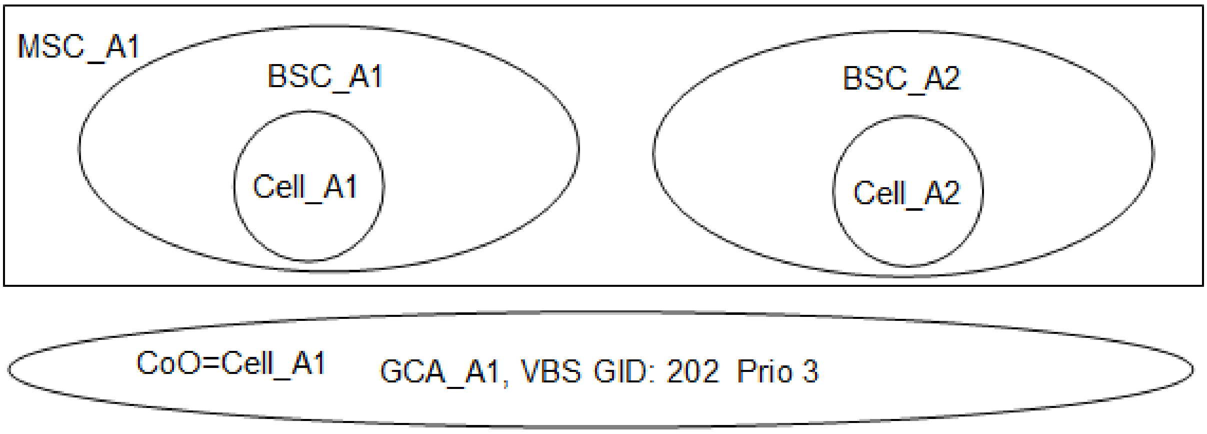
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VBS DCH can not be pre-empted on Um by a data call with lower priority.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1 (VBS GID: **202)**	MS_A2 (VBS GID: **202)**
MS_A3 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)
The Capacity on the Um in Cell_A1 is <u>reduced to two TS's</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a **202** VBS call	MS_A2 receives the **202** VBS call There are no IDLE TS's in Cell_A1
2	MS_A3 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) with Prio 4 to MS_A4	**Call is unsuccessful**
3	MS_A4 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) with Prio 3 to MS_A3	**Call is unsuccessful**
4	MS_A1 releases the VBS call	All participants are IDLE
5	Unblock the Um TS's in Cell_A1	All resources are IDLE

d) Success criteria

A VBS DCH can not be pre-empted on Um by a data call with lower priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.34 MS in VBS call as listener, pre-emption on A IF by lower prio data call does not take place

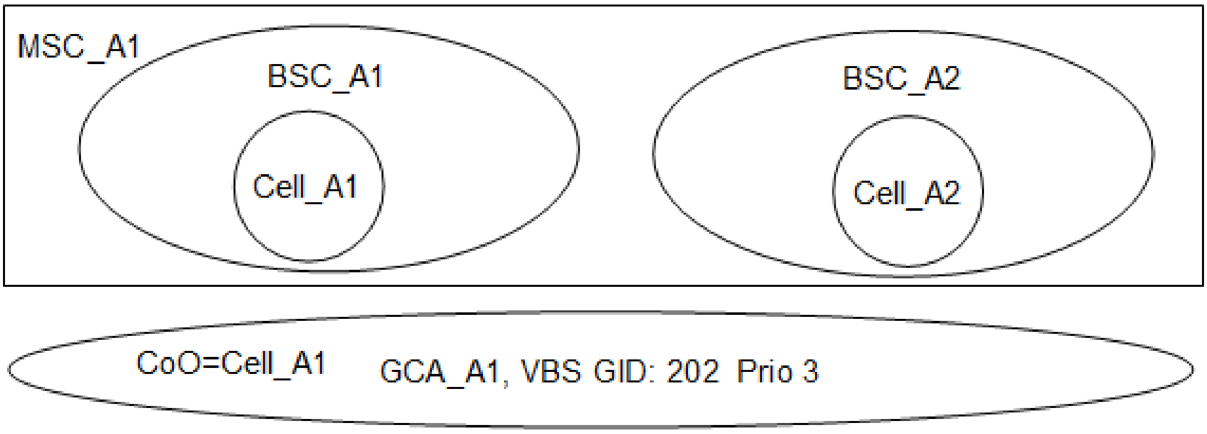
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VBS group channel can not be pre-empted on A-Interface by a data call with lower priority.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1 (VBS GID: **202)**	MS_A2 (VBS GID: **202)**
MS_A3 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)
The Capacity on the A-IF to BSC_A1 is reduced to one TS. **Only the Cell_A1 in BSC_A1 belongs to the GCA.**	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A2 originates a **202** VBS call	MS_A1 receives the **202** VBS call
2	MS_A3 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) to MS_A4 with Prio 4	**Call is unsuccessful**
3	MS_A4 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) to MS_A3 with Prio 4	**Call is unsuccessful**
4	MS_A3 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) to MS_A4 with Prio 3	**Call is unsuccessful**
5	MS_A4 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) to MS_A3 with Prio 3	**Call is unsuccessful**
6	MS_A2 releases the VBS call	All participants are IDLE
7	Unblock the A-IF TS's to BSC_A1	All resources are IDLE

d) Success criteria

A VBS group channel can not be pre-empted on A-Interface by a data call with lower priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

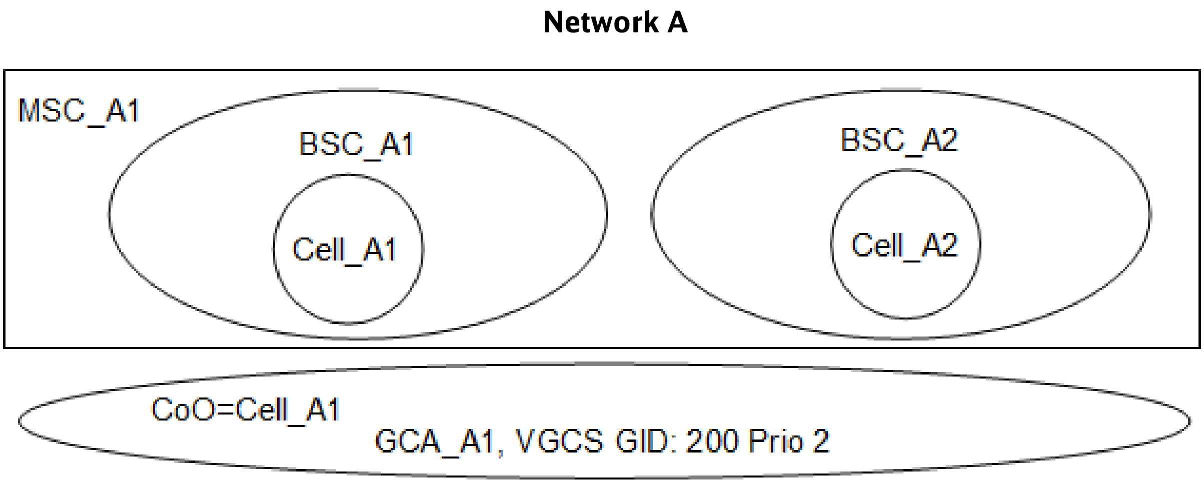
5.7.35 MS in VGCS call having the UL of the GCH, pre-emption on A IF by lower prio data call does not take place

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VGCS group channel can not be pre-empted on A-Interface by a data call with lower priority.

b) Test configuration / initial conditions



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A3 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)
The Capacity on the A-IF to BSC_A1 is <u>reduced to one TS</u> **Only the Cell_A1 in BSC_A1 belongs to the GCA.**	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A2 originates a 200 VGCS call	MS_A1 receives the 200 VGCS call and take the uplink.
2	MS_A3 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) to MS_A4 with Prio 4	**Call is unsuccessful**
3	MS_A4 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) to MS_A3 with Prio 4	**Call is unsuccessful**
4	MS_A3 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) to MS_A4 with Prio 3	**Call is unsuccessful**
5	MS_A4 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) to MS_A3 with Prio 3	**Call is unsuccessful**
6	MS_A2 releases the VGCS call	All participants are IDLE
7	Unblock the A-IF TS's to BSC_A1	All resources are IDLE

d) Success criteria

A VGCS group channel can not be pre-empted on A-Interface by a data call with lower priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.36 MS in data call, pre-emption on Um by lower prio data call does not take place

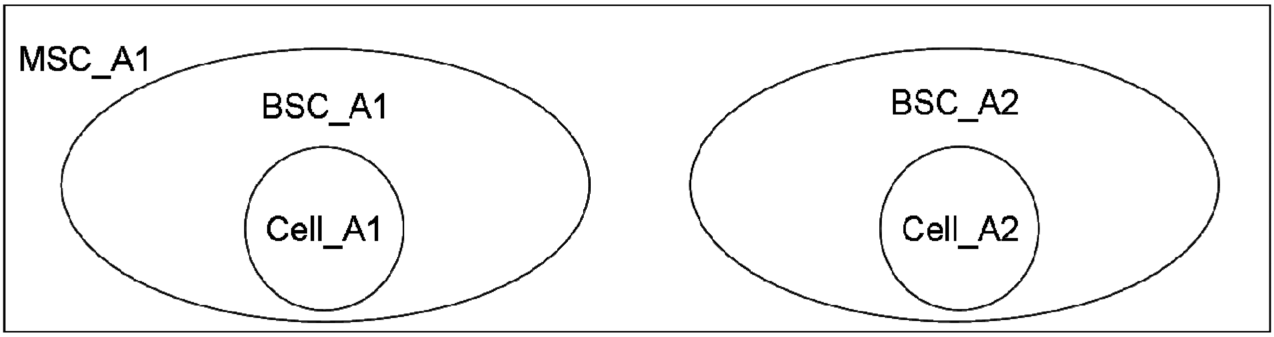
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a data call can not be pre-empted on Um by a data call with lower priority.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1	MS_A2
MS_A3	MS_A4
The Capacity on the Um of Cell_A1 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) to MS_A2 with Prio 1	MS_A1 is connected with MS_A2 All TS's in Cell_A1 are BUSY
2	MS_A3 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) with Prio 4 to MS_A4	**Call is unsuccessful**

Step	Action	Expected result(s)
3	MS_A3 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) with Prio 3 to MS_A4	**Call is unsuccessful**
4	MS_A4 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) with Prio 3 to MS_A3	**Call is unsuccessful**
5	MS_A1 releases the data call	All participants are IDLE
6	Unblock the Um TS's in Cell_A1	All resources are IDLE

d) Success criteria

A data call can not be pre-empted on Um by a data call with lower priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.37 MS in PEC, pre-emption on A IF by lower priority data call does not take place

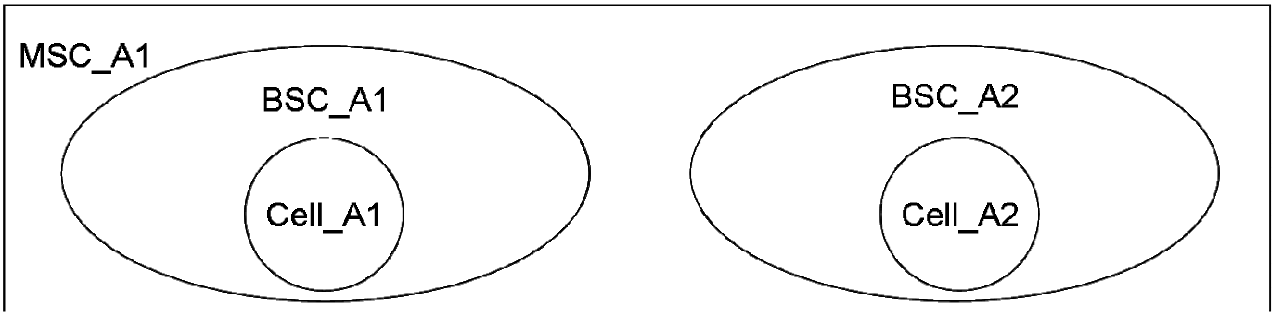
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1 9.8.5	

a) Purpose

Verify that a PEC call can not be pre-empted on A-Interface by a data call with lower priority.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1	
MS_A3	MS_A4
The Capacity on the A-IF to BSC_A1 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a 112 PEC	MS_A1 is connected with the emergency center
2	MS_A3 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) with Prio 4 to MS_A4	**Call is unsuccessful**

Step	Action	Expected result(s)
3	MS_A3 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) with Prio 3 to MS_A4	**Call is unsuccessful**
4	MS_A4 originates a data call (transparent, 2.4, 4.8 or 9.6 kbit/s) with Prio 3 to MS_A3	**Call is unsuccessful**
5	MS_A1 releases the PEC	All participants are IDLE
6	Unblock the A-IF TS's to BSC_A1	All resources are IDLE

d) Success criteria

A PEC call can not be pre-empted on A-Interface by a data call with lower priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.38 Pre-emption of VBS A IF resources on A and B BSS simultaneously

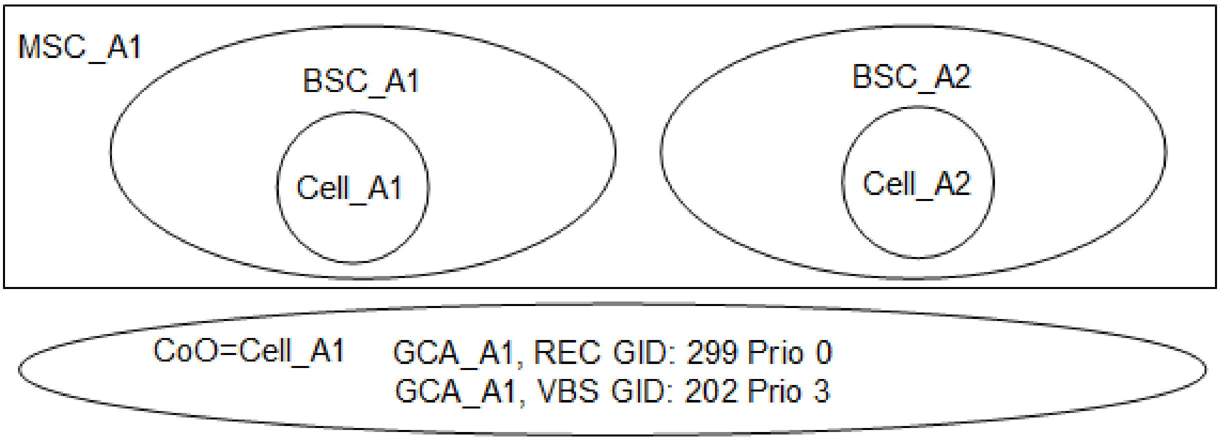
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VBS call can be pre-empted on two A-Interfaces simultaneously.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (REC, VBS GID: **202)**	MS_A2 (REC GID: 299, VBS GID: **202)**
CT_A1 (GCA_A1, REC GID: 299)	
CT_A2 (GCA_A1, VBS GID: 202)	
The Capacity on the A-IF to BSC_A1 and to BSC_A2 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	CT_A2 originates a **202** VBS	MS_A1 and MS_A2 receive the VBS call There are no IDLE TS's to BSC_A1 and BSC_A2
2	CT_A1 originates a 299 REC	**The VBS group channels are pre-empted at A-IF to BSC_A1 and BSC_A2** MS_A1 and MS_A2 receive the REC CT_A2 is IDLE, the VBS call is terminated
3	CT_A1 terminates the REC	All participants are IDLE
4	Unblock the A-IF TS's to BSC_A1 and BSC_A2	All resources are IDLE

d) Success criteria

A VBS call can be pre-empted on two A-Interfaces simultaneously.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.39 Pre-emption of VGCS A IF resources on A and B BSS simultaneously

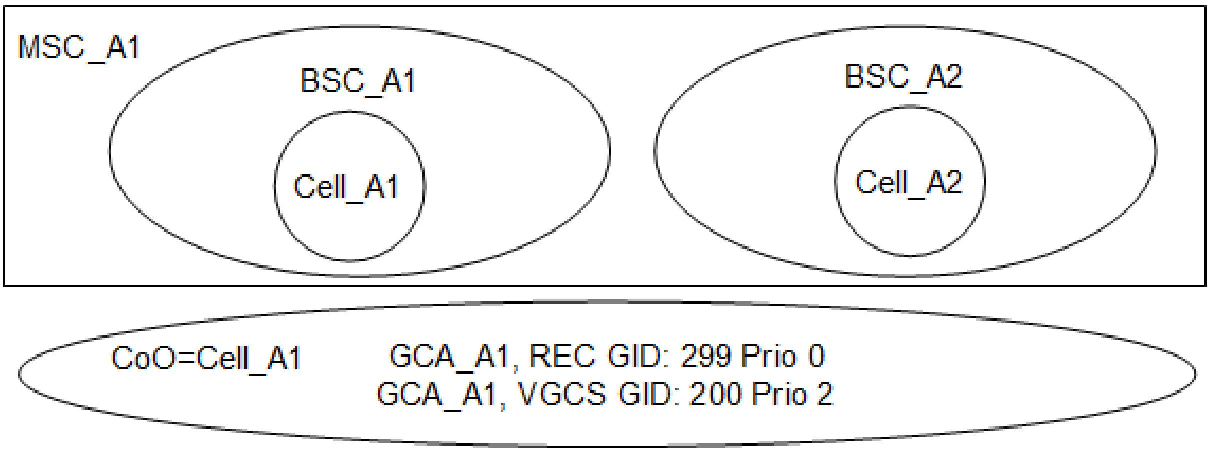
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VGCS call can be pre-empted on two A-Interfaces simultaneously.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (REC GID: 299, VGCS GID: 200)	MS_A2 (REC GID:299, VGCS GID: 200)
CT_A1 (GCA_A1, REC GID: 299)	
CT_A2 (GCA_A1, VGCS GID: 200)	
The Capacity on the A-IF to BSC_A1 and to BSC_A2 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	CT_A2 originates a 200 VGCS	MS_A1 and MS_A2 receive the VGCS call There are no IDLE TS's to BSC_A1 and BSC_A2
2	CT_A1 originates the 299 REC	**The VGCS group channels are pre-empted at A-IF to BSC_A1 and BSC_A2** MS_A1 and MS_A2 receive the REC CT_A2 is IDLE, the VGCS call is terminated
3	CT_A1 terminates the REC	All participants are IDLE
4	Unblock the A-IF TS's to BSC_A1 and BSC_A2	All resources are IDLE

d) Success criteria

A VGCS call can be pre-empted on two A-Interfaces simultaneously.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.40 Pre-emption of VBS Um resources on A and B BSS simultaneously

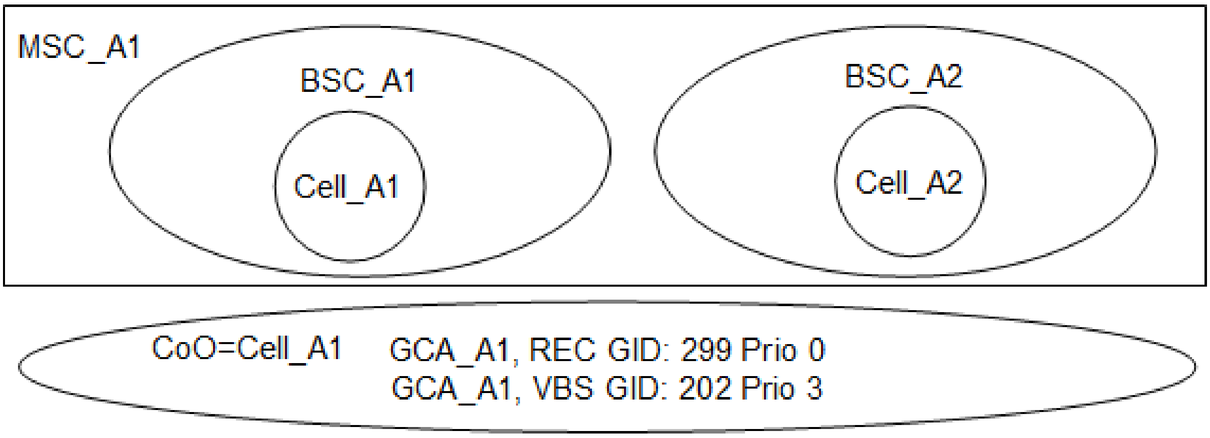
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VBS call can be pre-empted simultaneously on two Ums in two different BSC's.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (REC GID: 299, VBS GID: **202)**	MS_A2 (REC GID: 299, VBS GID: **202)**
MS_A3 (REC GID: 299)	
CT_A1 (GCA_A1, REC GID: 299)	
CT_A2 (GCA_A1, VBS GID: 202)	
The Capacity on the Um in Cell_A1 and Cell_A2 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	CT_A2 originates a **202** VBS	MS_A1 and MS_A2 receive the VBS call There are no IDLE TS's to BSC_A1 and BSC_A2
2	CT_A1 originates a 299 REC	**The VBS group channels are pre-empted at Um to Cell_A1 and Cell_A2** MS_A1 and MS_A2 receive the REC CT_A2 is IDLE, the VBS call is terminated
3	CT_A1 terminates the REC	All participants are IDLE
4	Unblock one more TS in Cell_A1	There are two IDLE TS's in Cell_A1 and one TS in Cell_A2
5	MS_A1 originates the **202** VBS	MS_A2 receive the VBS call There are no IDLE TS's in Cell_A1 and Cell_A2
6	MS_A3 originates the 299 REC	**The VBS group channels are pre-empted at Um to Cell_A1 and Cell_A2** MS_A1 and MS_A2 receive the REC The VBS call is terminated
7	Unblock the Um TS's to Cell_A1 and Cell_A2	All resources are IDLE

d) Success criteria

A VBS call can be pre-empted simultaneously on two Ums in two different BSC's.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.41 Pre-emption of VGCS Um resources on A and B BSS simultaneously

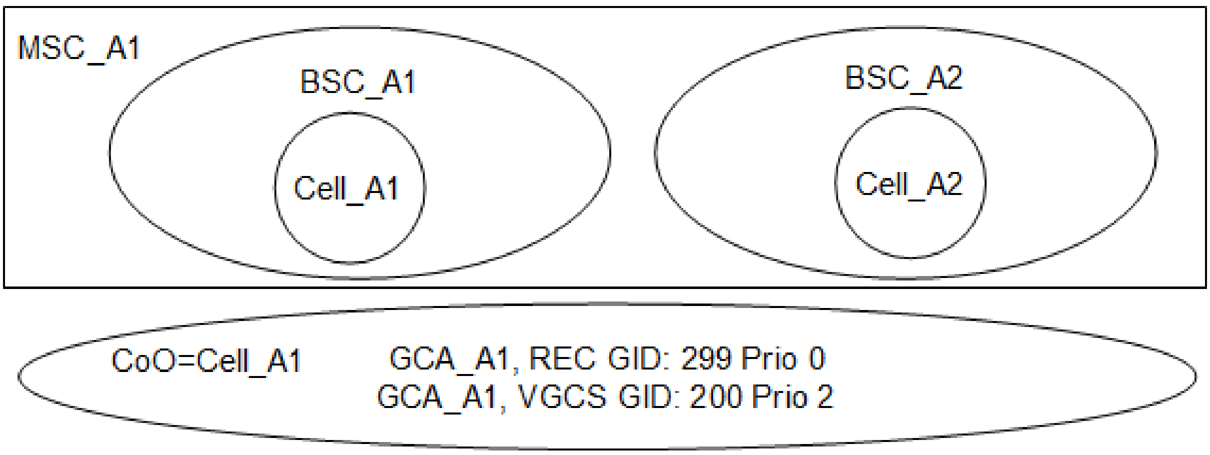
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VGCS call can be pre-empted simultaneously on two Ums in two different BSC's.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1 (REC GID: 299, VGCS GID: 200)	MS_A2 (REC GID: 299, VGCS GID: 200)
MS_A3 (REC GID: 299)	
CT_A1 (GCA_A1, REC GID: 299)	
CT_A2 (GCA_A1, VGCS GID: 200)	
The Capacity on the Um in Cell_A1 and Cell_A2 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	CT_A2 originates a 200 VGCS	MS_A1 and MS_A2 receive the VGCS call There are no IDLE TS's to BSC_A1 and BSC_A2
2	CT_A1 originates a 299 REC	**The VGCS group channels are pre-empted at Um to Cell_A1 and Cell_A2** MS_A1 and MS_A2 receive the REC CT_A2 is IDLE, the VGCS call is terminated
3	CT_A1 terminates the REC	All participants are IDLE
4	Unblock one more TS in Cell_A1	There are two IDLE TS's in Cell_A1 and one TS in Cell_A2
5	MS_A1 originates the 200 VGCS	MS_A2 receives the VGCS call There are no IDLE TS's in Cell_A1 and Cell_A2
6	MS_A3 originates a 299 REC	**The VGCS group channels are pre-empted at Um to Cell_A1 and Cell_A2** MS_A1 and MS_A2 receive the REC The VGCS call is terminated
7	MS_A3 releases the REC	All participants are IDLE
8	Unblock the Um TS's to Cell_A1 and Cell_A2	All resources are IDLE

d) Success criteria

A VGCS call can be pre-empted simultaneously on two Um's in two different BSC's.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.42 VGCS ongoing in GCA covering both BSS, pre-emption of the B VGCS resources on Um, VGCS on A BSS is still up

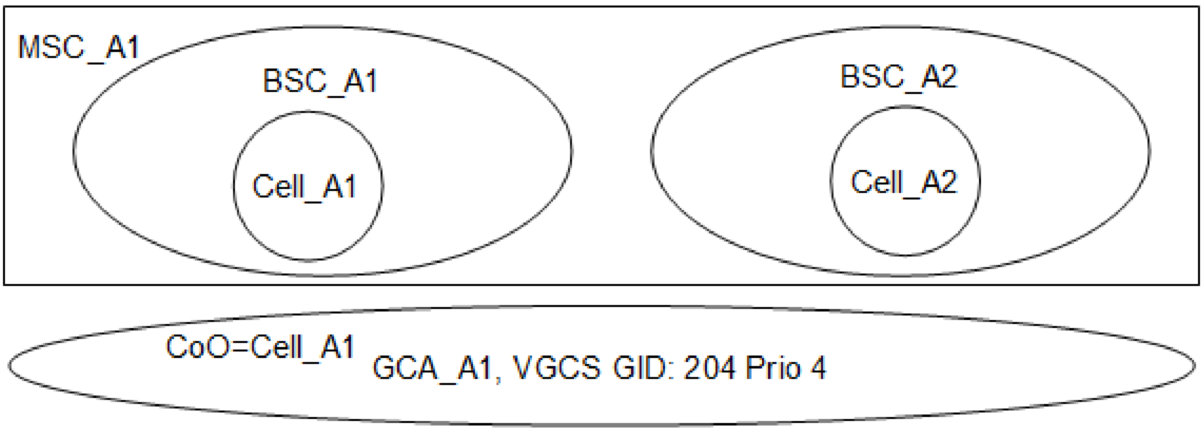
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VGCS call can be pre-empted on Um in one BSC and stay active in another BSC.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: **204)**	MS_A2 (VGCS GID: **204)**
MS_A3 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)
MS_A5 (VGCS GID: **204)**	
The Capacity on the Um in Cell_A2 is <u>reduced to one TS</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a **204** VGCS	MS_A2 and MS_A5 receive the VGCS call There are no IDLE TS's to Cell_A2
2	MS_A3 calls MS_A4 with Prio 3	**The VGCS group channel is pre-empted at Um of Cell_A2** MS_A3 is connected with MS_A4 MS_A2 is IDLE MS_A1 and MS_A5 are still in the VGCS Call
3	MS_A1 releases the VGCS call MS_A3 releases the PtP call	All participants are IDLE
4	Unblock the Um TS's to Cell_A2	All resources are IDLE

d) Success criteria

A VGCS call can be pre-empted on Um in one BSC and stay active in another BSC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.43 VGCS ongoing in GCA covering both BSS, pre-emption of the A VGCS resources on Um, VGCS on B BSS is still up

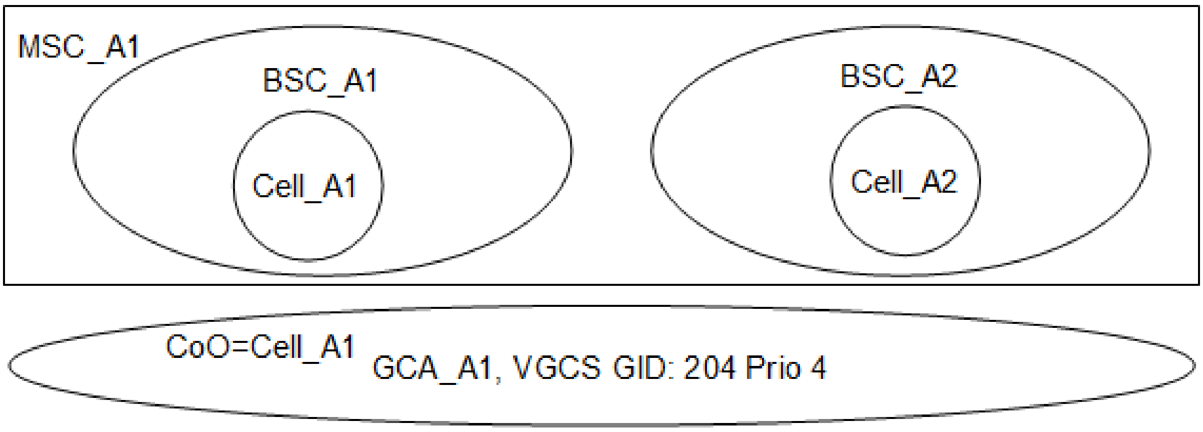
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that a VGCS call can be pre-empted on Um in one BSC and stay active in another BSC.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1 (VGCS GID: **204)**	MS_A2 (VGCS GID: **204)**
MS_A3 (no VGCS / VBS subscriber)	MS_A4 (VGCS GID: **204)**
MS_A5 (no VGCS / VBS subscriber)	
CT_A1 (GCA_A1, VGCS GID: **204)**	
The Capacity on the Um in Cell_A1 is <u>reduced to two TS's</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates a **204** VGCS and keep the dedicated link	MS_A2, MS_A4 and CT_A1 receive the VGCS call There are no IDLE TS's in Cell_A1
2	MS_A3 calls MS_A5 with Prio 3	**The VGCS group channel and the dedicated link are pre-empted at Um to Cell_A1** MS_A3 is connected with MS_A5 MS_A1 is IDLE MS_A2 and MS_A4 are still in the VGCS Call
3	CT_A1 releases the VGCS call MS_A3 releases the PtP call	All participants are IDLE
4	Unblock the Um TS's to Cell_A1	All resources are IDLE

d) Success criteria

A VGCS call can be pre-empted on Um in one BSC and stay active in another BSC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.44 eMLPP priority is preserved during CFU (Call Forwarding Unconditionally)

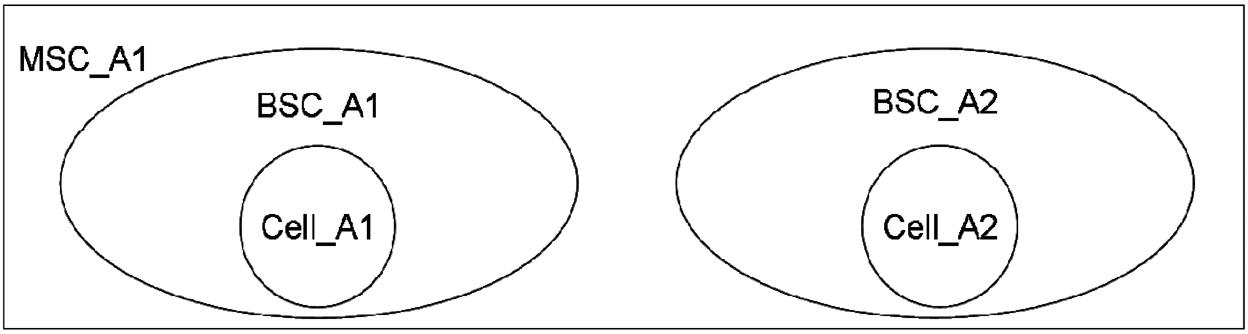
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that the eMLPP priority is preserved in case of CFU.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1	MS_A2
	MS_A4
MS_A3 in Cell_A1 with CFU to MS_A5	MS_A5
The Capacity on the Um in Cell_A2 is <u>reduced to two TS's</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A2 calls MS_A4 with prio 4	MS_A2 is connected with MS_A4 All TS's in Cell_A2 are BUSY
2	MS_A1 calls MS_A3 with Prio 4	Call is unsuccessful
3	MS_A1 calls MS_A3 with Prio 3	MS_A1 is connected with MS_A5 **MS_A2 and MS_A4 are disconnected**
4	MS_A1 releases the PtP	All participants are IDLE
5	Unblock the TS's at Um to Cell_A2	All resources are IDLE

d) Success criteria

The eMLPP priority is preserved in case of CFU.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.45 eMLPP priority is preserved during CFB (Call Forwarding Busy)

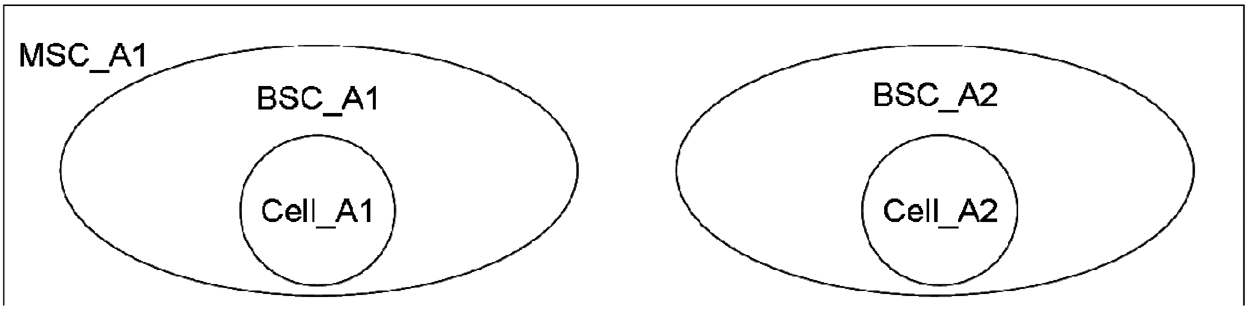
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that the eMLPP priority is preserved in case of CFB.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1	MS_A2
	MS_A4
MS_A3 with CFB to MS_A5 and no CW	MS_A5
MS_A6	
The Capacity on the Um in Cell_A2 is reduced to two TS's	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A2 calls MS_A4 with prio 4	MS_A2 is connected with MS_A4 All TS's in Cell_A2 are BUSY
2	MS_A3 calls MS_A6 with prio 4	MS_A3 is connected with MS_A6
3	MS_A1 calls MS_A3 with Prio 4	Call is unsuccessful
4	MS_A1 calls MS_A3 with Prio 3	MS_A1 is connected with MS_A5 **MS_A2 and MS_A4 are disconnected**
5	MS_A1 releases the PtP	All participants are IDLE
6	Unblock the TS's at Um to Cell_A2	All resources are IDLE

d) Success criteria

The eMLPP priority is preserved in case of CFB.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.46 Multi-Party: M6PORT: with different Prio

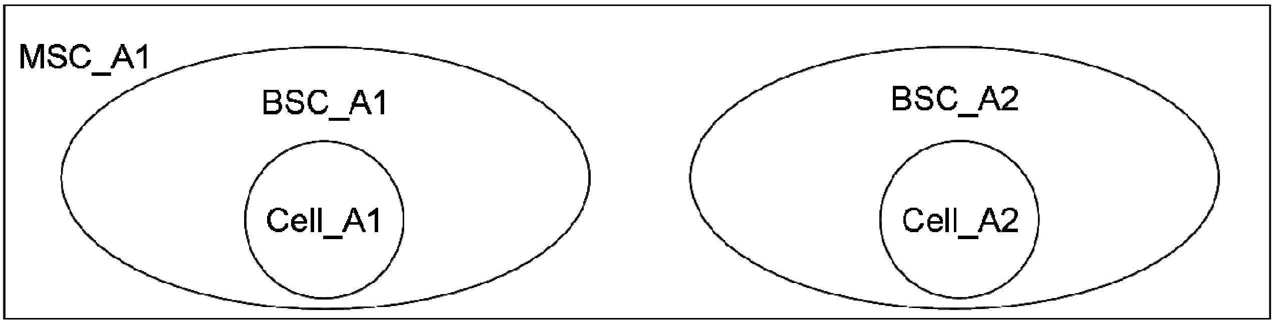
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

According to 3GPP TS 02.67 the eMLPP shall apply to the different call legs of a MPTY as for other calls.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1	MS_A2
	MS_A3
	MS_A4
	MS_A5
	MS_A6
MS_A7	MS_A8
The Capacity on the Um in Cell_A1 is reduced to one TS	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 calls MS_A2 with Prio 4	MS_A1 is connected with MS_A2
2	MS_A1 calls MS_A3 with Prio 3 and connect MS_A2 and MS_A3 to a conference	MS_A3 is a participant of the conference
3	MS_A1 calls MS_A4 to MS_A6 with different priorities and connect them to the conference.	MS_A1 to MS_A6 are connected in a conference
4	MS_A7 calls MS_A8 with prio 3	MS_A7 is connected with MS_A8 **The conference leg of MS_A1 is pre-empted at Um of Cell_A1** The conference is released MS_A2 to MS_A6 are IDLE
5	MS_A7 releases the call to MS_A8	MS_A7 and MS_A8 are IDLE
6	MS_A2 calls MS_A1 with Prio 4	MS_A2 is connected with MS_A1
7	MS_A2 calls MS_A3 to MS_A6 with different priorities and connect them to the conference.	MS_A1 to MS_A6 are connected in a conference
8	MS_A8 calls MS_A7 with Prio 3	MS_A8 is connected with MS_A7 **The conference leg of MS_A1 is pre-empted at Um of Cell_A1** The conference is still running
9	MS_A8 and MS_A2 releases the calls	All participants are IDLE
10	Unblock the TS’s at Um to Cell_A1	All resources are IDLE

d) Success criteria

The eMLPP applies to the different call legs of a MPTY as for other calls.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.47 Pre-emption on A-IF when pre-empted party has no subscription to eMLPP (assignment of default eMLPP priority)

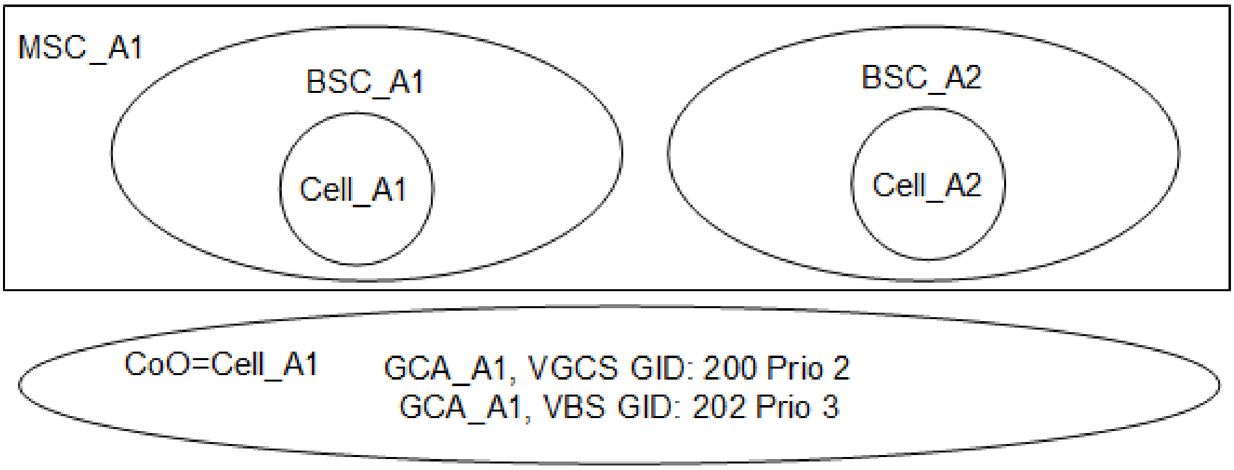
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that pre-emption on A-Interface is possible, if the A-IF resources are occupied by party without eMLPP subscription.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (without eMLPP subscription)	MS_A2 (without eMLPP subscription)
MS_A3 (VGCS, VBS GID: **202)**	MS_A4 (VGCS, VBS GID: **202)**
CT_A1 (GCA_A1, VGCS GID: 200 , VBS GID: **202**)	
The Capacity on the A-IF to BSC_A2 is <u>reduced to one TS</u> **Only the one Cell_A2 in BCS_A2 belongs to the GCA.**	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 calls MS_A2	MS_A1 is connected with MS_A2 with the default priority 4 There are no IDLE TS's to BSC_A2
2	MS_A3 calls MS_A4 with Prio 3	**The connection MS_A1 to MS_A2 is preempted.** MS_A3 is connected with MS_A4
3	MS_A3 releases the call	All participants are IDLE
4	MS_A1 calls MS_A2	MS_A1 is connected with MS_A2 with the default priority 4 There are no IDLE TS's to BSC_A2
5	CT_A1 originates a 200 VGCS call	**The connection MS_A1 to MS_A2 is preempted.** MS_A3 and MS_A4 receive the VGCS call
6	CT_A1 terminates the VGCS call	All participants are IDLE
7	MS_A1 calls MS_A2	MS_A1 is connected with MS_A2 with the default priority 4 There are no IDLE TS's to BSC_A2
8	CT_A1 originates a **202** VBS call	**The connection MS_A1 to MS_A2 is preempted.** MS_A3 and MS_A4 receive the VBS call
9	CT_A1 terminates the VBS call	All participants are IDLE
10	Unblock the A-IF TS's to BSC_A2	All resources are IDLE

d) Success criteria

Pre-emption on A-Interface is possible, if the A-IF resources are occupied by party without eMLPP subscription.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.48 Pre-emption on Um when pre-empted party has no subscription to eMLPP (assignment of default eMLPP priority)

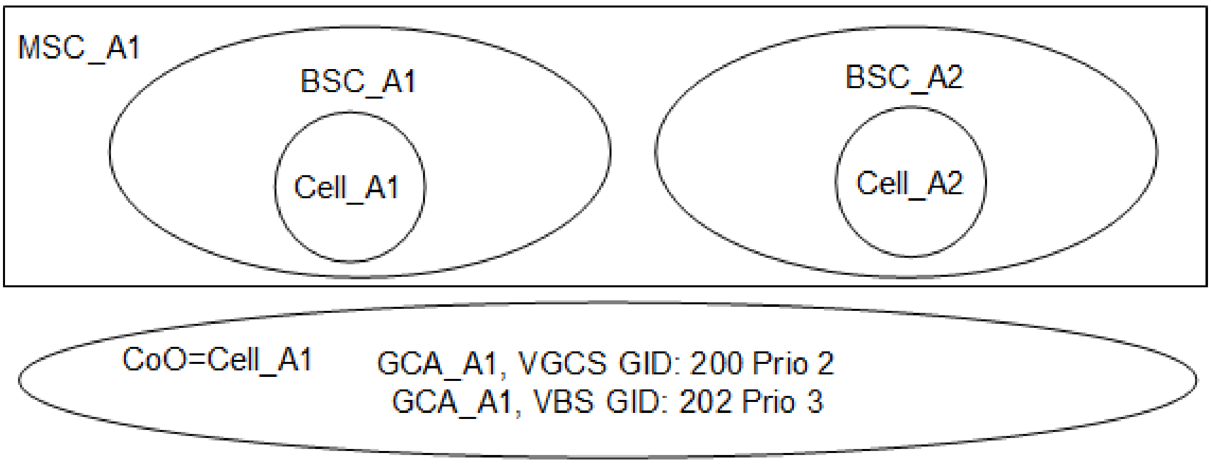
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that pre-emption on Um is possible, if the Um resources are occupied by party without eMLPP subscription.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (without eMLPP subscription)	MS_A2 (without eMLPP subscription)
MS_A3 (VGCS GID: 200, VBS GID: 202)	MS_A4 (VGCS GID: 200, VBS GID: 202)
CT_A1 (GCA_A1, VGCS GID 200 , VBS GID: 202)	
The Capacity on the Um to Cell_A2 is <u>reduced to one TS</u> **Only the one Cell_A2 in BCS_A2 belongs to the GCA.**	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 calls MS_A2	MS_A1 is connected with MS_A2 with the default priority 4 There are no IDLE TS's to Cell_A2
2	MS_A3 calls MS_A4 with Prio 3	The connection MS_A1 to MS_A2 is pre-empted. MS_A3 is connected with MS_A4
3	MS_A3 releases the call	All participants are IDLE
4	MS_A1 calls MS_A2	MS_A1 is connected with MS_A2 with the default priority 4 There are no IDLE TS's to Cell_A2
5	CT_A1 originates a 200 VGCS call	The connection MS_A1 to MS_A2 is pre-empted. MS_A3 and MS_A4 receive the VGCS call
6	CT_A1 terminates the VGCS call	All participants are IDLE
7	MS_A1 calls MS_A2	MS_A1 is connected with MS_A2 with the default priority 4 There are no IDLE TS's to Cell_A2
8	CT_A1 originates a 202 VBS call	The connection MS_A1 to MS_A2 is pre-empted. MS_A3 and MS_A4 receive the VBS call
9	CT_A1 terminates the VBS call	All participants are IDLE
10	Unblock the Um TS's to Cell_A2	All resources are IDLE

d) Success criteria

Pre-emption on Um is possible, if the Um resources are occupied by party without eMLPP subscription.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.49 3 TS available on A IF, 1 TS in use by prio 3 GCH, 1 TS in use by prio 4 GCH. Make prio 3 VBS and verify that the prio 4 GCH is pre-empted

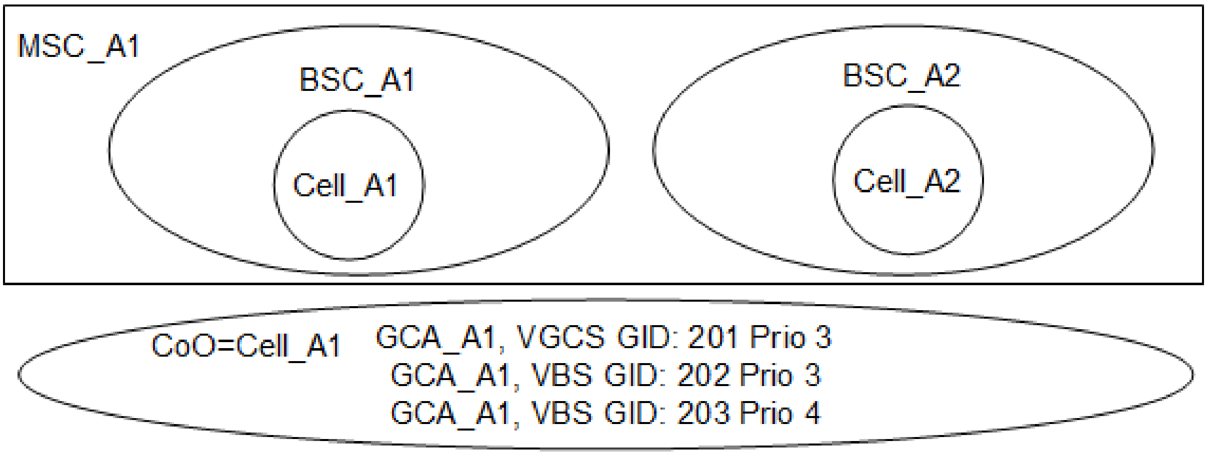
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 2.4.6 2.4.7 10.2.1 10.2.2 10.2.3	2.4.1	

a) Purpose

Verify that lowest priority on A-Interface is pre-empted, if the resources are occupied with different priorities.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 201)	MS_A2 (VGCS GID: 201)
MS_A3 (VBS GID: 203)	MS_A4 (VBS GID: 203)
MS_A5 (VBS GID: 202)	MS_A6 (VBS GID: 202)
The Capacity on the A-IF to BSC_A2 is <u>reduced to three TS's</u>	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 originates the 201 VGCS	MS_A2 receives the 201 VGCS call
2	MS_A3 originates the 203 VBS	MS_A4 receives the 203 VBS call
3	MS_A6 originates the 202 VBS	MS_A5 receives the 202 VBS call **The group channel of the 203 VBS is pre-empted at A-IF to BSC_A2** MS_A4 is IDLE MS_A3 is still in the 203 VBS
4	MS_A1, MS_A3 and MS_A6 terminate their group calls	All participants are IDLE
5	Unblock the A-IF TS's to BSC_A2	All resources are IDLE

d) Success criteria

The lowest priority on A-Interface is pre-empted, if the resources are occupied with different priorities.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.50 Check of maximum authorized eMLPP level (non-roaming case)

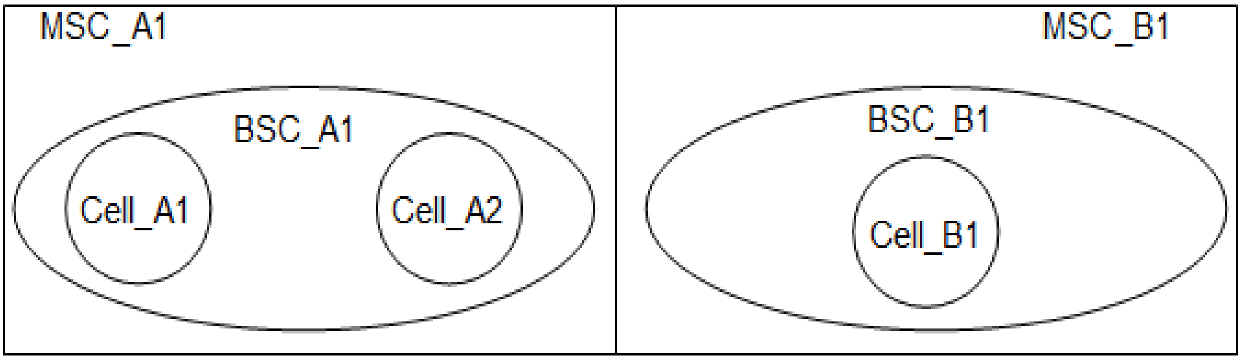
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1	2.4.1	

a) Purpose

Verify that a subscriber can not use higher call priority than subscribed for him in HLR

b) Test configuration / initial conditions

Network A



BSC_A1		BSC_B1
Cell_A1	**Cell_A2**	**Cell_B1**
MS_A1 (max eMLPP prio=3; default eMLPP prio=4)		MS_B1
MS_A2	MS_A3	

c) Test procedure

Use protocol tester to verify the priorities!

Step	Action	Expected result(s)
1	MS_A1 calls MS_A2 with default prio MS_A1 releases the call	**Prio 4 is used at A- and Abis-IF of BSC_A1**
2	MS_A1 calls MS_A2 with prio 2 MS_A1 releases the call	**Prio 3 is used at A- and Abis-IF of BSC_A1**
3	MS_A1 calls MS_B1 with prio 2 MS_A1 releases the call	**Prio 3 is used at E-IF to MSC_B, at A- and Abis-IF of BSC_B1**

d) Success criteria

A subscriber can not use higher call priority than subscribed for him in HLR.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.7.51 Check of maximum authorized eMLPP level (roaming case)

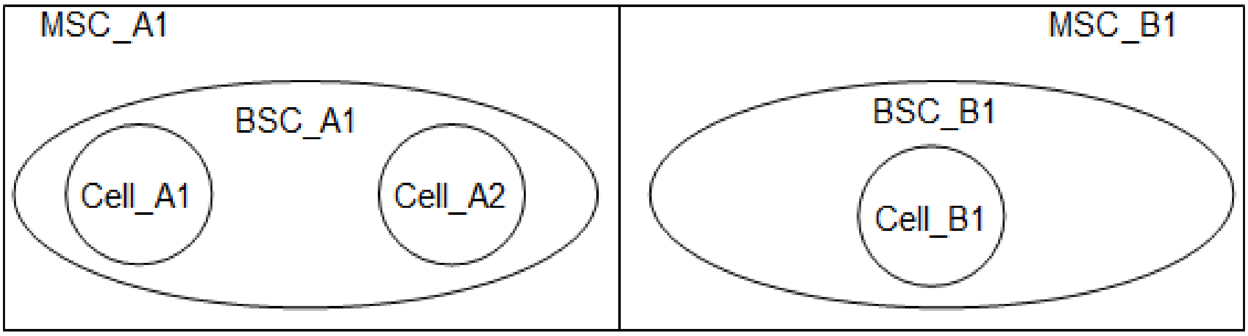
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1	2.4.1	

a) Purpose

Verify that a subscriber can not use higher call priority than subscribed for him in HLR

b) Test configuration / initial conditions

Network A



BSC_A1		**BSC_B1**
Cell_A1	**Cell_A2**	**Cell_B1**
MS_B1 (max eMLPP prio=3; default EMLPP prio=4. MS_B1 is roamer in MSC_A)		MS_B2
MS_A2	MS_A3	

c) Test procedure

Use protocol tester to verify the priorities!

Step	Action	Expected result(s)
1	MS_B1 calls MS_A2 with default prio MS_B1 releases the call	**Prio 4 is used at A- and Abis-IF of BSC_A1**
2	MS_B1 calls MS_A3 with prio 2 MS_B1 releases the call	**Prio 3 is used at A- and Abis-IF of BSC_A1**
3	MS_B1 calls MS_B2 with prio 2 MS_B1 releases the call	**Prio 3 is used at E-IF to MSC_B, at A- and Abis-IF of BSC_B1**

d) Success criteria

A subscriber can not use higher call priority than subscribed for him in HLR.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8 VGCS

5.8.1 SS originates VGCS call

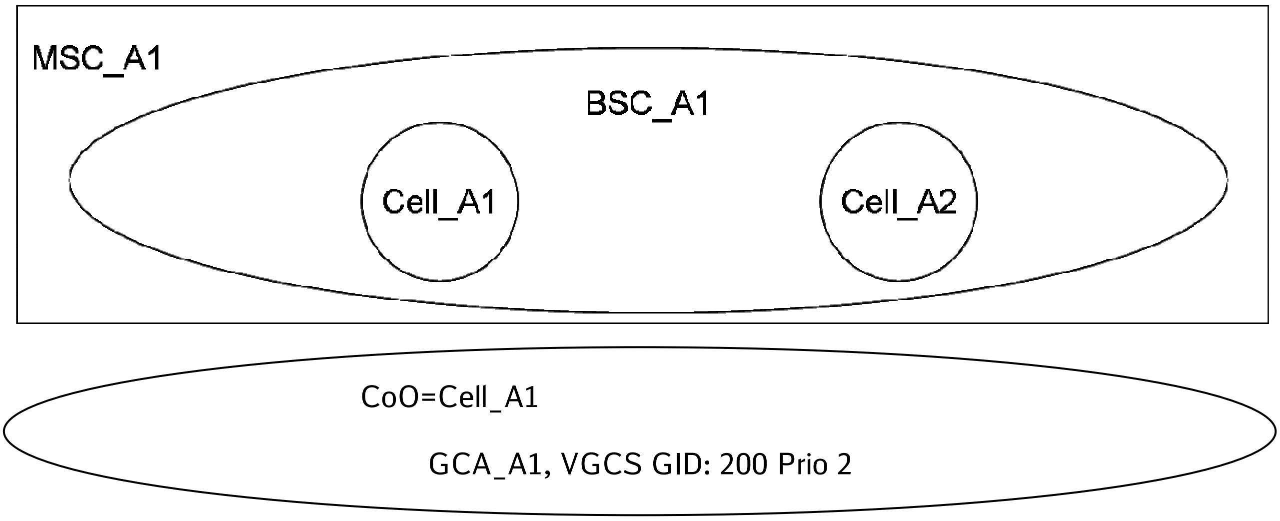
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.2.12 2.2.15 2.2.16 3.2.3 3.5.2 3.5.3 9.2.5.1 11.2.3.2	2.2.1 9.2.10 9.2.11 9.9.3 9.9.5	

a) Purpose

Verify that a service subscriber can originate a VGCS call.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 receives notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 accepts the incoming VGCS call.	MS_A2 joins VGCS call.
3)	MS_A1 takes the uplink on the dedicated channel (DCH).	MS_A1 is able to keep the uplink on the DCH. MS_A1 has two-way voice path, MS_A2 is only listener.
4)	MS_A1 releases the uplink.	The uplink is correctly released.
5)	MS_A2 requests the uplink on the group call channel (GCCH).	MS_A2 can take the uplink (GCCH) and has two-way voice path, MS_A1 is only listener.
6)	MS_A2 releases the uplink.	The uplink is correctly released.
7)	MS_A1 requests the uplink on GCCH.	MS_A1 can take the uplink (GCCH) and has two-way voice path, MS_A2 is only listener.
8)	MS_A1 releases the uplink.	The uplink is correctly released.
9)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

The service subscriber is able to originate a VGCS call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

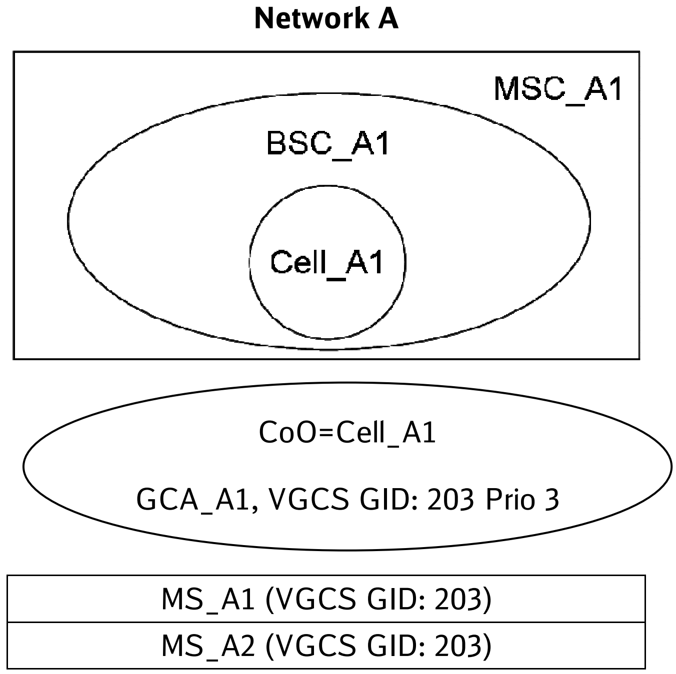
5.8.2 Service Subscriber originates a VGCS (priority 3) call

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1	2.2.1	

a) Purpose

Verify that a service subscriber is able to establish a VGCS call priority 3 and the correct priority is transmitted from the BSC.

b) Test configuration / initial conditions



c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2 receives notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 accepts the incoming VGCS.	MS_A2 joins VGCS call.
3)	Check the ‘Notification Command’ message sent from the BSC.	The correct priority is transmitted from the BSC.
4)	MS_A1 takes the uplink on the group call channel.	MS_A1 has two-way voice path, MS_A2 is only listener.
5)	MS_A1 releases the uplink.	The uplink is correctly released.
6)	MS_A1 releases the VGCS call.	The call is released and all related resources are de-allocated.

d) Success criteria

A service subscriber is able to establish a VGCS call priority 3 and the correct priority is transmitted from the BSC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.3 Controller originates a VGCS (priority 2) call

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 3.5.2 3.5.3	2.2.1 3.7.2 9.9.2	

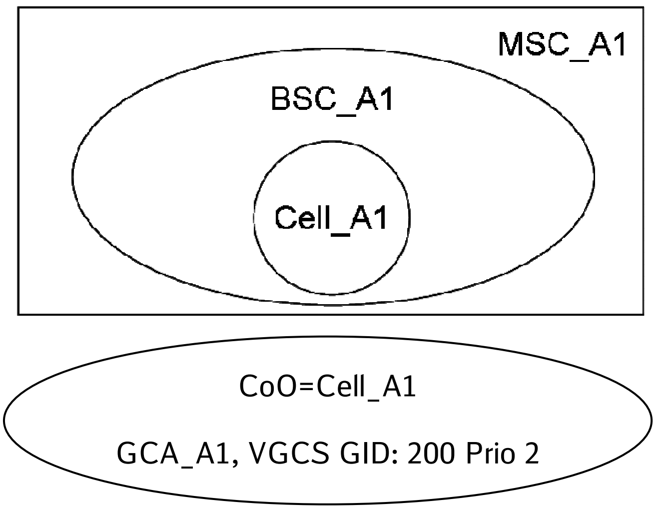
a) Purpose

Verify that a controller can originate a VGCS call with priority 2 and that the correct priority is sent on the ‘Notification’ message from the BSC.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

Network A



MS_A1 (VGCS GID: 200)
MS_A2 (VGCS GID: 200)
CT_A1 (GCA_A1, VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	Controller CT_A1 originates a VGCS call by dialling 50 + < GCA > + <GID>	VGCS call is correctly established. A group call channel (GCCH) is allocated in cell_A1. Uplink still free in cell_A1. MS_A1 and MS_A2 receive notification of the incoming VGCS call. CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
2)	MS_A1 and MS_A2 accept the incoming VGCS.	MS_A1 and MS_A2 join VGCS call. CT_A1 has voice path and MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
3)	Check the 'Notification Command' message sent from the BSC.	The correct priority is transmitted from the BSC.
4)	MS_A1 takes the uplink (group call channel).	MS_A1 has voice path on GCCH. CT_A1 is able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 is still able to listen to the announcement of CT_A1.
5)	Controller CT_A1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

d) Success criteria

The controller can originate a VGCS call with priority 2 and the correct priority is sent on the 'Notification' message from the BSC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.4 SS originates, leaves, rejoins and ends VGCS call

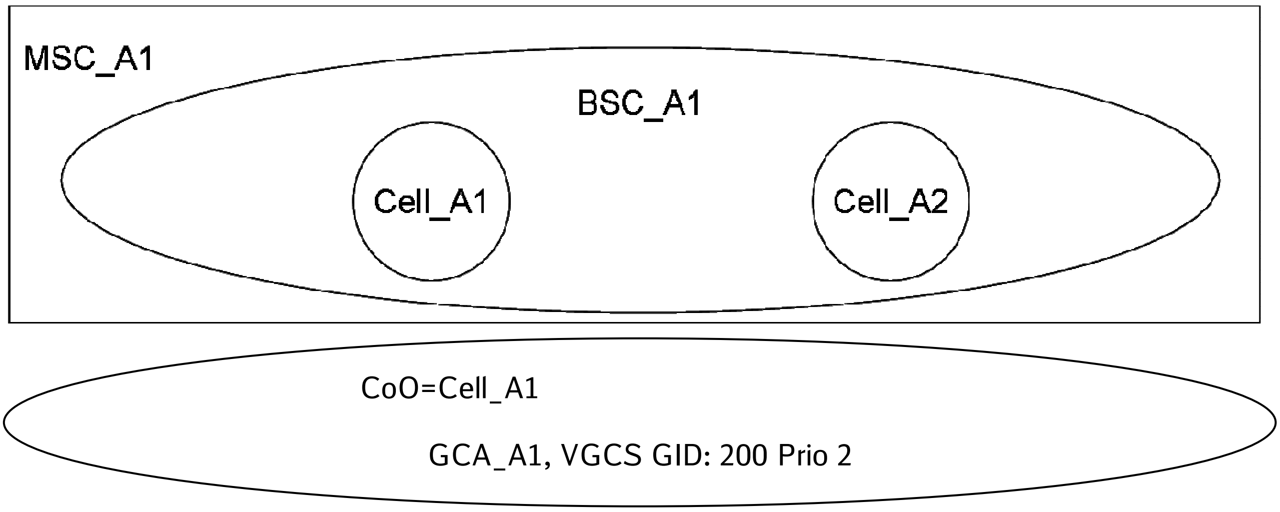
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	

a) Purpose

Verify that a service subscriber can originate, leave, rejoin and end a VGCS call.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
	MS_A3 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 and MS_A3 receive notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 and MS_A3 accept the incoming VGCS.	MS_A2 and MS_A3 join VGCS call.
3)	MS_A1 requests the uplink (group call channel).	MS_A1 can take the uplink (GCCH) and has two-way voice path, MS_A2 and MS_A3 are only listeners.
4)	MS_A1 releases the uplink.	The uplink is correctly released.
5)	MS_A2 requests the uplink (GCCH).	MS_A2 can take the uplink (GCCH) and has two-way voice path, MS_A1 and MS_A3 are only listeners.
6)	MS_A1 leaves the call.	MS_A1 is able to leave the call. The VGCS call is not released.
7)	MS_A1 rejoins the call.	MS_A1 is able to join the call. MS_A2 has still the uplink. MS_A2 has two-way voice path, MS_A1 and MS_A3 are only listeners.
8)	MS_A2 releases the uplink.	The uplink is correctly released.
9)	MS_A1 requests the uplink (GCCH).	MS_A1 can take the uplink (GCCH) and has two-way voice path, MS_A2 and MS_A3 are only listeners.
10)	MS_A1 releases the uplink.	The uplink is correctly released.
11)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

The service subscriber originates, leaves, rejoins and ends a VGCS call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.5 SS is notified when enters into VGCS broadcast area with ongoing VGCS call

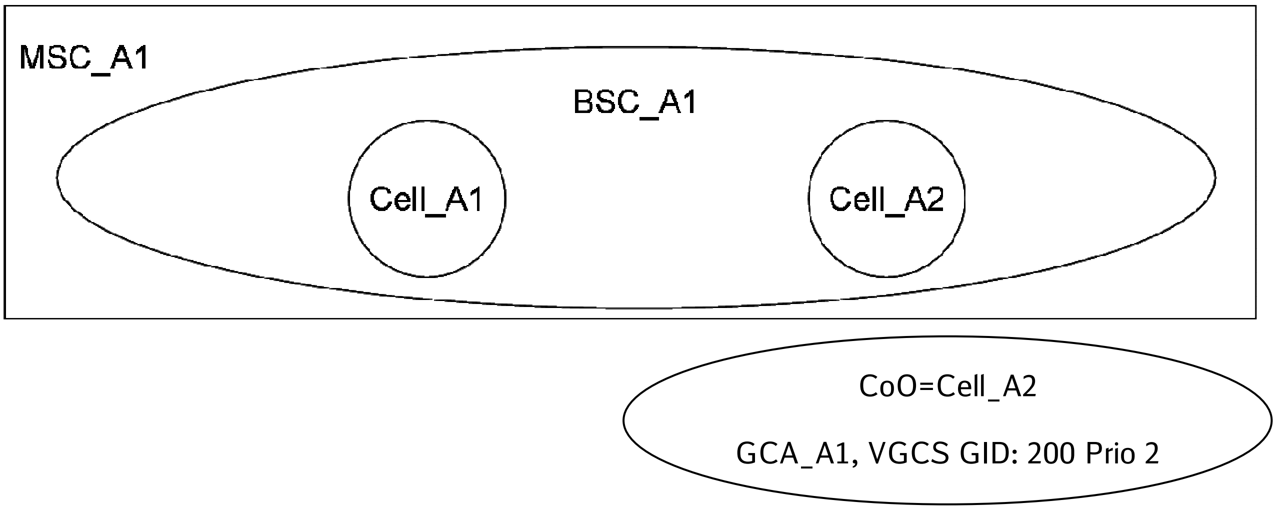
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	3.5.7 9.2.5.1	2.2.1	

a) Purpose

Verify that a service subscriber is notified of an ongoing VGCS call by entering the VGCS broadcast area and is able to join this call.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
	MS_A3 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A2 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. MS_A3 receives notification of the incoming call. So long the dedicated channel is not released, MS_A2 has two-way voice path.
2)	MS_A3 accepts the incoming VGCS.	MS_A3 joins VGCS call.
3)	MS_A2 requests the uplink (group call channel).	MS_A2 can take the uplink (GCCH) and has two-way voice path, MS_A3 is only listener.
4)	MS_A1 moves from cell_A1 to cell_A2 (VGCS broadcast area).	MS_A1 is notified about the ongoing VGCS call.
5)	MS_A1 joins the call.	MS_A1 joins the call. MS_A2 has two-way voice path, MS_A1 and MS_A3 are only listen-ers.
6)	MS_A2 releases the uplink.	The uplink is correctly released.
7)	MS_A1 requests the uplink.	MS_A1 can take the uplink (GCCH) and has two-way voice path, MS_A2 and MS_A3 are only listeners.
8)	MS_A1 releases the uplink.	The uplink is correctly released.
9)	MS_A2 releases the VGCS call.	The call is released and all resources are cor-rectly de-allocated.

d) Success criteria

The service subscriber is notified of the ongoing VGCS call by entering the VGCS broadcast area and is able to join the call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.6 Controller joins ongoing VGCS call

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	

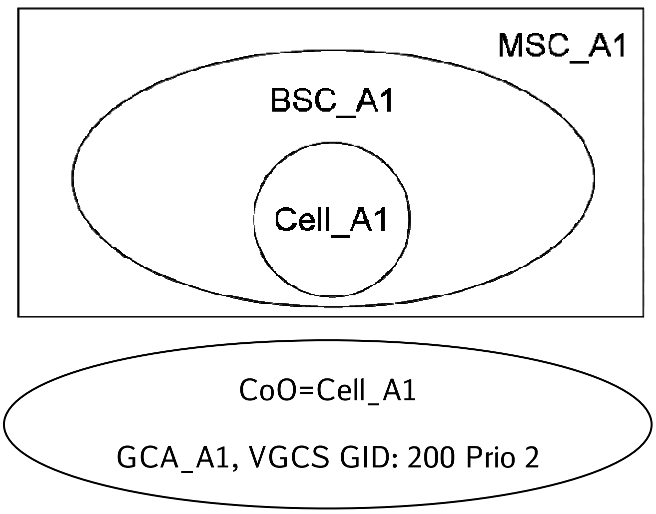
a) Purpose

Verify that a controller can join an ongoing VGCS call.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

Network A



MS_A1 (VGCS GID: 200)
MS_A2 (VGCS GID: 200)
CT_A1 (GCA_A1, VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. CT_A1 and MS_A2 receive notification of the incoming call.
2)	MS_A2 and CT_A1 accept the incoming VGCS call.	CT_A1 joins VGCS call. CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1. MS_A2 joins VGCS call as listener. CT_A1 has voice path and MS_A2 is able to listen to the announcement of CT_A1.
3)	MS_A1 takes the uplink (GCCH).	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
4)	Controller CT_A1 hangs up.	Controller CT_A1 leaves the VGCS call. It is not involved in the call anymore. Call is not released.
5)	Controller CT_A1 joins the VGCS call by dialling 50 + < GCA > + <GID>	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
6)	MS_A1 releases the uplink.	The uplink is correctly released.
7)	CT_A1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

d) Success criteria

The controller can join an ongoing VGCS call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.7 Originator of VGCS call releases DCH

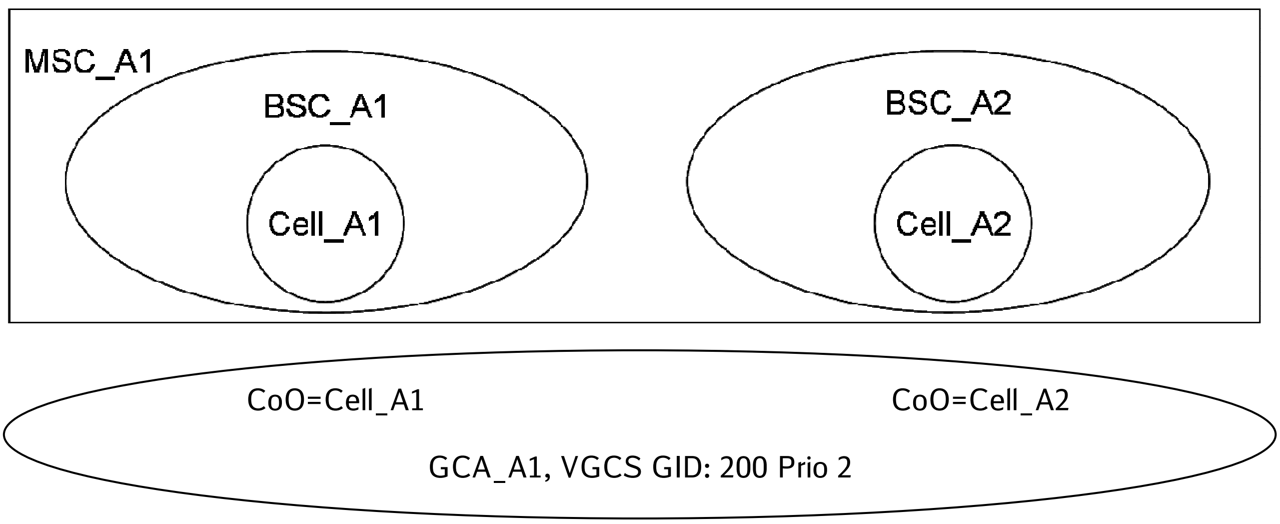
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	

a) Purpose

Verify that the originator of a VGCS can release the dedicated channel.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 receives notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 accepts the incoming VGCS.	MS_A2 joins VGCS call.
3)	MS_A1 keeps the uplink (dedicated channel).	The dedicated channel is not released. MS_A1 has two-way voice path, MS_A2 is only listener.
4)	MS_A2 requests the uplink.	MS_A2 cannot take the uplink.
5)	MS_A1 releases the uplink.	The uplink is correctly released.
6)	MS_A2 requests the uplink.	MS_A2 can take the uplink (GCCH). MS_A2 has two-way voice path, MS_A1 is only listener.
7)	MS_A2 releases the uplink.	The uplink is correctly released.
8)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.
9)	Service subscriber MS_A2 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A GCCH is allocated in cell_A1. MS_A1 receives notification of the incoming call. So long the dedicated channel is not released, MS_A2 has two-way voice path.
10)	MS_A1 accepts the incoming VGCS.	MS_A1 joins VGCS call.
11)	MS_A2 keeps the uplink (dedicated channel).	The dedicated channel is not released. MS_A2 has two-way voice path, MS_A1 is only listener.
12)	MS_A1 requests the uplink.	MS_A1 cannot take the uplink.
13)	MS_A2 releases the uplink.	The uplink is correctly released.
14)	MS_A1 requests the uplink.	MS_A1 can take the uplink (GCCH). MS_A1 has two-way voice path, MS_A2 is only listener.
15)	MS_A1 releases the uplink.	The uplink is correctly released.

Step	Action	Expected result(s)
16)	MS_A2 releases the VGCS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

The originator of a VGCS call can release the dedicated channel.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.8 Originator of VGCS call takes uplink

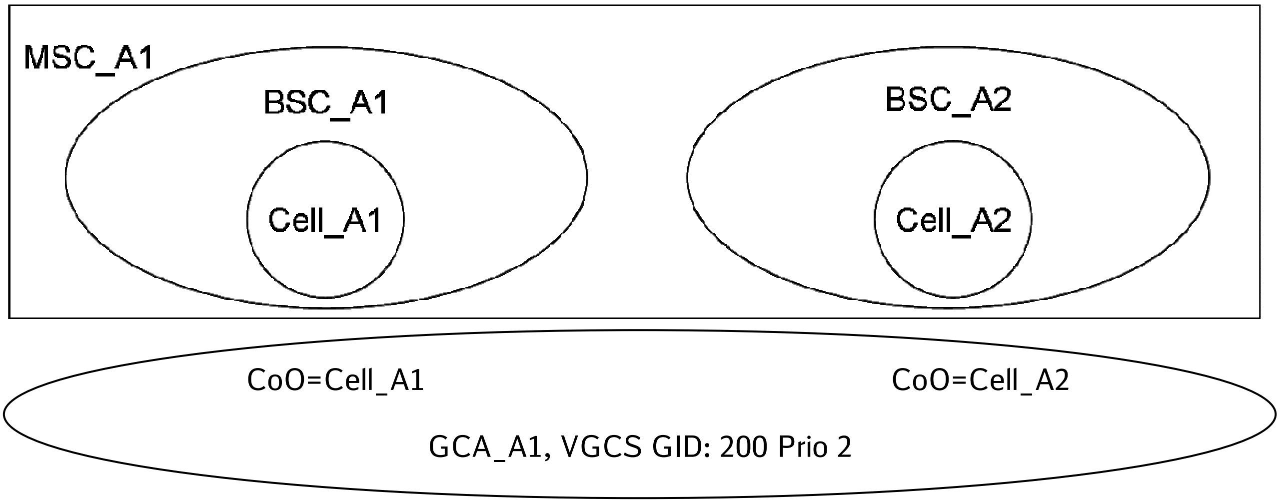
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	

a) Purpose

Verify that the originator of a VGCS can take the uplink on the group call channel.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 receives notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two way voice path.
2)	MS_A2 accepts the incoming VGCS.	MS_A2 joins VGCS call.
3)	MS_A1 requests the uplink (group call channel) after the dedicated channel is released.	MS_A1 takes the uplink. MS_A1 has two-way voice path, MS_A2 is only listener.
4)	MS_A2 requests the uplink.	MS_A2 cannot take the uplink.
5)	MS_A1 releases the uplink.	The uplink is correctly released.
6)	MS_A2 requests the uplink.	MS_A2 can take the uplink (GCCH). MS_A2 has two-way voice path, MS_A1 is only listener.
7)	MS_A2 releases the uplink.	The uplink is correctly released.
8)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.
9)	Service subscriber MS_A2 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A GCCH is allocated in cell_A1. MS_A1 receives notification of the incoming call. So long the dedicated channel is not released, MS_A2 has two-way voice path.
10)	MS_A1 accepts the incoming VGCS.	MS_A1 joins VGCS call.
11)	MS_A2 requests the uplink (group call channel) after the dedicated channel is released.	MS_A2 takes the uplink. MS_A2 has two-way voice path, MS_A1 is only listener.
12)	MS_A1 requests the uplink.	MS_A1 cannot take the uplink.
13)	MS_A2 releases the uplink.	The uplink is correctly released.
14)	MS_A1 requests the uplink.	MS_A1 can take the uplink (GCCH). MS_A1 has two-way voice path, MS_A2 is only listener.
15)	MS_A1 releases the uplink.	The uplink is correctly released.

Step	Action	Expected result(s)
16)	MS_A2 releases the VGCS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

The originator of a VGCS call can take the uplink on the group call channel.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.9 Joiner of VGCS call takes Uplink

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	

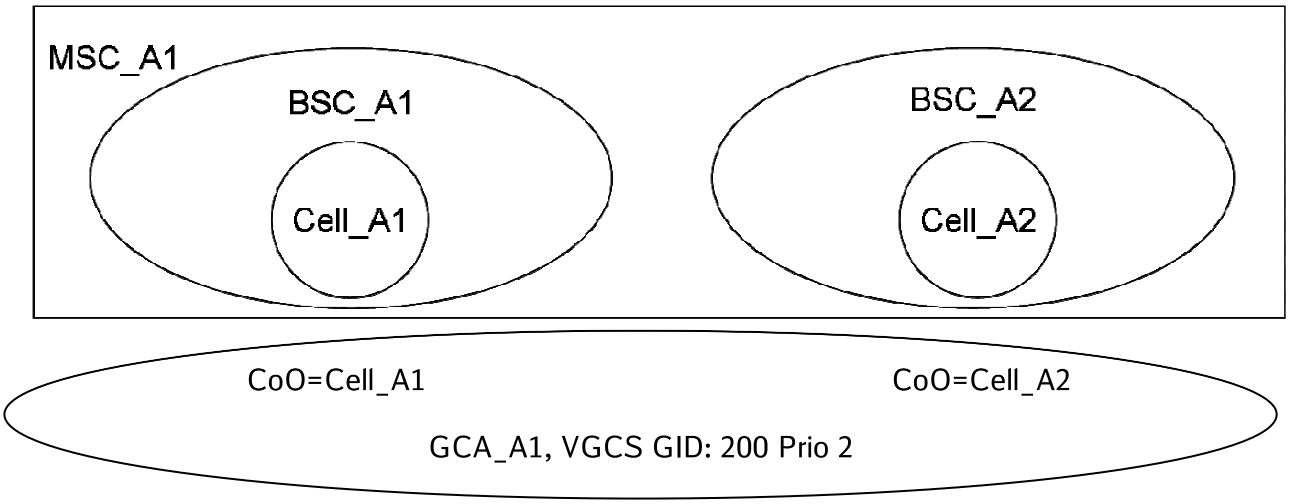
a) Purpose

Verify that the joiner of a VGCS can take the uplink on the group call channel.

b) Test configuration / initial conditions

MS_A3 and MS_A4 are off.

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A3 (VGCS GID: 200)	MS_A4 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 receives notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 accepts the incoming VGCS.	MS_A2 joins VGCS call.
3)	MS_A1 requests the uplink (group call channel) after the dedicated channel is released.	MS_A1 takes the uplink. MS_A1 has two-way voice path, MS_A2 is only listener.
4)	MS_A1 releases the uplink.	The uplink is correctly released.
5)	Switch on MS_A3 in cell_A1.	MS_A3 has correct subscriber information in the VLR_A1 and is attached to the network. MS_A3 receives notification of the ongoing call and joins the call.
6)	MS_A3 requests the uplink.	MS_A3 can take the uplink (GCCH). MS_A3 has two-way voice path, MS_A1 and MS_A2 are only listeners.
7)	MS_A3 releases the uplink.	The uplink is correctly released.
8)	MS_A3 leaves the call.	The call is not released.
9)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.
10)	Switch off MS_A3.	
11)	Service subscriber MS_A2 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A GCCH is allocated in cell_A1. MS_A1 receives notification of the incoming call. So long the dedicated channel is not released, MS_A2 has two-way voice path.
12)	MS_A1 accepts the incoming VGCS.	MS_A1 joins VGCS call.
13)	MS_A2 requests the uplink (group call channel) after the dedicated channel is released.	MS_A2 takes the uplink. MS_A2 has two-way voice path, MS_A1 is only listener.
14)	MS_A2 releases the uplink.	The uplink is correctly released.

Step	Action	Expected result(s)
15)	Switch on MS_A4 in cell_A2.	MS_A4 has correct subscriber information in the VLR_A1 and is attached to the network. MS_A4 receives notification of the ongoing call and joins the call.
16)	MS_A4 requests the uplink.	MS_A4 can take the uplink (GCCH). MS_A4 has two-way voice path, MS_A1 and MS_A2 are only listeners.
17)	MS_A4 releases the uplink.	The uplink is correctly released.
18)	MS_A4 leaves the call.	The call is not released.
19)	MS_A2 releases the VGCS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

The joiner of a VGCS call can take the uplink on the group call channel.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.10 Un-mute and mute sequence for originating controller

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1 3.7.2 3.8.1 3.8.2 3.8.4 3.8.5	

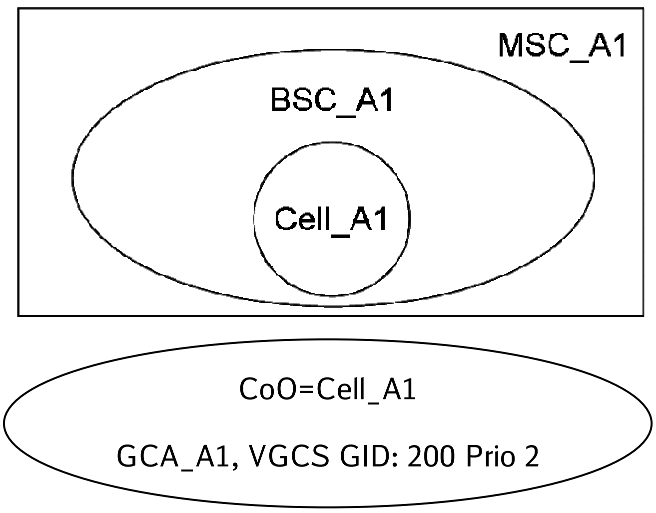
a) Purpose

Verify that an originating controller can use the un-mute and mute sequences correctly.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

Network A



MS_A1 (VGCS GID: 200)
MS_A2 (VGCS GID: 200)
CT_A1 (GCA_A1, VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	Controller CT_A1 originates a VGCS call by dialling 50 + < GCA > + <GID>	VGCS call is correctly established. A group call channel (GCCH) is allocated in cell_A1. Uplink still free in cell_A1. MS_A1 and MS_A2 receive notification of the incoming VGCS call. CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
2)	MS_A1 and MS_A2 accept the incoming VGCS.	MS_A1 and MS_A2 join VGCS call. CT_A1 has voice path and MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
3)	MS_A1 takes the uplink (group call channel).	MS_A1 has voice path on GCCH. CT_A1 is able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 is still able to listen to the announcement of CT_A1.
4)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
5)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
6)	Controller CT_A1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

d) Success criteria

The originating controller can use the un-mute and mute sequences correctly.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.11 Un-mute and mute sequence for joining controller

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1 3.7.2 3.8.1 3.8.2 3.8.4 3.8.5	

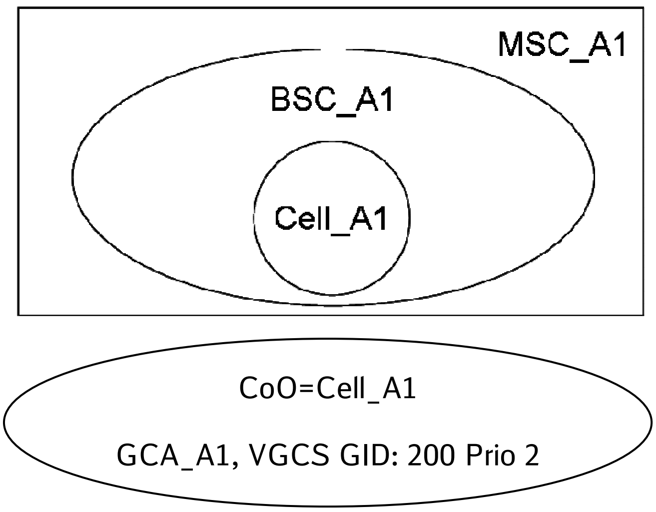
a) Purpose

Verify that a joining controller can use the un-mute and mute sequences correctly.

b) Test configuration / initial conditions

Controller CT_A1 is connected to network A.

Network A



MS_A1 (VGCS GID: 200)
MS_A2 (VGCS GID: 200)
CT_A1 (GCA_A1, VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. CT_A1 and MS_A2 receive notification of the incoming call.
2)	MS_A2 and CT_A1 accept the incoming VGCS call.	CT_A1 joins VGCS call. CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1. MS_A2 joins VGCS call as listener. CT_A1 has voice path and MS_A2 is able to listen to the announcement of CT_A1.
3)	MS_A1 takes the uplink (GCCH).	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
4)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
5)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
6)	Controller CT_A1 leaves the VGCS call.	CT_A1 is not involved in the call anymore.

Step	Action	Expected result(s)
7)	Controller CT_A1 joins the VGCS call by dialling 50 + < GCA > + <GID>	CT_A1 joins VGCS call. CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1. MS_A2 joins VGCS call as listener. CT_A1 has voice path and MS_A2 is able to listen to the announcement of CT_A1.
8)	CT_A1 un-mutes the downlink to MS_A1 by using the un-mute sequence (dialling ###).	MSC_A1 sends set parameter message and MS_A1 un-mutes its downlink to get two-way voice path on GCCH. MS_A1 and MS_A2 are able to listen to the announcement of CT_A1.
9)	CT_A1 mutes the downlink to MS_A1 by using the mute sequence (dialling #**).	MSC_A1 sends set parameter message and MS_A1 mutes its downlink. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1. CT_A1 still able to listen to the announcement of MS_A1.
10)	Controller CT_A1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

d) Success criteria

The joining controller can use the un-mute and mute sequences correctly.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.12 Parallel group calls are possible in the same cell

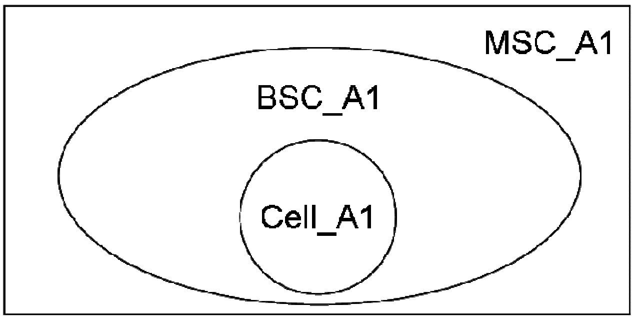
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	

a) Purpose

Verify that it is possible to have different VGCS calls in a cell in parallel.

b) Test configuration / initial conditions

Network A



CoO=Cell_A1

GCA_A1, VGCS GID: 200 Prio 2,
VGCS GID: 203 Prio 3

MS_A1 (VGCS GID: 200)
MS_A2 (VGCS GID: 200)
MS_A3 (VGCS GID: 203)
MS_A4 (VGCS GID: 203)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call with GID 200.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2 receives notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 accepts the incoming VGCS.	MS_A2 joins VGCS call.
3)	MS_A1 takes the uplink (dedicated channel).	MS_A1 has two-way voice path, MS_A2 is only listener.
4)	Service subscriber MS_A3 originates a VGCS call with GID 203.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A4 receives notification of the incoming call. So long the dedicated channel is not released, MS_A3 has two-way voice path.
5)	MS_A4 accepts the incoming VGCS.	MS_A4 joins VGCS call.
6)	MS_A3 takes the uplink (dedicated channel).	MS_A3 has two-way voice path, MS_A4 is only listener.
7)	MS_A1 releases the uplink.	The uplink is correctly released.
8)	MS_A3 releases the uplink.	The uplink is correctly released.
9)	MS_A1 takes the uplink (group call channel).	MS_A1 has two-way voice path, MS_A2 is only listener.
10)	MS_A3 takes the uplink (group call channel).	MS_A3 has two-way voice path, MS_A4 is only listener.
11)	MS_A1 releases the uplink.	The uplink is correctly released.
12)	MS_A3 releases the uplink.	The uplink is correctly released.
13)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.
14)	MS_A3 releases the VGCS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

It is possible to have different VGCS calls in a cell in parallel.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.13 Parallel VBS/VGCS calls with same GID are possible (same BSS and different BSS)

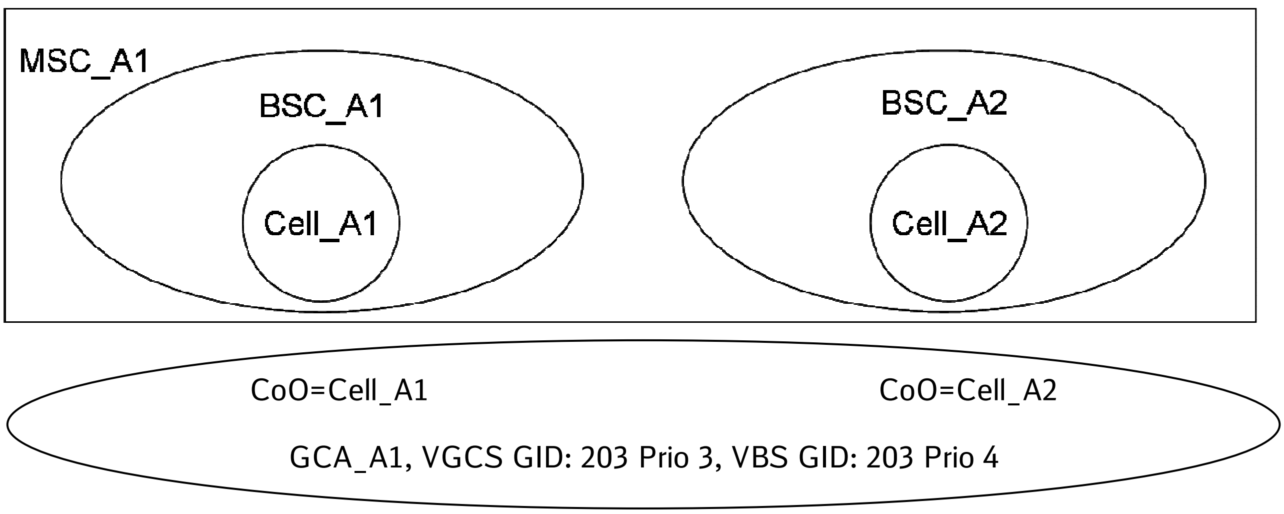
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.2.7 3.5.2 3.5.3 9.2.5.1	2.2.1	

a) Purpose

Verify that it is possible to establish a VBS and a VGCS call with the same GID in parallel in the same BSS as well as in different BSS.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 203)	MS_A5 (VBS GID: 203)
MS_A2 (VBS GID: 203)	MS_A6 (VGCS GID: 203)
MS_A3 (VGCS GID: 203)	
MS_A4 (VGCS GID: 203)	

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 and MS_A5 receive notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
2)	MS_A2 and MS_A5 accept the incoming VBS call.	MS_A2 and MS_A5 join VBS call. MS_A1 has two-way voice path, MS_A2 and MS_A5 are only listener.
3)	Service subscriber MS_A3 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A4 and MS_A6 receive notification of the incoming call. So long the dedicated channel is not released, MS_A3 has two-way voice path.
4)	MS_A4 and MS_A6 accept the incoming VGCS call.	MS_A4 and MS_A6 join VGCS call.
5)	MS_A3 takes the uplink (group call channel).	MS_A3 has two-way voice path, MS_A4 and MS_A6 are only listener.
6)	MS_A1 releases the VBS call.	The call is released and all resources are correctly de-allocated.
7)	MS_A3 releases the uplink.	The uplink is correctly released.
8)	MS_A3 releases the VGCS call.	The call is released and all resources are correctly de-allocated.
9)	Service subscriber MS_A5 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A GCCH is allocated in cell_A1. The DCH (uplink) remains allocated during the whole VBS call. MS_A1 and MS_A2 receive notification of the incoming call.
10)	MS_A1 and MS_A2 accept the incoming	MS_A1 and MS_A2 join VBS call. MS_A5 has

Step	Action	Expected result(s)
	VBS call.	two-way voice path, MS_A1 and MS_A2 are only listener.
11)	Service subscriber MS_A3 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A4 and MS_A6 receive notification of the incoming call. So long the dedicated channel is not released, MS_A3 has two-way voice path.
12)	MS_A4 and MS_A6 accept the incoming VGCS call.	MS_A4 and MS_A6 join VGCS call.
13)	MS_A3 takes the uplink (group call channel).	MS_A3 has two-way voice path, MS_A4 and MS_A6 are only listener.
14)	MS_A5 releases the VBS call.	The call is released and all resources are correctly de-allocated.
15)	MS_A3 releases the uplink.	The uplink is correctly released.
16)	MS_A3 releases the VGCS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

It was possible to establish a VBS and a VGCS call with the same GID in parallel in the same BSS as well as in different BSS.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.14 MSC receives VBS/VGCS Queuing Indication followed by Assignment Result from non CoO

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	1.4.1.1 9.2.5.1	2.2.1	

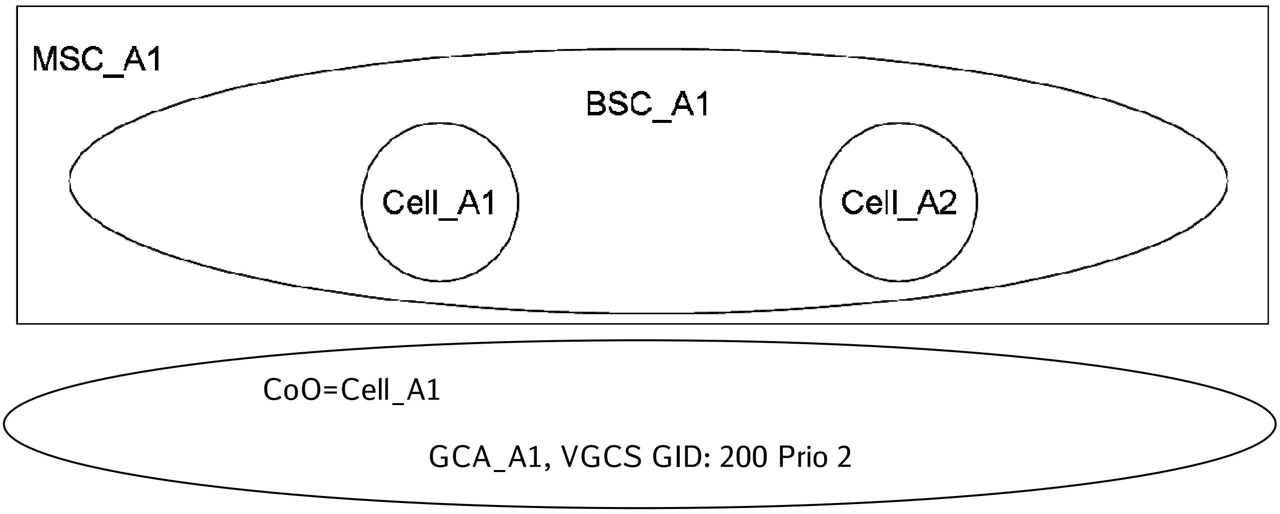
a) Purpose

Verify that a VGCS call can be established in the cell of origin, even if in the non cell of origin the call is queued and verify that after resources are freed, 'Assignment Result' is sent to the MSC and a GCCH is allocated in the non cell of origin.

b) Test configuration / initial conditions

Queuing is activated on the network.

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A3 (VGCS GID: 200)
MS_A2 (VGCS GID: 200)	MS_A4 (VGCS GID: 200)
	MS_A5
	MS_A6
	MS_A7
	MS_A8

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A3 establishes a PTP call to MS_A4 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A3 and MS_A4.
2)	MS_A5 establishes a PTP call to MS_A6 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A5 and MS_A6.
3)	MS_A7 establishes a PTP call to MS_A8 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A7 and MS_A8. There is no more traffic channel available in cell_A2.
4)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established in cell_A1. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2 receives notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path. In cell_A2, all traffic channels are busy. VGCS call is queued for this cell. 'VGCS/VBS Queuing Indication' message is sent from the BSC to the MSC. If traffic channels are available before timer T14 expires, the message 'VGCS/VBS Assignment Result' is sent to the MSC.
5)	MS_A2 accepts the incoming VGCS call.	MS_A2 joins VGCS call.
6)	MS_A1 takes the uplink (dedicated channel).	MS_A1 has two-way voice path, MS_A2 is only listener.
7)	MS_A1 releases the uplink.	The uplink is correctly released.
8)	MS_A2 takes the uplink (group call channel).	MS_A2 has two-way voice path, MS_A1 is only listener.
9)	MS_A2 releases the uplink.	The uplink is correctly released.
10)	MS_A3 releases the PTP call before timer T14 expires.	'VGCS/VBS Assignment Result' is sent to the MSC before timer expiration. MS_A3 and MS_A4 are notified about the incoming VGCS call. A GCCH is allocated in cell_A2.
11)	MS_A3 and MS_4 accept the incoming VGCS call.	MS_A3 and MS_A4 join the VGCS call.

Step	Action	Expected result(s)
12)	MS_A3 requests the uplink.	MS_A3 has two-way voice path. MS_A1, MS_A2 and MS_A4 are only listener.
13)	MS_A3 releases the uplink.	The uplink is correctly released.
14)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.
15)	MS_A5 releases the PTP call.	The call is released and all related resources are correctly de-allocated.
16)	MS_A7 releases the PTP call.	The call is released and all related resources are correctly de-allocated.

d) Success criteria

The VGCS call can be established in the cell of origin, even if in the non cell of origin the call is queued. After resources are freed, 'Assignment Result' is sent to the MSC and a GCCH is allocated in the non cell of origin.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.15 MSC receives VBS/VGCS Queuing Indication followed by Assignment Result from CoO

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	1.4.1.1 9.2.5.1	2.2.1	

a) Purpose

Verify that a VGCS call can be established in the cell of origin, when in this cell the group call channel is queued and after resources are freed, 'Assignment Result' is sent to the MSC and a GCCH is allocated.

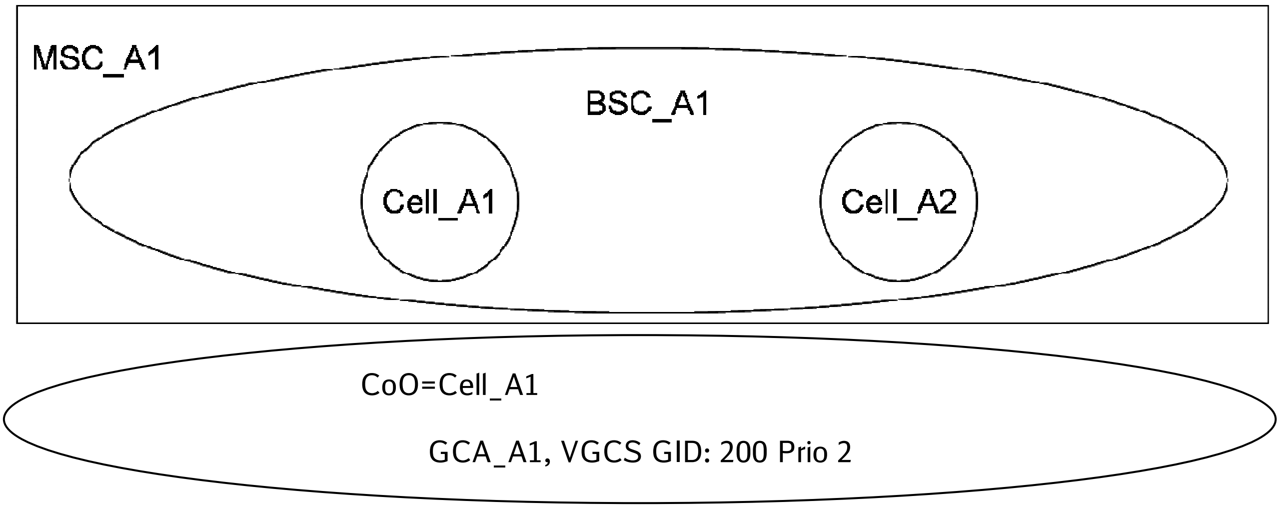
b) Test configuration / initial conditions

CT_A1 is connected to network A.

Queuing is activated on the network.

Check values of BSC Timer T14 and MSC Timer Txx.

Network A



Cell_A1	Cell_A2
MS_A1	MS_A7 (VGCS GID: 200)
MS_A2	
MS_A3 (VGCS GID: 200)	
MS_A4 (VGCS GID: 200)	
MS_A5	
MS_A6 (VGCS GID: 200)	
CT_A1	

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A1 and MS_A2. Two traffic channels are busy in the cell of origin.
2)	MS_A3 establishes a PTP call to MS_A4 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A3 and MS_A4. Four traffic channels are busy in the cell of origin.
3)	MS_A5 establishes a PTP call to CT_A1 with priority 1 by dialling *75<Priority>#<ISDN>.	The call is established correctly, there is a speech path between MS_A5 and CT_A1. All traffic channels except one are busy on the cell of origin cell_A1.
4)	Service subscriber MS_A6 originates a VGCS call. MS_A6 does not take the uplink.	A dedicated channel (DCH) is allocated in cell_A1. A GCCH is allocated in cell_A2. The group call channel is queued in cell_A1. 'VGCS/VBS Queuing Indication' message is sent from the BSC to the MSC. MS_A7 receives notification of the incoming call.
5)	If BSC Timer T14 > MSC Timer Txx then: MS_A3 releases the PTP call after the BSC sends the 'VGCS/VBS Queuing Indication' message to the MSC but before expiration of timer Txx. Otherwise the call will be terminated from the MSC. If MSC Timer Txx > BSC Timer T14 then: MS_A3 releases the PTP call after the BSC sends the 'VGCS/VBS Queuing Indication' message to the MSC but before expiration of timer T14. Otherwise message 'VGCS/VBS Assignment Failure' is sent to the MSC.	Message 'VGCS/VBS Assignment Result' is sent to the MSC. VGCS call is correctly established. A group call channel (GCCH) is allocated in cell_A1. MS_A3 and MS_A4 receive notification of the incoming call.
6)	MS_A3 and MS_A4 accept the incoming VGCS.	MS_A3 and MS_A4 join VGCS call.
7)	MS_A3 takes the uplink (group call channel).	MS_A3 has two-way voice path, MS_A6, MS_A7, and MS_A4 are only listener.
8)	MS_A3 releases the uplink.	The uplink is correctly released.

Step	Action	Expected result(s)
9)	MS_A6 releases the VGCS call.	The call is released and all related resources are correctly de-allocated.
10)	MS_A5 releases the PTP call.	The call is released and all related resources are correctly de-allocated.
11)	MS_A1 releases the PTP call.	The call is released and all related resources are correctly de-allocated.

d) Success criteria

A VGCS call can be established in the cell of origin, when in this cell the group call channel is queued and after resources are freed, ‘Assignment Result’ is sent to the MSC and a GCCH is allocated.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.16 MSC receives VBS/VGCS Queuing Indication followed by Assignment Failure from non CoO

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	

a) Purpose

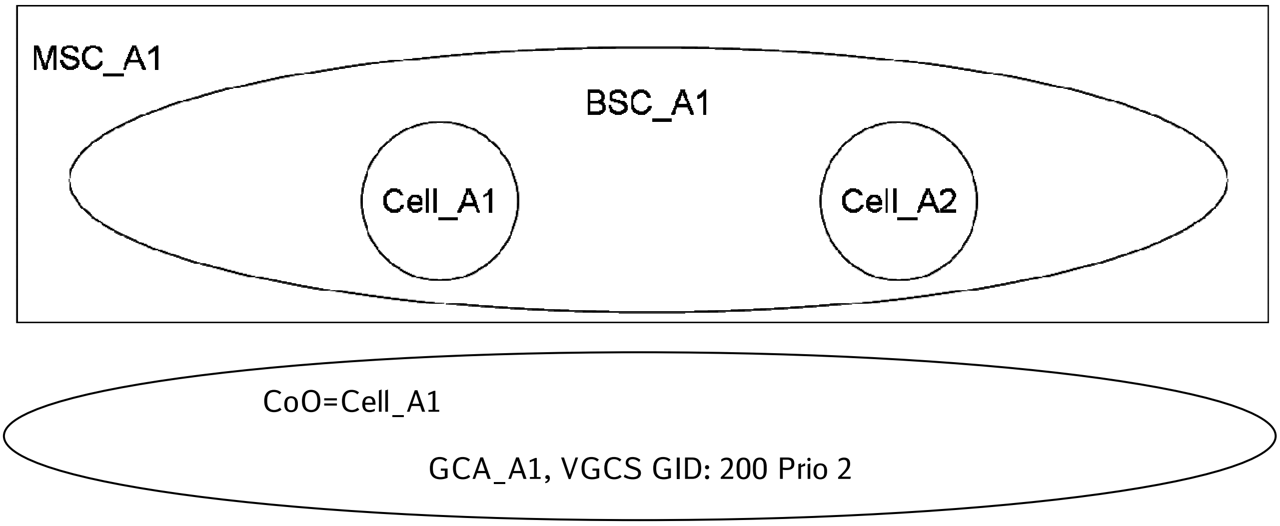
Verify that VGCS call can be established in the cell of origin, even if in the non cell of origin the call is queued and an 'Assignment Failure' is sent to the MSC.

b) Test configuration / initial conditions

Queuing is activated on the network.

Cell_A2 has only one TRX.

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A3 (VGCS GID: 200)
MS_A2 (VGCS GID: 200)	MS_A4 (VGCS GID: 200)
	MS_A5
	MS_A6
	MS_A7
	MS_A8

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A3 establishes a PTP call to MS_A4 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A3 and MS_A4.
2)	MS_A5 establishes a PTP call to MS_A6 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A5 and MS_A6.
3)	MS_A7 establishes a PTP call to MS_A8 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A7 and MS_A8. There are no more traffic channels available in cell_A2.
4)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established in cell_A1. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2 receives notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path. In cell_A2, all traffic channels are busy. VGCS call is queued for this cell. 'VGCS/VBS Queuing Indication' message is sent from the BSC to the MSC. If no traffic channels are available before timer T14 expires, the message 'VGCS/VBS Assignment Failure' with cause 'No radio resource available' is sent to the MSC.
5)	MS_A2 accepts the incoming VGCS.	MS_A2 joins VGCS call.
6)	MS_A1 takes the uplink (group call channel).	MS_A1 has two-way voice path, MS_A2 is only listener.
7)	MS_A1 releases the uplink.	The uplink is correctly released.
8)	MS_A3 releases the PTP call after timer T14 expires.	'VGCS/VBS Assignment Failure' with cause 'No radio resource available' is sent to the MSC after timer expiration. The PTP call is released and all related resources are correctly de-allocated. No VGCS call could be established in cell_A2.
9)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.
10)	MS_A5 releases the PTP call.	The call is released and all related resources are correctly de-allocated.

Step	Action	Expected result(s)
11)	MS_A7 releases the PTP call.	The call is released and all related resources are correctly de-allocated.

d) Success criteria

The VGCS call can be established in the cell of origin, even if in the non cell of origin the call is queued and an ‘Assignment Failure’ is sent to the MSC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.17 Origination of VGCS call from non subscribed MS fails

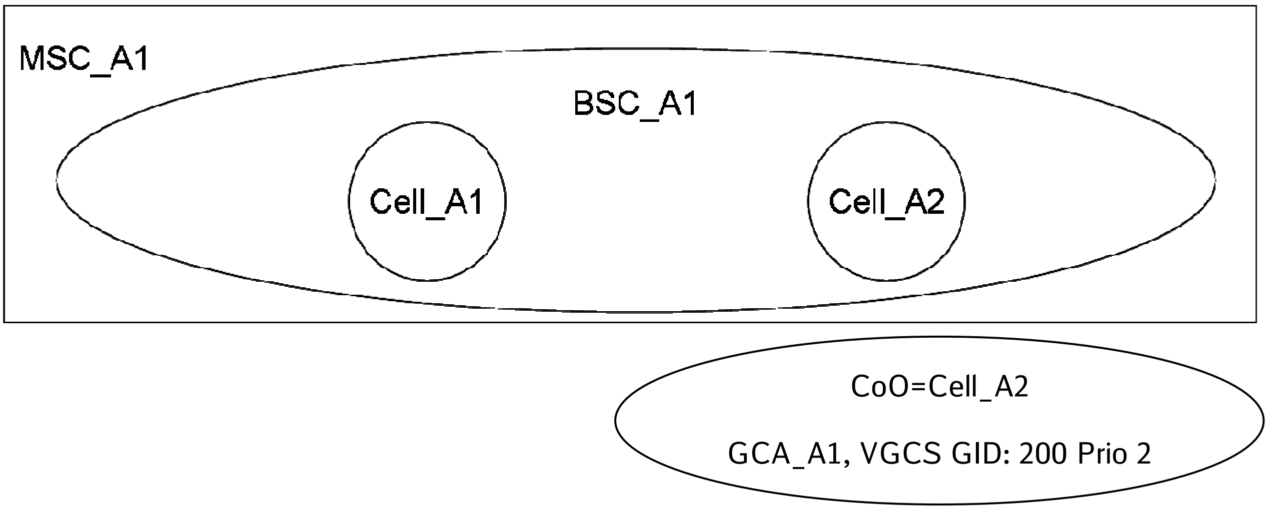
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1	2.2.1	

a) Purpose

Verify that a service subscriber cannot originate a VGCS call if it is located outside the GCA or if it has no subscription to regarding GID.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (no VGCS / VBS subscriber)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is not established.
2)	Service subscriber MS_A2 originates a VGCS call.	VGCS call is not established.

d) Success criteria

The service subscriber cannot originate a VGCS call if it is located outside the GCA or if it has no subscription to regarding GID.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.18 Origination by controller fails

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	

a) Purpose

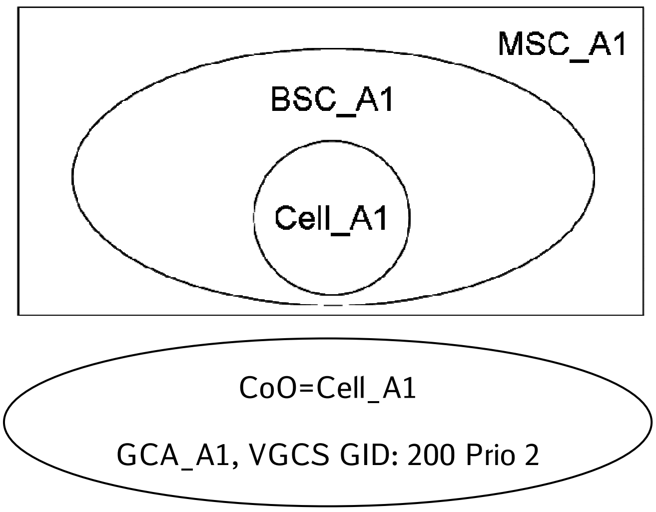
Verify that a controller cannot originate a VGCS call if it is not entitled for this.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

CT_A1 is not entitled to originate calls on the regarding GCA.

Network A



MS_A1 (VGCS GID: 200)	
CT_A1 (GCA_A1, VGCS GID: 200)	

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 is located in cell_A1.	MS_A1 has correct subscriber information in the VLR_A1 and is attached to the network.
2)	Controller CT_A1 originates a VGCS call by dialling 50 + < GCA > + <GID>	VGCS call is not established.

d) Success criteria

The controller cannot originate a VGCS call if it is not entitled for this.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.19 Killing of VGCS call by controller fails

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	

a) Purpose

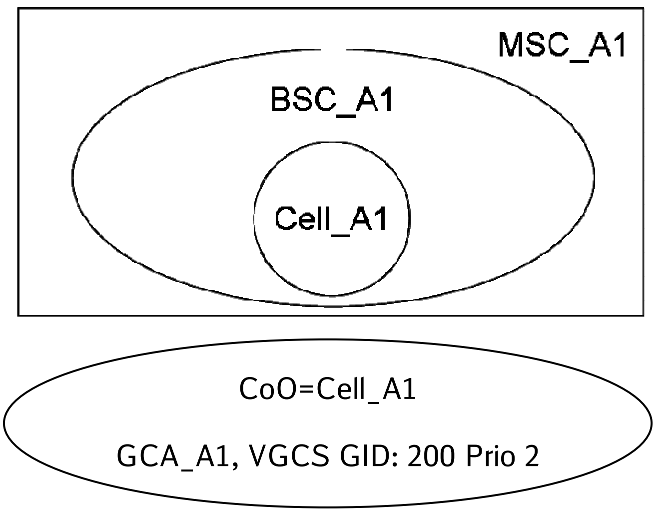
Verify that a controller cannot kill a VGCS call if it is not entitled for this.

b) Test configuration / initial conditions

Controller CT_A1 is connected to network A.

CT_A1 is not entitled to kill calls on the regarding GCA.

Network A



MS_A1 (VGCS GID: 200)
MS_A2 (VGCS GID: 200)
CT_A1 (GCA_A1, VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. CT_A1 and MS_A2 receive notification of the incoming call.
2)	MS_A2 and CT_A1 accept the incoming VGCS.	CT_A1 joins VGCS call. CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1. MS_A2 joins VGCS call as listener. CT_A1 has voice path and MS_A2 is able to listen to the announcement of CT_A1.
3)	MS_A1 takes the uplink (on the group call channel).	MS_A1 has voice path on GCCH. MS_A2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_A2 still able to listen to the announcement of CT_A1.
4)	MS_A1 releases the uplink.	The uplink is correctly released.
5)	CT_A1 releases the call by using the kill sequence (dialling ***).	The call is not released.
6)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

The controller cannot kill a VGCS call if it is not entitled for this.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.20 Uplink release when DCH is allocated in case of SS contact lost

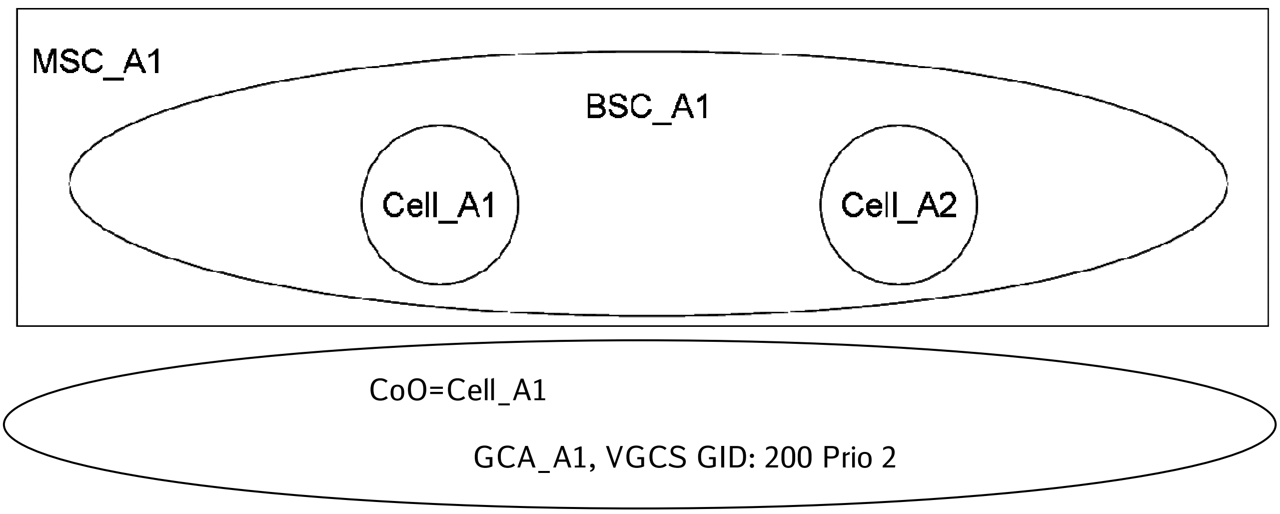
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	

a) Purpose

Verify that the uplink on the dedicated channel is correctly released in case the service subscriber looses contact to the network.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A3 (VGCS GID: 200)	

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 and MS_A3 receive notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 and MS_A3 accept the incoming VGCS.	MS_A2 and MS_A3 join VGCS call.
3)	MS_A1 takes the uplink (dedicated channel).	MS_A1 has two-way voice path, MS_A2 and MS_A3 are only listener.
4)	Remove the battery of MS_A1 so it looses contact with the network.	The uplink (dedicated channel) is correctly released. Release cause: “Radio Interface Failure”.
5)	MS_A2 requests the uplink.	MS_A2 can take the uplink (GCCH) and has two-way voice path. MS_A3 is only listener.
6)	Put back the battery of MS_A1 and switch it on.	MS_A1 is notified about the ongoing VGCS and joins it. MS_A2 has two-way voice path. MS_A1 and MS_A3 are only listener.
7)	MS_A2 releases the uplink.	The uplink is correctly released.
8)	MS_A1 requests the uplink.	MS_A1 can take the uplink (GCCH) and has two-way voice path, MS_A2 and MS_A3 are only listener.
9)	MS_A1 releases the uplink.	The uplink is correctly released.
10)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

The uplink on the dedicated channel is correctly released in case the service subscriber looses contact to the network.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.21 Uplink release when DCH is allocated in case of Equipment failure (TRX)

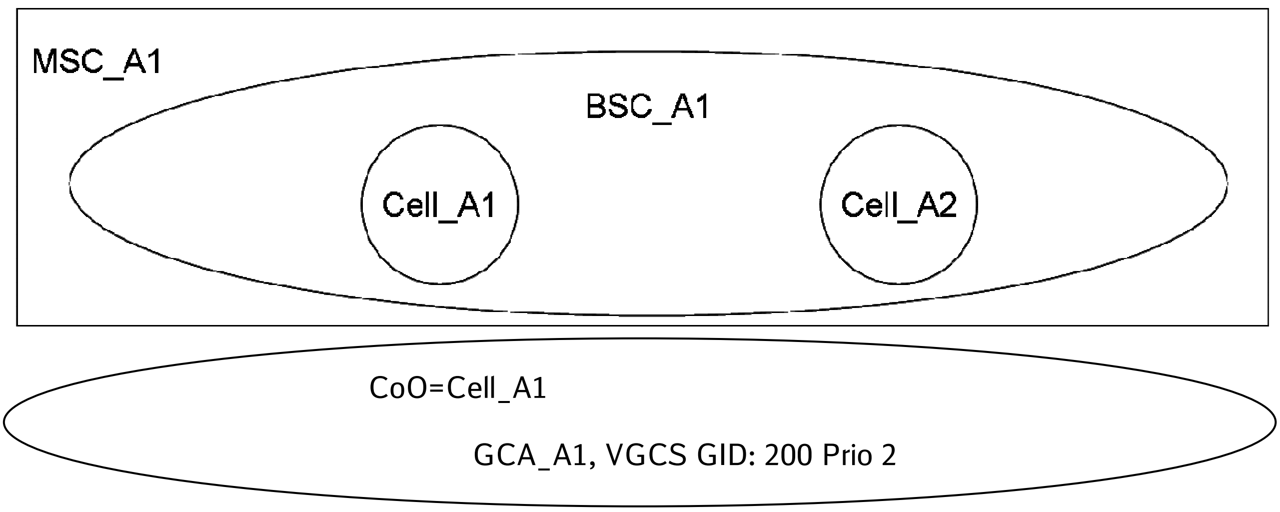
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	TS 100933

a) Purpose

Verify that the uplink on the dedicated channel is correctly released in case of equipment failure (TRX failure).

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
	MS_A3 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 and MS_A3 receive notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 and MS_A3 accept the incoming VGCS.	MS_A2 and MS_A3 join VGCS call.
3)	MS_A1 takes the uplink (dedicated channel).	MS_A1 has two-way voice path, MS_A2 and MS_A3 are only listener.
4)	Originate a TRX failure on the TRX of cell_A1.	The uplink (dedicated channel) is correctly released. Release cause: "Equipment Failure".
5)	MS_A2 requests the uplink.	MS_A2 can take the uplink (GCCH) and has two-way voice path. MS_A3 is only listener.
6)	MS_A1 moves to cell_A2.	MS_A1 performs a cell reselection. MS_A1 is notified about the ongoing VGCS and joins it. MS_A2 has two-way voice path. MS_A1 and MS_A3 are only listener.
7)		
8)	MS_A2 releases the uplink.	The uplink is correctly released.
9)	MS_A1 requests the uplink.	MS_A1 can take the uplink (GCCH) and has two-way voice path, MS_A2 and MS_A3 are only listener.
10)	MS_A1 releases the uplink.	The uplink is correctly released.
11)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.
12)	Put TRX back into service again.	TRX is working again.

d) Success criteria

The uplink on the dedicated channel is correctly released in case of equipment failure (TRX failure).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.22 Uplink Release when DCH is allocated in case of Equipment failure (PCM)

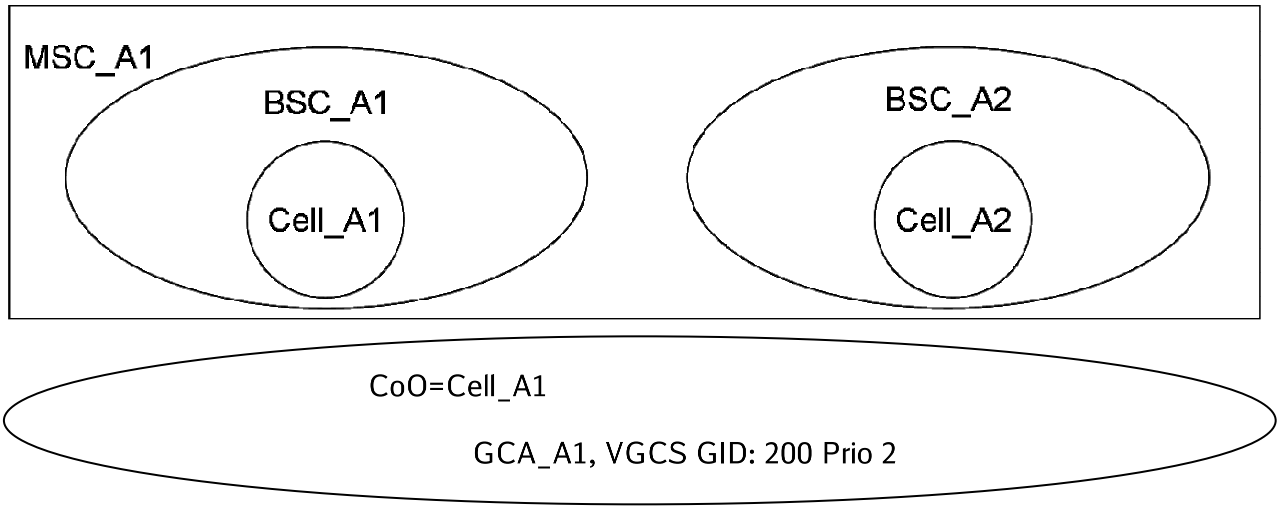
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	TS 100933

a) Purpose

Verify that the uplink on the dedicated call channel is correctly released in case of equipment failure (PCM failure) in the originating cell and that the call is not released in the non-originating cell.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
	MS_A3 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 and MS_A3 receive notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 and MS_A3 accept the incoming VGCS call.	MS_A2 and MS_A3 join VGCS call.
3)	MS_A1 takes the uplink (dedicated channel).	MS_A1 has two-way voice path, MS_A2 and MS_A3 are only listener.
4)	Originate a PCM failure on the Abis PCM of cell_A1 (where the uplink is allocated).	The uplink (group call channel) is correctly released. Messages sent: From the BSC to the MSC: “Uplink Release Indication” with cause “Equipment failure”. From the BSC to all BTS in the GCA. “Uplink Free”. In cell_A2 the call is not released.
5)	MS_A2 requests the uplink.	MS_A2 can take the uplink (GCCH) and has two-way voice path. MS_A3 only listener.
6)	MS_A1 moves to cell_A2.	MS_A1 performs a normal location update. MS_A1 is notified about the ongoing VGCS and joins it. MS_A2 has two-way voice path. MS_A1 and MS_A3 are only listener.
7)	MS_A2 releases the uplink.	The uplink is correctly released.
8)	MS_A1 requests the uplink.	MS_A1 can take the uplink (GCCH) and has two-way voice path, MS_A2 and MS_A3 are only listener.
9)	MS_A1 releases the uplink.	The uplink is correctly released.
10)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.
11)	Put PCM back into service again.	PCM is working again.

d) Success criteria

The uplink on the dedicated call channel is correctly released in case of equipment failure (PCM failure) in the originating cell and the call is not released in the non-originating cell.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.23 Uplink release when GCCH Uplink is allocated in case of SS contact lost

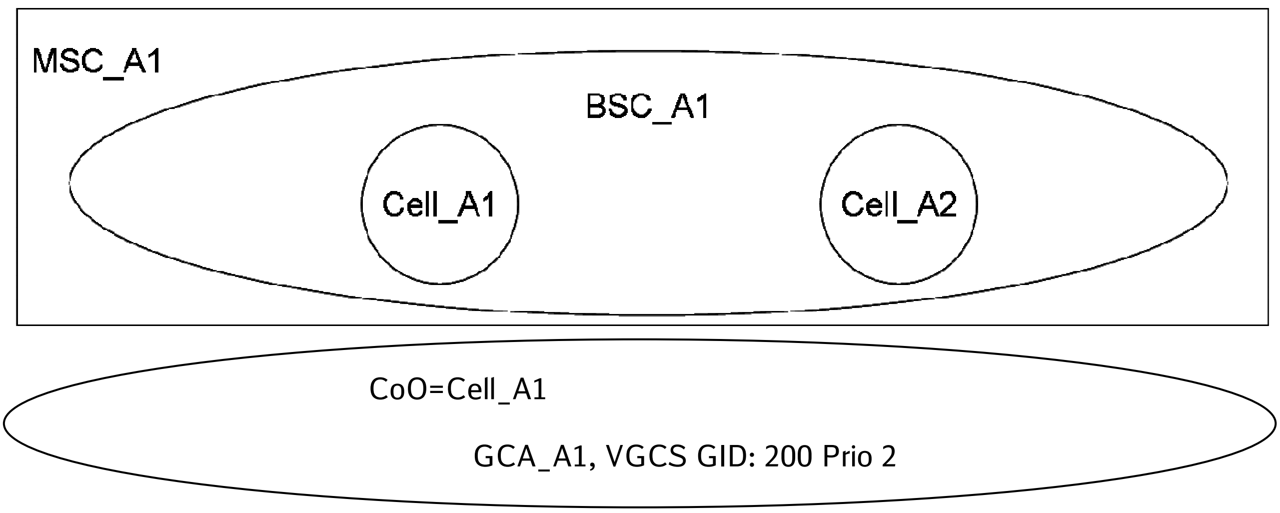
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	TS 100933

a) Purpose

Verify that the uplink on the group call channel is correctly released in case the service subscriber who has the uplink looses contact to the network.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A3 (VGCS GID: 200)	

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 and MS_A3 receive notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 and MS_A3 accept the incoming VGCS.	MS_A2 and MS_A4 join VGCS call.
3)	MS_A1 requests the uplink (group call channel).	MS_A1 can take the uplink (GCCH) MS_A1 has two-way voice path, MS_A2, and MS_A3 are only listener.
4)	Remove the battery of MS_A1 so it looses contact with the network.	The uplink (group call channel) is correctly released. Messages sent: From the BSC to the MSC: “Uplink Release Indication” with cause “Radio interface failure”. From the BSC to all BTS in the GCA. “Uplink Free”.
5)	MS_A2 requests the uplink.	MS_A2 can take the uplink (GCCH) and has two-way voice path. MS_A3 is only listener.
6)	Put back the battery of MS_A1 and switch it on.	MS_A1 is notified about the ongoing VGCS and joins it. MS_A2 has two-way voice path. MS_A1 and MS_A3 are only listener.
7)	MS_A2 releases the uplink.	The uplink is correctly released.
8)	MS_A1 requests the uplink.	MS_A1 can take the uplink (GCCH) and has two-way voice path, MS_A2 and MS_A3 are only listener.
9)	MS_A1 releases the uplink.	The uplink is correctly released.
10)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

The uplink on the group call channel and on the dedicated channel is correctly released in case the service subscriber who has the uplink, looses contact to the network.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.24 Uplink release when GCCH Uplink is allocated in case of Equipment failure (TRX)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	TS 100933

a) Purpose

Verify that the uplink on the group call channel is correctly released in case of equipment failure (TRX failure) in the originating cell and that the call is not released in the non-originating cell.

Verify that the uplink on the group call channel is correctly released in case of equipment failure (TRX failure) in the non-originating cell and that the call is not released in the originating cell.

Verify that the uplink on the group call channel and the VGCS call are not released in case of equipment failure (TRX failure) in the non-originating cell where a listener is allocated.

b) Test configuration / initial conditions

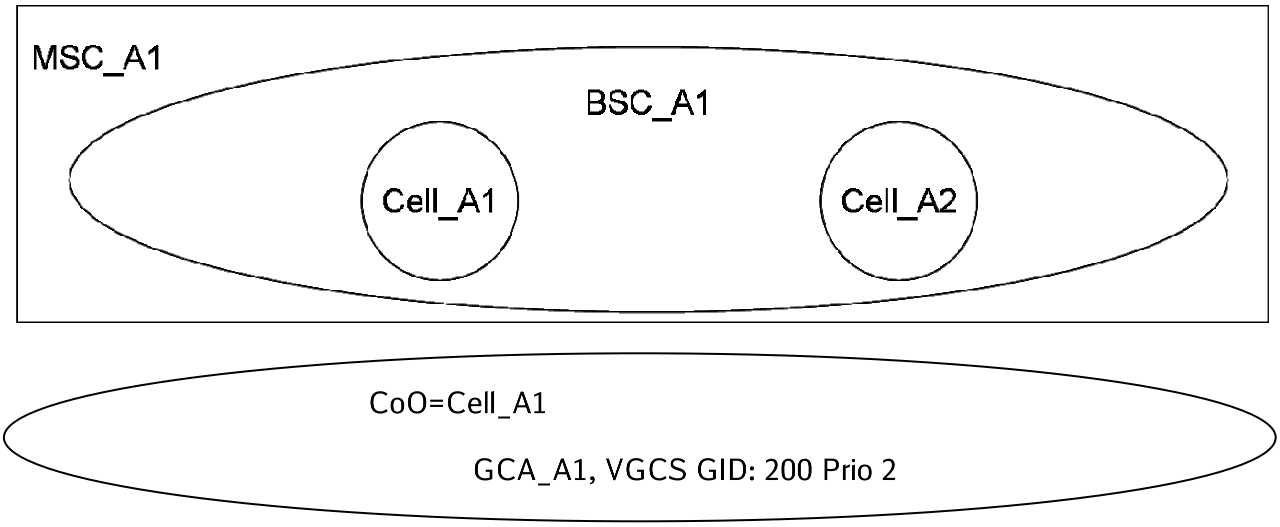
This test case has been divided into the following steps:

Step 1: Uplink release in originating cell when TRX failure in originating cell.

Step 2: Uplink release in non-originating cell when TRX failure in non-originating cell.

Step 3: No uplink release in originating cell when TRX failure in non-originating cell.

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A4 (VGCS GID: 200)	MS_A3 (VGCS GID: 200)

c) Test procedure

Step 1: Uplink release in originating cell when TRX failure in originating cell.

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call and does not keep the dedicated channel.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2, MS_A3 and MS_A4 receive notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2, MS_A3 and MS_A4 accept the incoming VGCS call.	MS_A2, MS_A3 and MS_A4 join VGCS call.
3)	MS_A1 takes the uplink (group call channel).	MS_A1 has two-way voice path, MS_A2, MS_A3 and MS_A4 are only listener.
4)	Originate a TRX failure on the TRX of cell_A1 (where the uplink is allocated).	The uplink (group call channel) is correctly released. Messages sent: from the BSC to the MSC: “Uplink Release Indication” with cause “Equipment failure”. From the BSC to all BTS in the GCA. “Uplink Free”. In cell A2 the call is not released.
5)	MS_A2 requests the uplink.	MS_A2 can take the uplink (GCCH) and has two-way voice path. MS_A3 only listener.
6)	MS_A1 moves to cell_A2.	MS_A1 performs a cell reselection. MS_A1 is notified about the ongoing VGCS and joins it. MS_A2 has two-way voice path. MS_A1 and MS_A3 are only listener.
7)	MS_A2 releases the uplink.	The uplink is correctly released.
8)	MS_A1 requests the uplink.	MS_A1 can take the uplink (GCCH) and has two-way voice path, MS_A2 and MS_A3 are only listener.
9)	MS_A1 releases the uplink.	The uplink is correctly released.
10)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.
11)	Put TRX back into service again.	TRX is working again.
12)	MS_A1 moves to cell_A1.	MS_A1 performs a cell reselection.

Step 2: Uplink release in non-originating cell when TRX failure in non-originating cell.

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call and does not keep the dedicated channel.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2, MS_A3 and MS_A4 receive notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2, MS_A3 and MS_A4 accept the incoming VGCS call.	MS_A2, MS_A3 and MS_A4 join VGCS call.
3)	MS_A2 takes the uplink (group call channel).	MS_A2 has two-way voice path, MS_A1, MS_A3 and MS_A4 are only listener.
4)	Originate a TRX failure on the TRX of cell_A2 (where the subsequent talker is allocated).	The uplink (group call channel) is correctly released. Messages sent: from the BSC to the MSC: “Uplink Release Indication” with cause “Equipment failure”. From the BSC to all BTS in the GCA. “Uplink Free”. In cell_A1 the call is not released.
5)	MS_A1 requests the uplink.	MS_A1 can take the uplink (GCCH). MS_A1 has two-way voice path, MS_A4 is only listener.
6)	MS_A1 releases the uplink.	The uplink is correctly released.
7)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.
8)	Put TRX back into service again.	TRX is working again.

Step 3: No uplink release in originating cell when TRX failure in non-originating cell.

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call and does not keep the dedicated channel.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2, MS_A3 and MS_A4 receive notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2, MS_A3 and MS_A4 accept the incoming VGCS call.	MS_A2, MS_A3 and MS_A4 join VGCS call.
3)	MS_A1 takes the uplink (group call channel).	MS_A1 has two-way voice path, MS_A2, MS_A3 and MS_A4 are only listener.
4)	Originate a TRX failure on the TRX of cell_A2 (where no talker is allocated).	The group channel in cell_A2 is correctly released. Message sent: from the BSC to the MSC: “Clear Request” with cause “Equipment failure”. The uplink and the call are not released In cell_A1.
5)	MS_A1 releases the uplink.	The uplink is correctly released.
6)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.
7)	Put TRX back into service again.	TRX is working again.

d) Success criteria

The uplink on the group call channel is correctly released in case of equipment failure (TRX failure) in the originating cell and the call is not released in the non-originating cell..

The uplink on the group call channel is correctly released in case of equipment failure (TRX failure) in the non-originating cell and the call is not released in the originating cell.

The uplink on the group call channel and the VGCS call are not released in case of equipment failure (TRX failure) in the non-originating cell where a listener is allocated.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.25 Uplink release when GCCH Uplink is allocated in case of Equipment failure (PCM)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	TS 100933

a) Purpose

Verify that the uplink on the group call channel is correctly released in case of equipment failure (PCM failure) in the originating cell and that the call is not released in the non-originating cell.

Verify that the uplink on the group call channel is correctly released in case of equipment failure (PCM failure) in the non-originating cell and that the call is not released in the originating cell.

Verify that the uplink on the group call channel and the VGCS call are not released in case of equipment failure (PCM failure) in the non-originating cell where a listener is allocated.

b) Test configuration / initial conditions

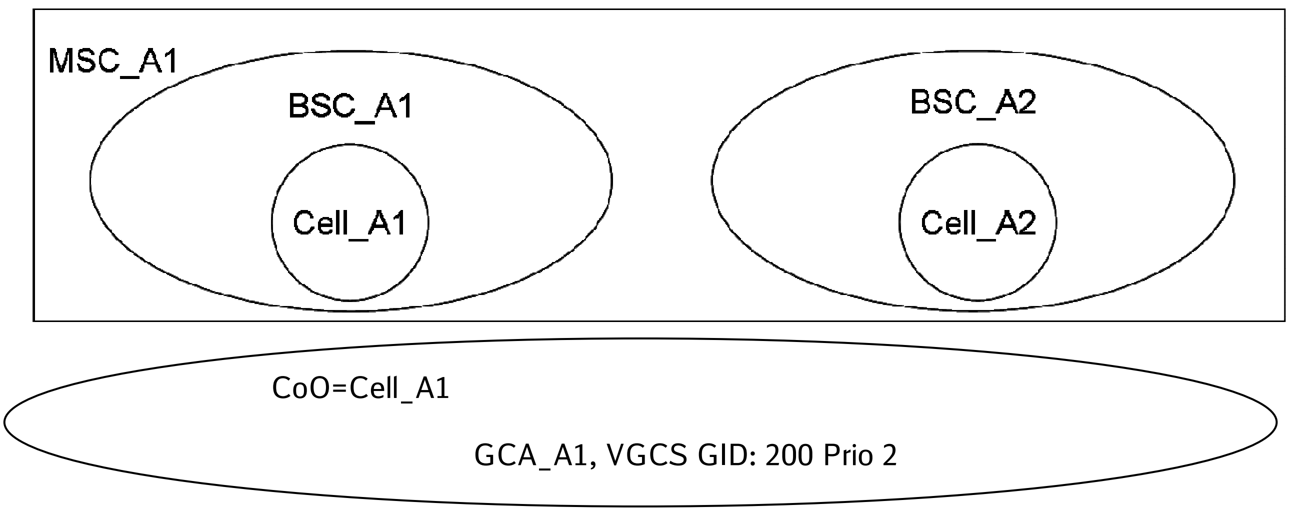
This test case has been divided into the following steps:

Step 1: Uplink release in originating cell when PCM failure in originating cell.

Step 2: Uplink release in non-originating cell when PCM failure in non-originating cell.

Step 3: No uplink release in originating cell when PCM failure in non-originating cell.

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A4 (VGCS GID: 200)	MS_A3 (VGCS GID: 200)

c) Test procedure

Step 1: Uplink release in originating cell when PCM failure in originating cell.

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call and does not keep the dedicated channel.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2, MS_A3 and MS_A4 receive notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2, MS_A3 and MS_A4 accept the incoming VGCS call.	MS_A2, MS_A3 and MS_A4 join VGCS call.
3)	MS_A1 takes the uplink (group call channel).	MS_A1 has two-way voice path, MS_A2, MS_A3 and MS_A4 are only listener.
4)	Originate a PCM failure on the Abis PCM of cell_A1 (where the uplink is allocated).	The uplink (group call channel) is correctly released. Messages sent: from the BSC to the MSC: “Uplink Release Indication” with cause “Equipment failure”. From the BSC to all BTS in the GCA. “Uplink Free”. In cell_A2 the call is not released.
5)	MS_A2 requests the uplink.	MS_A2 can take the uplink (GCCH) and has two-way voice path. MS_A3 is only listener.
6)	MS_A1 moves to cell_A2.	MS_A1 performs a normal location update. MS_A1 is notified about the ongoing VGCS call and joins it. MS_A2 has two-way voice path. MS_A1 and MS_A3 are only listener.
7)	MS_A2 releases the uplink.	The uplink is correctly released.
8)	MS_A1 requests the uplink.	MS_A1 can take the uplink (GCCH) and has two-way voice path, MS_A2 and MS_A3 are only listener.
9)	MS_A1 releases the uplink.	The uplink is correctly released.
10)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.
11)	Put PCM back into service again.	PCM is working again.
12)	MS_A1 moves to cell_A1.	MS_A1 performs a normal location update

Step 2: Uplink release in non-originating cell when PCM failure in non-originating cell.

1)	Service subscriber MS_A1 originates a VGCS call and does not keep the dedicated channel.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2, MS_A3 and MS_A4 receive notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2, MS_A3 and MS_A4 accept the incoming VGCS call.	MS_A2, MS_A3 and MS_A4 join VGCS call.
3)	MS_A2 takes the uplink (group call channel).	MS_A2 has two-way voice path, MS_A1, MS_A3 and MS_A4 are only listener.
4)	Originate a PCM failure on the Abis PCM of cell_A2 (where the subsequent talker is allocated).	The uplink (group call channel) is correctly released. Messages sent: from the BSC to the MSC: “Uplink Release Indication” with cause “Equipment failure”. From the BSC to all BTS in the GCA. “Uplink Free”. In cell_A1 the call is not released.
5)	MS_A1 requests the uplink.	MS_A1 can take the uplink (GCCH). MS_A1 has two-way voice path, MS_A4 is only listener.
6)	MS_A1 releases the uplink.	The uplink is correctly released.
7)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.
8)	Put PCM back into service again.	PCM is working again.

Step 3: No uplink release in originating cell when PCM failure in non-originating cell.

1)	Service subscriber MS_A1 originates a VGCS call and does not keep the dedicated channel.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2, MS_A3 and MS_A4 receive notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2, MS_A3 and MS_A4 accept the incoming VGCS call.	MS_A2, MS_A3 and MS_A4 join VGCS call.
3)	MS_A1 takes the uplink (group call channel).	MS_A1 has two-way voice path, MS_A2, MS_A3 and MS_A4 are only listener.
4)	Originate a PCM failure on the Abis PCM of cell_A2 (where no talker is allocated).	The group channel in cell_A2 is correctly released. Message sent: from the BSC to the MSC: "Clear Request" with cause "Equipment failure". The uplink and the call are not released In cell_A1.
5)	MS_A1 releases the uplink.	The uplink is correctly released.
6)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.
7)	Put PCM back into service again.	PCM is working again.

d) Success criteria

The uplink on the group call channel is correctly released in case of equipment failure (PCM failure) in the originating cell and the call is not released in the non-originating cell..

The uplink on the group call channel is correctly released in case of equipment failure (PCM failure) in the non-originating cell and the call is not released in the originating cell.

The uplink on the group call channel and the VGCS call are not released in case of equipment failure (PCM failure) in the non-originating cell where a listener is allocated.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.26 Uplink Request is rejected due to Uplink already allocated

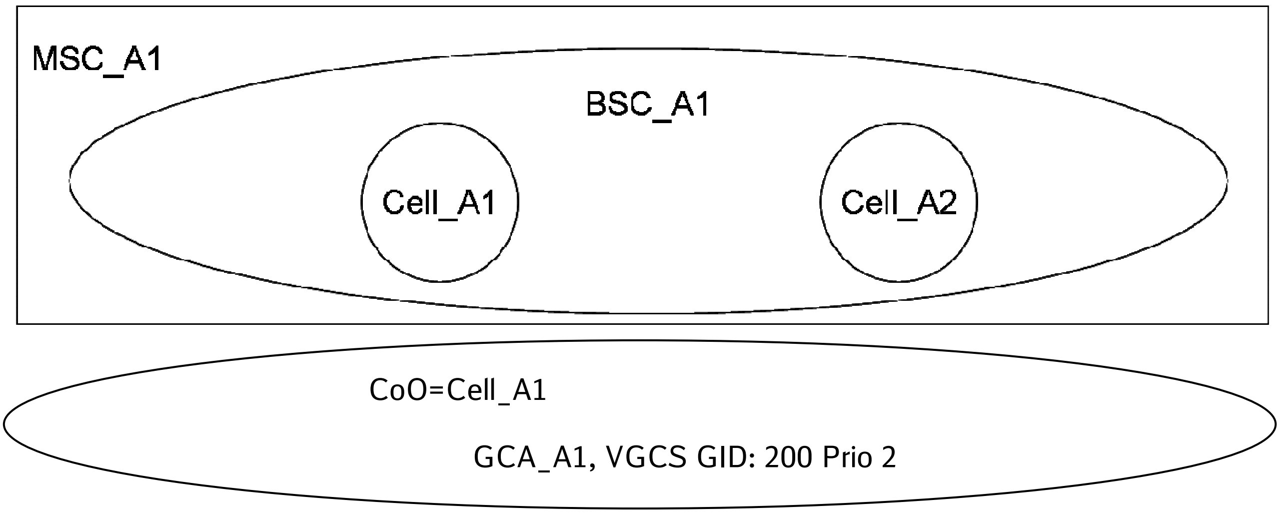
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	5.2.2.51 5.2.2.53 5.2.2.54 6.2.2.10 6.2.2.12 6.2.2.13 7.2.2.18 7.2.2.20 7.2.2.21 9.2.5.1	2.2.1	EN301515

a) Purpose

Verify that the uplink can only be allocated to one mobile subscriber at a time.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call. MS_A1 does not take the uplink.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 receives notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 accepts the incoming VGCS call.	MS_A2 joins VGCS call.
3)	MS_A2 requests the uplink.	MS_A2 can take the uplink (GCCH) and has two-way voice path, MS_A1 is only listener.
4)	MS_A1 requests the uplink (group call channel).	MS_A1 cannot take the uplink (GCCH).
5)	MS_A2 releases the uplink.	The uplink is correctly released.
6)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

The uplink can only be allocated to one mobile subscriber at a time.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.27 Two controllers initiate VGCS with the same GID but different GCAs

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	3.5.2 3.5.3 9.2.5.1	2.2.1	EN301515

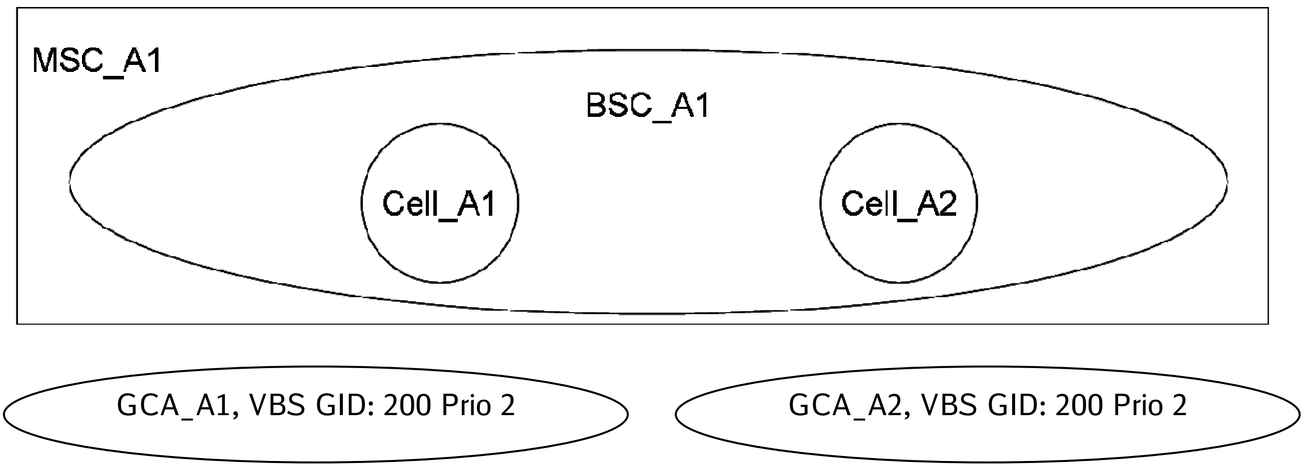
a) Purpose

Verify that two controller originated group calls can be established with the same GID in different group call areas at the same time.

b) Test configuration / initial conditions

CT_A1 and CT_A2 are connected to network A.

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
CT_A1 (GCA_A1, VGCS GID: 200)	CT_A2 (GCA_A2, VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	At the same time: controller CT_A1 originates a VGCS call by dialling 50 + < GCA_A1 > + <GID> and controller CT_A2 originates a VGCS call by dialling 50 + < GCA_A2 > + <GID>	VGCS calls are correctly established. A group call channel (GCCH) is allocated in cell_A1. Uplink still free in cell_A1. A group call channel (GCCH) is allocated in cell_A2. Uplink still free in cell_A2. MS_A1 receives notification of one incoming VGCS call. MS_A2 receives notification of other incoming VGCS call. CT_A1 has voice path to MS_A1. If MS_A1 takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1. CT_A2 has voice path to MS_A2. If MS_A2 takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A2.
2)	MS_A1 and MS_A2 accept the incoming VGCS calls.	MS_A1 joins one VGCS call as listener. MS_A2 joins the other VGCS call as listener. CT_A1 has voice path and MS_A1 is able to listen to the announcement of CT_A1. CT_A2 has voice path and MS_A2 is able to listen to the announcement of CT_A2.
3)	MS_A1 takes the uplink.	MS_A1 has voice path on GCCH. CT_A1 is able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1.
4)	MS_A2 takes the uplink.	MS_A2 has voice path on GCCH. CT_A2 is able to listen to the announcement of MS_A2. MS_A2 is not able to listen to the announcement of CT_A2.
5)	MS_A1 releases the uplink.	The uplink is correctly released.
6)	MS_A2 releases the uplink.	The uplink is correctly released.
7)	CT_A1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

Step	Action	Expected result(s)
8)	CT_A2 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

d) Success criteria

Two controller originated group calls can be established with the same GID in different group call areas at the same time.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.28 VGCS call taken down during setup by SS

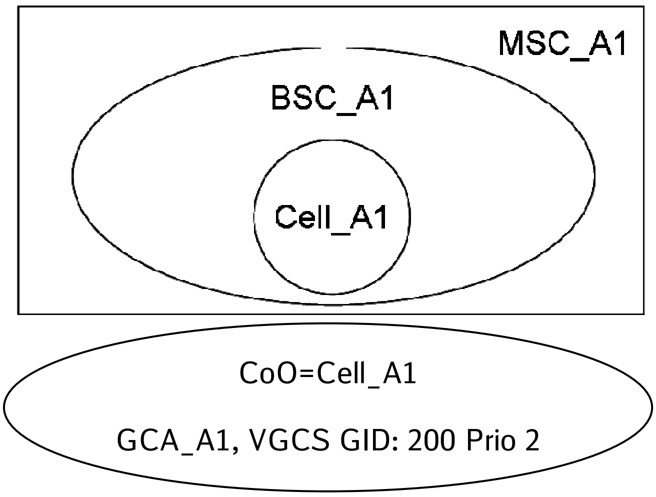
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	EN301515

a) Purpose

Verify that a service subscriber can take down a VGCS call during the call establishment.

b) Test configuration / initial conditions

Network A



MS_A1 (VGCS GID: 200)
MS_A2 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call and hangs up before the call is established.	All resources are correctly de-allocated.

d) Success criteria

A service subscriber can take down a VGCS call during the call establishment.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.29 VGCS call taken down during setup by controller

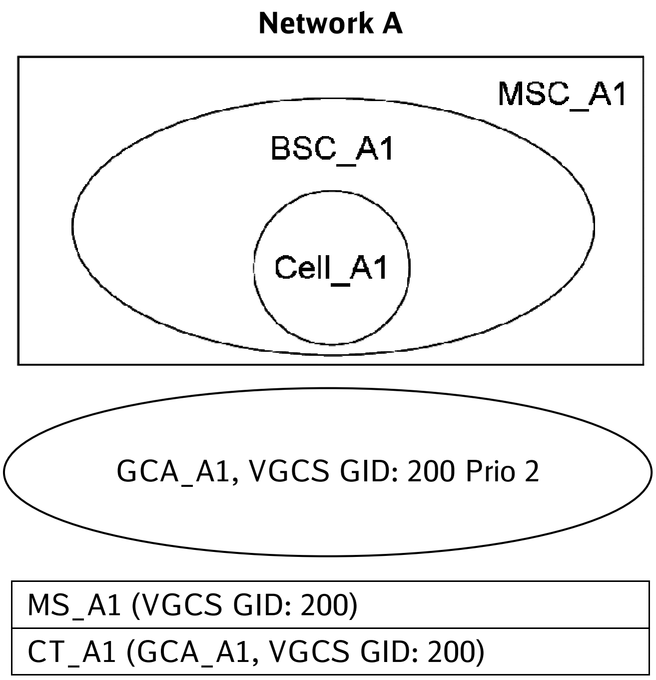
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	EN301515

a) Purpose

Verify that a controller can take down a VGCS call during the call establishment.

b) Test configuration / initial conditions

CT_A1 is connected to network A.



c) Test procedure

Step	Action	Expected result(s)
1)	Controller CT_A1 originates a VGCS call by dialling 50 + < GCA > + <GID> and hangs up before the call is established.	All resources are correctly de-allocated.

d) Success criteria

Controller can take down a VGCS call during the call establishment.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

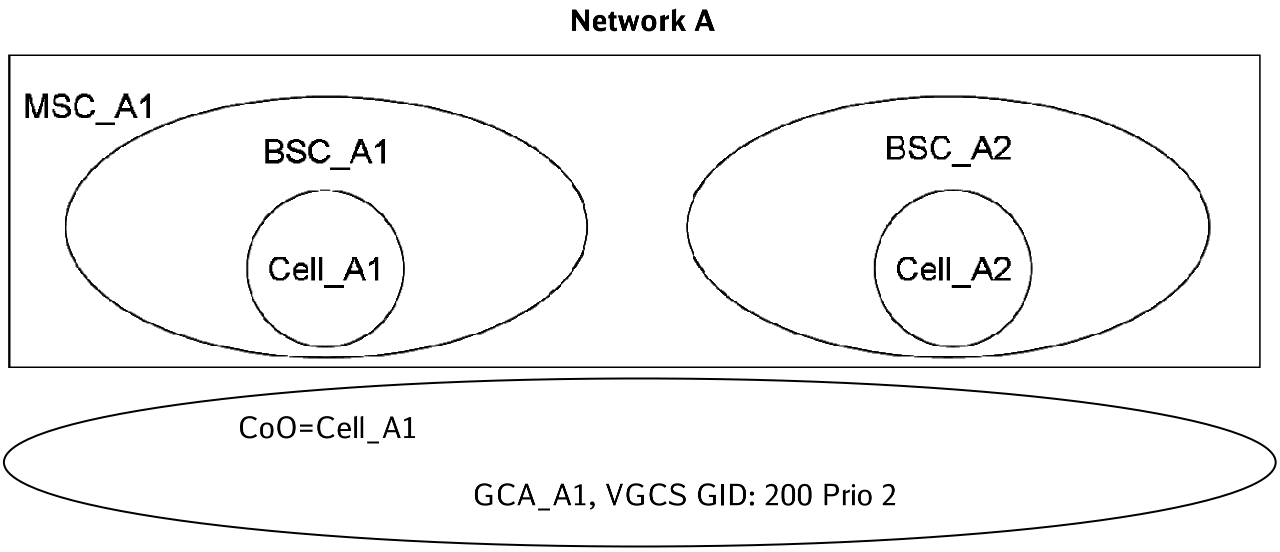
5.8.30 More than one Uplink Request at the same time (same BSS and different BSS)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.16 5.2.2.51 5.2.2.53 5.2.2.54 6.2.2.10 6.2.2.12 6.2.2.13 7.2.2.18 7.2.2.20 7.2.2.21 9.2.5.1	2.2.1	EN301515

a) Purpose

Verify that only one service subscriber can take the uplink at a time.

b) Test configuration / initial conditions



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A3 (VGCS GID: 200)	

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 and MS_A3 receive notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 and MS_A3 accept the incoming VGCS.	MS_A2 and MS_A3 join VGCS call.
3)	MS_A1 takes the uplink (group call channel).	MS_A1 has two-way voice path, MS_A2 and MS_A3 are only listener.
4)	MS_A1 releases the uplink.	The uplink is correctly released.
5)	MS_A1 and MS_A3 request the uplink at the same time.	Only one MS can take the uplink. The other gets uplink reject. The mobile able to take the uplink has two-way voice path, the other one and MS_A2 are only listener.
6)	The MS releases the uplink.	The uplink is correctly released.
7)	MS_A1 and MS_A2 request the uplink at the same time.	Only one MS can take the uplink. The other gets uplink reject. The mobile able to take the uplink has two-way voice path, the other one and MS_A3 are only listener.
8)	The MS releases the uplink.	The uplink is correctly released.
9)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

Only one service subscriber can take the uplink at a time.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.31 Two SS originate VGCS call at same time (same BSS and different BSS)

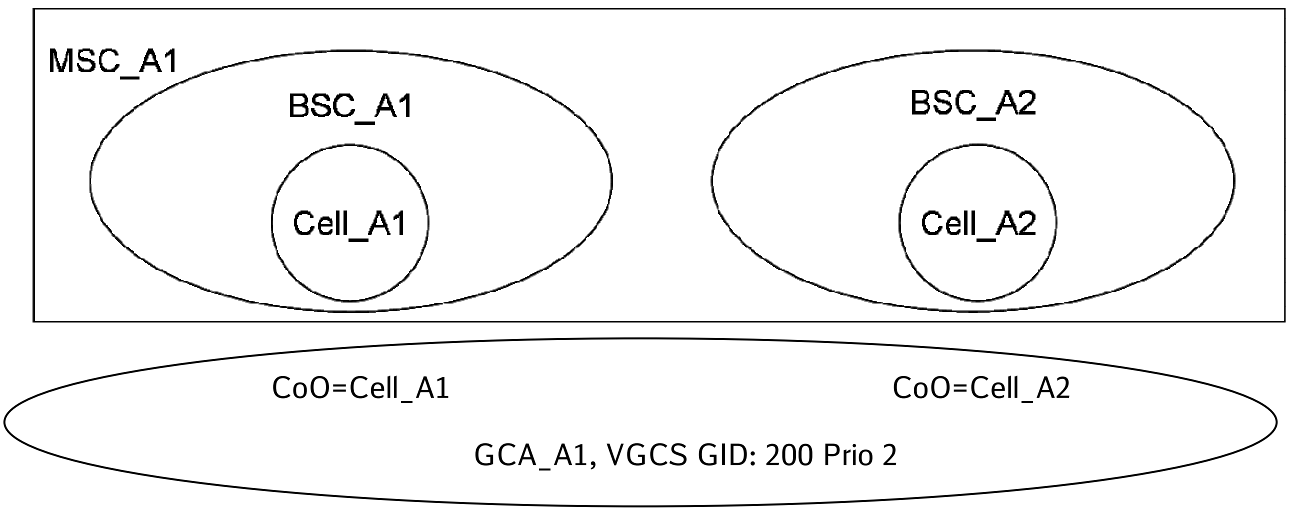
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	EN301515

a) Purpose

Verify that when two service subscribers originate a VGCS call at the same time, only one can establish the call and the other receives the notification of this incoming call.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A3 (VGCS GID: 200)	

c) Test procedure

Step	Action	Expected result(s)
1)	At the same time: Service subscriber MS_A1 originates a VGCS call. Service subscriber MS_A3 originates a VGCS call.	Only one service subscriber can establish the VGCS. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. The other MS and MS_A2 receive notification of the incoming call. So long the dedicated channel is not released, the MS who established the VGCS call has two-way voice path.
2)	The notified MS and MS_A2 accept the incoming VGCS.	The notified MS and MS_A2 join VGCS call.
3)	The originating MS takes the uplink (group call channel).	The originating MS has two-way voice path, MS_A2 and the notified MS are only listener.
4)	The originating MS releases the uplink.	The uplink is correctly released.
5)	Originating MS releases the VGCS call.	The call is released and all resources are correctly de-allocated.
6)	At the same time: Service subscriber MS_A1 originates a VGCS call. Service subscriber MS_A2 originates a VGCS call.	Only one service subscriber can establish the VGCS call. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in the cell where the call was established. A GCCH is allocated in the other cell. The other MS and MS_A3 receive notification of the incoming call. So long the dedicated channel is not released, the MS who established the VGCS call has two-way voice path.
7)	The notified MS and MS_A3 accept the incoming VGCS.	MS and MS_A3 join VGCS call.
8)	The originating MS takes the uplink (group call channel).	The originating MS has two-way voice path, the notified MS and MS_A3 are only listener.
9)	The originating MS releases the uplink.	The uplink is correctly released.
10)	Originating MS releases the VGCS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

When two service subscribers originate a VGCS call at the same time, only one can establish the call and the other receives the notification of this incoming call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.32 Two controllers originate VGCS call at the same time

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	EN301515

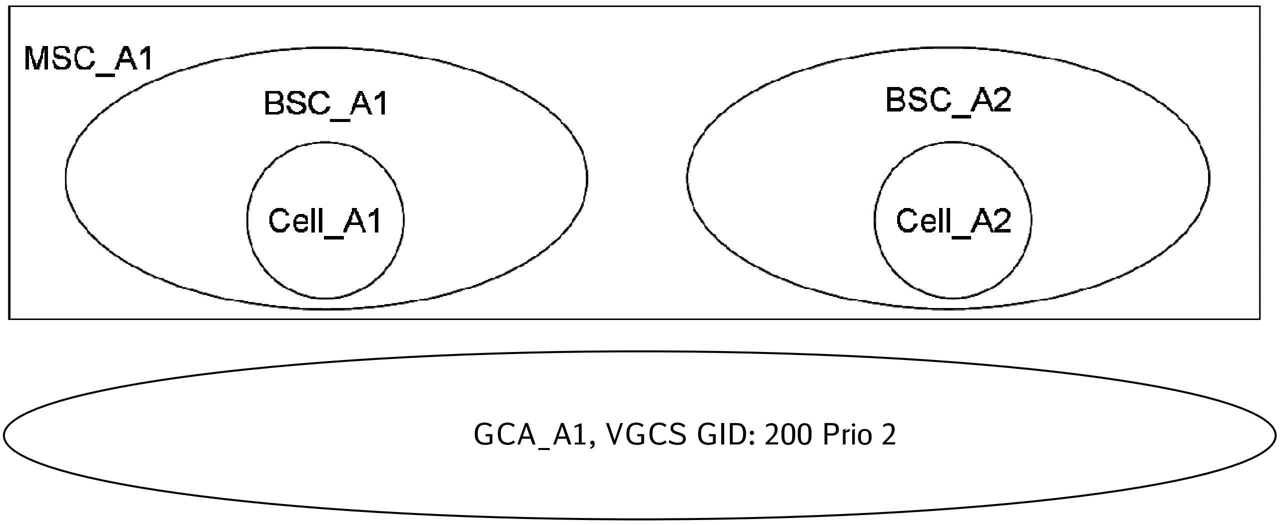
a) Purpose

Verify that when two controllers originate a VGCS call at the same time (same group call reference), only one can establish the call.

b) Test configuration / initial conditions

CT_A1 and CT_A2 are connected to network A.

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
CT_A1 (GCA_A1, VGCS GID: 200)	
CT_A2 (GCA_A1, VGCS GID: 200)	

c) Test procedure

Step	Action	Expected result(s)
1)	At the same time: Controller CT_A1 originates a VGCS call by dialling 50 + < GCA > + <GID> Controller CT_A2 originates a VGCS call by dialling 50 + < GCA > + <GID>	Only one controller manages to establish a VGCS call. VGCS call is correctly established. A group call channel (GCCH) is allocated in cell_A1 and cell_A2. MS_A1 and MS_A2 are notified about the incoming VGCS call. The controller not able to establish the call is notified about the incoming VGCS call. Both controllers have voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of the controllers.
2)	MS_A1, MS_A2 and controller not able to establish the call accept the incoming VGCS.	MS_A1 and MS_A2 join VGCS call in group receive mode. Controller not able to establish the call joins the VGCS call. Both controllers can hear and talk to each other and have voice path to MS_A1 and MS_A2. MS_A1 and MS_A2 are able to listen to the announcement of the controllers.
3)	MS_A1 takes the uplink.	MS_A1 has voice path on GCCH. Controllers are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of the controllers. MS_A2 is still able to listen to the announcement of the controllers.
4)	MS_A1 releases the uplink.	The uplink is correctly released. Both controllers can hear and talk to each other and have voice path to MS_A1 and MS_A2. MS_A1 and MS_A2 are able to listen to the announcement of the controllers.
5)	The controller able to establish the call releases it by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

d) Success criteria

When two controllers originate a VGCS call at the same time, only one can establish the call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.33 VGCS originator leaves GCA

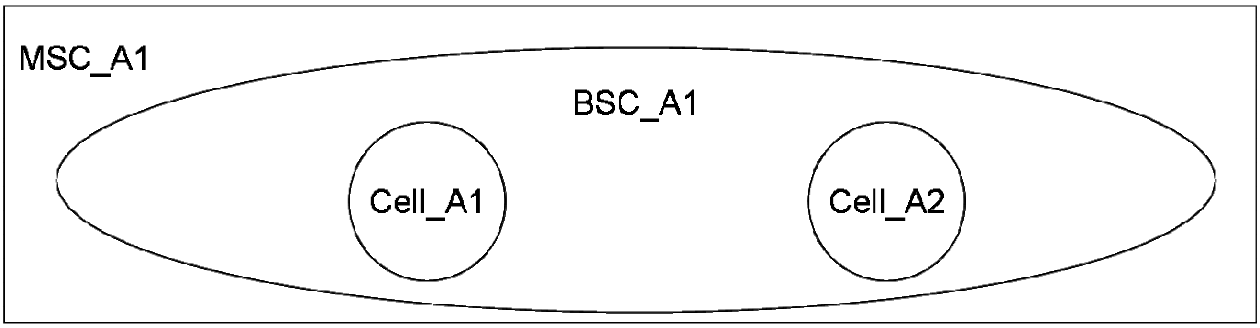
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	EN301515

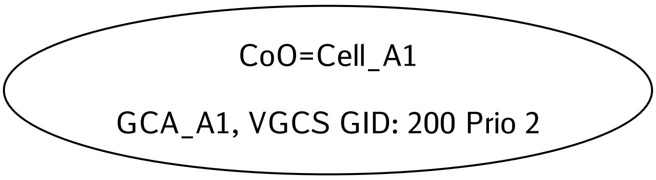
a) Purpose

Verify that the originator of a VGCS call can leave the group call area and the call is not released.

b) Test configuration / initial conditions

Network A





Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	
MS_A2 (VGCS GID: 200)	
MS_A3 (VGCS GID: 200)	

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2 and MS_A3 receive notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 and MS_A3 accept the incoming VGCS call.	MS_A2 and MS_A3 join VGCS call.
3)	MS_A1 takes the uplink (group call channel).	MS_A1 has two-way voice path, MS_A2 and MS_A3 are only listener.
4)	MS_A1 releases the uplink.	The uplink is correctly released.
5)	MS_A1 moves to cell_A2.	Originator leaves the group call area, call is not released.
6)	MS_A2 requests the uplink.	MS_A2 can take the uplink (GCCH) and has two-way voice path, MS_A3 is only listener.
7)	MS_A1 moves back to cell_A1.	MS_A1 is notified of the ongoing VGCS call.
8)	MS_A1 joins the VGCS call.	MS_A2 has two-way voice path, MS_A1 and MS_A3 are only listener.
9)	MS_A2 releases the uplink.	The uplink is correctly released.
10)	MS_A1 requests the uplink (group call channel).	MS_A1 can take the uplink (GCCH) and has two-way voice path, MS_A2 and MS_A3 are only listeners.
11)	MS_A1 releases the uplink.	The uplink is correctly released.
12)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

The originator of a VGCS call can leave the group call area and the call is not released.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.34 VGCS talker leaves GCA

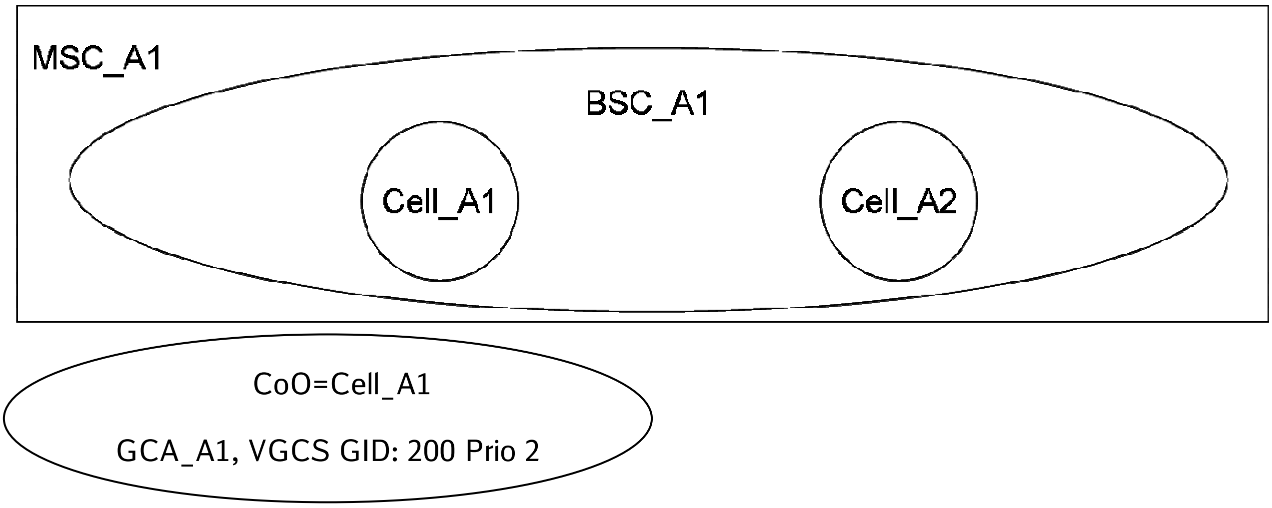
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	EN301515

a) Purpose

Verify that when the subsequent talker of a VGCS call leaves the group call area, the uplink is correctly released but not the call.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	
MS_A2 (VGCS GID: 200)	
MS_A3 (VGCS GID: 200)	

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2 and MS_A3 receive notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 and MS_A3 accept the incoming VGCS.	MS_A2 and MS_A3 join VGCS call.
3)	MS_A1 takes the uplink (group call channel).	MS_A1 has two-way voice path, MS_A2 and MS_A3 are only listener.
4)	MS_A1 releases the uplink.	The uplink is correctly released.
5)	MS_A2 takes the uplink (group call channel).	MS_A2 has two-way voice path, MS_A1 and MS_A3 are only listener.
6)	MS_A2 moves to cell_A2.	Subsequent talker leaves the group call area. The uplink (group call channel) is correctly released, but not the call.
7)	MS_A1 requests the uplink.	MS_A1 can take the uplink (GCCH) and has two-way voice path, MS_A3 is only listener.
8)	MS_A1 releases the uplink.	The uplink is correctly released.
9)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

When the subsequent talker of a VGCS call leaves the group call area, the uplink is correctly released but not the call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.35 Service Subscriber initiated VGCS from Relay MSC in PLMN A, call to A-MSC Controller

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1 9.4.2	2.2.1 9.5.4 9.9.4	

a) Purpose

Verify that a service subscriber can originate and release a VGCS call from relay MSC. A controller in anchor MSC is connected to the call.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

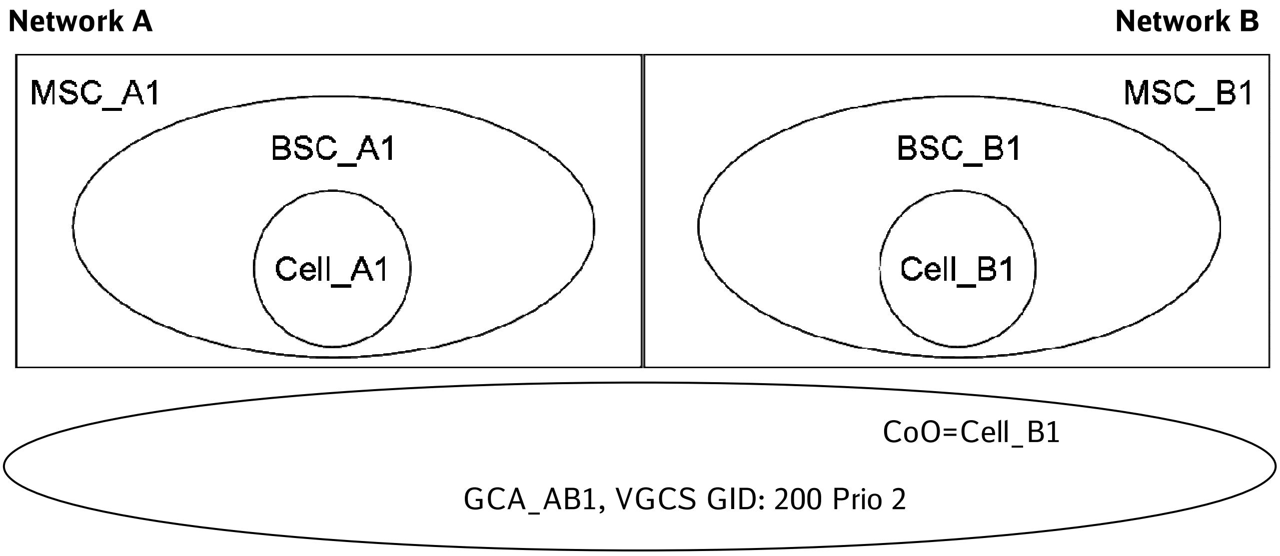
CT_B1 is connected to network B.

This test case has been divided into the following steps:

Step 1: MS establishes VGCS call in relay MSC_B1.

Step 2: MS establishes VGCS call in relay MSC_A1.

Test configuration for step 1



A-MSC_A1	**R-MSC_B1**
MS_A1 (VGCS GID: 200)	MS_B1 (VGCS GID: 200)
MS_A2 (VGCS GID: 200)	MS_B2 (VGCS GID: 200)
CT_A1 (GCA_AB1, VGCS GID: 200)	

c) Test procedure

Step 1: MS establishes VGCS call in relay MSC_B1.

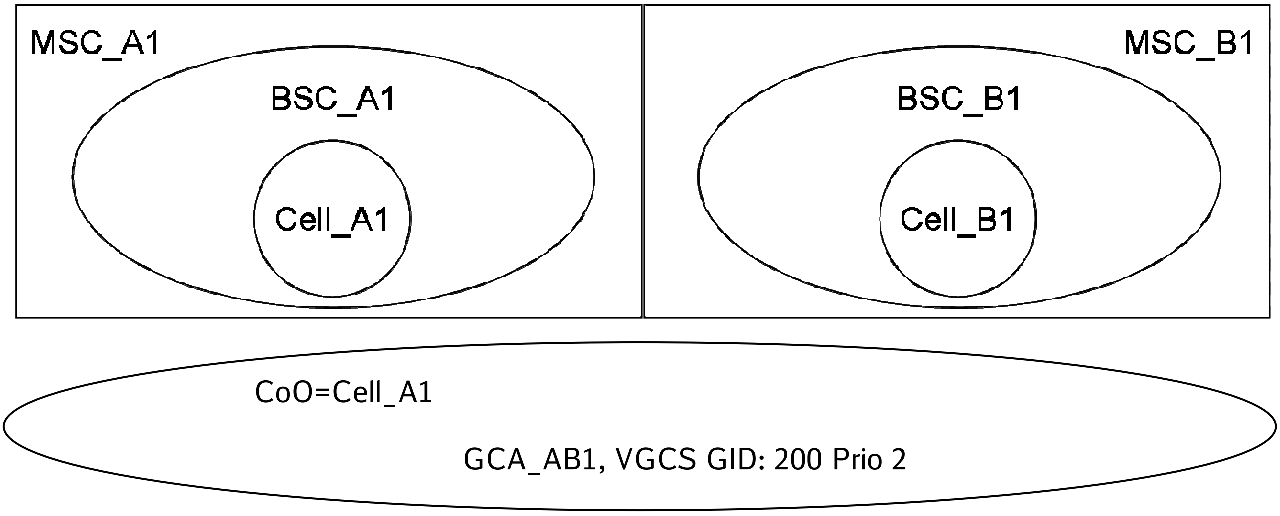
Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A GCCH is allocated in cell_A1. CT_A1, MS_A1, MS_A2 and MS_B2 receive notification of the incoming call.

Step	Action	Expected result(s)
2)	CT_A1, MS_A1, MS_A2 and MS_B2 accept the incoming VGCS.	CT_A1 joins VGCS call. CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1. MS_A1, MS_A2 and MS_B2 join VGCS call as listener. CT_A1 has voice path and MS_A1, MS_A2 and MS_B2 are able to listen to the announcement of CT_A1.
3)	MS_B1 takes the uplink (dedicated channel).	MS_B1 has voice path on DCH. MS_A1, MS_A2, MS_B2 and CT_A1 are able to listen to the announcement of MS_B1. MS_B1 is able to listen to the announcement of CT_A1. MS_A1, MS_A2 and MS_B2 are still able to listen to the announcement of CT_A1.
4)	MS_B1 releases the uplink.	The uplink is correctly released. CT_A1 has voice path to all mobile subscribers. They are able to listen to the announcement of CT_A1. MS_A1, MS_A2, MS_B1 and MS_B2 are listener.
5)	MS_B1 requests the uplink (group call channel).	MS_B1 has voice path on GCCH. MS_A1, MS_A2, MS_B2 and CT_A1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1. MS_A1, MS_A2 and MS_B2 are still able to listen to the announcement of CT_A1.
6)	MS_B1 releases the uplink.	The uplink is correctly released.
7)	MS_A1 requests the uplink (group call channel).	MS_A1 has voice path on GCCH. MS_B1, MS_A2, MS_B2 and CT_A1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_B1, MS_A2 and MS_B2 are still able to listen to the announcement of CT_A1.
8)	MS_A1 releases the uplink.	The uplink is correctly released.

Step	Action	Expected result(s)
9)	MS_B1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.

Test configuration for step 2

Network A **Network B**



R-MSC_A1	**A-MSC_B1**
MS_A1 (VGCS GID: 200)	MS_B1 (VGCS GID: 200)
MS_A2 (VGCS GID: 200)	MS_B2 (VGCS GID: 200)
	CT_B1 (GCA_AB1, VGCS GID: 200)

Test procedure

Step 2: MS establishes VGCS call in relay MSC_A1.

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_B1. CT_B1, MS_B1, MS_A2 and MS_B2 receive notification of the incoming call.

Step	Action	Expected result(s)
2)	CT_B1, MS_B1, MS_A2 and MS_B2 accept the incoming VGCS.	CT_B1 joins VGCS call. CT_B1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_B1. MS_A2, MS_B1 and MS_B2 join VGCS call as listener. CT_B1 has voice path and MS_B1, MS_A2 and MS_B2 are able to listen to the announcement of CT_B1.
3)	MS_A1 takes the uplink (dedicated channel).	MS_A1 has voice path on DCH. MS_B1, MS_A2, MS_B2 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is able to listen to the announcement of CT_B1. MS_B1, MS_A2 and MS_B2 are still able to listen to the announcement of CT_B1.
4)	MS_A1 releases the uplink.	The uplink is correctly released. CT_B1 has voice path to all mobile subscribers. They are able to listen to the announcement of CT_B1. MS_A1, MS_A2, MS_B1 and MS_B2 are listener.
5)	MS_A1 requests the uplink (group call channel).	MS_A1 has voice path on GCCH. MS_B1, MS_A2, MS_B2 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_B1. MS_B1, MS_A2 and MS_B2 are still able to listen to the announcement of CT_B1.
6)	MS_A1 releases the uplink.	The uplink is correctly released.
7)	MS_B1 requests the uplink (group call channel).	CT_B1 has voice path to all mobile subscribers. They are able to listen to the announcement of CT_B1.
8)	MS_B1 releases the uplink.	The uplink is correctly released.
9)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

The service subscriber can originate and release a VGCS call from relay MSC. The controller in anchor MSC is connected to the call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**

5.8.36 Controller originates a VGCS call from Relay MSC-

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1 9.5.4	

a) Purpose

Verify that a controller can originate and kill a VGCS call from relay MSC.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

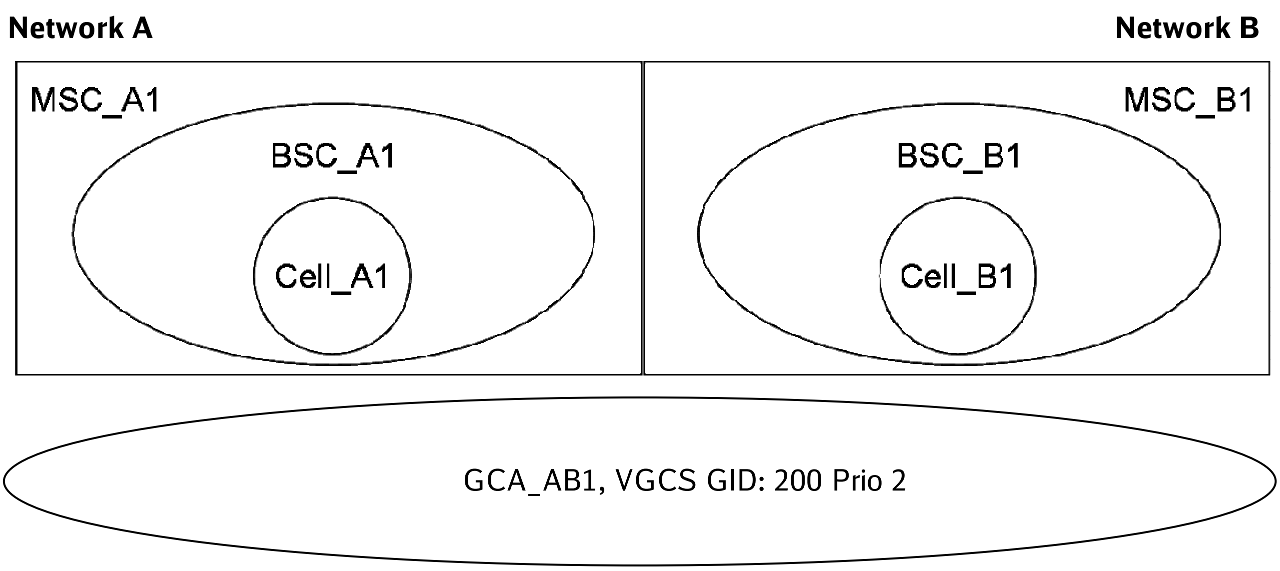
CT_B1 is connected to network B.

This test case has been divided into the following steps:

Step 1: Controller establishes VGCS call in relay MSC_B1.

Step 2: Controller establishes VGCS call in relay MSC_A1.

Test configuration for step 1



A-MSC_A1	R-MSC_B1
MS_A1 (VGCS GID: 200)	MS_B1 (VGCS GID: 200)
	CT_B1 (GCA_AB1, VGCS GID: 200)

c) Test procedure

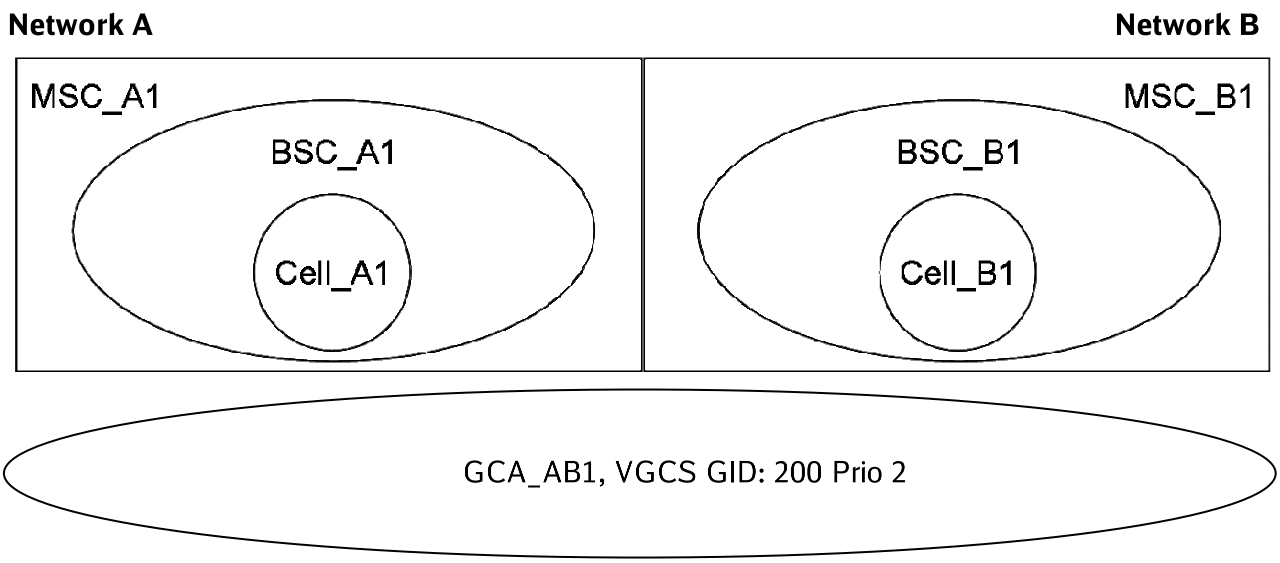
Step 1: Controller establishes VGCS call in relay MSC_B1.

Step	Action	Expected result(s)
1)	Controller CT_B1 originates a VGCS call by dialling 900 + < IC > + 50 + < GCA > + <GID> (CT 5 Eirene Format).	VGCS call is correctly established. A group call channel (GCCH) is allocated in cell_A1. Uplink still free in cell_A1. A group call channel (GCCH) is allocated in cell_B1. Uplink still free in cell_B1. MS_A1 and MS_B1 receive notification of the incoming VGCS call. CT_B1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_B1.
2)	MS_A1 and MS_B1 accept the incoming VGCS call.	MS_A1 and MS_B1 join VGCS call. CT_B1 has voice path and MS_A1 and MS_B1 are able to listen to the announcement of CT_B1.
3)	MS_A1 takes the uplink (group call channel).	MS_A1 has voice path on GCCH. CT_B1 is able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_B1. MS_B1 is still able to listen to the announcement of CT_B1.
4)	MS_A1 releases the uplink.	The uplink is correctly released. CT_B1 has voice path. MS_A1 and MS_B1 are able to listen to the announcement of CT_B1.
5)	MS_B1 takes the uplink (group call channel).	MS_B1 has voice path on GCCH. CT_B1 is able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_B1. MS_A1 is still able to listen to the announcement of CT_B1.

Step	Action	Expected result(s)
6)	MS_B1 releases the uplink.	The uplink is correctly released. CT_B1 has voice path. MS_B1 and MS_A1 are able to listen to the announcement of CT_B1.
7)	CT_B1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.
8)	Controller CT_B1 originates a VGCS call by dialling < CC > + < NDC > + 50 + < GCA > + <GID> (CT 5 ITU Format E.164)	VGCS call is correctly established. A group call channel (GCCH) is allocated in cell_A1. Uplink still free in cell_A1. A group call channel (GCCH) is allocated in cell_B1. Uplink still free in cell_B1. MS_A1 and MS_B1 receive notification of the incoming VGCS call. CT_B1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_B1.
9)	MS_A1 and MS_B1 accept the incoming VGCS call.	MS_A1 and MS_B1 join VGCS call. CT_B1 has voice path and MS_A1 and MS_B1 are able to listen to the announcement of CT_B1.
10)	MS_A1 takes the uplink (group call channel).	MS_A1 has voice path on GCCH. CT_B1 is able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_B1. MS_B1 is still able to listen to the announcement of CT_B1.
11)	MS_A1 releases the uplink.	The uplink is correctly released. CT_B1 has voice path. MS_A1 and MS_B1 are able to listen to the announcement of CT_B1.
12)	MS_B1 takes the uplink (group call channel).	MS_B1 has voice path on GCCH. CT_B1 is able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_B1. MS_A1 is still able to listen to the announcement of CT_B1.

Step	Action	Expected result(s)
13)	MS_B1 releases the uplink.	The uplink is correctly released. CT_B1 has voice path. MS_B1 and MS_A1 are able to listen to the announcement of CT_B1.
14)	CT_B1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

Test configuration for step 2



R-MSC_A1	A-MSC_B1
MS_A1 (VGCS GID: 200)	MS_B1 (VGCS GID: 200)
CT_A1 (GCA_AB1, VGCS GID: 200)	

Test procedure

Step 2: Controller establishes VGCS call in relay MSC_A1.

Step	Action	Expected result(s)
1)	Controller CT_A1 originates a VGCS call by dialling 900 + < IC > + 50 + < GCA > + <GID> (CT 5 Eirene Format).	VGCS call is correctly established. A group call channel (GCCH) is allocated in cell_A1. Uplink still free in cell_A1. A group call channel (GCCH) is allocated in cell_B1. Uplink still free in cell_B1. MS_A1 and MS_B1 receive notification of the incoming VGCS call. CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
2)	MS_A1 and MS_B1 accept the incoming VGCS call.	MS_A1 and MS_B1 join VGCS call. CT_A1 has voice path and MS_A1 and MS_B1 are able to listen to the announcement of CT_A1.
3)	MS_B1 takes the uplink (group call channel).	MS_B1 has voice path on GCCH. CT_A1 is able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1. MS_A1 is still able to listen to the announcement of CT_A1.
4)	MS_B1 releases the uplink.	The uplink is correctly released. CT_A1 has voice path. MS_A1 and MS_B1 are able to listen to the announcement of CT_A1.
5)	MS_A1 takes the uplink (group call channel).	MS_A1 has voice path on GCCH. CT_A1 is able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_B1 is still able to listen to the announcement of CT_A1.
6)	MS_A1 releases the uplink.	The uplink is correctly released. CT_A1 has voice path. MS_B1 and MS_A1 are able to listen to the announcement of CT_A1.
7)	CT_A1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

Step	Action	Expected result(s)
8)	Controller CT_A1 originates a VGCS call by dialling < CC > + < NDC > + 50 + < GCA > + <GID> (CT 5 ITU Format E.164)	VGCS call is correctly established. A group call channel (GCCH) is allocated in cell_A1. Uplink still free in cell_A1. A group call channel (GCCH) is allocated in cell_B1. Uplink still free in cell_B1. MS_A1 and MS_B1 receive notification of the incoming VGCS call. CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1.
9)	MS_A1 and MS_B1 accept the incoming VGCS call.	MS_A1 and MS_B1 join VGCS call. CT_A1 has voice path and MS_A1 and MS_B1 are able to listen to the announcement of CT_A1.
10)	MS_B1 takes the uplink (group call channel).	MS_B1 has voice path on GCCH. CT_A1 is able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1. MS_A1 is still able to listen to the announcement of CT_A1.
11)	MS_B1 releases the uplink.	The uplink is correctly released. CT_A1 has voice path. MS_A1 and MS_B1 are able to listen to the announcement of CT_A1.
12)	MS_A1 takes the uplink (group call channel).	MS_A1 has voice path on GCCH. CT_A1 is able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_A1. MS_B1 is still able to listen to the announcement of CT_A1.
13)	MS_A1 releases the uplink.	The uplink is correctly released. CT_A1 has voice path. MS_B1 and MS_A1 are able to listen to the announcement of CT_A1.
14)	CT_A1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

d) Success criteria

The controller can originate and kill a VGCS call from relay MSC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.37 SS initiated VGCS call from Relay MSC. Controller in A-MSC area can re-connect to on-going VGCS call

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 9.2.5.1	2.2.1	

a) Purpose

Verify that a service subscriber can originate a VGCS call from relay MSC and that a controller in anchor MSC area can re-connect to the ongoing VGCS call and can release the call using the killing sequence.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

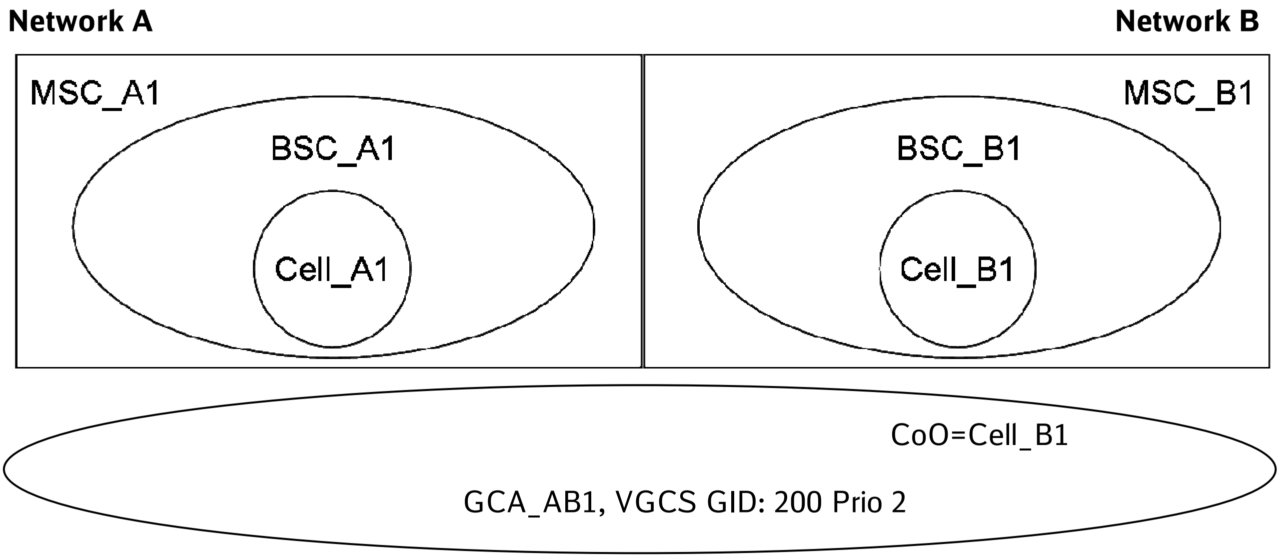
CT_B1 is connected to network B.

This test case has been divided into the following steps:

Step 1: Controller in anchor MSC_A1 area re-connects VGCS call established in relay MSC_B1.

Step 2: Controller in anchor MSC_B1 area re-connects VGCS call established in relay MSC_A1.

Test configuration for step 1



A-MSC_A1	**R-MSC_B1**
MS_A1 (VGCS GID: 200)	MS_B1 (VGCS GID: 200)
MS_A2 (VGCS GID: 200)	MS_B2 (VGCS GID: 200)
CT_A1 (GCA_AB1, VGCS GID: 200)	

c) Test procedure

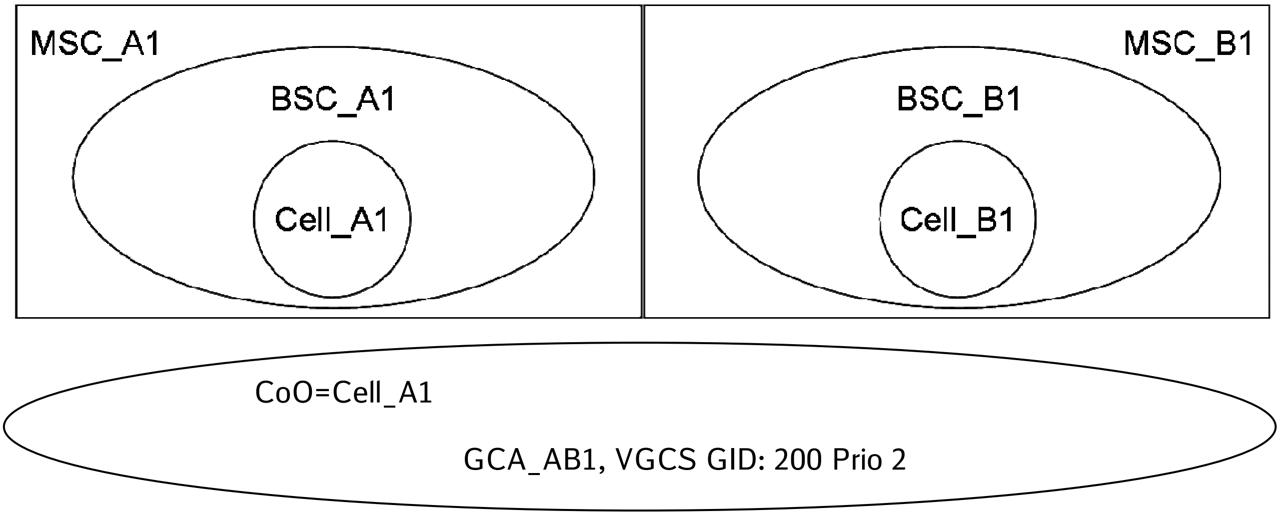
Step 1: Controller in anchor MSC_A1 area re-connects VGCS call established in relay MSC_B1.

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. CT_A1, MS_A1, MS_A2 and MS_B2 receive notification of the incoming call.

Step	Action	Expected result(s)
2)	CT_A1, MS_A1, MS_A2 and MS_B2 accept the incoming VGCS call.	CT_A1 joins VGCS call. CT_A1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_A1. MS_A1, MS_A2 and MS_B2 join VGCS call as listener. CT_A1 has voice path. MS_A1, MS_A2 and MS_B2 are able to listen to the announcement of CT_A1.
3)	MS_B1 requests the uplink (group call channel).	MS_B1 has voice path on GCCH. MS_A1, MS_A2, MS_B2 and CT_A1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1.
4)	Controller CT_A1 hangs up.	Controller is able to leave the VGCS call without the call being released. MS_B1 has voice path on GCCH. MS_A1, MS_A2 and MS_B2 are listeners
5)	Controller CT_A1 rejoins VGCS call by dialling 900 + < IC > + 50 + < GCA > + <GID> (CT 5 Eirene Format).	Controller rejoins the VGCS call. MS_B1 has voice path on GCCH. MS_A1, MS_A2, MS_B2 and CT_A1 are able to listen to the announcement of MS_B1. MS_B1 is not able to listen to the announcement of CT_A1. MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1.
6)	MS_B1 releases the uplink.	The uplink is correctly released. CT_A1 has voice path to all mobile subscribers. MS_A1, MS_A2 and MS_B2 are able to listen to the announcement of CT_A1.
7)	CT_A1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

Test configuration for step 2

Network A **Network B**



R-MSC_A1	**A-MSC_B1**
MS_A1 (VGCS GID: 200)	MS_B1 (VGCS GID: 200)
MS_A2 (VGCS GID: 200)	MS_B2 (VGCS GID: 200)
	CT_B1 (GCA_AB1, VGCS GID: 200)

Test procedure

Step 2: Controller in anchor MSC_B1 area re-connects VGCS call established in relay MSC_A1.

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. CT_B1, MS_B1, MS_A2 and MS_B2 receive notification of the incoming call.

Step	Action	Expected result(s)
2)	CT_B1, MS_B1, MS_A2 and MS_B2 accept the incoming VGCS call.	CT_A1 joins VGCS call. CT_B1 has voice path to all mobile subscribers. If one mobile subscriber takes the uplink of the group call on GCCH, the downlink to the talking mobile subscriber will be muted. The talking mobile subscriber is not able to listen to the announcement of CT_B1. MS_B1, MS_A2 and MS_B2 join VGCS call as listener. CT_B1 has voice path. MS_B1, MS_A2 and MS_B2 are able to listen to the announcement of CT_B1.
3)	MS_A1 requests the uplink (group call channel).	MS_A1 has voice path on GCCH. MS_B1, MS_A2, MS_B2 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_B1. MS_B1, MS_A2 and MS_B2 still able to listen to the announcement of CT_B1.
4)	Controller CT_B1 hangs up.	Controller is able to leave the VGCS call without the call being released. MS_A1 has voice path on GCCH. MS_B1, MS_A2 and MS_B2 are listeners
5)	Controller CT_B1 rejoins VGCS call by dialling 900 + < IC > + 50 + < GCA > + <GID> (CT 5 Eirene Format).	Controller rejoins the VGCS call. MS_A1 has voice path on GCCH. MS_B1, MS_A2, MS_B2 and CT_B1 are able to listen to the announcement of MS_A1. MS_A1 is not able to listen to the announcement of CT_B1. MS_B1, MS_A2 and MS_B2 still able to listen to the announcement of CT_B1.
6)	MS_A1 releases the uplink.	The uplink is correctly released. CT_B1 has voice path to all mobile subscribers. MS_B1, MS_A2 and MS_B2 are able to listen to the announcement of CT_B1.
7)	CT_B1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

d) Success criteria

A service subscriber can originate a VGCS call from relay MSC and a controller in anchor MSC area can re-connect to the ongoing VGCS call and can release the call using the killing sequence.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.38 VGCS first talker notification (MS dedicated mode, incoming PTP call, non roaming case)

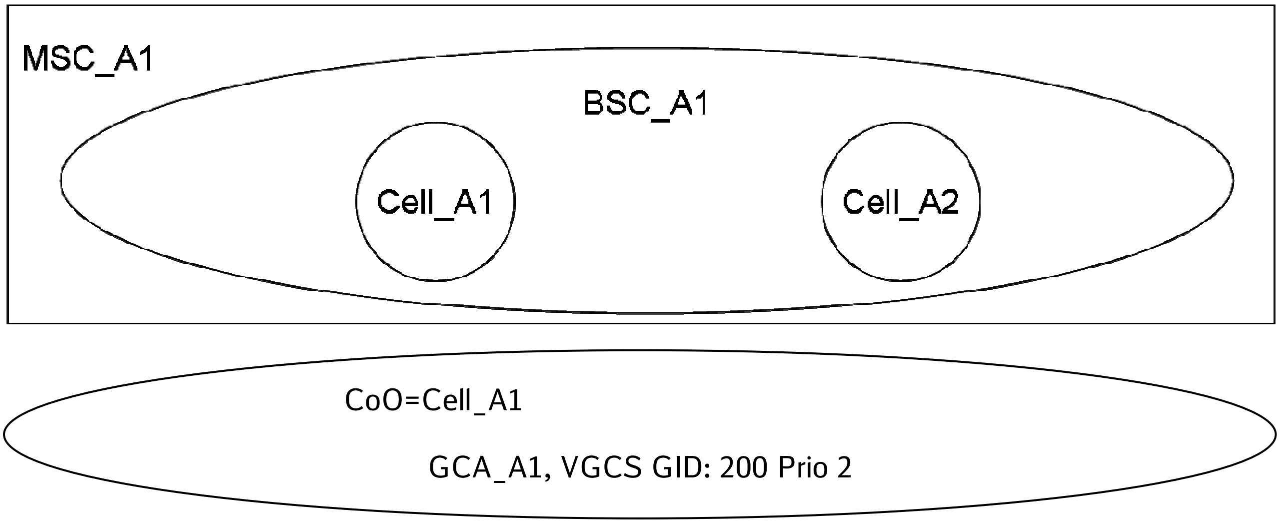
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 5.2.2.43 9.2.5.1	2.2.1 5.5.19 5.5.20 5.5.21 14.3.3	

a) Purpose

Verify that a VGCS first talker on the dedicated channel get a notification of an incoming PTP call.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A3 (VGCS GID: 200)
MS_A2 (VGCS GID: 200)	MS_A4 (no VGCS / VBS subscriber)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2, MS_A3 receives notification of the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2, MS_A3 automatically accepts the incoming VGCS call (GID 200).	MS_A2, MS_A3 joins VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_A3 are only listener.
4)	MS_A4 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_A1 advertise the incoming PTP call from MS_A4 optically and acoustically.
5)	MS_A1 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All resources are correctly released by the network.
6)	MS_A1 releases the uplink.	Uplink free message is send in Cell_A1, Cell_A2 and DCH is correctly released.
7)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
8)	Repeat step 1 to 7 with priority 3 for the PTP call.	

d) Success criteria

The VGCS call (GID 200) first talker on the dedicated channel is able to receive notification about an incoming PTP call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.39 VGCS first talker notification (MS dedicated mode, incoming VGCS call, non roaming case)

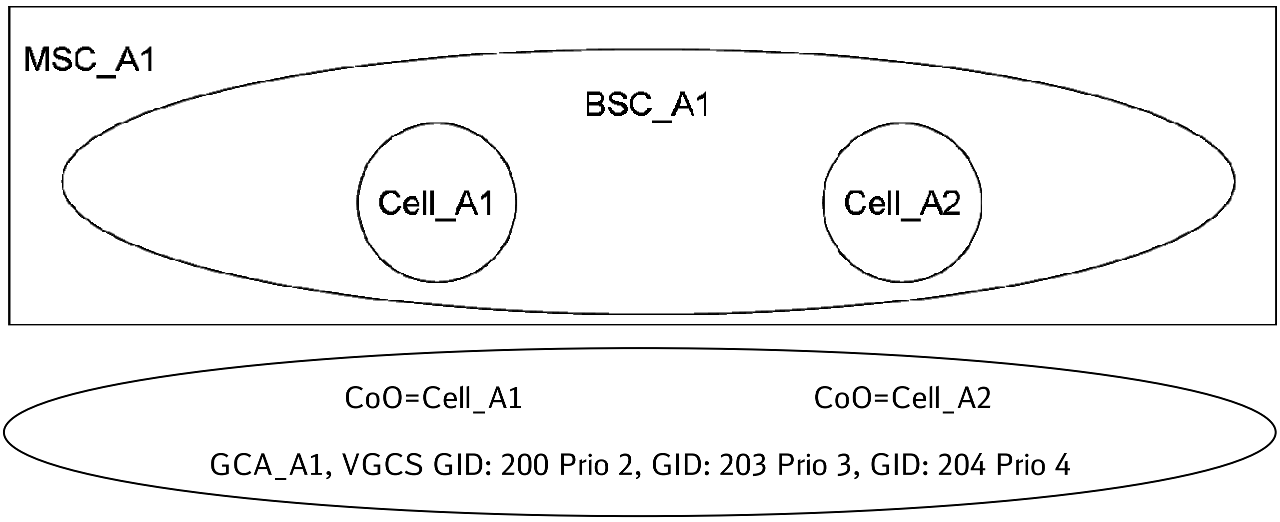
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 5.2.2.47 9.2.5.1	2.2.1 5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a VGCS call (GID 200) first talker on dedicated channel get a notification of an incoming VGCS call (GID 203, 204) call.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200, 203, 204)	MS_A3 (VGCS GID: 203, 204)
MS_A2 (VGCS GID: 200)	

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 receives a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 automatically accepts the incoming VGCS call (GID 200).	MS_A2 joins VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2 is only listener.
4)	Service subscriber MS_A3 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1. MS_A1 receives an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A1 don't accept the incoming VGCS call (GID 203).	
6)	MS_A3 releases the VGCS call (GID 203).	VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
7)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_A2 and the DCH is correctly released.
8)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	Repeat from step 1 to 8 with VGCS call (GID 204) instead of VGCS call (GID 203).	

d) Success criteria

VGCS call (GID 200) first talker on the dedicated channel is able to receive notification about an incoming VGCS call (GID 203, 204).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.40 VGCS first talker notification (MS dedicated mode, incoming VBS call, non roaming case)

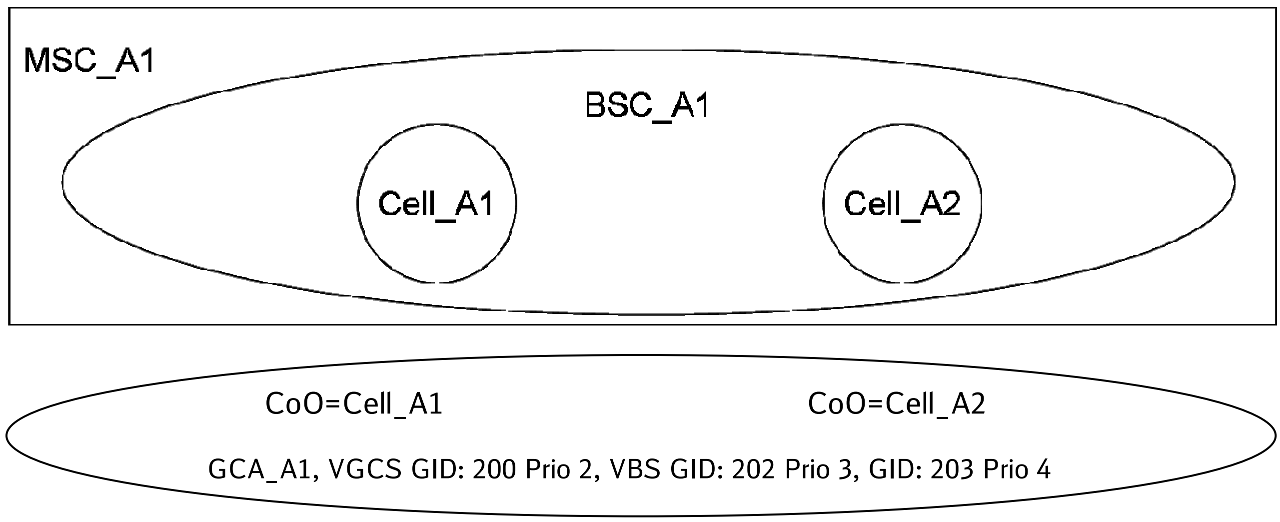
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 5.2.2.47 9.2.5.1	2.2.1 5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a VGCS call (GID 200) first talker originator on dedicated channel get a notification about an incoming VBS call (GID 203, 204).

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200, VBS GID: 202, 203)	MS_A3 (VBS GID: 202, 203)
MS_A2 (VGCS GID: 200)	

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 receives a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 automatically accepts the incoming VGCS call (GID 200).	MS_A2 joins VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2 is only listener.
4)	Service subscriber MS_A3 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1. MS_A1 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A1 don’t accept the incoming VBS call (GID 202).	
6)	MS_A3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_A2 and the DCH is correctly released.
8)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
9)	Repeat from step 1 to 8 with VBS call (GID 203) instead of VBS call (GID 202).	

d) Success criteria

VGCS call (GID 200) first talker on the dedicated channel is able to receive notification about an incoming VBS call (GID 202, 203).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.41 VGCS first talker notification (MS dedicated mode, incoming PTP call, roaming)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 5.2.2.43 9.2.5.1	2.2.1 5.5.19 5.5.20 5.5.21 14.3.3	

a) Purpose

Verify that a VGCS call (GID 200) first talker on dedicated channel get a notification about an incoming PTP call. This should be verified in different networks (roaming).

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Mobile subscriber of network A originates VGCS call in HPLMN (MSC_A1 anchor).

Step 2: Mobile subscriber of network B originates VGCS call in VPLMN (MSC_A1 anchor).

Step 3: Mobile subscriber of network B originates VGCS call in HPLMN (MSC_A1 anchor).

Step 4: Mobile subscriber of network A originates VGCS call in VPLMN (MSC_A1 anchor).

Step 5: Mobile subscriber of network A originates VGCS call in HPLMN (MSC_B1 anchor).

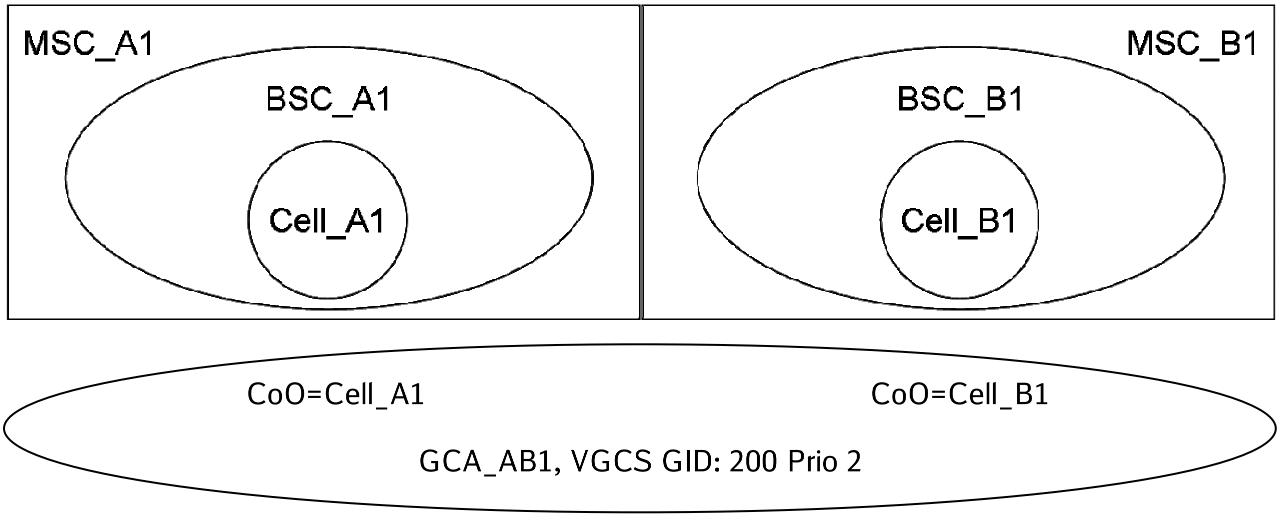
Step 6: Mobile subscriber of network B originates VGCS call in VPLMN (MSC_B1 anchor).

Step 7: Mobile subscriber of network B originates VGCS call in HPLMN (MSC_B1 anchor).

Step 8: Mobile subscriber of network A originates VGCS call in VPLMN (MSC_B1 anchor).

Test configuration for step 1 to 4

Network A **Network B**



A-MSC_A1	**R-MSC_B1**
MS_A1 (VGCS GID: 200)	MS_B1 (VGCS GID: 200)
MS_A2 (no VGCS / VBS subscriber)	MS_B2 (no VGCS / VBS subscriber)
MS_B3 (VGCS GID: 200)	MS_A3 (VGCS GID: 200)
MS_B4 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)

c) Test procedure

Step 1: Mobile subscriber of network A originates VGCS call in HPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).

Step	Action	Expected result(s)
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_A2 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A2. MS_A1 advertise the incoming PTP call from MS_A2 optically and acoustically.
5)	MS_A1 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
6)	MS_B4 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B4. MS_A1 advertise the incoming PTP call from MS_B4 optically and acoustically.
7)	MS_A1 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
8)	MS_B2 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B2. MS_A1 advertise the incoming PTP call from MS_B2 optically and acoustically.
9)	MS_A1 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
10)	MS_A4 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_A1 advertise the incoming PTP call from MS_A4 optically and acoustically.
11)	MS_A1 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
12)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
13)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
14)	Repeat from step 1 to 13 with priority 3 for the PTP calls instead of priority 4.	

Step 2: Mobile subscriber of network B originates VGCS call in VPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_B1 and MS_A3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_A3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_B1 and MS_A3 are joining the VGCS call (GID 200).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_B1 and MS_A3 are able to listen to the announcement of MS_B3.
4)	MS_A2 originates a PTP call with priority 4 to MS_A1.	MS_B3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A2. MS_B3 advertise the incoming PTP call from MS_A2 optically and acoustically.
5)	MS_B3 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
6)	MS_B4 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B4. MS_B3 advertise the incoming PTP call from MS_B4 optically and acoustically.
7)	MS_B3 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
8)	MS_B2 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B2. MS_B3 advertise the incoming PTP call from MS_B2 optically and acoustically.
9)	MS_B3 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
10)	MS_A4 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_B3 advertise the incoming PTP call from MS_A4 optically and acoustically.

Step	Action	Expected result(s)
11)	MS_B3 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
12)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
13)	MS_B3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
14)	Repeat from step 1 to 13 with priority 3 for the PTP calls instead of priority 4.	

Step 3: Mobile subscriber of network B originates VGCS call in HPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_A2 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A2. MS_B1 advertise the incoming PTP call from MS_A2 optically and acoustically.
5)	MS_B1 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
6)	MS_B4 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B4. MS_B1 advertise the incoming PTP call from MS_B4 optically and acoustically.
7)	MS_B1 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.

Step	Action	Expected result(s)
8)	MS_B2 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B2. MS_B1 advertise the incoming PTP call from MS_B2 optically and acoustically.
9)	MS_B1 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
10)	MS_A4 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_B1 advertise the incoming PTP call from MS_A4 optically and acoustically.
11)	MS_B1 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
12)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
13)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
14)	Repeat from step 1 to 13 with priority 3 for the PTP calls instead of priority 4.	

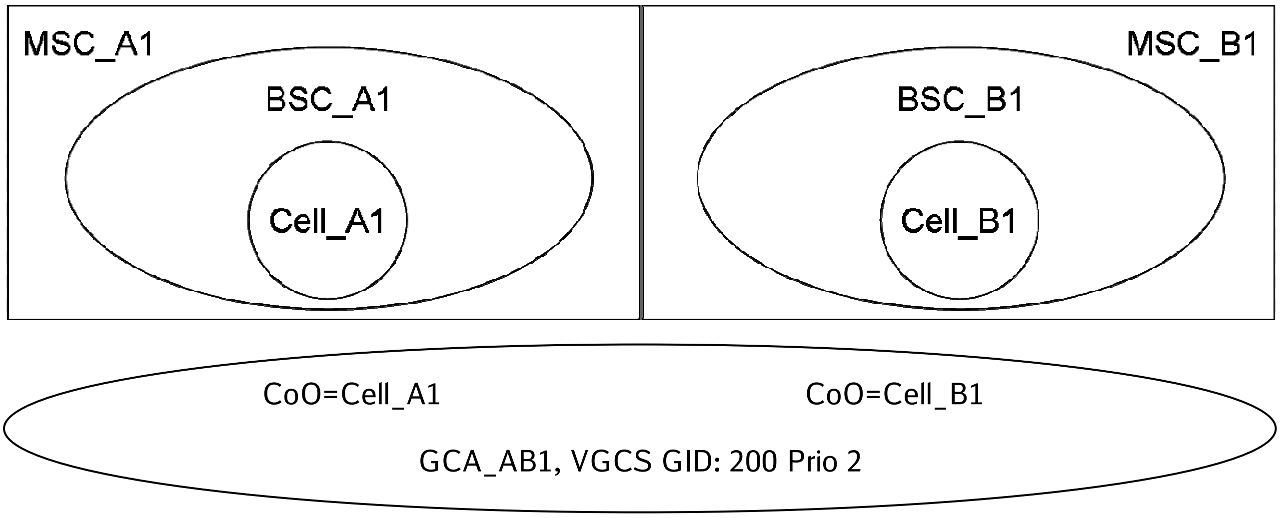
Step 4: Mobile subscriber of network A originates VGCS call in VPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B3 and MS_B1 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B3 and MS_B1 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_B3 and MS_B1 are joining the VGCS call (GID 200).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B3 and MS_B1 are able to listen to the announcement of MS_A3.

Step	Action	Expected result(s)
4)	MS_A2 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A2. MS_A3 advertise the incoming PTP call from MS_A2 optically and acoustically.
5)	MS_A3 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
6)	MS_B4 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B4. MS_A3 advertise the incoming PTP call from MS_B4 optically and acoustically.
7)	MS_A3 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
8)	MS_B2 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B2. MS_A3 advertise the incoming PTP call from MS_B2 optically and acoustically.
9)	MS_A3 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
10)	MS_A4 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_A3 advertise the incoming PTP call from MS_A4 optically and acoustically.
11)	MS_A3 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
12)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
13)	MS_A3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
14)	Repeat from step 1 to 13 with priority 3 for the PTP calls instead of priority 4.	

Test configuration for step 5 to 8

Network A **Network B**



B-MSC_A1	**A-MSC_B1**
MS_A1 (VGCS GID: 200)	MS_B1 (VGCS GID: 200)
MS_A2 (no VGCS / VBS subscriber)	MS_B2 (no VGCS / VBS subscriber)
MS_B3 (VGCS GID: 200)	MS_A3 (VGCS GID: 200)
MS_B4 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)

Test procedure

Step 5: Mobile subscriber of network A originates VGCS call in HPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).

Step	Action	Expected result(s)
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_A2 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A2. MS_A1 advertise the incoming PTP call from MS_A2 optically and acoustically.
5)	MS_A1 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
6)	MS_B4 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B4. MS_A1 advertise the incoming PTP call from MS_B4 optically and acoustically.
7)	MS_A1 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
8)	MS_B2 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B2. MS_A1 advertise the incoming PTP call from MS_B2 optically and acoustically.
9)	MS_A1 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
10)	MS_A4 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_A1 advertise the incoming PTP call from MS_A4 optically and acoustically.
11)	MS_A1 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
12)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
13)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
14)	Repeat from step 1 to 13 with priority 3 for the PTP calls instead of priority 4.	

Step 6: Mobile subscriber of network B originates VGCS call in VPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_B1 and MS_A3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_A3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_B1 and MS_A3 are joining the VGCS call (GID 200).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_B1 and MS_A3 are able to listen to the announcement of MS_B3.
4)	MS_A2 originates a PTP call with priority 4 to MS_A1.	MS_B3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A2. MS_B3 advertise the incoming PTP call from MS_A2 optically and acoustically.
5)	MS_B3 don’t accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
6)	MS_B4 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B4. MS_B3 advertise the incoming PTP call from MS_B4 optically and acoustically.
7)	MS_B3 don’t accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
8)	MS_B2 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B2. MS_B3 advertise the incoming PTP call from MS_B2 optically and acoustically.
9)	MS_B3 don’t accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
10)	MS_A4 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_B3 advertise the incoming PTP call from MS_A4 optically and acoustically.

Step	Action	Expected result(s)
11)	MS_B3 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
12)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
13)	MS_B3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
14)	Repeat from step 1 to 13 with priority 3 for the PTP calls instead of priority 4.	

Step 7: Mobile subscriber of network B originates VGCS call in HPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_A2 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A2. MS_B1 advertise the incoming PTP call from MS_A2 optically and acoustically.
5)	MS_B1 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
6)	MS_B4 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B4. MS_B1 advertise the incoming PTP call from MS_B4 optically and acoustically.
7)	MS_B1 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.

Step	Action	Expected result(s)
8)	MS_B2 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B2. MS_B1 advertise the incoming PTP call from MS_B2 optically and acoustically.
9)	MS_B1 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
10)	MS_A4 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_B1 advertise the incoming PTP call from MS_A4 optically and acoustically.
11)	MS_B1 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
12)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
13)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
14)	Repeat from step 1 to 13 with priority 3 for the PTP calls instead of priority 4.	

Step 8: Mobile subscriber of network A originates VGCS call in VPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B3 and MS_B1 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B3 and MS_B1 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_B3 and MS_B1 are joining the VGCS call (GID 200).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B3 and MS_B1 are able to listen to the announcement of MS_A3.

Step	Action	Expected result(s)
4)	MS_A2 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A2. MS_A3 advertise the incoming PTP call from MS_A2 optically and acoustically.
5)	MS_A3 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
6)	MS_B4 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B4. MS_A3 advertise the incoming PTP call from MS_B4 optically and acoustically.
7)	MS_A3 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
8)	MS_B2 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B2. MS_A3 advertise the incoming PTP call from MS_B2 optically and acoustically.
9)	MS_A3 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
10)	MS_A4 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_A3 advertise the incoming PTP call from MS_A4 optically and acoustically.
11)	MS_A3 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
12)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
13)	MS_A3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
14)	Repeat from step 1 to 13 with priority 3 for the PTP calls instead of priority 4.	

d) Success criteria

The VGCS call (GID 200) first talker on the dedicated channel is able to receive notification about an incoming PTP call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.42 VGCS first talker notification (MS dedicated mode, incoming VGCS call, roaming)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 5.2.2.47 9.5.2.1	2.2.1 5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a VGCS call (GID 200) first talker on dedicated channel get a notification about an incoming VGCS call (GID 203, 204). This should be verified in different networks (roaming).

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in HPLMN (MSC_A1 anchor).

Step 2: Mobile subscriber of network B originates VGCS call in VPLMN. Second VGCS call originated by mobile subscriber of network A in HPLMN (MSC_A1 anchor).

Step 3: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in VPLMN (MSC_A1 anchor).

Step 4: Mobile subscriber of network B originates VGCS call in VPLMN. Second VGCS call originated by mobile subscriber of network B in VPLMN (MSC_A1 anchor).

Step 5: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in HPLMN (MSC_A1 anchor).

Step 6: Mobile subscriber of network A originates VGCS call in VPLMN. Second VGCS call originated by mobile subscriber of network B in HPLMN (MSC_A1 anchor).

Step 7: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in VPLMN (MSC_A1 anchor).

Step 8: Mobile subscriber of network A originates VGCS call in VPLMN. Second VGCS call originated by mobile subscriber of network A in VPLMN (MSC_A1 anchor).

Step 9: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in VPLMN (MSC_A1 anchor).

Step 10: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in HPLMN (MSC_A1 anchor).

Step 11: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in VPLMN (MSC_A1 anchor).

Step 12: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in HPLMN (MSC_A1 anchor).

Step 13: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in HPLMN (MSC_B1 anchor).

Step 14: Mobile subscriber of network B originates VGCS call in VPLMN. Second VGCS call originated by mobile subscriber of network A in HPLMN (MSC_B1 anchor).

Step 15: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in VPLMN (MSC_B1 anchor).

Step 16: Mobile subscriber of network B originates VGCS call in VPLMN. Second VGCS call originated by mobile subscriber of network B in VPLMN (MSC_B1 anchor).

Step 17: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in HPLMN (MSC_B1 anchor).

Step 18: Mobile subscriber of network A originates VGCS call in VPLMN. Second VGCS call originated by mobile subscriber of network B in HPLMN (MSC_B1 anchor).

Step 19: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in VPLMN (MSC_B1 anchor).

Step 20: Mobile subscriber of network A originates VGCS call in VPLMN. Second VGCS call originated by mobile subscriber of network A in VPLMN (MSC_B1 anchor).

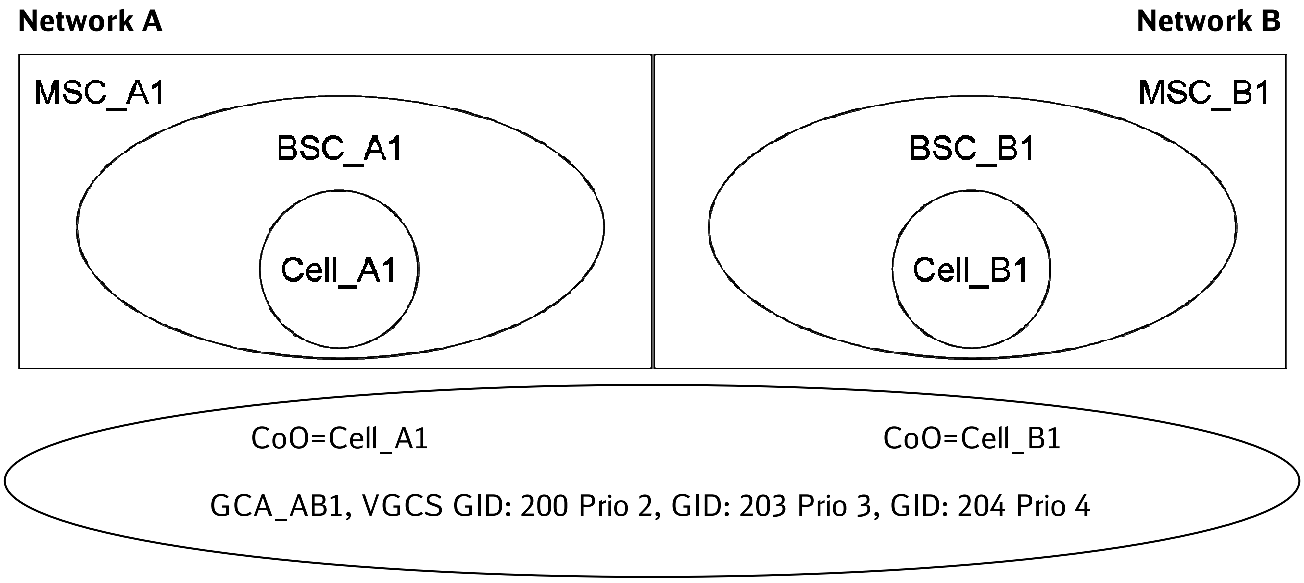
Step 21: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in VPLMN (MSC_B1 anchor).

Step 22: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in HPLMN (MSC_B1 anchor).

Step 23: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in VPLMN (MSC_B1 anchor).

Step 24: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in HPLMN (MSC_B1 anchor).

Test configuration for step 1 to 12



A-MSC_A1	B-MSC_B1
MS_A1 (VGCS GID: 200, 203, 204)	MS_B1 (VGCS GID: 200, 203, 204)
MS_A2 (VGCS GID: 203, 204)	MS_B2 (VGCS GID: 203, 204)
MS_B3 (VGCS GID: 200, 203, 204)	MS_A3 (VGCS GID: 200, 203, 204)
MS_B4 (VGCS GID: 203, 204)	MS_A4 (VGCS GID: 203, 204)

c) Test procedure

Step 1: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in HPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).

Step	Action	Expected result(s)
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_A2 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A3, MS_B1 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_A1 don't accept the incoming VGCS call (GID 203).	
7)	MS_A2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 2: Mobile subscriber of network B originates VGCS call in VPLMN. Second VGCS call originated by mobile subscriber of network A in HPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VGCS (200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B1 are joining the VGCS call (GID 200).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
4)	MS_A2 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_A3 and MS_B1 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_B3 don't accept the incoming VGCS call (GID 203).	

Step	Action	Expected result(s)
7)	MS_A2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 3: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in VPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
4)	MS_B4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2 MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A3, MS_B1 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_A1 don't accept the incoming VGCS call (GID 203).	
7)	MS_B4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 4: Mobile subscriber of network B originates VGCS call in VPLMN. Second VGCS call originated by mobile subscriber of network B in VPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B1 are joining the VGCS call (GID 200).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
4)	MS_B4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_A3 and MS_B1 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_B3 don't accept the incoming VGCS call (GID 203).	

Step	Action	Expected result(s)
7)	MS_B4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 5: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in HPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
4)	MS_B2 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_A3 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_B1 don't accept the incoming VGCS call (GID 203).	
7)	MS_B2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 6: Mobile subscriber of network A originates VGCS call in VPLMN. Second VGCS call originated by mobile subscriber of network B in HPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_B2 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
4)	MS_B2 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_B1 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_A3 don't accept the incoming VGCS call (GID 203).	

Step	Action	Expected result(s)
7)	MS_B2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 7: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in VPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
4)	MS_A4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2 MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_A3 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_B1 don't accept the incoming VGCS call (GID 203).	
7)	MS_A4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 8: Mobile subscriber of network A originates VGCS call in VPLMN. Second VGCS call originated by mobile subscriber of network A in VPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
4)	MS_A4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_B1 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_A3 don't accept the incoming VGCS call (GID 203).	

Step	Action	Expected result(s)
7)	MS_A4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 9: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in VPLMN (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
4)	MS_A4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_42 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A3, MS_B1 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_A1 don't accept the incoming VGCS call (GID 203).	
7)	MS_A4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 10: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in HPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_B2 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A3, MS_B1 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_A1 don't accept the incoming VGCS call (GID 203).	

Step	Action	Expected result(s)
7)	MS_B2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 11: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in VPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
4)	MS_B4 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS (GID 203). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_A3 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_B1 don't accept the incoming VGCS call (GID 203).	
7)	MS_B4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

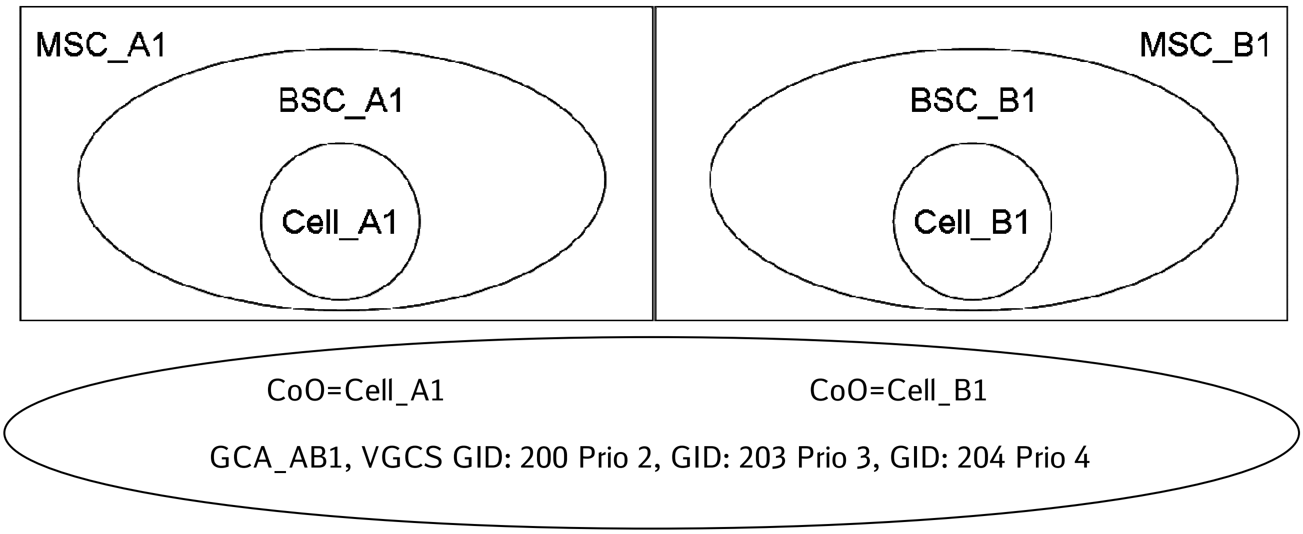
Step 12: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in HPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS CALL (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_A2 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_A3 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_B1 don't accept the incoming VGCS call (GID 203).	

Step	Action	Expected result(s)
7)	MS_A2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Test configuration for step 13 to 24

Network A **Network B**



R-MSC_A1	A-MSC_B1
MS_A1 (VGCS GID: 200, 203, 204)	MS_B1 (VGCS GID: 200, 203, 204)
MS_A2 (VGCS GID: 203, 204)	MS_B2 (VGCS GID: 203, 204)
MS_B3 (VGCS GID: 200, 203, 204)	MS_A3 (VGCS GID: 200, 203, 204)
MS_B4 (VGCS GID: 203, 204)	MS_A4 (VGCS GID: 203, 204)

Test procedure

Step 13: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in HPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_A2 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A3, MS_B1 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_A1 don't accept the incoming VGCS call (GID 203).	

Step	Action	Expected result(s)
7)	MS_A2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 14: Mobile subscriber of network B originates VGCS call in VPLMN. Second VGCS call originated by mobile subscriber of network A in HPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VGCS (200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B1 are joining the VGCS call (GID 200).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.

Step	Action	Expected result(s)
4)	MS_A2 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_A3 and MS_B1 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_B3 don't accept the incoming VGCS call (GID 203).	
7)	MS_A2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 15: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in VPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_B4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2 MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A3, MS_B1 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_A1 don't accept the incoming VGCS call (GID 203).	

Step	Action	Expected result(s)
7)	MS_B4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 16: Mobile subscriber of network B originates VGCS call in VPLMN. Second VGCS call originated by mobile subscriber of network B in VPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B1 are joining the VGCS call (GID 200).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.

Step	Action	Expected result(s)
4)	MS_B4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_A3 and MS_B1 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_B3 don't accept the incoming VGCS call (GID 203).	
7)	MS_B4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 17: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in HPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_B2 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_A3 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_B1 don't accept the incoming VGCS call (GID 203).	

Step	Action	Expected result(s)
7)	MS_B2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 18: Mobile subscriber of network A originates VGCS call in VPLMN. Second VGCS call originated by mobile subscriber of network B in HPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_B2 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.

Step	Action	Expected result(s)
4)	MS_B2 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_B1 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_A3 don't accept the incoming VGCS call (GID 203).	
7)	MS_B2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 19: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in VPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_A4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2 MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_A3 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_B1 don't accept the incoming VGCS call (GID 203).	

Step	Action	Expected result(s)
7)	MS_A4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 20: Mobile subscriber of network A originates VGCS call in VPLMN. Second VGCS call originated by mobile subscriber of network A in VPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.

Step	Action	Expected result(s)
4)	MS_A4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_B1 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_A3 don't accept the incoming VGCS call (GID 203).	
7)	MS_A4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 21: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in VPLMN (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_A4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_42 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A3, MS_B1 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_A1 don't accept the incoming VGCS call (GID 203).	

Step	Action	Expected result(s)
7)	MS_A4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 22: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in HPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
4)	MS_B2 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A3, MS_B1 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_A1 don't accept the incoming VGCS call (GID 203).	
7)	MS_B2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 23: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in VPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_B4 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS (GID 203). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_A3 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_B1 don't accept the incoming VGCS call (GID 203).	

Step	Action	Expected result(s)
7)	MS_B4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 24: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in HPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
4)	MS_A2 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_A3 and MS_B3 can not accept the VGCS call (GID 203), the priority of the VGCS call (GID 203) is lower than the priority of VGCS call (GID 200).
6)	MS_B1 don't accept the incoming VGCS call (GID 203).	
7)	MS_A2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

d) Success criteria

The VGCS call (GID 200) first talker on the dedicated channel is able to receive notification about an incoming VGCS call (GID 203, 204). This should succeed in different networks (roaming).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.43 VGCS first talker notification (MS dedicated mode, incoming VBS call, roaming)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 5.2.2.47 9.2.5.1	2.2.1 5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a VGCS call (GID 200) first talker on dedicated channel get a notification about an incoming VBS call (GID 202, 203). This should be verified in different networks (roaming).

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network A in HPLMN originates VBS call (MSC_A1 anchor).

Step 2: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN originates VBS call (MSC_A1 anchor).

Step 3: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network B in VPLMN originates VBS call (MSC_A1 anchor).

Step 4: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network B in VPLMN originates VBS call (MSC_A1 anchor).

Step 5: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network B in HPLMN originates VBS call (MSC_A1 anchor).

Step 6: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN originates VBS call (MSC_A1 anchor).

Step 7: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network A in VPLMN originates VBS call (MSC_A1 anchor).

Step 8: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network A in VPLMN originates VBS call (MSC_A1 anchor).

Step 9: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network A in VPLMN originates VBS call (MSC_A1 anchor).

Step 10: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network B in HPLMN originates VBS call (MSC_A1 anchor).

Step 11: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network B in VPLMN originates VBS call (MSC_A1 anchor).

Step 12: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network A in HPLMN originates VBS call (MSC_A1 anchor).

Step 13: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network A in HPLMN originates VBS call (MSC_B1 anchor).

Step 14: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN originates VBS call (MSC_B1 anchor).

Step 15: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network B in VPLMN originates VBS call (MSC_B1 anchor).

Step 16: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network B in VPLMN originates VBS call (MSC_B1 anchor).

Step 17: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network B in HPLMN originates VBS call (MSC_B1 anchor).

Step 18: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN originates VBS call (MSC_B1 anchor).

Step 19: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network A in VPLMN originates VBS call (MSC_B1 anchor).

Step 20: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network A in VPLMN originates VBS call (MSC_B1 anchor).

Step 21: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network A in VPLMN originates VBS call (MSC_B1 anchor).

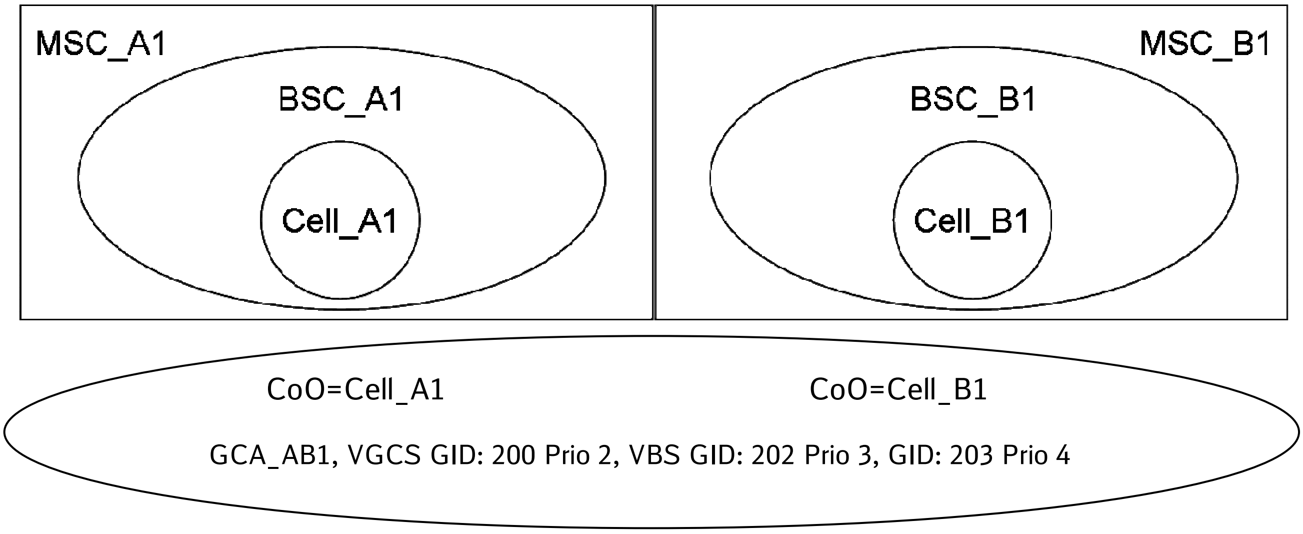
Step 22: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network B in HPLMN originates VBS call (MSC_B1 anchor).

Step 23: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network B in VPLMN originates VBS call (MSC_B1 anchor).

Step 24: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network A in HPLMN originates VBS call (MSC_B1 anchor).

Test configuration for step 1 to 12

Network A **Network B**



A-MSC_A1	**R-MSC_B1**
MS_A1 (VGCS GID: 200, VBS GID: 202, 203)	MS_B1 (VGCS GID: 200, VBS GID: 202, 203)
MS_A2 (VBS GID: 202, 203)	MS_B2 (VBS GID: 202, 203)
MS_B3 (VGCS GID: 200, VBS GID: 202, 203)	MS_A3 (VGCS GID: 200, VBS GID: 202, 203)
MS_B4 (VBS GID: 202, 203)	MS_A4 (VBS GID: 202, 203)

c) Test procedure

Step 1: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network A in HPLMN originates VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).

Step	Action	Expected result(s)
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_A2 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3, MS_B1 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_A1 don’t accept the incoming VBS call (GID 202).	
7)	MS_A2 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 2: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN originates VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VGCS call (200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B1 are joining the VGCS call (GID 200).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
4)	MS_A2 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_A3 and MS_B1 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_B3 don't accept the incoming VBS call (GID 202).	
7)	MS_A2 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
8)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 3: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network B in VPLMN originates VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_B4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A2 MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user as to accept the VBS call manually.	MS_A3, MS_B1 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS CALL (GID 200).
6)	MS_A1 don't accept the incoming VBS call (GID 202).	
7)	MS_B4 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 4: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network B in VPLMN originates VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B1 are joining the VGCS call (GID 200).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.

Step	Action	Expected result(s)
4)	MS_B4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_A3 and MS_B1 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_B3 don't accept the incoming VBS call (GID 202).	
7)	MS_B4 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 5: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network B in HPLMN originates VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_B2 originates a VBS call (GID 202) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_A3 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_B1 don't accept the incoming VBS call (GID 202).	
7)	MS_B2 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 6: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN originates VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_B2 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_B1 and MS_B3 are joining the VGCS Call (GID 200).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
4)	MS_B2 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_B1 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_A3 don't accept the incoming VBS call (GID 202).	
7)	MS_B2 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 7: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network A in VPLMN originates VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
4)	MS_A4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2 MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_A3 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_B1 don’t accept the incoming VBS call (GID 202).	
7)	MS_A4 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 8: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network A in VPLMN originates VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
4)	MS_A4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_B1 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_A3 don't accept the incoming VBS call (GID 202).	
7)	MS_A4 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
8)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 9: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network A in VPLMN originates VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_A4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3, MS_B1 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_A1 don't accept the incoming VBS call (GID 202).	
7)	MS_A4 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 10: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network B in HPLMN originates VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS CALL (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
4)	MS_B2 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3, MS_B1 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_A1 don't accept the incoming VBS call (GID 202).	
7)	MS_B2 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 11: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network B in VPLMN originates VBS call (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_B4 originates a VBS call (GID 202) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_A3 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_B1 don't accept the incoming VBS call (GID 202).	
7)	MS_B4 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

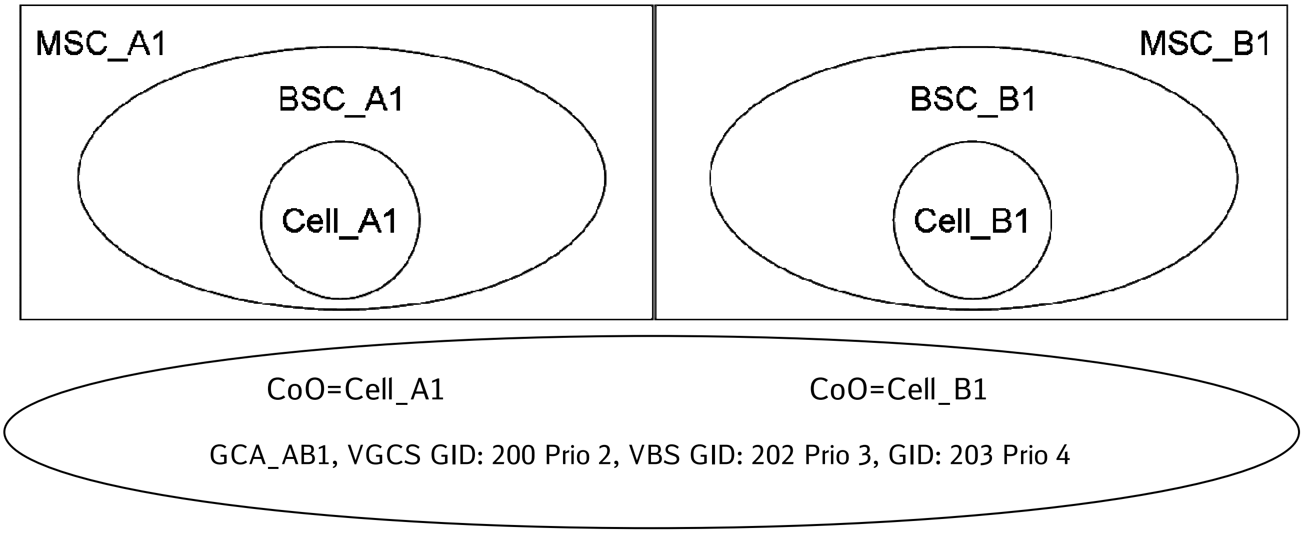
Step 12: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network A in HPLMN originates VBS call (MSC_A1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_A2 originates a VBS call (GID 202) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_A3 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_B1 don't accept the incoming VBS call (GID 202).	
7)	MS_A2 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Test configuration for step 13 to 24

Network A **Network B**



R-MSC_A1	**A-MSC_B1**
MS_A1 (VGCS GID: 200, VBS GID: 202, 203)	MS_B1 (VGCS GID: 200, VBS GID: 202, 203)
MS_A2 (VBS GID: 202, 203)	MS_B2 (VBS GID: 202, 203)
MS_B3 (VGCS GID: 200, VBS GID: 202, 203)	MS_A3 (VGCS GID: 200, VBS GID: 202, 203)
MS_B4 (VBS GID: 202, 203)	MS_A4 (VBS GID: 202, 203)

Test procedure

Step 13: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network A in HPLMN originates VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).

Step	Action	Expected result(s)
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_A2 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3, MS_B1 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_A1 don't accept the incoming VBS call (GID 202).	
7)	MS_A2 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 14: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN originates VBS call (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VGCS call (200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B1 are joining the VGCS call (GID 200).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
4)	MS_A2 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_A3 and MS_B1 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_B3 don't accept the incoming VBS call (GID 202).	
7)	MS_A2 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
8)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 15: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network B in VPLMN originates VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_B4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A2 MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user as to accept the VBS call (GID 202) manually.	MS_A3, MS_B1 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS CALL (GID 200).
6)	MS_A1 don't accept the incoming VBS call (GID 202).	
7)	MS_B4 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 16: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network B in VPLMN originates VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B1 are joining the VGCS call (GID 200).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.

Step	Action	Expected result(s)
4)	MS_B4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_A3 and MS_B1 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_B3 don't accept the incoming VBS call (GID 202).	
7)	MS_B4 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 17: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network B in HPLMN originates VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_B2 originates a VBS call (GID 202) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_A3 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_B1 don't accept the incoming VBS call (GID 202).	
7)	MS_B2 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 18: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN originates VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_B2 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_B1 and MS_B3 are joining the VGCS Call (GID 200).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
4)	MS_B2 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_B1 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_A3 don't accept the incoming VBS call (GID 202).	
7)	MS_B2 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 19: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network A in VPLMN originates VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
4)	MS_A4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2 MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_A3 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_B1 don’t accept the incoming VBS call (GID 202).	
7)	MS_A4 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 20: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network A in VPLMN originates VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
4)	MS_A4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_B1 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_A3 don’t accept the incoming VBS call (GID 202).	
7)	MS_A4 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
8)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 21: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network A in VPLMN originates VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
4)	MS_A4 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3, MS_B1 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_A1 don't accept the incoming VBS call (GID 202).	
7)	MS_A4 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 22: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network B in HPLMN originates VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A3, MS_B1 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
4)	MS_B2 originates a VBS call (GID 202) with priority 3.	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3, MS_B1 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_A1 don't accept the incoming VBS call (GID 202).	
7)	MS_B2 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 23: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network B in VPLMN originates VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_B4 originates a VBS call (GID 202) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.
5)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_A3 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_B1 don't accept the incoming VBS call (GID 202).	
7)	MS_B4 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 24: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network A in HPLMN originates VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
4)	MS_A2 originates a VBS call (GID 202) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 202). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 202) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_A3 and MS_B3 can not accept the VBS call (GID 202), the priority of the VBS call (GID 202) is lower than the priority of VGCS call (GID 200).
6)	MS_B1 don't accept the incoming VBS call (GID 202).	
7)	MS_A2 releases the VBS call (GID 202).	The VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
9)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
10)	Repeat from step 1 to 9 with VBS call (GID 203) instead of VBS call (GID 202).	

d) Success criteria

The VGCS call (GID 200) first talker on the dedicated channel is able to receive notification about an incoming VBS call (GID 202, 203). This should succeed in different networks (roaming).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.44 VGCS first talker notification (MS dedicated mode, incoming REC, non roaming case)

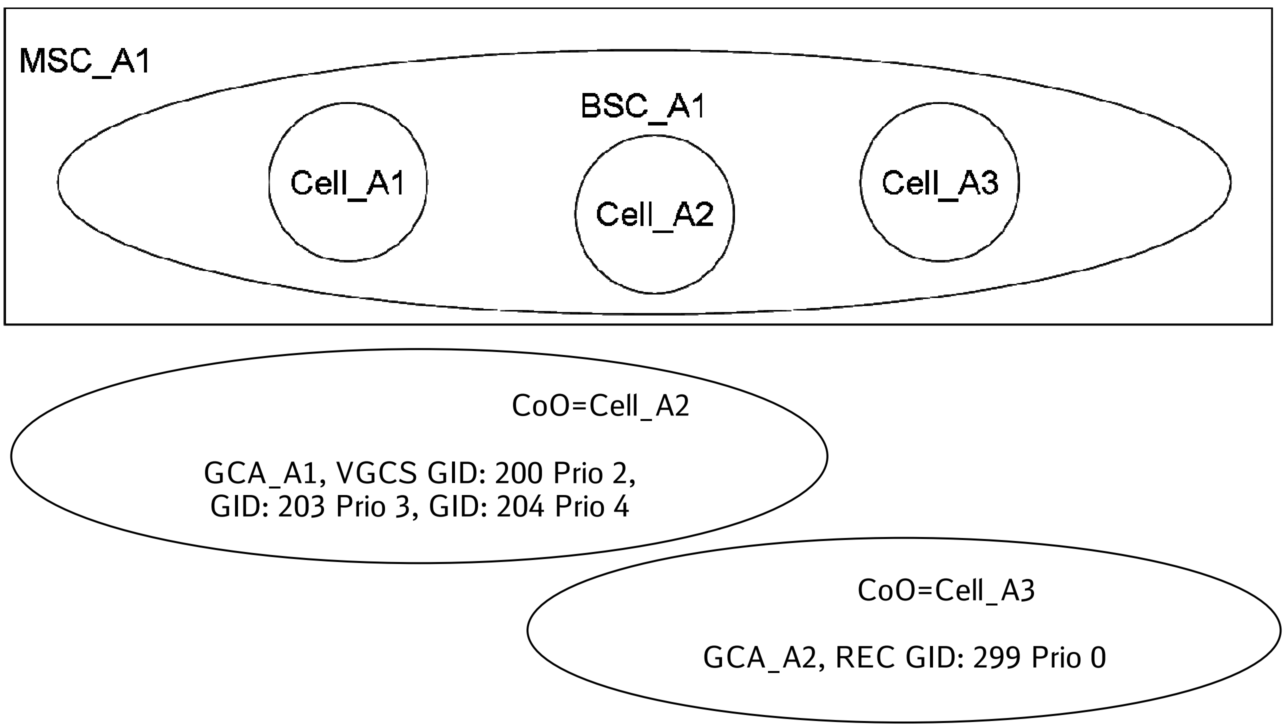
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 5.2.2.47 9.2.5.1 13.3.1	2.2.1 5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a VGCS call (GID 200) first talker on dedicated channel get a notification about an incoming REC (GID 299).

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2	Cell_A3
MS_A1 (REC GID: 299, VGCS GID: 200, 203, 204)	MS_A3 (REC GID: 299, VGCS GID: 200, 203, 204)	MS_A5 (REC GID: 299)
MS_A2 (REC GID: 299, VGCS GID: 200, 203, 204)	MS_A4 (REC GID: 299, VGCS GID: 200, 203, 204)	MS_A6 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A2 and MS_A4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_A2 and MS_A4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A1, MS_A2 and MS_A4 are joining the VGCS call (GID 200).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_A2 and MS_A4 are able to listen to the announcement of MS_A3.
4)	Service subscriber MS_A5 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A3. A group call channel (GCCH) is allocated in cell_A2. MS_A6 receives a notification about the incoming REC (GID 299). MS_A3 and MS_A4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3 and MS_A4 advertise the incoming REC (GID 299) optically and acoustically.
5)	MS_A4 and MS_A6 automatically accepting the incoming REC (GID 299).	MS_A4 and MS_A6 are joining the REC (GID 299).
6)	MS_A3 automatically accepts the incoming REC call (GID 299).	MS_A3 automatically joins the REC (GID 299). The uplink on DCH of MS_A3 for the VGCS call (GID 200) will be released automatically. Uplink free message is send in cell_A1 and cell_A2.

Step	Action	Expected result(s)
7)	MS_A5 takes the uplink on DCH.	MS_A5 has two-way voice path. MS_A3, MS_A4 and MS_A6 are able to listen to the announcement of MS_A5.
8)	MS_A5 releases the uplink.	Uplink free message is send in cell_A2 and cell_A3 and the DCH is correctly released.
9)	MS_A5 takes the uplink on GCCH.	MS_A5 has two-way voice path. MS_A3, MS_A4 and MS_A6 are able to listen to the announcement of MS_A5.
10)	MS_A5 releases the uplink.	Uplink free message is send in cell_A2 and cell_A3 and the uplink is correctly released.
11)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2 is able to listen to the announcement of MS_A1.
12)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_A2 and the uplink is correctly released.
13)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A4, MS_A5 and MS_A6 are able to listen to the announcement of MS_A3.
14)	MS_A3 releases the uplink.	Uplink free message is send in cell_A2 and cell_A3 and the uplink is correctly released.
15)	MS_A5 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
16)	MS_A3 and MS_A4 receive a notification about the ongoing VGCS call (GID 200).	MS_A3 and MS_A4 rejoin the ongoing VGCS call (GID 200).
17)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_A2, and MS_A4 are able to listen to the announcement of MS_A3. Talker flag at MS_A3 for VGCS call (GID 200) will be updated.
18)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_A2 and the uplink is correctly released.
19)	MS_A3 releases the VGCS call (GID 200)	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
20)	Repeat from step 1 to 19 with VGCS call (GID 203, 204) instead of VGCS call (GID 200).	

d) Success criteria

The VGCS call (GID 200) first talker on the dedicated channel is able to receive notification about an incoming REC (GID 299).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.45 VGCS first talker notification (MS dedicated mode, incoming REC, roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 5.2.2.47 9.2.5.1 13.3.1	2.2.1 5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a VGCS CALL (GID 200) first talker on dedicated channel get a notification about an incoming REC (GID 299). This should be verified in different networks (roaming).

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN originates a REC (MSC_A1 anchor).

Step 2: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_A1 anchor).

Step 3: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN originates a REC (MSC_A1 anchor).

Step 4: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_A1 anchor).

Step 5: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN originates a REC (MSC_B1 anchor).

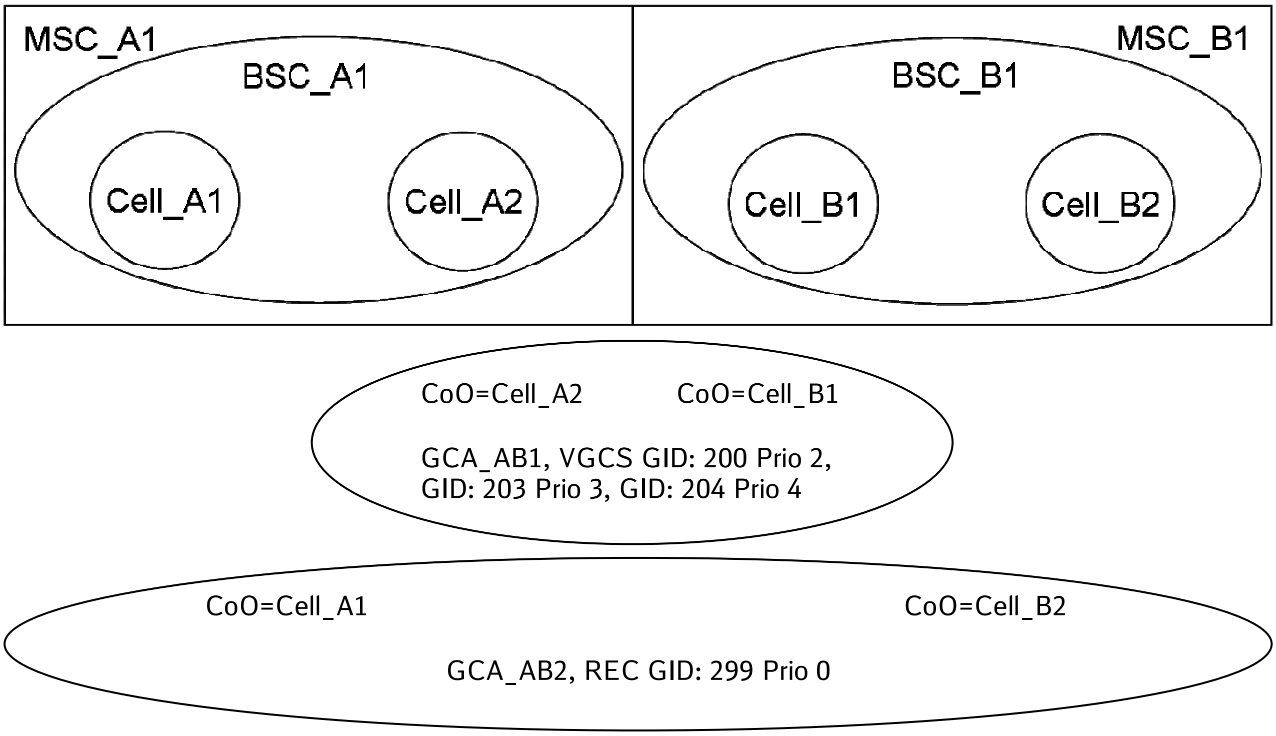
Step 6: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_B1 anchor).

Step 7: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN originates a REC (MSC_B1 anchor).

Step 8: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_B1 anchor).

Test configuration for step 1 to 4

Network A **Network B**



A-MSC_A1 (GCA_AB1)		**R-MSC_B1 (GCA_AB1)**	
A-MSC_A1 (GCA_AB2)		**R-MSC_B1 (GCA_AB2)**	
Cell_A1	**Cell_A2**	**Cell_B1**	**Cell_B2**
MS_A1 (REC GID: 299	MS_A3 (REC GID: 299, VGCS GID: 200, 203, 204)	MS_B3 (REC GID: 299, VGCS GID: 200, 203, 204)	MS_B1 (REC GID: 299
MS_A2 (REC GID: 299	MS_B4 (REC GID: 299, VGCS GID: 200, 203, 204)	MS_A4 (REC GID: 299, VGCS GID: 200, 203, 204)	MS_B2 (REC GID: 299

c) Test procedure

Step 1: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN originates a REC (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B4 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_A4 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B4 has two-way voice path.
2)	MS_A3, MS_A4 and MS_B3 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A3, MS_A4 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B4 takes the uplink on DCH.	MS_B4 has two-way voice path. MS_A3, MS_A4 and MS_B3 are able to listen to the announcement of MS_B4.
4)	Service subscriber MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2, cell_B1 and cell_B2. MS_A2, MS_B1 and MS_B2 receiving a notification about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 advertise the incoming REC (GID 299) optically and acoustically.
5)	MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B3 automatically accepting the incoming REC (GID 299).	MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B3 are joining the REC (GID 299).
6)	MS_B4 automatically accepts the incoming REC call (GID 299).	MS_B4 automatically joins the REC (GID 299). The uplink on DCH of MS_B4 for the VGCS call (GID 200) will be released automatically. Uplink free message is send in cell_A2 and cell_B1.

Step	Action	Expected result(s)
7)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the DCH is correctly released.
9)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
10)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
11)	MS_B4 takes the uplink on GCCH.	MS_B4 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B3 are able to listen to the announcement of MS_B4.
12)	MS_B4 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
13)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
14)	MS_A3, MS_A4, MS_B3 and MS_B4 receive a notification about the ongoing VGCS call (GID 200).	MS_A3, MS_A4, MS_B3 and MS_B4 rejoin the ongoing VGCS call (GID 200).
15)	MS_B4 takes the uplink on GCCH.	MS_B4 has two-way voice path. MS_A3, MS_A4, and MS_B3 are able to listen to the announcement of MS_B4. Talker flag at MS_B4 for VGCS call (GID 200) will be updated.
16)	MS_B4 releases the uplink.	Uplink free message is send in cell_A2 and cell_B1 and the uplink is correctly released.
17)	MS_B4 releases the VGCS call (GID 200)	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
18)	Repeat from step 1 to 17 with VGCS call (GID 203, 204) instead of VGCS call (GID 200).	

Step 2: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B4 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_A4 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B4 has two-way voice path.
2)	MS_A3, MS_A4 and MS_B3 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A3, MS_A4 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B4 takes the uplink on DCH.	MS_B4 has two-way voice path. MS_A3, MS_A4 and MS_B3 are able to listen to the announcement of MS_B4.
4)	Service subscriber MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1, cell_A2 and cell_B2. MS_A1, MS_A2 and MS_B2 receiving a notification about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 advertise the incoming REC (GID 299) optically and acoustically.
5)	MS_A1, MS_A2, MS_A3, MS_A4, MS_B2 and MS_B3 automatically accepting the incoming REC (GID 299).	MS_A1, MS_A2, MS_A3, MS_A4, MS_B2 and MS_B3 are joining the REC (GID 299).
6)	MS_B4 automatically accepts the incoming REC call (GID 299).	MS_B4 automatically joins the REC (GID 299). The uplink on DCH of MS_B4 for the VGCS call (GID 200) will be released automatically. Uplink free message is send in cell_A2 and cell_B1.

Step	Action	Expected result(s)
7)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the DCH is correctly released.
9)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
10)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
11)	MS_B4 takes the uplink on GCCH.	MS_B4 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B3 are able to listen to the announcement of MS_B4.
12)	MS_B4 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
13)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
14)	MS_A3, MS_A4, MS_B3 and MS_B4 receive a notification about the ongoing VGCS call (GID 200).	MS_A3, MS_A4, MS_B3 and MS_B4 rejoin the ongoing VGCS call (GID 200).
15)	MS_B4 takes the uplink on GCCH.	MS_B4 has two-way voice path. MS_A3, MS_A4, and MS_B3 are able to listen to the announcement of MS_B4. Talker flag at MS_B4 for VGCS call (GID 200) will be updated.
16)	MS_B4 releases the uplink.	Uplink free message is send in cell_A2 and cell_B1 and the uplink is correctly released.
17)	MS_B4 releases the VGCS call (GID 200)	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
18)	Repeat from step 1 to 17 with VGCS call (GID 203, 204) instead of VGCS call (GID 200).	

Step 3: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN originates a REC (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A4 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A2. MS_A3, MS_B3 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A4 has two-way voice path.
2)	MS_A3, MS_B3 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A3, MS_B3 and MS_B4 are joining the VGCS call (GID 200).
3)	MS_A4 takes the uplink on DCH.	MS_A4 has two-way voice path. MS_A3, MS_B3 and MS_B4 are able to listen to the announcement of MS_A4.
4)	Service subscriber MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2, cell_B1 and cell_B2. MS_A2, MS_B1 and MS_B2 receiving a notification about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 advertise the incoming REC (GID 299) optically and acoustically.
5)	MS_A2, MS_A3, MS_B1, MS_B2, MS_B3 and MS_B4 automatically accepting the incoming REC (GID 299).	MS_A2, MS_A3, MS_B1, MS_B2, MS_B3 and MS_B4 are joining the REC (GID 299).
6)	MS_A4 automatically accepts the incoming REC call (GID 299).	MS_A4 automatically joins the REC (GID 299). The uplink on DCH of MS_A4 for the VGCS call (GID 200) will be released automatically. Uplink free message is send in cell_A2 and cell_B1.

Step	Action	Expected result(s)
7)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the DCH is correctly released.
9)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
10)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
11)	MS_A4 takes the uplink on GCCH.	MS_A4 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A4.
12)	MS_A4 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
13)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
14)	MS_A3, MS_A4, MS_B3 and MS_B4 receive a notification about the ongoing VGCS call (GID 200).	MS_A3, MS_A4, MS_B3 and MS_B4 rejoin the ongoing VGCS call (GID 200).
15)	MS_A4 takes the uplink on GCCH.	MS_A4 has two-way voice path. MS_A3, MS_B3, and MS_B4 are able to listen to the announcement of MS_A4. Talker flag at MS_A4 for VGCS call (GID 200) will be updated.
16)	MS_A4 releases the uplink.	Uplink free message is send in cell_A2 and cell_B1 and the uplink is correctly released.
17)	MS_A4 releases the VGCS call (GID 200)	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
18)	Repeat from step 1 to 17 with VGCS call (GID 203, 204) instead of VGCS call (GID 200).	

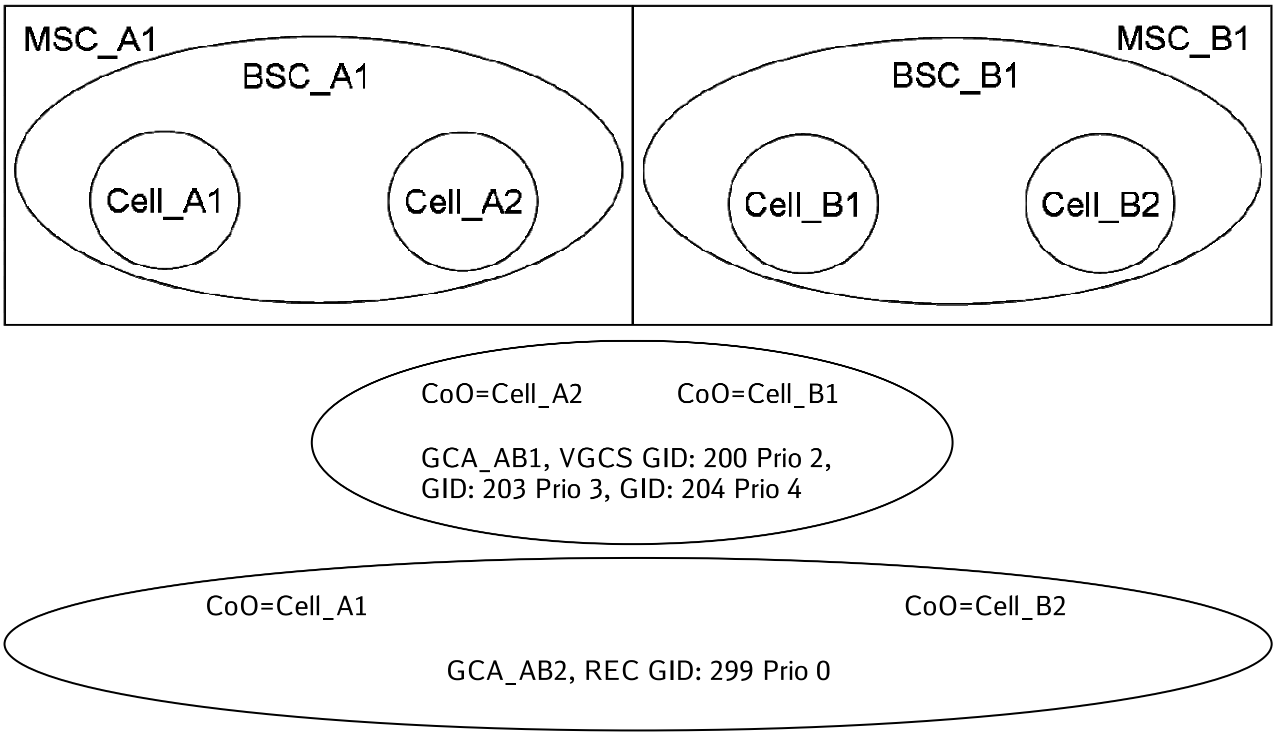
Step 4: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A4 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A2. MS_A3, MS_B3 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A4 has two-way voice path.
2)	MS_A3, MS_B3 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A3, MS_B3 and MS_B4 are joining the VGCS call (GID 200).
3)	MS_A4 takes the uplink on DCH.	MS_A4 has two-way voice path. MS_A3, MS_B3 and MS_B4 are able to listen to the announcement of MS_A4.
4)	Service subscriber MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1, cell_A2 and cell_B2. MS_A1, MS_A2 and MS_B2 receiving a notification about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 advertise the incoming REC (GID 299) optically and acoustically.
5)	MS_A1, MS_A2, MS_A3, MS_B2, MS_B3 and MS_B4 automatically accepting the incoming REC (GID 299).	MS_A1, MS_A2, MS_A3, MS_B2, MS_B3 and MS_B4 are joining the REC (GID 299).
6)	MS_A4 automatically accepts the incoming REC call (GID 299).	MS_A4 automatically joins the REC (GID 299). The uplink on DCH of MS_A4 for the VGCS call (GID 200) will be released automatically. Uplink free message is send in cell_A2 and cell_B1.

Step	Action	Expected result(s)
7)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the DCH is correctly released.
9)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
10)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
11)	MS_A4 takes the uplink on GCCH.	MS_A4 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A4.
12)	MS_A4 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
13)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
14)	MS_A3, MS_A4, MS_B3 and MS_B4 receive a notification about the ongoing VGCS call (GID 200).	MS_A3, MS_A4, MS_B3 and MS_B4 rejoin the ongoing VGCS call (GID 200).
15)	MS_A4 takes the uplink on GCCH.	MS_A4 has two-way voice path. MS_A3, MS_B3, and MS_B4 are able to listen to the announcement of MS_A4. Talker flag at MS_A4 for VGCS call (GID 200) will be updated.
16)	MS_A4 releases the uplink.	Uplink free message is send in cell_A2 and cell_B1 and the uplink is correctly released.
17)	MS_A4 releases the VGCS call (GID 200)	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
18)	Repeat from step 1 to 17 with VGCS call (GID 203, 204) instead of VGCS call (GID 200).	

Test configuration for step 5 to 8

Network A **Network B**



R-MSC_A1 (GCA_AB1)		**A-MSC_B1 (GCA_AB1)**	
R-MSC_A1 (GCA_AB2)		**A-MSC_B1 (GCA_AB2)**	
Cell_A1	**Cell_A2**	**Cell_B1**	**Cell_B2**
MS_A1 (REC GID: 299	MS_A3 (REC GID: 299, VGCS GID: 200, 203, 204)	MS_B3 (REC GID: 299, VGCS GID: 200, 203, 204)	MS_B1 (REC GID: 299
MS_A2 (REC GID: 299	MS_B4 (REC GID: 299, VGCS GID: 200, 203, 204)	MS_A4 (REC GID: 299, VGCS GID: 200, 203, 204)	MS_B2 (REC GID: 299

c) Test procedure

Step 5: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN originates a REC (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B4 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_A4 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B4 has two-way voice path.
2)	MS_A3, MS_A4 and MS_B3 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A3, MS_A4 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B4 takes the uplink on DCH.	MS_B4 has two-way voice path. MS_A3, MS_A4 and MS_B3 are able to listen to the announcement of MS_B4.
4)	Service subscriber MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2, cell_B1 and cell_B2. MS_A2, MS_B1 and MS_B2 receiving a notification about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 advertise the incoming REC (GID 299) optically and acoustically.
5)	MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B3 automatically accepting the incoming REC (GID 299).	MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B3 are joining the REC (GID 299).
6)	MS_B4 automatically accepts the incoming REC call (GID 299).	MS_B4 automatically joins the REC (GID 299). The uplink on DCH of MS_B4 for the VGCS call (GID 200) will be released automatically. Uplink free message is send in cell_A2 and cell_B1.

Step	Action	Expected result(s)
7)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the DCH is correctly released.
9)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
10)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
11)	MS_B4 takes the uplink on GCCH.	MS_B4 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B3 are able to listen to the announcement of MS_B4.
12)	MS_B4 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
13)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
14)	MS_A3, MS_A4, MS_B3 and MS_B4 receive a notification about the ongoing VGCS call (GID 200).	MS_A3, MS_A4, MS_B3 and MS_B4 rejoin the ongoing VGCS call (GID 200).
15)	MS_B4 takes the uplink on GCCH.	MS_B4 has two-way voice path. MS_A3, MS_A4, and MS_B3 are able to listen to the announcement of MS_B4. Talker flag at MS_B4 for VGCS call (GID 200) will be updated.
16)	MS_B4 releases the uplink.	Uplink free message is send in cell_A2 and cell_B1 and the uplink is correctly released.
17)	MS_B4 releases the VGCS call (GID 200)	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
18)	Repeat from step 1 to 17 with VGCS call (GID 203, 204) instead of VGCS call (GID 200).	

Step 6: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B4 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_A4 and MS_B3 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B4 has two-way voice path.
2)	MS_A3, MS_A4 and MS_B3 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A3, MS_A4 and MS_B3 are joining the VGCS call (GID 200).
3)	MS_B4 takes the uplink on DCH.	MS_B4 has two-way voice path. MS_A3, MS_A4 and MS_B3 are able to listen to the announcement of MS_B4.
4)	Service subscriber MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1, cell_A2 and cell_B2. MS_A1, MS_A2 and MS_B2 receiving a notification about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 advertise the incoming REC (GID 299) optically and acoustically.
5)	MS_A1, MS_A2, MS_A3, MS_A4, MS_B2 and MS_B3 automatically accepting the incoming REC (GID 299).	MS_A1, MS_A2, MS_A3, MS_A4, MS_B2 and MS_B3 are joining the REC (GID 299).
6)	MS_B4 automatically accepts the incoming REC call (GID 299).	MS_B4 automatically joins the REC (GID 299). The uplink on DCH of MS_B4 for the VGCS call (GID 200) will be released automatically. Uplink free message is send in cell_A2 and cell_B1.

Step	Action	Expected result(s)
7)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the DCH is correctly released.
9)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
10)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
11)	MS_B4 takes the uplink on GCCH.	MS_B4 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B3 are able to listen to the announcement of MS_B4.
12)	MS_B4 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
13)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
14)	MS_A3, MS_A4, MS_B3 and MS_B4 receive a notification about the ongoing VGCS call (GID 200).	MS_A3, MS_A4, MS_B3 and MS_B4 rejoin the ongoing VGCS call (GID 200).
15)	MS_B4 takes the uplink on GCCH.	MS_B4 has two-way voice path. MS_A3, MS_A4, and MS_B3 are able to listen to the announcement of MS_B4. Talker flag at MS_B4 for VGCS call (GID 200) will be updated.
16)	MS_B4 releases the uplink.	Uplink free message is send in cell_A2 and cell_B1 and the uplink is correctly released.
17)	MS_B4 releases the VGCS call (GID 200)	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
18)	Repeat from step 1 to 17 with VGCS call (GID 203, 204) instead of VGCS call (GID 200).	

Step 7: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN originates a REC (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A4 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A2. MS_A3, MS_B3 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A4 has two-way voice path.
2)	MS_A3, MS_B3 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A3, MS_B3 and MS_B4 are joining the VGCS call (GID 200).
3)	MS_A4 takes the uplink on DCH.	MS_A4 has two-way voice path. MS_A3, MS_B3 and MS_B4 are able to listen to the announcement of MS_A4.
4)	Service subscriber MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2, cell_B1 and cell_B2. MS_A2, MS_B1 and MS_B2 receiving a notification about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 advertise the incoming REC (GID 299) optically and acoustically.
5)	MS_A2, MS_A3, MS_B1, MS_B2, MS_B3 and MS_B4 automatically accepting the incoming REC (GID 299).	MS_A2, MS_A3, MS_B1, MS_B2, MS_B3 and MS_B4 are joining the REC (GID 299).
6)	MS_A4 automatically accepts the incoming REC call (GID 299).	MS_A4 automatically joins the REC (GID 299). The uplink on DCH of MS_A4 for the VGCS call (GID 200) will be released automatically. Uplink free message is send in cell_A2 and cell_B1.

Step	Action	Expected result(s)
7)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the DCH is correctly released.
9)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
10)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
11)	MS_A4 takes the uplink on GCCH.	MS_A4 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A4.
12)	MS_A4 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
13)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
14)	MS_A3, MS_A4, MS_B3 and MS_B4 receive a notification about the ongoing VGCS call (GID 200).	MS_A3, MS_A4, MS_B3 and MS_B4 rejoin the ongoing VGCS call (GID 200).
15)	MS_A4 takes the uplink on GCCH.	MS_A4 has two-way voice path. MS_A3, MS_B3, and MS_B4 are able to listen to the announcement of MS_A4. Talker flag at MS_A4 for VGCS call (GID 200) will be updated.
16)	MS_A4 releases the uplink.	Uplink free message is send in cell_A2 and cell_B1 and the uplink is correctly released.
17)	MS_A4 releases the VGCS call (GID 200)	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
18)	Repeat from step 1 to 17 with VGCS call (GID 203, 204) instead of VGCS call (GID 200).	

Step 8: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A4 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A2. MS_A3, MS_B3 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A4 has two-way voice path.
2)	MS_A3, MS_B3 and MS_B4 automatically accept the incoming VGCS call (GID 200), if the priority of the VGCS call (GID 200) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VGCS call manually.	MS_A3, MS_B3 and MS_B4 are joining the VGCS call (GID 200).
3)	MS_A4 takes the uplink on DCH.	MS_A4 has two-way voice path. MS_A3, MS_B3 and MS_B4 are able to listen to the announcement of MS_A4.
4)	Service subscriber MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1, cell_A2 and cell_B2. MS_A1, MS_A2 and MS_B2 receiving a notification about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 advertise the incoming REC (GID 299) optically and acoustically.
5)	MS_A1, MS_A2, MS_A3, MS_B2, MS_B3 and MS_B4 automatically accepting the incoming REC (GID 299).	MS_A1, MS_A2, MS_A3, MS_B2, MS_B3 and MS_B4 are joining the REC (GID 299).
6)	MS_A4 automatically accepts the incoming REC call (GID 299).	MS_A4 automatically joins the REC (GID 299). The uplink on DCH of MS_A4 for the VGCS call (GID 200) will be released automatically. Uplink free message is send in cell_A2 and cell_B1.

Step	Action	Expected result(s)
7)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
8)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the DCH is correctly released.
9)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
10)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
11)	MS_A4 takes the uplink on GCCH.	MS_A4 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A4.
12)	MS_A4 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
13)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
14)	MS_A3, MS_A4, MS_B3 and MS_B4 receive a notification about the ongoing VGCS call (GID 200).	MS_A3, MS_A4, MS_B3 and MS_B4 rejoin the ongoing VGCS call (GID 200).
15)	MS_A4 takes the uplink on GCCH.	MS_A4 has two-way voice path. MS_A3, MS_B3, and MS_B4 are able to listen to the announcement of MS_A4. Talker flag at MS_A4 for VGCS call (GID 200) will be updated.
16)	MS_A4 releases the uplink.	Uplink free message is send in cell_A2 and cell_B1 and the uplink is correctly released.
17)	MS_A4 releases the VGCS call (GID 200)	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.
18)	Repeat from step 1 to 17 with VGCS call (GID 203, 204) instead of VGCS call (GID 200).	

d) Success criteria

The VGCS (GID 299) first talker on the dedicated channel is able to receive notification about an incoming REC (GID 299).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.46 Multiple VGCS membership (non roaming case)

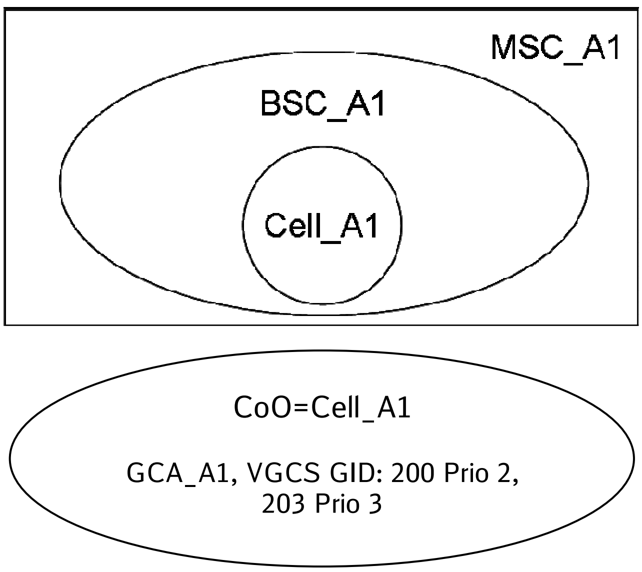
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.14 9.2.5.1	2.2.1	

a) Purpose

Verify that a service subscriber can be a member of several VGCS calls at the same time.

b) Test configuration / initial conditions

Network A



MS_A1 (VGCS GID: 200, 203)
MS_A2 (VGCS GID: 200, 203)
MS_A3 (VGCS GID: 200, 203)
MS_A4 (VGCS GID: 200, 203)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2, MS_A3 and MS_A4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2, MS_A3 and MS_A4 automatically accept the incoming VGCS call (GID 200).	MS_A2, MS_A3 and MS_A4 are joining the VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_A3 and MS_A4 are able to listen to the announcement of MS_A1.
4)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and the DCH is correctly released.
5)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3 and MS_A4 are able to listen to the announcement of MS_A1.
6)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
7)	MS_A2 takes the uplink on GCCH.	MS_A2 has two-way voice path. MS_A1, MS_A3 and MS_A4 are able to listen to the announcement of MS_A2.
8)	MS_A2 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
9)	MS_A2 leaves the ongoing VGCS call (GID 200).	MS_A2 is able to leave VGCS call (GID 200).
10)	Service subscriber MS_A2 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A1, MS_A3 and MS_A4 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_A3 and MS_A4 advertise the incoming VGCS call (GID 203) optically and acoustically. So long the dedicated channel is not released, MS_A2 has two-way voice path.
11)	MS_A3 joins the VGCS (GID 203).	MS_A3 is able to join the VGCS (GID 203).
12)	MS_A2 takes the uplink on DCH.	MS_A2 has two-way voice path. MS_A3 is able to listen to the announcement of MS_A2.

Step	Action	Expected result(s)
13)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A4 is able to listen to the announcement of MS_A1.
14)	MS_A2 releases the uplink.	Uplink free message is send in cell_A1 and the DCH is correctly released.
15)	MS_A2 takes the uplink on GCCH.	MS_A2 has two-way voice path. MS_A3 is able to listen to the announcement of MS_A2.
16)	MS_A2 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
17)	MS_A2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
18)	MS_A2 and MS_A3 rejoin the VGCS call (GID 200).	MS_A1 has two-way voice path. MS_A2. MS_A3 and MS_A4 are able to listen to the announcement of MS_A1.
19)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
20)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_A2 and MS_A4 are able to listen to the announcement of MS_A3.
21)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
22)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.

d) Success criteria

A service subscriber can be a member of several VGCS calls at the same time.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.47 Multiple VGCS membership (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.14 9.2.5.1	2.2.1	

a) Purpose

Verify that a service subscriber can be a member of several VGCS calls at the same time.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network B in VPLMN leaves ongoing VGCS and originates second VGCS call (MSC_A1 anchor).

Step 2: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN leaves ongoing VGCS and originates second VGCS call (MSC_A1 anchor).

Step 3: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network A in VPLMN leaves ongoing VGCS and originates second VGCS call (MSC_A1 anchor).

Step 4: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN leaves ongoing VGCS and originates second VGCS call (MSC_A1 anchor).

Step 5: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network B in VPLMN leaves ongoing VGCS and originates second VGCS call (MSC_B1 anchor).

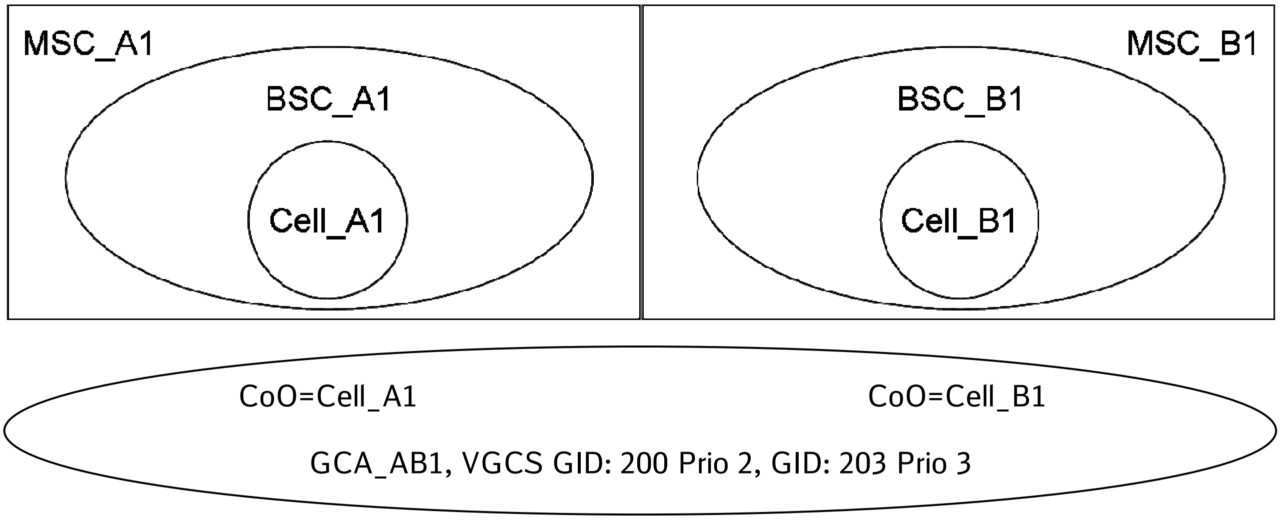
Step 6: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN leaves ongoing VGCS and originates second VGCS call (MSC_B1 anchor).

Step 7: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network A in VPLMN leaves ongoing VGCS and originates second VGCS call (MSC_B1 anchor).

Step 8: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN leaves ongoing VGCS and originates second VGCS call (MSC_B1 anchor).

Test configuration for step 1 to 4

Network A **Network B**



A-MSC_A1	**R-MSC_B1**
MS_A1 (VGCS GID: 200, 203)	MS_B1 (VGCS GID: 200, 203)
MS_A2 (VGCS GID: 200)	MS_B2 (VGCS GID: 200)
MS_B3 (VGCS GID: 200, 203)	MS_A3 (VGCS GID: 200, 203)
MS_B4 (VGCS GID: 200)	MS_A4 (VGCS GID: 200)

Test procedure

Step 1: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network B in VPLMN leaves ongoing VGCS and originates second VGCS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.

Step	Action	Expected result(s)
2)	MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 automatically accept the incoming VGCS call (GID 200).	MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are joining the VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
4)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
5)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
6)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
7)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are able to listen to the announcement of MS_B3.
8)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
9)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
10)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
11)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A3.
12)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
13)	MS_B3 leaves the ongoing VGCS call (GID 200).	MS_B3 is able to leave VGCS call (GID 200).

Step	Action	Expected result(s)
14)	Service subscriber MS_B3 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_A3 and MS_B1 advertise the incoming VGCS call (GID 203) optically and acoustically. So long the dedicated channel is not released, MS_B3 has two-way voice path.
15)	MS_A1, MS_A3 and MS_B1 are joining the VGCS (GID 203).	MS_A1, MS_A3 and MS_B1 are able to join the VGCS (GID 203).
16)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
17)	MS_A2 takes the uplink on GCCH.	MS_A2 has two-way voice path. MS_A4, MS_B2 and MS_B4 are able to listen to the announcement of MS_A2.
18)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
19)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
20)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
21)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
22)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
23)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
24)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
25)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
26)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.

Step	Action	Expected result(s)
27)	MS_B3 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
28)	MS_A1, MS_A3, MS_B1 and MS_B3 rejoin the VGCS call (GID 200).	MS_A2 has two-way voice path. MS_A1, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A2.
29)	MS_A2 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
30)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
31)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
32)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.

Step 2: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN leaves ongoing VGCS and originates second VGCS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are joining the VGCS call (GID 200).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are able to listen to the announcement of MS_B3.
4)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.

Step	Action	Expected result(s)
5)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are able to listen to the announcement of MS_B3.
6)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
7)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
9)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
10)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
11)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A3.
12)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
13)	MS_A1 leaves the ongoing VGCS call (GID 200).	MS_A1 is able to leave VGCS call (GID 200).
14)	Service subscriber MS_A1 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A3, MS_B1 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically. So long the dedicated channel is not released, MS_A1 has two-way voice path.
15)	MS_A3, MS_B1 and MS_B3 are joining the VGCS (GID 203).	MS_A3, MS_B1 and MS_B3 are able to join the VGCS (GID 203).
16)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
17)	MS_A2 takes the uplink on GCCH.	MS_A2 has two-way voice path. MS_A4, MS_B2 and MS_B4 are able to listen to the announcement of MS_A2.
18)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
19)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
20)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
21)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
22)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
23)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
24)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
25)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
26)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
27)	MS_A1 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
28)	MS_A1, MS_A3, MS_B1 and MS_B3 rejoin the VGCS call (GID 200).	MS_A2 has two-way voice path. MS_A1, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A2.
29)	MS_A2 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
30)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are able to listen to the announcement of MS_B3.
31)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
32)	MS_B3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.

Step 3: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network A in VPLMN leaves ongoing VGCS and originates second VGCS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
4)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
5)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
6)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
7)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are able to listen to the announcement of MS_B3.
8)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
9)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
10)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.

Step	Action	Expected result(s)
11)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A3.
12)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
13)	MS_A3 leaves the ongoing VGCS call (GID 200).	MS_A3 is able to leave VGCS call (GID 200).
14)	Service subscriber MS_A3 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically. So long the dedicated channel is not released, MS_A3 has two-way voice path.
15)	MS_A1, MS_B1 and MS_B3 are joining the VGCS (GID 203).	MS_A1, MS_B1 and MS_B3 are able to join the VGCS (GID 203).
16)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
17)	MS_B2 takes the uplink on GCCH.	MS_B2 has two-way voice path. MS_A2, MS_A4 and MS_B4 are able to listen to the announcement of MS_B2.
18)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
19)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
20)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
21)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
22)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.

Step	Action	Expected result(s)
23)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
24)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
25)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
26)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
27)	MS_A3 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
28)	MS_A1, MS_A3, MS_B1 and MS_B3 rejoin the VGCS call (GID 200).	MS_B2 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B3 and MS_B4 are able to listen to the announcement of MS_B2.
29)	MS_B2 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
30)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
31)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
32)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.

Step 4: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN leaves ongoing VGCS and originates second VGCS call (MSC_A1 anchor)

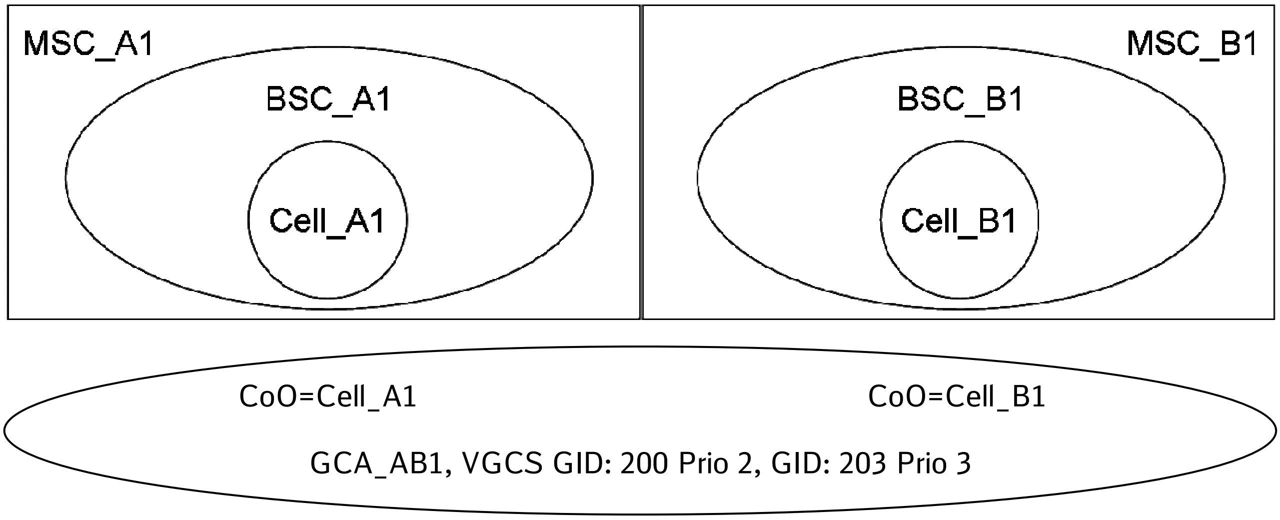
Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are joining the VGCS call (GID 200).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A3.
4)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
5)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A3.
6)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
7)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are able to listen to the announcement of MS_B3.
8)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
9)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
10)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.

Step	Action	Expected result(s)
11)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
12)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
13)	MS_B1 leaves the ongoing VGCS call (GID 200).	MS_B1 is able to leave VGCS call (GID 200).
14)	Service subscriber MS_B1 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically. So long the dedicated channel is not released, MS_B1 has two-way voice path.
15)	MS_A1, MS_A3 and MS_B3 are joining the VGCS (GID 203).	MS_A1, MS_A3 and MS_B3 are able to join the VGCS (GID 203).
16)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
17)	MS_B2 takes the uplink on GCCH.	MS_B2 has two-way voice path. MS_A2, MS_A4 and MS_B4 are able to listen to the announcement of MS_B2.
18)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
19)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
20)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
21)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
22)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.

Step	Action	Expected result(s)
23)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
24)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
25)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
26)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
27)	MS_B1 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
28)	MS_A1, MS_A3, MS_B1 and MS_B3 rejoin the VGCS call (GID 200).	MS_B2 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B3 and MS_B4 are able to listen to the announcement of MS_B2.
29)	MS_B2 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
30)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A3.
31)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
32)	MS_A3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.

Test configuration for step 5 to 8

Network A **Network B**



R-MSC_A1	**A-MSC_B1**
MS_A1 (VGCS GID: 200, 203)	MS_B1 (VGCS GID: 200, 203)
MS_A2 (VGCS GID: 200)	MS_B2 (VGCS GID: 200)
MS_B3 (VGCS GID: 200, 203)	MS_A3 (VGCS GID: 200, 203)
MS_B4 (VGCS GID: 200)	MS_A4 (VGCS GID: 200)

Test procedure

Step 5: Mobile subscriber of network A originates VGCS call in HPLMN and mobile subscriber of network B in VPLMN leaves ongoing VGCS and originates second VGCS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A1 has two-way voice path.

Step	Action	Expected result(s)
2)	MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 automatically accept the incoming VGCS call (GID 200).	MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are joining the VGCS call (GID 200).
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
4)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
5)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
6)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
7)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are able to listen to the announcement of MS_B3.
8)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
9)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
10)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
11)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A3.
12)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
13)	MS_B3 leaves the ongoing VGCS call (GID 200).	MS_B3 is able to leave VGCS call (GID 200).

Step	Action	Expected result(s)
14)	Service subscriber MS_B3 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_A3 and MS_B1 advertise the incoming VGCS call (GID 203) optically and acoustically. So long the dedicated channel is not released, MS_B3 has two-way voice path.
15)	MS_A1, MS_A3 and MS_B1 are joining the VGCS (GID 203).	MS_A1, MS_A3 and MS_B1 are able to join the VGCS (GID 203).
16)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
17)	MS_A2 takes the uplink on GCCH.	MS_A2 has two-way voice path. MS_A4, MS_B2 and MS_B4 are able to listen to the announcement of MS_A2.
18)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
19)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
20)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
21)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
22)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
23)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
24)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
25)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
26)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.

Step	Action	Expected result(s)
27)	MS_B3 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
28)	MS_A1, MS_A3, MS_B1 and MS_B3 rejoin the VGCS call (GID 200).	MS_A2 has two-way voice path. MS_A1, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A2.
29)	MS_A2 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
30)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
31)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
32)	MS_A1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.

Step 6: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN leaves ongoing VGCS and originates second VGCS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B3 has two-way voice path.
2)	MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are joining the VGCS call (GID 200).
3)	MS_B3 takes the uplink on DCH.	MS_B3 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are able to listen to the announcement of MS_B3.
4)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.

Step	Action	Expected result(s)
5)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are able to listen to the announcement of MS_B3.
6)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
7)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
8)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
9)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
10)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
11)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A3.
12)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
13)	MS_A1 leaves the ongoing VGCS call (GID 200).	MS_A1 is able to leave VGCS call (GID 200).
14)	Service subscriber MS_A1 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A3, MS_B1 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically. So long the dedicated channel is not released, MS_A1 has two-way voice path.
15)	MS_A3, MS_B1 and MS_B3 are joining the VGCS (GID 203).	MS_A3, MS_B1 and MS_B3 are able to join the VGCS (GID 203).
16)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
17)	MS_A2 takes the uplink on GCCH.	MS_A2 has two-way voice path. MS_A4, MS_B2 and MS_B4 are able to listen to the announcement of MS_A2.
18)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
19)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
20)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
21)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
22)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
23)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
24)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
25)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
26)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
27)	MS_A1 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released success-fully and all resources are correctly de-allocated.
28)	MS_A1, MS_A3, MS_B1 and MS_B3 rejoin the VGCS call (GID 200).	MS_A2 has two-way voice path. MS_A1, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A2.
29)	MS_A2 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
30)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are able to listen to the announcement of MS_B3.
31)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
32)	MS_B3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.

Step 7: Mobile subscriber of network B originates VGCS call in HPLMN and mobile subscriber of network A in VPLMN leaves ongoing VGCS and originates second VGCS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_B1 has two-way voice path.
2)	MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are joining the VGCS call (GID 200).
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
4)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
5)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
6)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
7)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are able to listen to the announcement of MS_B3.
8)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
9)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
10)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.

Step	Action	Expected result(s)
11)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A3.
12)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
13)	MS_A3 leaves the ongoing VGCS call (GID 200).	MS_A3 is able to leave VGCS call (GID 200).
14)	Service subscriber MS_A3 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically. So long the dedicated channel is not released, MS_A3 has two-way voice path.
15)	MS_A1, MS_B1 and MS_B3 are joining the VGCS (GID 203).	MS_A1, MS_B1 and MS_B3 are able to join the VGCS (GID 203).
16)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
17)	MS_B2 takes the uplink on GCCH.	MS_B2 has two-way voice path. MS_A2, MS_A4 and MS_B4 are able to listen to the announcement of MS_B2.
18)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
19)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
20)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
21)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
22)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.

Step	Action	Expected result(s)
23)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
24)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
25)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
26)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
27)	MS_A3 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
28)	MS_A1, MS_A3, MS_B1 and MS_B3 rejoin the VGCS call (GID 200).	MS_B2 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B3 and MS_B4 are able to listen to the announcement of MS_B2.
29)	MS_B2 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
30)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
31)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
32)	MS_B1 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.

Step 8: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN leaves ongoing VGCS and originates second VGCS call (MSC_B1 anchor)

Step	Action	Expected result(s)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates a VGCS call (GID 200).	VGCS call (GID 200) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 receive a notification about the incoming VGCS call (GID 200). So long the dedicated channel is not released, MS_A3 has two-way voice path.
2)	MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 automatically accept the incoming VGCS call (GID 200).	MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are joining the VGCS call (GID 200).
3)	MS_A3 takes the uplink on DCH.	MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A3.
4)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
5)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A3.
6)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
7)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are able to listen to the announcement of MS_B3.
8)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
9)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
10)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
11)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
12)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
13)	MS_B1 leaves the ongoing VGCS call (GID 200).	MS_B1 is able to leave VGCS call (GID 200).
14)	Service subscriber MS_B1 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically. So long the dedicated channel is not released, MS_B1 has two-way voice path.
15)	MS_A1, MS_A3 and MS_B3 are joining the VGCS (GID 203).	MS_A1, MS_A3 and MS_B3 are able to join the VGCS (GID 203).
16)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
17)	MS_B2 takes the uplink on GCCH.	MS_B2 has two-way voice path. MS_A2, MS_A4 and MS_B4 are able to listen to the announcement of MS_B2.
18)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released.
19)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
20)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
21)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
22)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.
23)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
24)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1 and the uplink is correctly released.

Step	Action	Expected result(s)
25)	MS_B3 takes the uplink on GCCH.	MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
26)	MS_B3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
27)	MS_B1 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
28)	MS_A1, MS_A3, MS_B1 and MS_B3 rejoin the VGCS call (GID 200).	MS_B2 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B3 and MS_B4 are able to listen to the announcement of MS_B2.
29)	MS_B2 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
30)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A3.
31)	MS_A3 releases the uplink.	Uplink free message is send in cell_A1 and cell_B1 and the uplink is correctly released.
32)	MS_A3 releases the VGCS call (GID 200).	VGCS call (GID 200) is released successfully and all resources are correctly de-allocated.

d) Success criteria

A service subscriber can join multiple VGCS calls (GID 200, GID 203) in different networks.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.8.48 VGCS call established in CoO when non CoO is locked

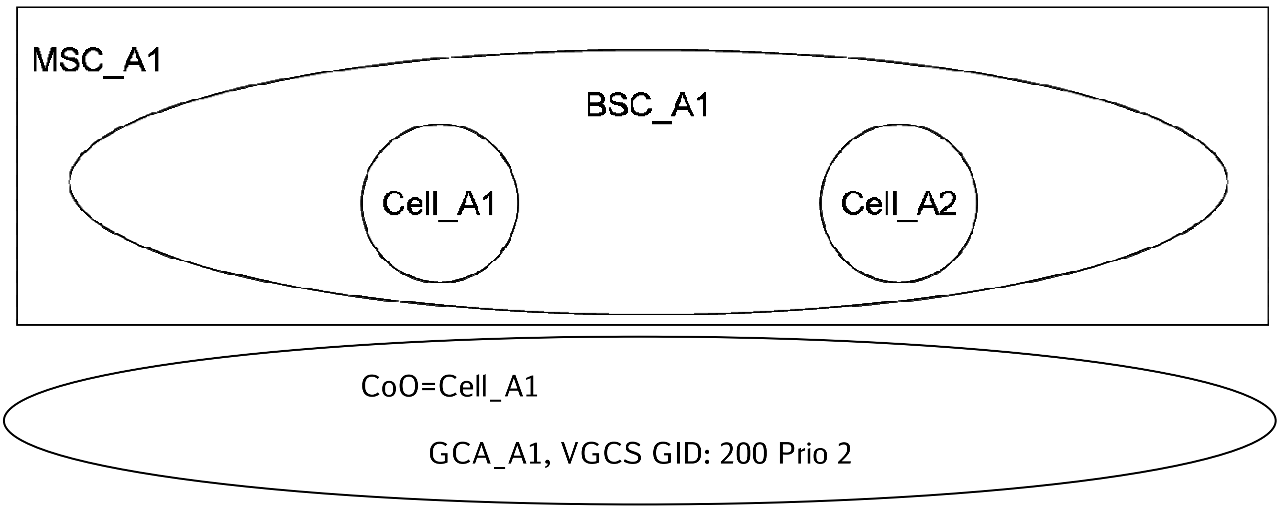
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	9.2.5.1	2.2.1	

a) Purpose

Verify that a VGCS call can be established in the cell of origin, even if the non cell of origin is locked.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A3 (VGCS GID: 200)
MS_A2 (VGCS GID: 200)	

c) Test procedure

Step	Action	Expected result(s)
1)	Lock cell_A2.	Cell_A2 is locked.
2)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established in cell_A1. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2 receives notification of the incoming call. So long the dedicated channel is not released, MS_A1 has two-way voice path. Cell_A2 is locked. No GCCH can be allocated in this cell. 'VGCS/VBS Assignment Failure' is sent from the BSC to the MSC with cause 'No radio resource available'.
3)	MS_A2 accepts the incoming VGCS.	MS_A2 joins VGCS call.
4)	MS_A1 takes the uplink (group call channel).	MS_A1 has two-way voice path, MS_A2 is only listener.
5)	MS_A1 releases the uplink.	The uplink is correctly released.
6)	MS_A1 releases the VGCS call.	The call is released and all resources are correctly de-allocated.
7)	Unlock cell_A2.	Cell_A2 is unlocked.

d) Success criteria

The VGCS call can be established in the cell of origin, even if the non cell of origin is locked.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9 VBS

5.9.1 SS originates VBS call

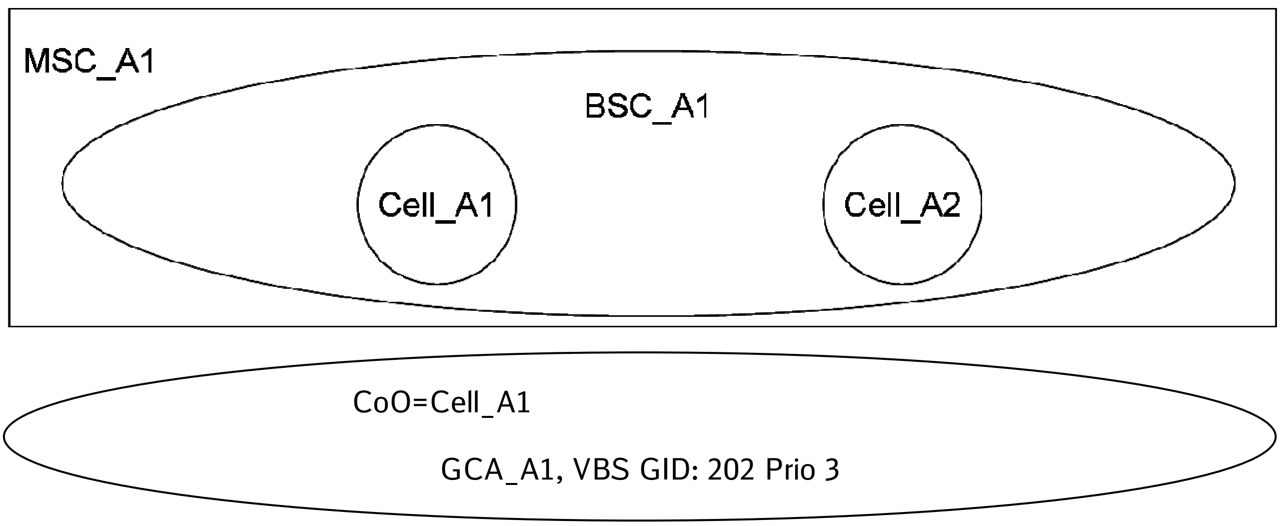
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 2.2.7 2.2.11 3.2.3 3.5.2 3.5.3 11.2.3.2	2.2.1 9.2.11	

a) Purpose

Verify that a service subscriber can originate a VBS call and the correct priority is transmitted from the BSC.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 receives notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
2)	MS_A2 accepts the incoming VBS.	MS_A2 can join VBS call. MS_A1 has two-way voice path, MS_A2 is only listener.
3)	Check the 'Notification Command' message sent from the BSC.	The correct priority is transmitted from the BSC.
4)	MS_A1 releases the VBS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

The service subscriber is able to originate a VBS call and the correct priority is transmitted from the BSC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.2 Modification of broadcast area

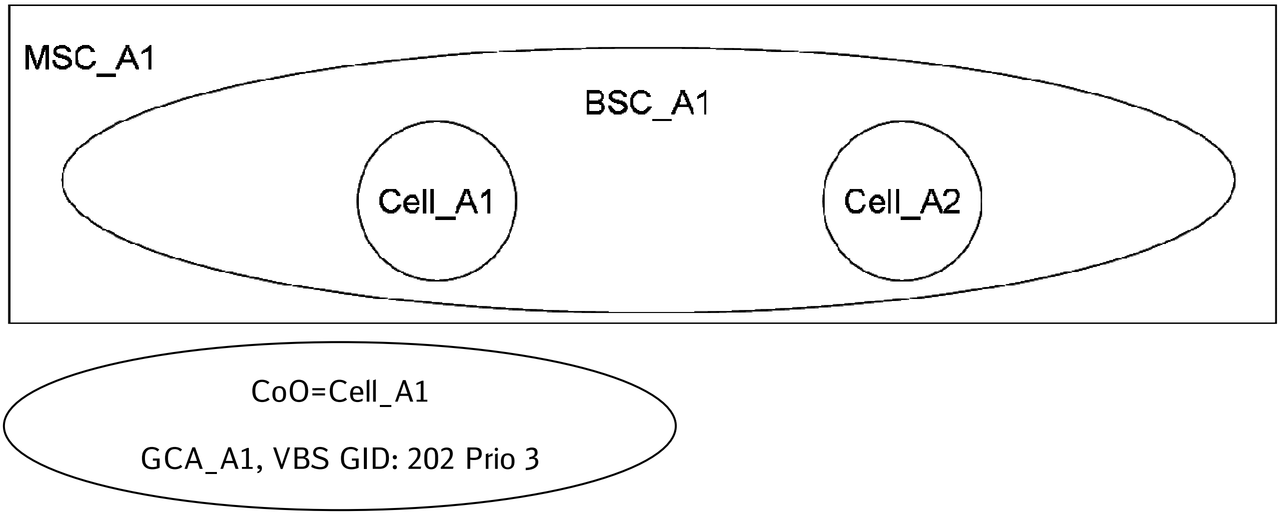
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.10	2.2.1	

a) Purpose

Verify that it is possible to modify a broadcast area.

b) Test configuration / initial conditions

Network A

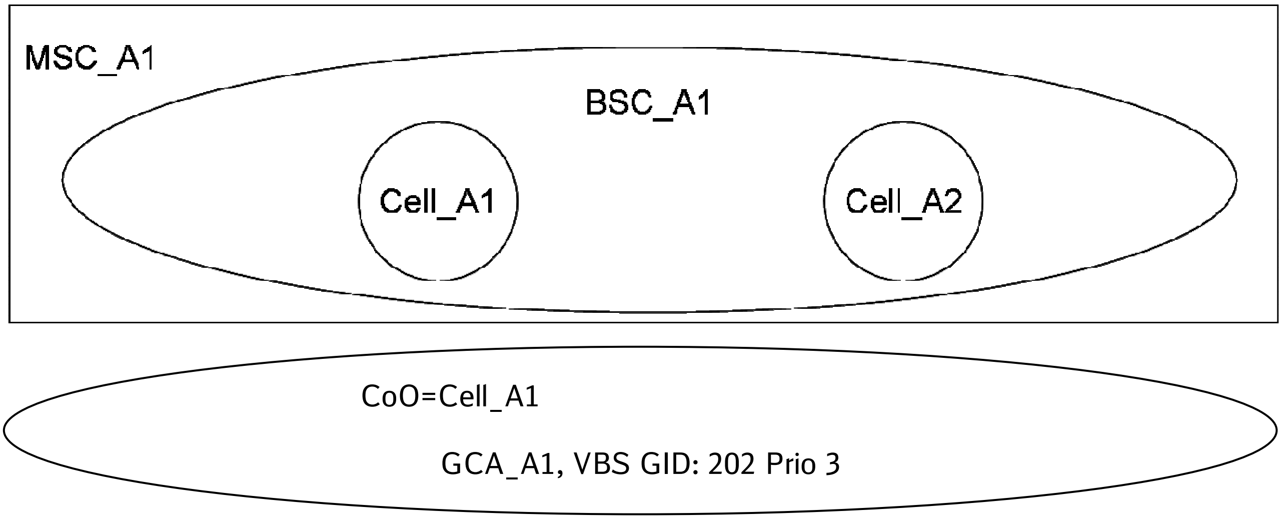


Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)
MS_A3 (VBS GID: 202)	

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A3 receives notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
2)	MS_A3 accepts the incoming VBS.	MS_A3 can join VBS call. MS_A1 has two-way voice path, MS_A3 is only listener.
3)	MS_A1 releases the VBS call.	The call is released and all resources are correctly de-allocated.
4)	Add cell_A2 to the group call area.	The group call area consists of cell_A1 and cell_A2 as shown in the picture below.

Network A



Cell_A1	**Cell_A2**
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)
MS_A3 (VBS GID: 202)	

Step	Action	Expected result(s)
5)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 and MS_A3 receive notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
6)	MS_A2 and MS_A3 accept the incoming VBS call.	MS_A2 and MS_A3 can join VBS call. MS_A1 has two-way voice path, MS_A2 and MS_A3 are only listener.
7)	MS_A1 releases the VBS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

It is possible to modify a broadcast area.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.3 SS originates a VBS (prio4) call

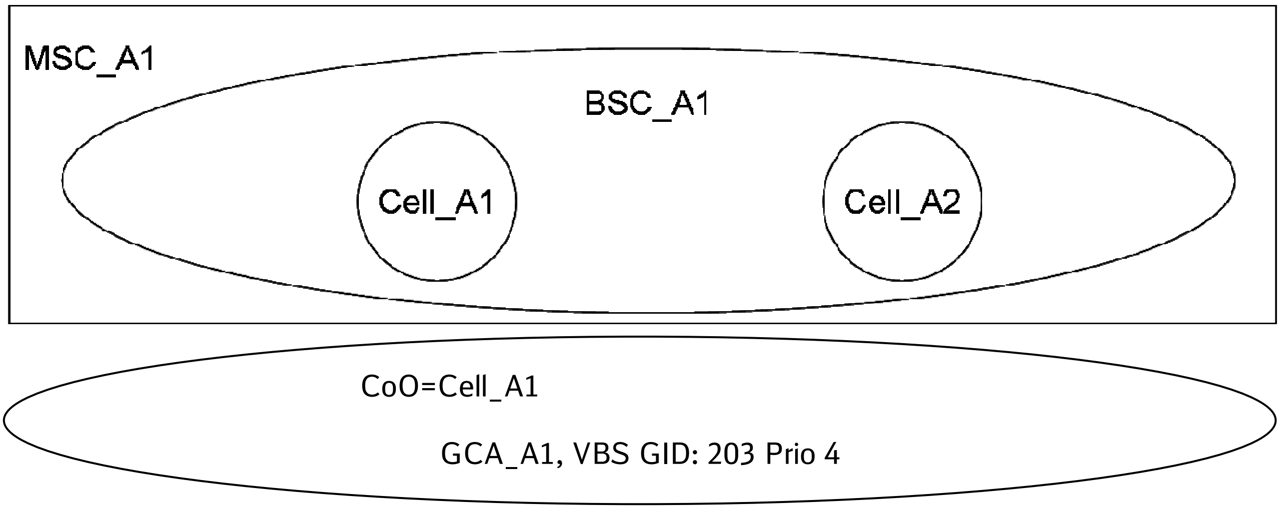
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

Verify that a service subscriber is able to establish a VBS call priority 4 and the correct priority is transmitted from the BSC.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 203)	MS_A2 (VBS GID: 203)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 receives notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
2)	MS_A2 accepts the incoming VBS.	MS_A2 can join VBS call. MS_A1 has two-way voice path, MS_A2 is only listener.
3)	Check the 'Notification Command' message sent from the BSC.	The correct priority is transmitted from the BSC.
4)	MS_A1 releases the VBS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

A service subscriber is able to establish a VBS call priority 4 and the correct priority is transmitted from the BSC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.4 Controller originates a VBS (prio3) call.

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	3.5.2 3.5.3	2.2.1 9.2.11 9.5.4	

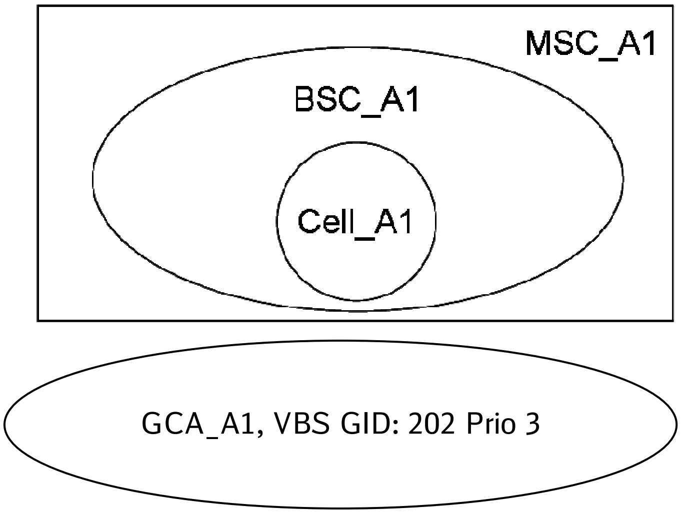
a) Purpose

Verify that a controller can originate a VBS call with priority 3 and that the correct priority is sent on the 'Notification' message from the BSC. Verify that the controller can release the call using the kill sequence.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

Network A



MS_A1 (VBS GID: 202)
CT_A1 (GCA_A1, VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	Controller CT_A1 originates a VBS call by dialling 51 + < GCA > + <GID>	VBS call is correctly established. A group call channel (GCCH) is allocated in cell_A1. MS_A1 receives notification of the incoming VBS call.
2)	MS_A1 accepts the incoming VBS.	MS_A1 joins VBS call. MS_A1 is only listener. CT_A1 has voice path and MS_A1 is able to listen to the announcement of CT_A1.
3)	Check the 'Notification Command' message sent from the BSC.	The correct priority is transmitted from the BSC.
4)	CT_A1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

d) Success criteria

A controller can originate a VBS call with priority 3 and that the correct priority is sent on the 'Notification' message from the BSC. The controller can release the call using the kill sequence.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.5 Controller originates a VBS (prio4) call

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	3.5.2 3.5.3	2.2.1	

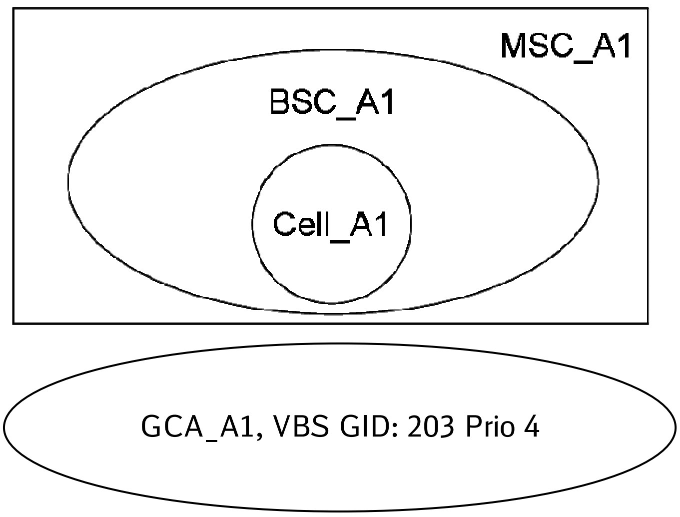
a) Purpose

Verify that a controller can originate a VBS call with priority 4 and that the correct priority is sent on the 'Notification' message from the BSC. Verify that the controller can release the call using the kill sequence.

b) Test configuration / initial conditions

Controller CT_A1 is connected to network A.

Network A



MS_A1 (VBS GID: 203)
CT_A1 (GCA_A1, VBS GID: 203)

c) Test procedure

Step	Action	Expected result(s)
1)	Controller CT_A1 originates a VBS call by dialling 51 + < GCA > + <GID>	VBS call is correctly established. A group call channel (GCCH) is allocated in cell_A1. MS_A1 receives notification of the incoming VBS call.
2)	MS_A1 accepts the incoming VBS.	MS_A1 joins VBS call. MS_A1 is only listener. CT_A1 has voice path and MS_A1 is able to listen to the announcement of CT_A1.
3)	Check the ‘Notification Command’ message sent from the BSC.	The correct priority is transmitted from the BSC.
4)	CT_A1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

d) Success criteria

A controller can originate a VBS call with priority 4 and that the correct priority is sent on the ‘Notification’ message from the BSC. The controller can release the call using the kill sequence.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.6 Controller joins ongoing VBS call

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

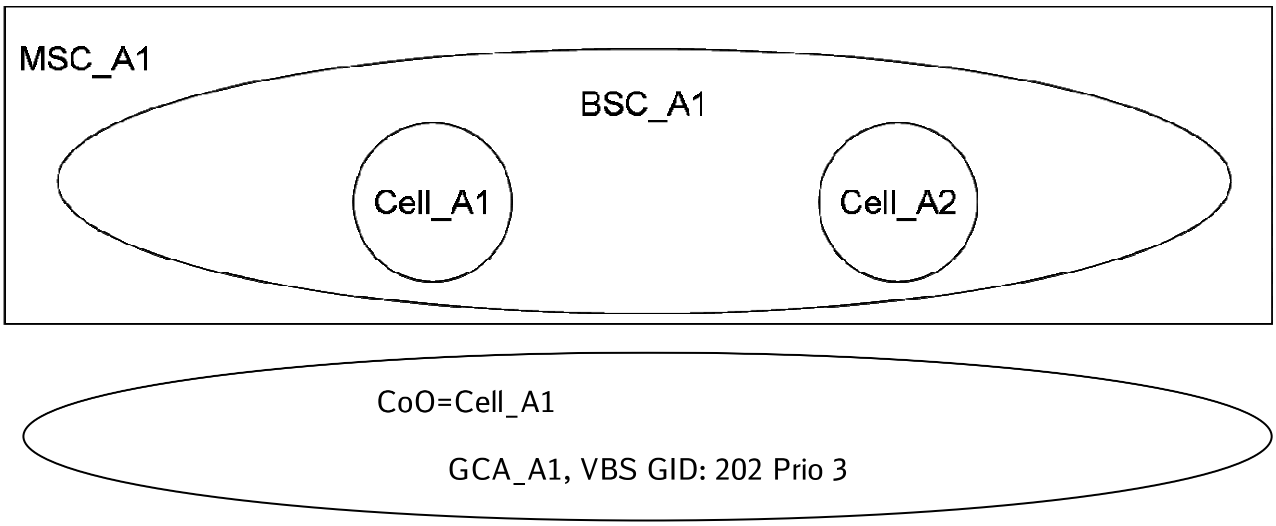
a) Purpose

Verify that a controller can join an ongoing VBS call.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

Network A



Cell_A1	**Cell_A2**
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)
CT_A1 (GCA_A1, VBS GID: 202)	

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 and CT_A1 receive notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
2)	MS_A2 and CT_A1 accept the incoming VBS call.	MS_A2 and CT_A1 can join the VBS call. MS_A1 has two-way voice path, CT_A1 and MS_A2 are only listener.
3)	CT_A1 leaves the VBS call.	CT_A1 is not part of the call anymore. VBS call is not released.
4)	Controller CT_A1 dials 51 + < GCA > + <GID>	Controller CT_A1 joins the VBS call again. CT_A1 joins VBS call. MS_A1 has two-way voice path, CT_A1 and MS_A2 are only listener.
5)	MS_A1 releases the VBS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

A controller can join an ongoing VBS call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.7 SS enters into VBS broadcast area with ongoing VBS call and is notified of it, SS joins the VBS call

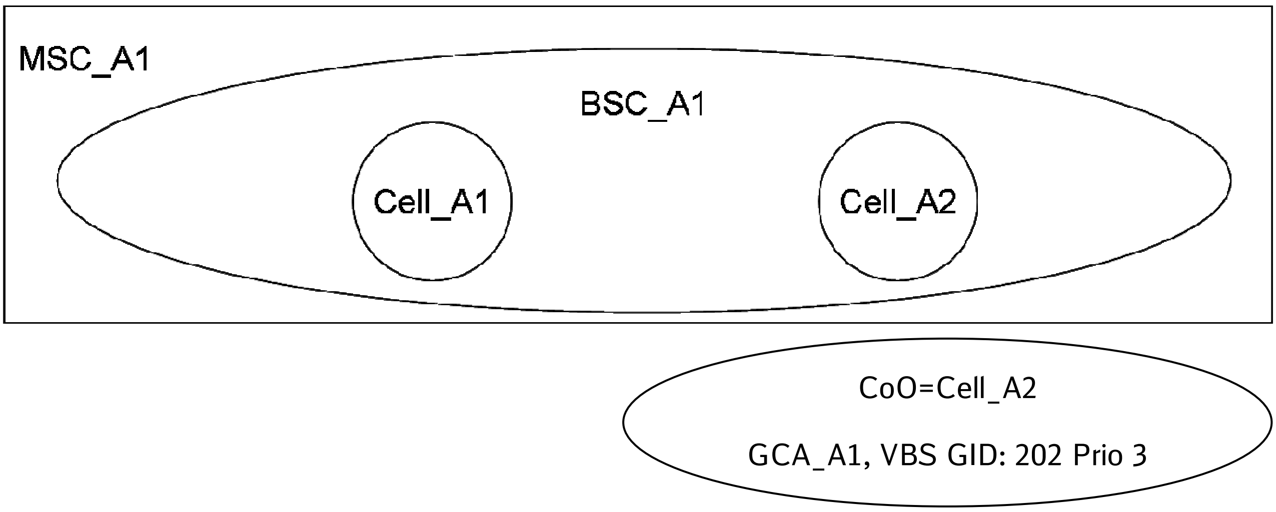
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

Verify that a service subscriber is notified of an ongoing VBS call by entering the VBS broadcast area and is able to join this call.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)
	MS_A3 (VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A2 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. MS_A3 receives notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
2)	MS_A3 accepts the incoming VBS.	MS_A3 joins VBS call. MS_A2 has two-way voice path, MS_A3 is only listener.
3)	MS_A1 moves from cell_A1 to cell_A2 (VBS broadcast area).	MS_A1 is notified about the ongoing VBS call.
4)	MS_A1 joins the call.	MS_A1 joins the call. MS_A2 has two-way voice path, MS_A1 and MS_A3 are only listeners.
5)	MS_A2 releases the VBS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

The service subscriber is notified of the ongoing VBS call by entering the VBS broadcast area and is able to join the call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.8 Parallel VBS (different GID) calls are possible in the same cell

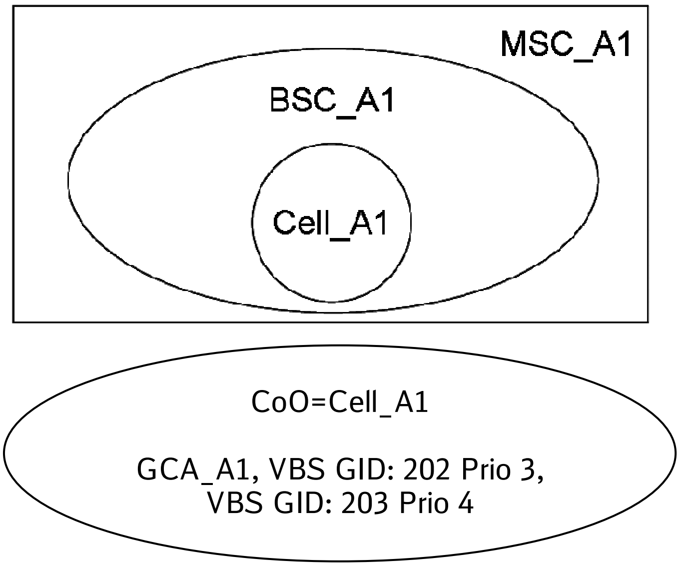
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

Verify that it is possible to have different VBS calls with a different GID in a cell in parallel.

b) Test configuration / initial conditions

Network A



MS_A1 (VBS GID: 202)
MS_A2 (VBS GID: 202)
MS_A3 (VBS GID: 203)
MS_A4 (VBS GID: 203)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2 receives notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
2)	MS_A2 accepts the incoming VBS call.	MS_A2 joins VBS call. MS_A1 has two-way voice path, MS_A2 is only listener.
3)	Service subscriber MS_A3 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A4 receives notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
4)	MS_A4 accepts the incoming VBS.	MS_A4 joins VBS call. MS_A3 has two-way voice path, MS_A4 is only listener.
5)	MS_A1 releases the VBS call.	The call is released and all resources are correctly de-allocated.
6)	MS_A3 releases the VBS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

It is possible to have different VBS calls with a different GID in a cell in parallel.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**

5.9.9 Parallel VBS calls with the same GID are possible (same BSS, different BSS)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

Verify that it is possible to establish two VBS calls with the same GID in parallel in the same BSS as well as in different BSS.

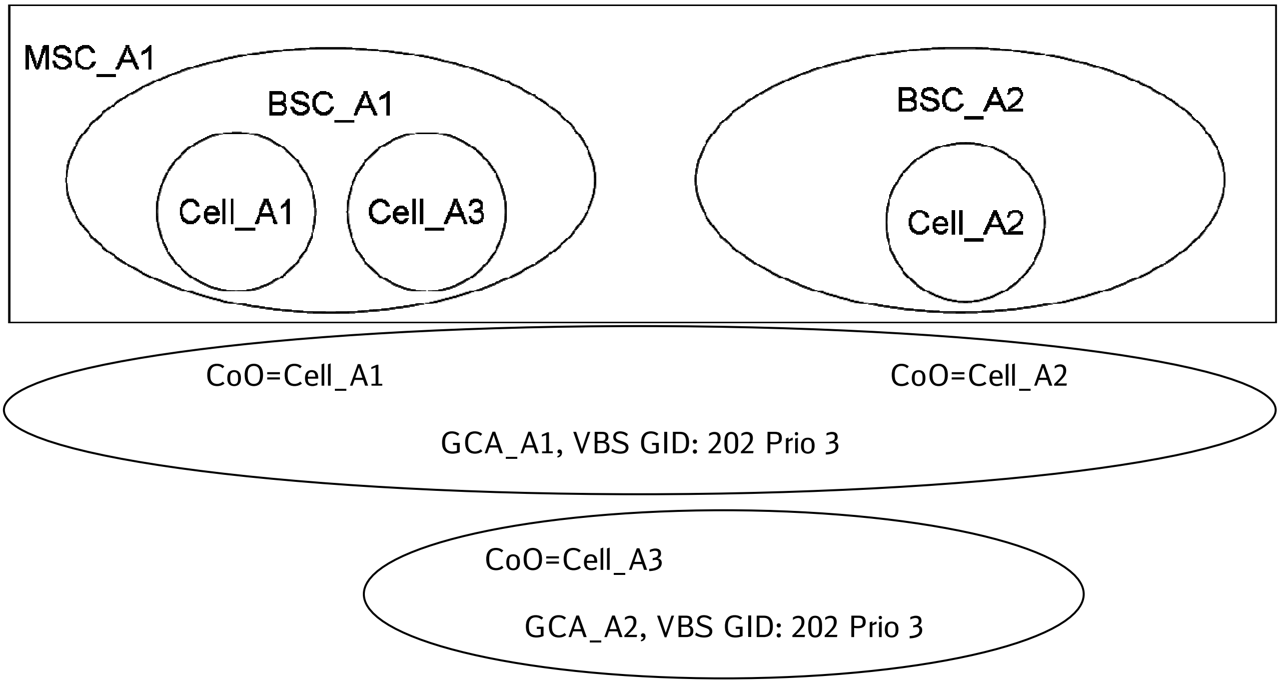
b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Two VBS calls established in same BSS.

Step 2: Two VBS calls established in different BSS.

Network A



Cell_A1	Cell_A3	Cell_A2
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)	MS_A3 (VBS GID: 202)
	MS_A4 (VBS GID: 202)	MS_A5 (VBS GID: 202)

c) Test procedure

Step 1: Two VBS calls established in same BSS.

Step	Action	Expected result(s)
1)	Service subscriber MS_A2 originates a VBS call (GCA_A2).	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A3. A group call channel (GCCH) is allocated in cell_A2. MS_A3, MS_A4 and MS_A5 receive notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
2)	MS_A3, MS_A4 and MS_A5 accept the incoming VBS.	MS_A3, MS_A4 and MS_A5 join VBS call. MS_A2 has two-way voice path, MS_A3, MS_A4 and MS_A5 are only listener.
3)	Service subscriber MS_A1 originates a VBS call (GCA_A1)	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A3 and cell_A2. MS_A2, MS_A3, MS_A4 and MS_A5 receive notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
4)	MS_A3 leaves the first VBS call (GCA_A2) and joins the second VBS call (GCA_A1). MS_A2, MS_A4 and MS_A5 remain on the first call (GCA_A2).	MS_A3 joins VBS call. MS_A1 has two-way voice path, MS_A3 is only listener. MS_A2, MS_A4 and MS_A5 do not join the second call (GCA_A1).
5)	MS_A1 releases the VBS call. MS_A2 releases the VBS call.	The calls are released and all resources are correctly de-allocated.

Step 2: Two VBS calls established in different BSS.

Step	Action	Expected result(s)
1)	Service subscriber MS_A2 originates a VBS call (GCA_A2).	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A3. A group call channel (GCCH) is allocated in cell_A2. MS_A3, MS_A4 and MS_A5 receive notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
2)	MS_A3, MS_A4 and MS_A5 accept the incoming VBS.	MS_A3, MS_A4 and MS_A5 join VBS call. MS_A2 has two-way voice path, MS_A3, MS_A4 and MS_A5 are only listener.
3)	Service subscriber MS_A3 leaves the first VBS call (GCA_A1).	Service subscriber MS_A3 leaves the call.
4)	Service subscriber MS_A3 originates a VBS call (GCA_A1)	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1 and cell_A3. MS_A1, MS_A2, MS_A4 and MS_A5 receive notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
5)	MS_A1 joins the VBS call with (GCA_A1). MS_A2, MS_A4 and MS_A5 are notified about the second VBS call, but do not accept this one.	MS_A1 joins VBS call. MS_A3 has two-way voice path, MS_A1 is only listener. MS_A2, MS_A4 and MS_A5 remain on the first VBS call (GCA_A2).
6)	MS_A2 releases the VBS call. MS_A3 releases the VBS call.	The calls are released and all resources are correctly de-allocated.

d) Success criteria

It is possible to establish two VBS calls with the same GID in parallel in the same BSS as well as in different BSS.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.10 Two controllers initiate VBS with the same GID but different GCAs

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	3.5.2 3.5.3	2.2.1	

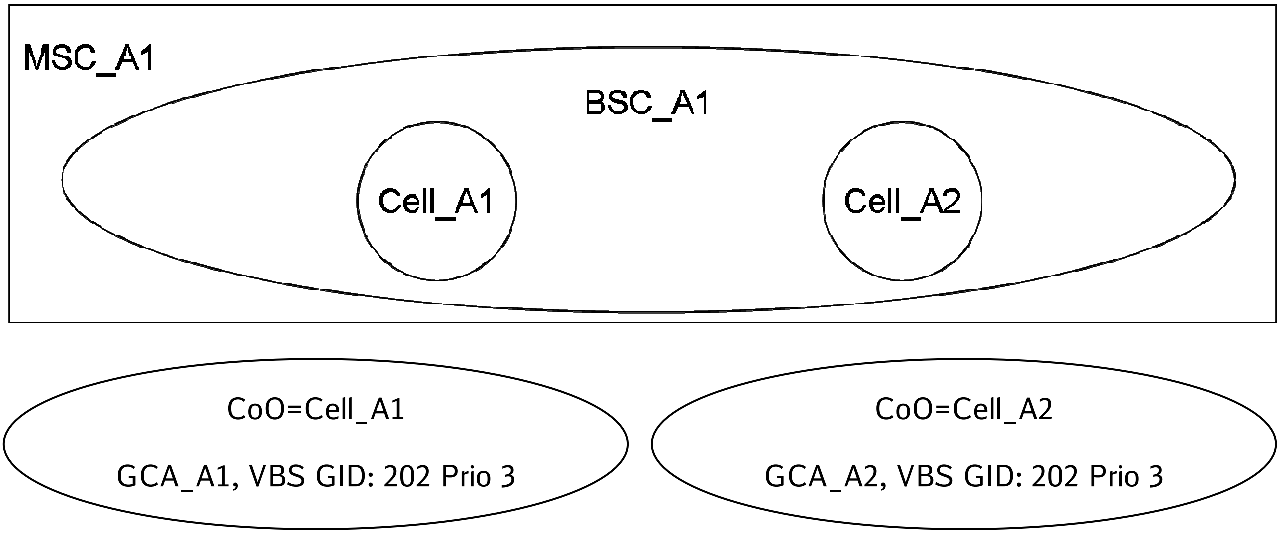
a) Purpose

Verify that two voice broadcast calls can be established with the same GID in different group call areas at the same time.

b) Test configuration / initial conditions

CT_A1 is connected to network A.
CT_A2 is connected to network A.

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)
CT_A1 (GCA_A1, VBS GID: 202)	CT_A2 (GCA_A2, VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	At the same time: controller CT_A1 originates a VBS call by dialling 51 + < GCA_A1 > + <GID> and controller CT_A2 originates a VBS call by dialling 51 + < GCA_A2 > + <GID>	MS_A1 receives notification of the incoming VBS call (GCA_A1). MS_A2 receives notification of the incoming VBS call (GCA_A2).
2)	MS_A1 and MS_A2 accept the incoming VBS call respectively.	MS_A1 joins VBS call (GCA_A1). VBS call is correctly established. A group call channel (GCCH) is allocated in cell_A1. CT_A1 has two-way voice path during the whole call. MS_A1 is only listener. MS_A2 joins VBS call (GCA_A2). VBS call is correctly established. A group call channel (GCCH) is allocated in cell_A2. CT_A2 has two-way voice path during the whole call. MS_A2 is only listener.
3)	CT_A1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.
4)	CT_A2 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

d) Success criteria

Two voice broadcast calls can be established with the same GID in different group call areas at the same time.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.11 MSC receives VBS/VGCS Queuing Indication followed by Assignment Result from non COO during SS originated VBS call

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

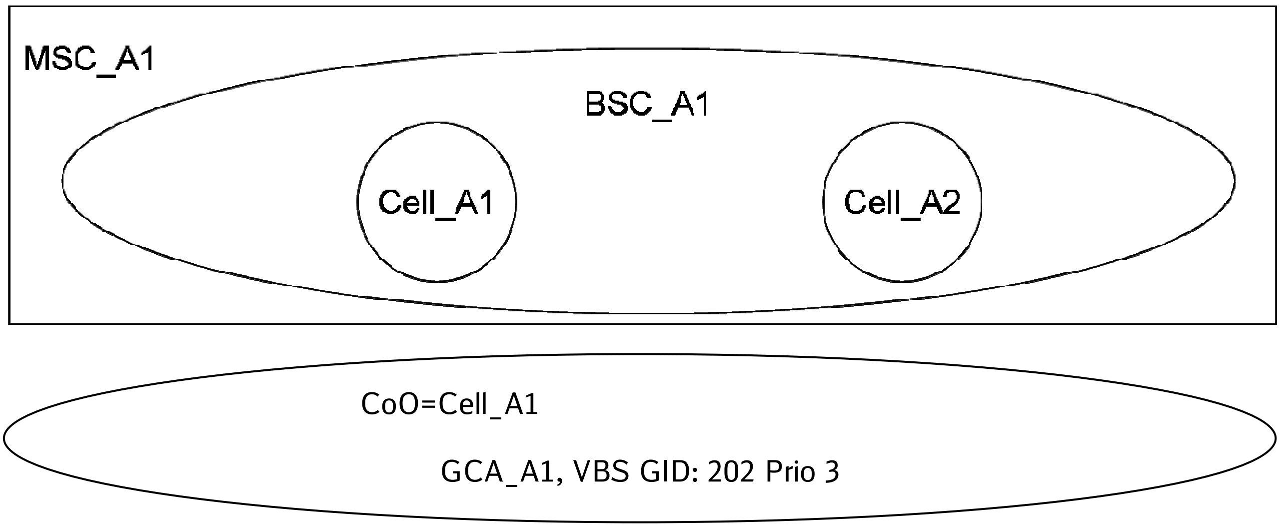
a) Purpose

Verify that a VBS call can be established in the cell of origin, even if in the non cell of origin the call is queued and verify that after resources are freed, 'Assignment Result' is sent to the MSC and a GCCH is allocated in the non cell of origin.

b) Test configuration / initial conditions

Queuing is activated on the network.

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A3 (VBS GID: 202)
MS_A2 (VBS GID: 202)	MS_A4 (VBS GID: 202)
	MS_A5
	MS_A6
	MS_A7
	MS_A8

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A3 establishes a PTP call to MS_A4 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A3 and MS_A4.
2)	MS_A5 establishes a PTP call to MS_A6 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A5 and MS_A6.
3)	MS_A7 establishes a PTP call to MS_A8 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A7 and MS_A8. There are no more traffic channels available in cell_A2.
4)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established in cell_A1. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2 receives notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call. In cell_A2, all traffic channels are busy. VBS call is queued for this cell. 'VGCS/VBS Queuing Indication' message is sent from the BSC to the MSC. If traffic channels are available before timer T14 expires, the message 'VGCS/VBS Assignment Result' is sent to the MSC.
5)	MS_A2 accepts the incoming VBS.	MS_A2 joins VBS call. MS_A1 has two-way voice path, MS_A2 is only listener.
6)	MS_A3 releases the PTP call before timer T14 expires.	'VGCS/VBS Assignment Result' is sent to the MSC before timer expiration. MS_A3 and MS_A4 are notified about the incoming VBS call. A GCCH is allocated in cell_A2.
7)	MS_A3 and MS_4 accept the incoming VBS call.	MS_A3 and MS_A4 join the VBS call. MS_A1 has two-way voice path. MS_A2, MS_A3 and MS_A4 are only listener.
8)	MS_A1 releases the VBS call.	The call is released and all resources are correctly de-allocated.

Step	Action	Expected result(s)
9)	MS_A5 releases the PTP call.	The call is released and all related resources are correctly de-allocated.
10)	MS_A7 releases the PTP call.	The call is released and all related resources are correctly de-allocated.

d) Success criteria

The VBS call can be established in the cell of origin, even if in the non cell of origin the call is queued. After resources are freed, 'Assignment Result' is sent to the MSC and a GCCH is allocated in the non cell of origin.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.12 MSC receives VBS/VGCS Queuing Indication followed by Assignment Result from COO during SS originated VBS call

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

Verify that a VBS call can be established in the cell of origin, when in this cell the group call channel is queued and after resources are freed, 'Assignment Result' is sent to the MSC and a GCCH is allocated.

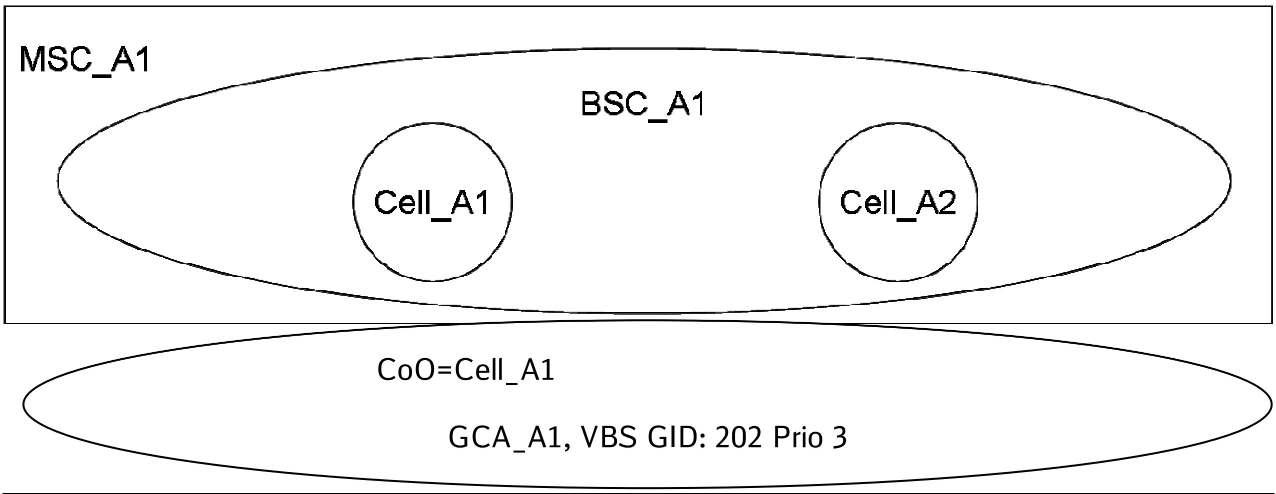
b) Test configuration / initial conditions

CT_A1 is connected to network A.

Queuing is activated on the network.

Check the values of BSC Timer T14 and MSC Timer Txx.

Network A



Cell_A1	**Cell_A2**
MS_A1	MS_A7 (VBS GID: 202)
MS_A2	
MS_A3 (VBS GID: 202)	
MS_A4 (VBS GID: 202)	
MS_A5	
MS_A6 (VBS GID: 202)	
CT_A1	

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A1 and MS_A2. Two traffic channels are busy in the cell of origin.
2)	MS_A3 establishes a PTP call to MS_A4 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A3 and MS_A4. Four traffic channels are busy in the cell of origin.
3)	MS_A5 establishes a PTP call to CT_A1 with priority 1 by dialling *75<Priority>#<ISDN>.	The call is established correctly, there is a speech path between MS_A5 and CT_A1. All traffic channels except one are busy on the cell of origin cell_A1.
4)	Service subscriber MS_A6 originates a VBS call.	A dedicated channel (DCH) is allocated in cell_A1. A GCCH is allocated in cell_A2. The group call channel is queued in cell_A1. 'VGCS/VBS Queuing Indication' message is sent from the BSC to the MSC. MS_A7 receives notification of the incoming call.
5)	If BSC Timer T14 > MSC Timer Txx then: MS_A3 releases the PTP call after the BSC sends the 'VGCS/VBS Queuing Indication' message to the MSC but before expiration of timer Txx. Otherwise the call will be terminated from the MSC. If MSC Timer Txx > BSC Timer T14 then: MS_A3 releases the PTP call after the BSC sends the 'VGCS/VBS Queuing Indication' message to the MSC but before expiration of timer T14. Otherwise message 'VGCS/VBS Assignment Failure' is sent to the MSC.	Message 'VGCS/VBS Assignment Result' is sent to the MSC. VBS call is correctly established. A group call channel (GCCH) is allocated in cell_A1. MS_A3 and MS_A4 receive notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
6)	MS_A3 and MS_A4 accept the incoming VBS call.	MS_A3 and MS_A4 join VBS call. MS_A6 has two-way voice path, MS_A3, MS_A7, and MS_A4 are only listener.
7)	MS_A6 releases the VBS call.	The call is released and all related resources are correctly de-allocated.

Step	Action	Expected result(s)
8)	MS_A5 releases the PTP call.	The call is released and all related resources are correctly de-allocated.
9)	MS_A1 releases the PTP call.	The call is released and all related resources are correctly de-allocated.

d) Success criteria

A VBS call can be established in the cell of origin, when in this cell the group call channel is queued and after resources are freed, ‘Assignment Result’ is sent to the MSC and a GCCH is allocated.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.13 MSC receives VBS/VGCS Queuing Indication followed by Assignment Failure from non COO during SS originated VBS call

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

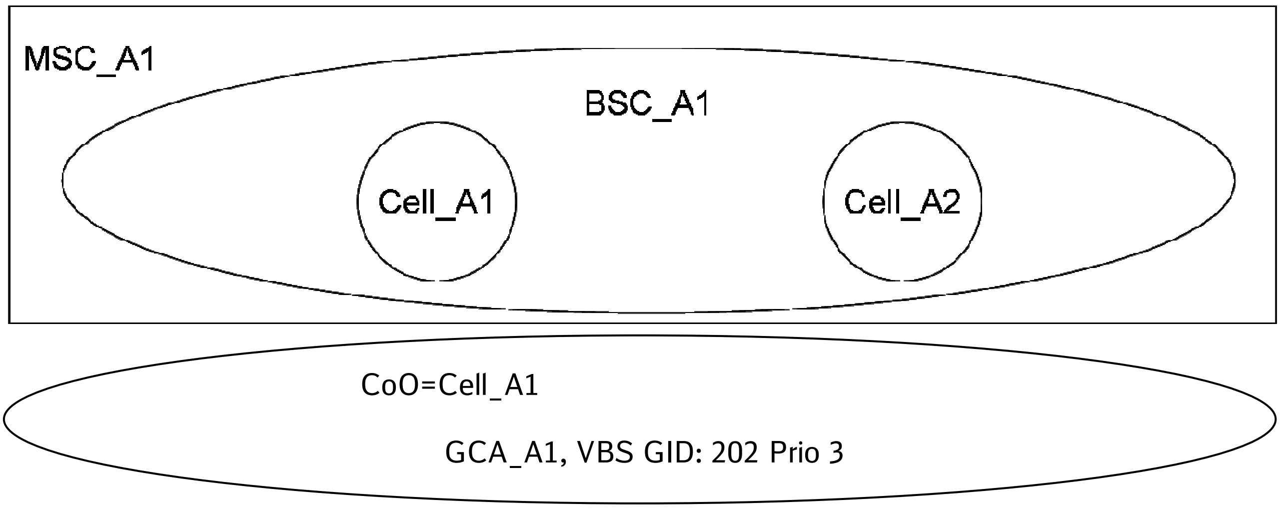
a) Purpose

Verify that VBS call can be established in the cell of origin, even if in the non cell of origin the call is queued and an 'Assignment Failure' is sent to the MSC.

b) Test configuration / initial conditions

Queuing is activated on the network.

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A3 (VBS GID: 202)
MS_A2 (VBS GID: 202)	MS_A4 (VBS GID: 202)
	MS_A5
	MS_A6
	MS_A7
	MS_A8

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A3 establishes a PTP call to MS_A4 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A3 and MS_A4.
2)	MS_A5 establishes a PTP call to MS_A6 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A5 and MS_A6.
3)	MS_A7 establishes a PTP call to MS_A8 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A7 and MS_A8. There are no more traffic channels available in cell_A2.
4)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established in cell_A1. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2 receives notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call. In cell_A2, all traffic channels are busy. VBS call is queued for this cell. 'VGCS/VBS Queuing Indication' message is sent from the BSC to the MSC. If no traffic channels are available before timer T14 expires, the message 'VGCS/VBS Assignment Failure' with cause 'No radio resource available' is sent to the MSC.
5)	MS_A2 accepts the incoming VBS.	MS_A2 joins VBS call. MS_A1 has two-way voice path, MS_A2 is only listener.
6)	MS_A3 releases the PTP call after timer T14 expires.	'VGCS/VBS Assignment Failure' with cause 'No radio resource available' is sent to the MSC after timer expiration. The PTP call is released and all related resources are correctly de-allocated. No VBS call could be established in cell_A2.
7)	MS_A1 releases the VBS call.	The call is released and all resources are correctly de-allocated.
8)	MS_A5 releases the PTP call.	The call is released and all related resources are correctly de-allocated.

Step	Action	Expected result(s)
11)	MS_A7 releases the PTP call.	The call is released and all related resources are correctly de-allocated.

d) Success criteria

The VBS call can be established in the cell of origin, even if in the non cell of origin the call is queued and an ‘Assignment Failure’ is sent to the MSC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.14 MSC receives VBS/VGCS Queuing Indication followed by Assignment Failure from CoO during SS originated VBS call

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

Verify that a VBS call cannot be established in the cell of origin, when in this cell the group call channel is queued and resources are not freed before T14 expires.

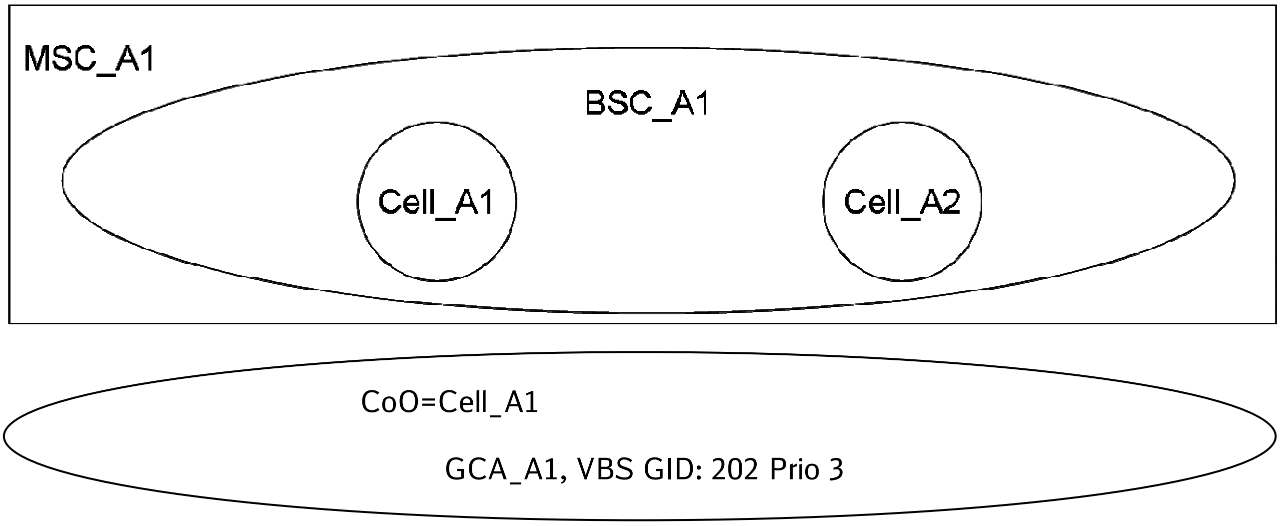
b) Test configuration / initial conditions

CT_A1 is connected to network A.

Queuing is activated on the network.

MSC Timer Txx > BSC Timer T14. Otherwise “Assignment Failure” will not be available because the call will be terminated from the MSC. Note: In this case the test case is not applicable.

Network A



Cell_A1	**Cell_A2**
MS_A1	MS_A7 (VBS GID: 202)
MS_A2	
MS_A3 (VBS GID: 202)	
MS_A4 (VBS GID: 202)	
MS_A5	
MS_A6 (VBS GID: 202)	
CT_A1	

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A1 and MS_A2. Two traffic channels are busy in the cell of origin.
2)	MS_A3 establishes a PTP call to MS_A4 with priority 1 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A3 and MS_A4. Four traffic channels are busy in the cell of origin.
3)	MS_A5 establishes a PTP call to CT_A1 with priority 1 by dialling *75<Priority>#<ISDN>.	The call is established correctly, there is a speech path between MS_A5 and CT_A1. All traffic channels except one are busy on the cell of origin cell_A1.

Step	Action	Expected result(s)
4)	Service subscriber MS_A6 originates a VBS call.	A dedicated channel (DCH) is allocated in cell_A1. A GCCH is allocated in cell_A2. The group call channel is queued in cell_A1. 'VGCS/VBS Queuing Indication' message is sent from the BSC to the MSC. MS_A7 receives notification of the incoming call.
5)	MS_A3 releases the PTP call after the BSC sends the 'VGCS/VBS Queuing Indication' message to the MSC and after expiration of timer T14.	Message 'VGCS/VBS Assignment Failure' is sent to the MSC. All related resources are correctly de-allocated.
6)	MS_A5 releases the PTP call.	The call is released and all related resources are correctly de-allocated.
7)	MS_A1 releases the PTP call.	The call is released and all related resources are correctly de-allocated.

d) Success criteria

The VBS call cannot be established in the cell of origin, when in this cell the group call channel is queued and resources are not freed before T14 expires.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.15 Contact loss for VBS originator

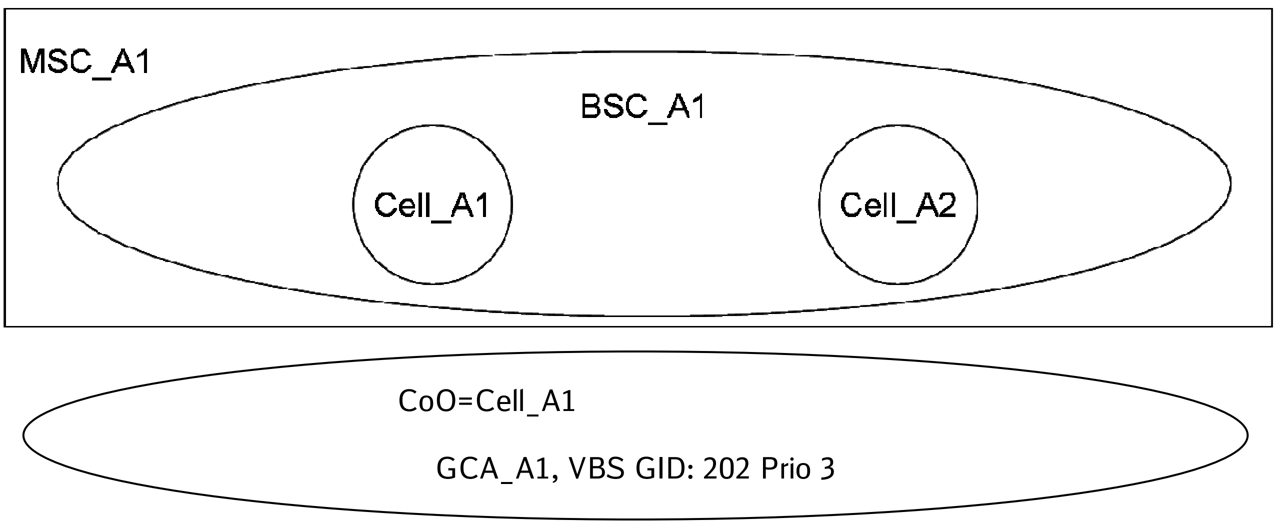
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

Verify that the VBS call is correctly released in case the originating service subscriber looses contact to the network.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)
MS_A3 (VBS GID: 202)	

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 and MS_A3 receive notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
2)	MS_A2 and MS_A3 accept the incoming VBS.	MS_A2 and MS_A3 join VBS call. MS_A1 has two-way voice path, MS_A2 and MS_A3 are only listener.
3)	Remove the battery of MS_A1 so it looses contact with the network.	The dedicated channel is correctly released. Release cause: “Radio Interface Failure”. The call is released and all resources are correctly de-allocated.

d) Success criteria

The VBS call is correctly released in case the originating service subscriber looses contact to the network.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.16 Equipment failure (TRX) for VBS originator

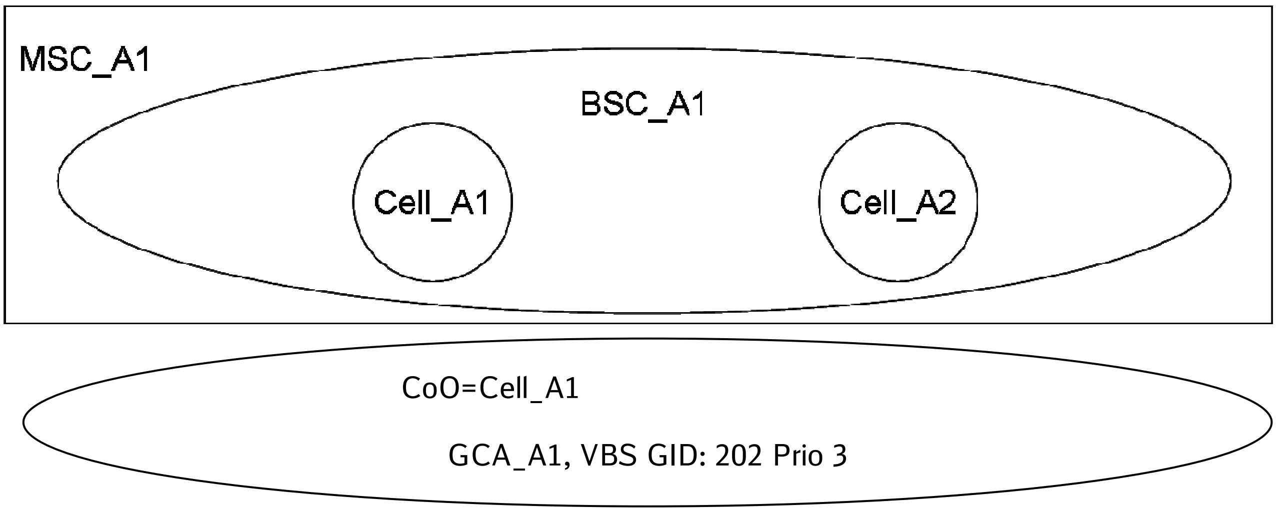
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

Verify that the VBS call is correctly released in case of equipment failure (TRX failure) on the TRX where the dedicated channel is allocated.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)
	MS_A3 (VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 and MS_A3 receive notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
2)	MS_A2 and MS_A3 accept the incoming VBS.	MS_A2 and MS_A3 join VBS call. MS_A1 has two-way voice path, MS_A2 and MS_A3 are only listener.
3)	Originate a TRX failure on the TRX of cell_A1 (where the dedicated channel is allocated).	The dedicated channel is correctly released. Release cause: “Equipment Failure”. The call is released and all resources are correctly de-allocated.
4)	Put TRX back into service again.	TRX is working correctly.

d) Success criteria

The VBS call is correctly released in case of equipment failure (TRX failure) on the TRX where the dedicated channel is allocated.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.17 Equipment failure (PCM) for VBS originator

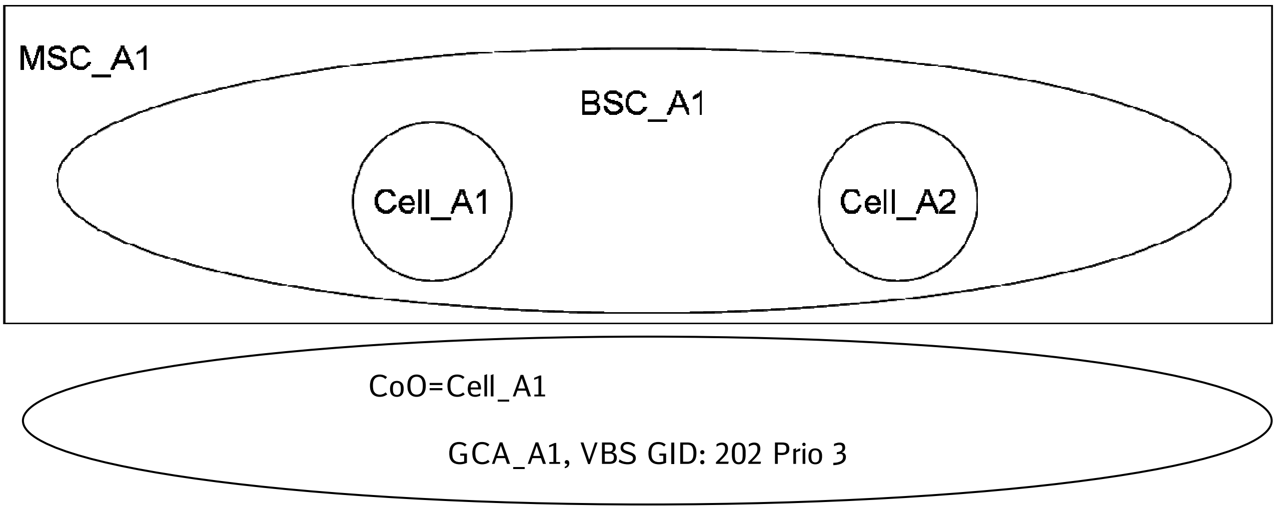
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

Verify that the VBS call is correctly released in case of equipment failure (PCM failure) in the cell where the dedicated channel is allocated.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)
	MS_A3 (VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 and MS_A3 receive notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
2)	MS_A2 and MS_A3 accept the incoming VBS.	MS_A2 and MS_A3 join VBS call. MS_A1 has two-way voice path. MS_A1 and MS_A3 are only listener.
3)	Originate a PCM failure in cell_A1 (where the dedicated channel is allocated).	The dedicated channel is correctly released. Release cause: “Equipment Failure”. The call is released and all resources are correctly de-allocated.
4)	Put the PCM link back into service again.	PCM link is working correctly.

d) Success criteria

The VBS call is correctly released in case of equipment failure (PCM failure) in the cell where the dedicated channel is allocated.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.18 VBS call established in CoO when non CoO is locked

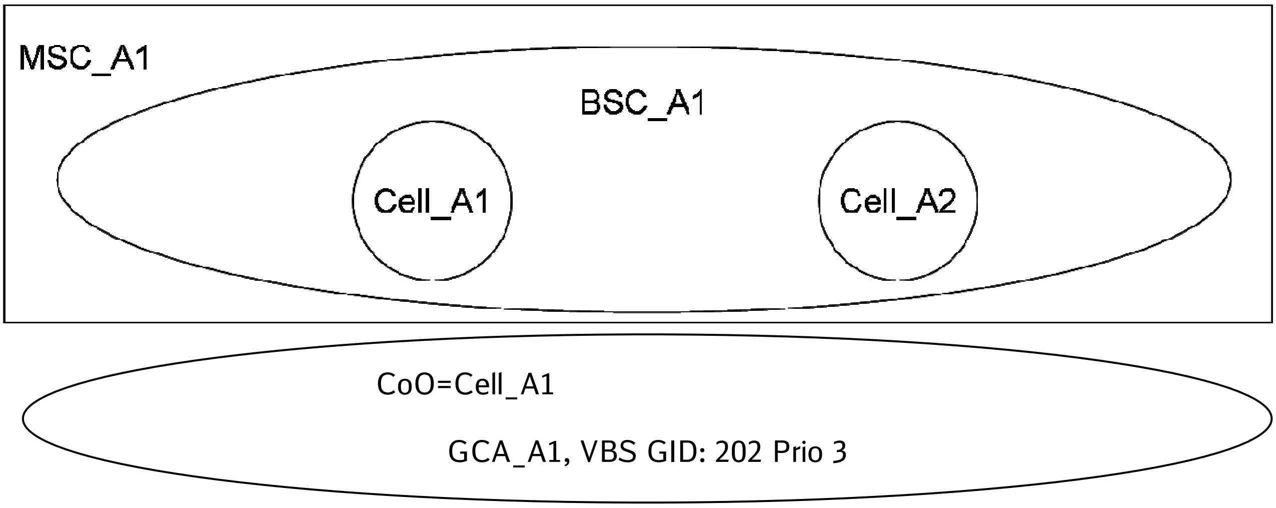
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

Verify that a VBS call can be established in the cell of origin, even if the non cell of origin is locked.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A3 (VBS GID: 202)
MS_A2 (VBS GID: 202)	

c) Test procedure

Step	Action	Expected result(s)
1)	Lock cell_A2.	Cell_A2 is locked.

Step	Action	Expected result(s)
2)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established in cell_A1. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2 receives notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call. Cell_A2 is locked. No GCCH can be allocated in this cell. 'VGCS/VBS Assignment Failure' is sent from the BSC to the MSC with cause 'No radio resource available'.
3)	MS_A2 accepts the incoming VBS call.	MS_A2 joins VBS call. MS_A1 has two-way voice path, MS_A2 is only listener.
4)	MS_A1 releases the VBS call.	The call is released and all resources are correctly de-allocated.
5)	Unlock cell_A2.	Cell_A2 is unlocked.

d) Success criteria

The VBS call can be established in the cell of origin, even if the non cell of origin is locked.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.19 Origination of VBS call from non subscribed MS fails

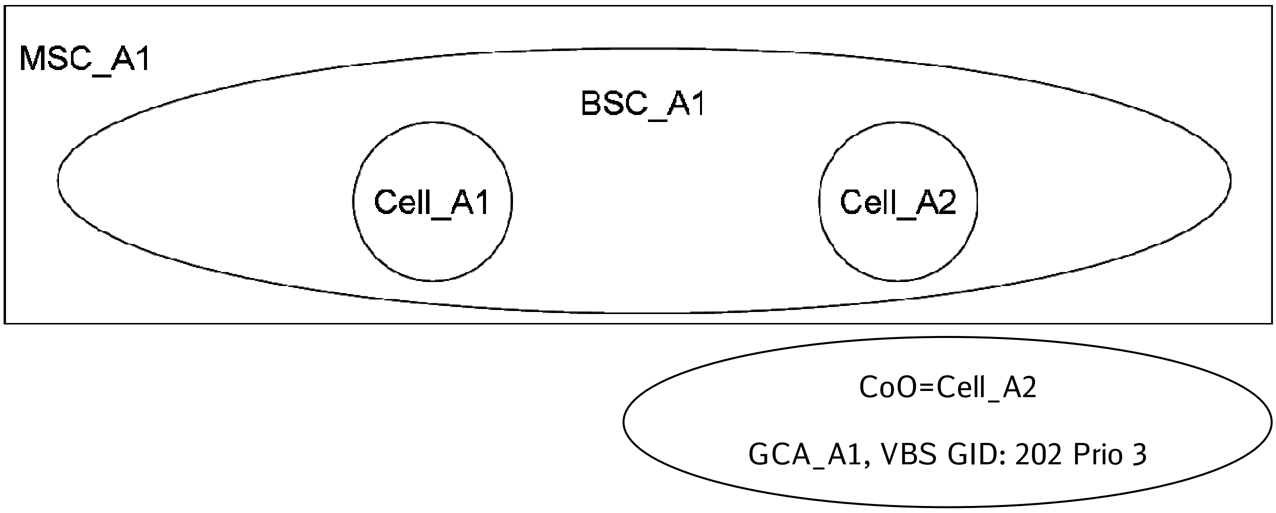
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

Verify that a service subscriber cannot originate a VBS call if it is located outside the GCA or if it has no subscription to regarding GID.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is not established.
2)	Service subscriber MS_A2 originates a VBS call.	VBS call is not established.

d) Success criteria

The service subscriber cannot originate a VBS call if it is located outside the GCA or if it has no subscription to regarding GID.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.20 Origination by controller fails

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

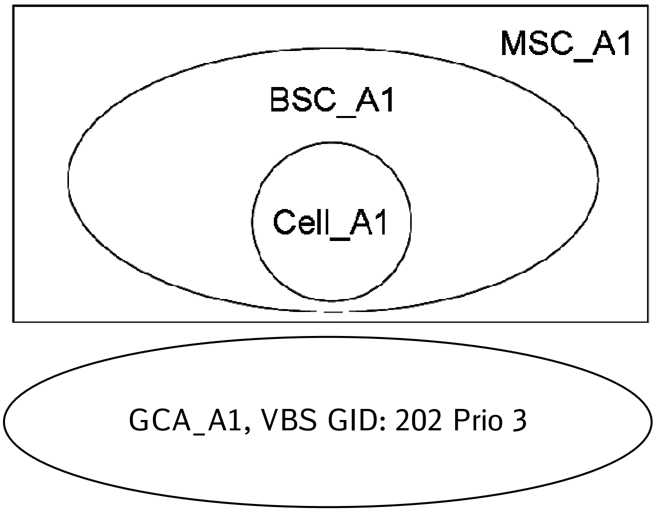
Verify that a controller cannot originate a VBS call if it is not entitled for this.

b) Test configuration / initial conditions

Controller CT_A1 is connected to network A.

CT_A1 is not entitled to originate calls on the regarding GCA.

Network A



MS_A1 (VBS GID: 202)
CT_A1 (GCA_A1, VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	Controller CT_A1 originates a VBS call by dialling 51 + < GCA > + <GID>	VBS call is not established.

d) Success criteria

The controller cannot originate a VBS call if it is not entitled for this.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.21 Killing of VBS call by controller fails

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

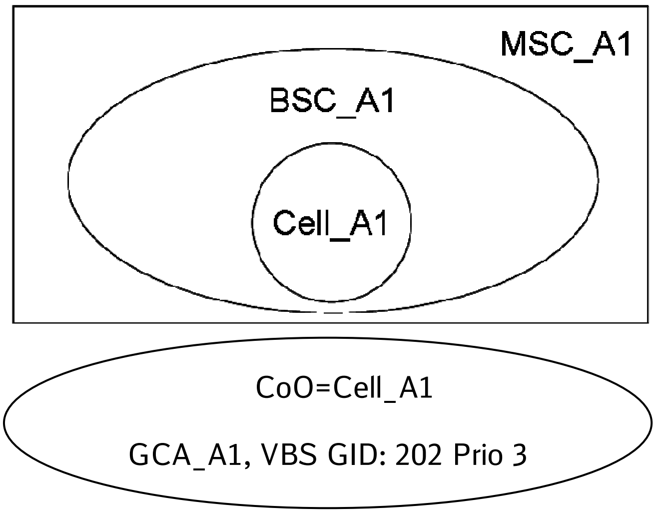
Verify that a controller cannot kill a VBS call if it is not entitled for this.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

CT_A1 is not entitled to kill calls on the regarding GCA.

Network A



MS_A1 (VBS GID: 202)
MS_A2 (VBS GID: 202)
CT_A1 (GCA_A1, VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. CT_A1 and MS_A2 receive notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
2)	MS_A2 and CT_A1 accept the incoming VBS.	MS_A2 and CT_A1 join the VBS call. VBS call is correctly established. MS_A1 has two-way voice path. MS_A2 and CT_A1 are only listener.
3)	CT_A1 releases the call by using the kill sequence (dialling ***).	The call is not released.
4)	MS_A1 releases the VBS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

The controller cannot kill a VBS call if it is not entitled for this.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.22 VBS call taken down during setup by SS

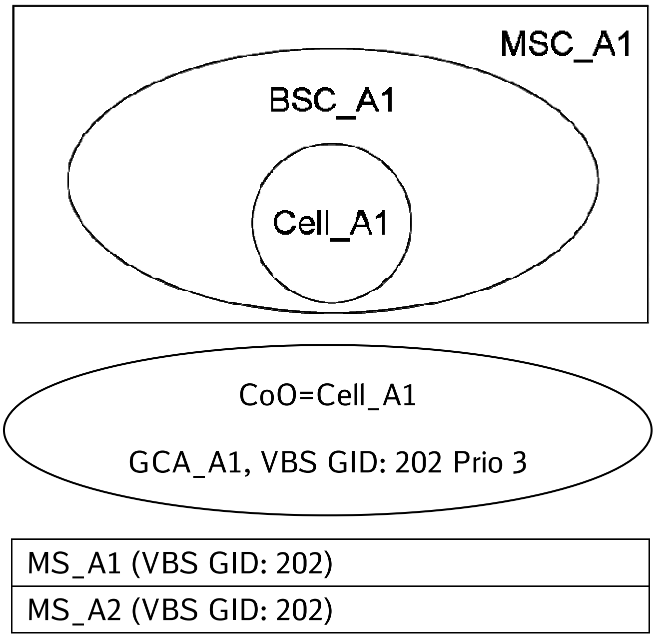
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

Verify that a service subscriber can take down a VBS call during the call establishment.

b) Test configuration / initial conditions

Network A



c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call and hangs up before the call is established.	All resources are correctly de-allocated.

d) Success criteria

A service subscriber can take down a VBS call during the call establishment.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.23 VBS call taken down during setup by Controller

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

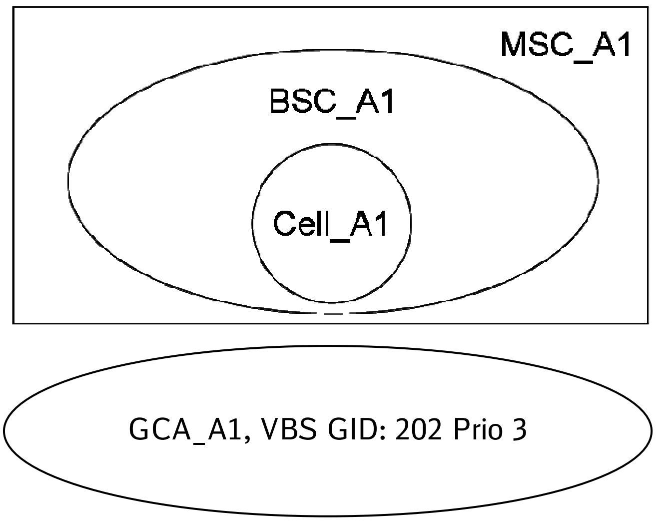
a) Purpose

Verify that a controller can take down a VBS call during the call establishment.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

Network A



MS_A1 (VBS GID: 202)
CT_A1 (GCA_A1, VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	Controller CT_A1 originates a VBS call by dialling 51 + < GCA > + <GID> and hangs up before the call is established.	All resources are correctly de-allocated.

d) Success criteria

Controller can take down a VBS call during the call establishment.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

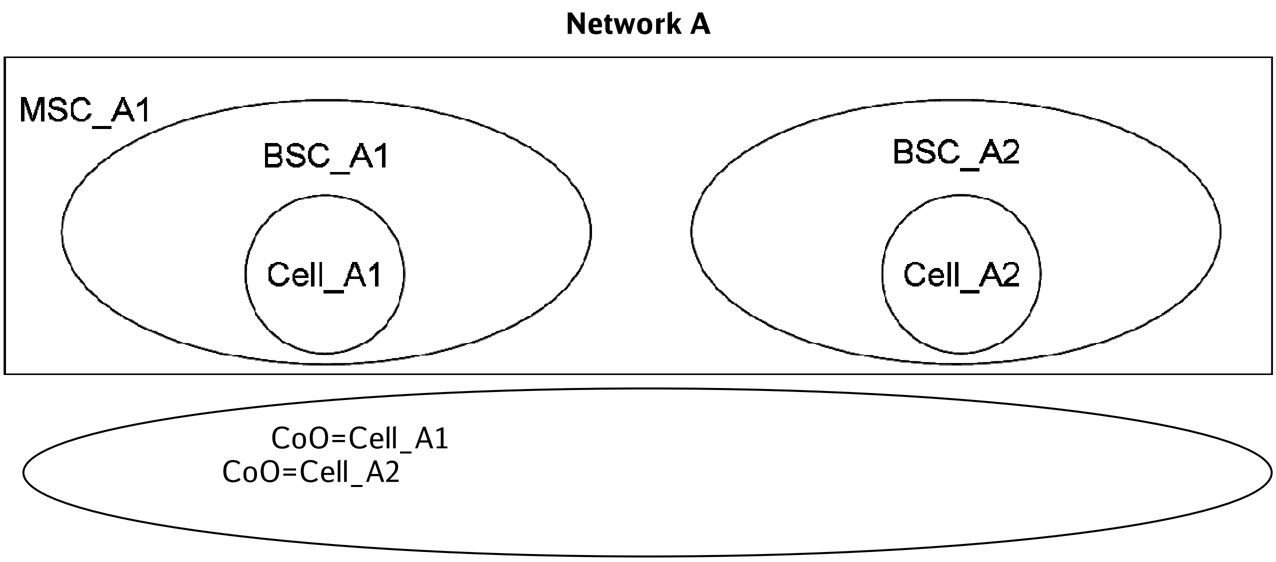
5.9.24 Two SS originate VBS call at same time (same BSS and different BSS)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

Verify that when two service subscribers originate a VBS call at the same time, only one can establish the call and the other receives the notification of this incoming call.

b) Test configuration / initial conditions



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)
MS_A3 (VBS GID: 202)	

c) Test procedure

Step	Action	Expected result(s)
1)	At the same time: Service subscriber MS_A1 originates a VBS call. Service subscriber MS_A3 originates a VBS call with.	Only one service subscriber can establish the VBS call. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. The other MS and MS_A2 receive notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
2)	The notified MS and MS_A2 accept the incoming VBS.	The notified MS and MS_A2 join VBS call. The originating MS has two-way voice path, the other two are only listener.
3)	Originating MS releases the VBS call.	The call is released and all resources are correctly de-allocated.
4)	At the same time: Service subscriber MS_A1 originates a VBS call. Service subscriber MS_A2 originates a VBS call.	Only one service subscriber can establish the VBS. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in the cell where the call was established. A GCCH is allocated in the other cell. The other MS and MS_A3 receive notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
5)	The notified MS and MS_A3 accept the incoming VBS.	MS and MS_A3 join VBS call. The originating MS has two-way voice path, the other two are only listener.
6)	Originating MS releases the VBS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

When two service subscribers originate a VBS call at the same time, only one can establish the call and the other receives the notification of this incoming call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.25 Two controllers originate VBS call at the same time

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

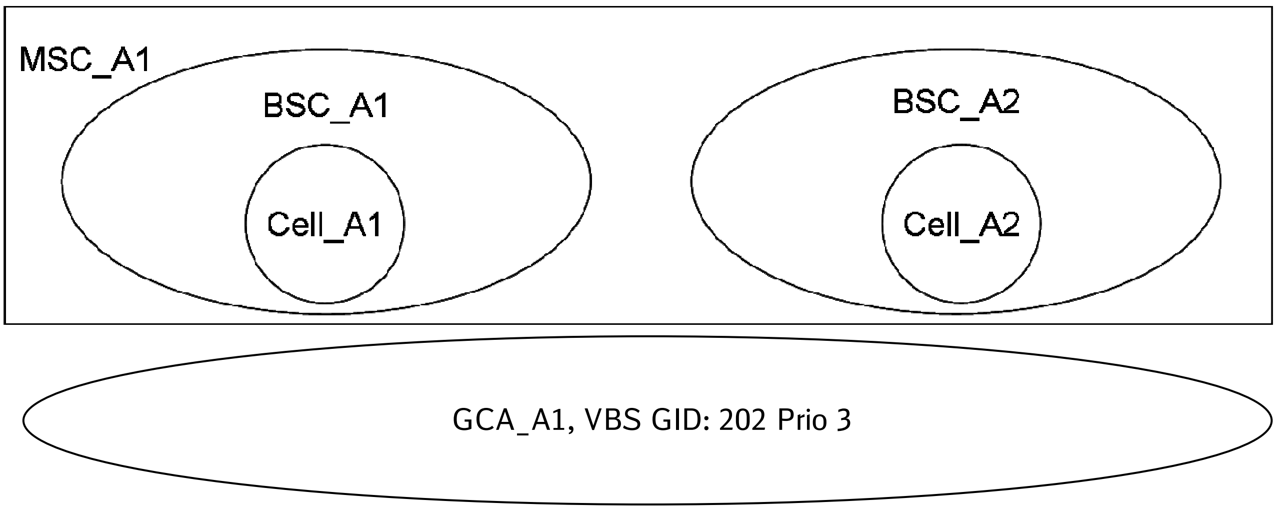
a) Purpose

Verify that when two controllers originate a VBS call at the same time (same group call reference), only one can establish the call.

b) Test configuration / initial conditions

CT_A1 and CT_A2 are connected to network A.

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)
CT_A1 (GCA_A1, VBS GID: 202)	
CT_A2 (GCA_A1, VBS GID: 202)	

c) Test procedure

Step	Action	Expected result(s)
1)	At the same time: Controller CT_A1 originates a VBS call by dialling 51 + < GCA > + <GID> Controller CT_A2 originates a VBS call by dialling 51 + < GCA > + <GID>	Only one controller manages to establish a VBS call. VBS call is correctly established. A group call channel (GCCH) is allocated in cell_A1 and cell_A2. MS_A1 and MS_A2 are notified about the incoming VBS call. The controller not able to establish the call is notified about the incoming VBS call.
2)	MS_A1, MS_A2 and controller not able to establish the call accept the incoming VBS call.	MS_A1 and MS_A2 join VBS call in group receive mode. Controller not able to establish the call joins the VBS call. Controller able to establish the call has voice path and MS_A1, MS_A2 and joining controller are able to listen to the announcement of the originating controller.
3)	The controller able to establish the call releases it by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

d) Success criteria

When two controllers originate a VBS call at the same time (same group call reference), only one can establish the call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.26 Service Subscriber initiated VBS from Relay MSC. Call to A-MSC controller

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

Verify that a service subscriber can originate and release a VBS call from relay MSC. A controller in anchor MSC is connected to the call.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

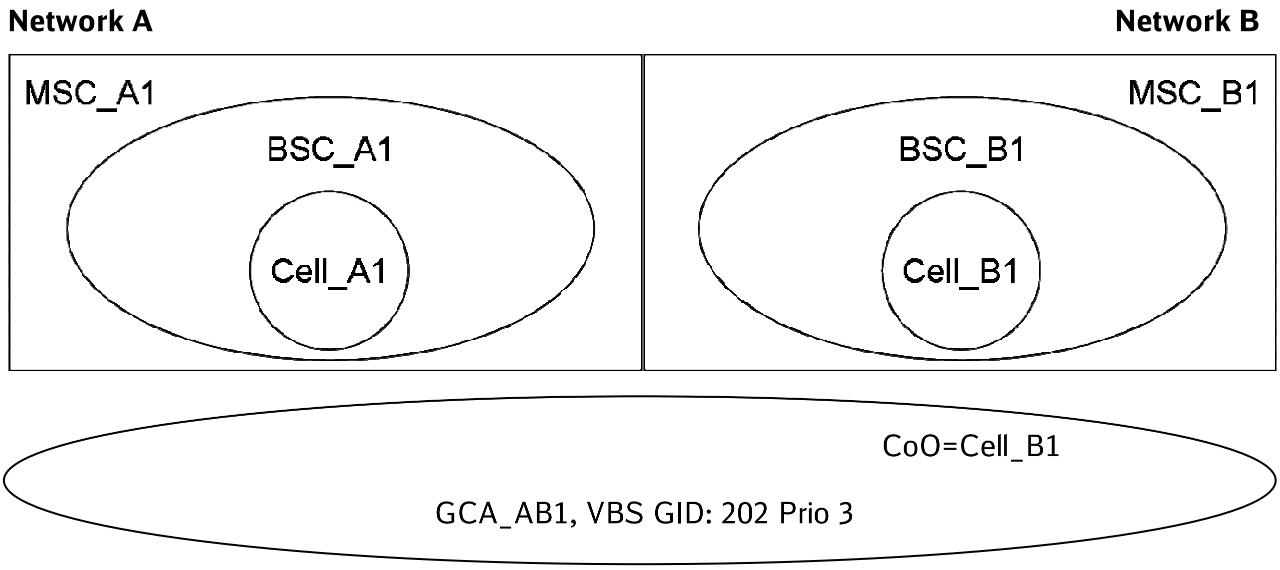
CT_B1 is connected to network B.

This test case has been divided into the following steps:

Step 1: VBS call establishment in relay MSC_B1.

Step 2: VBS call establishment in relay MSC_A1.

Test configuration for step 1



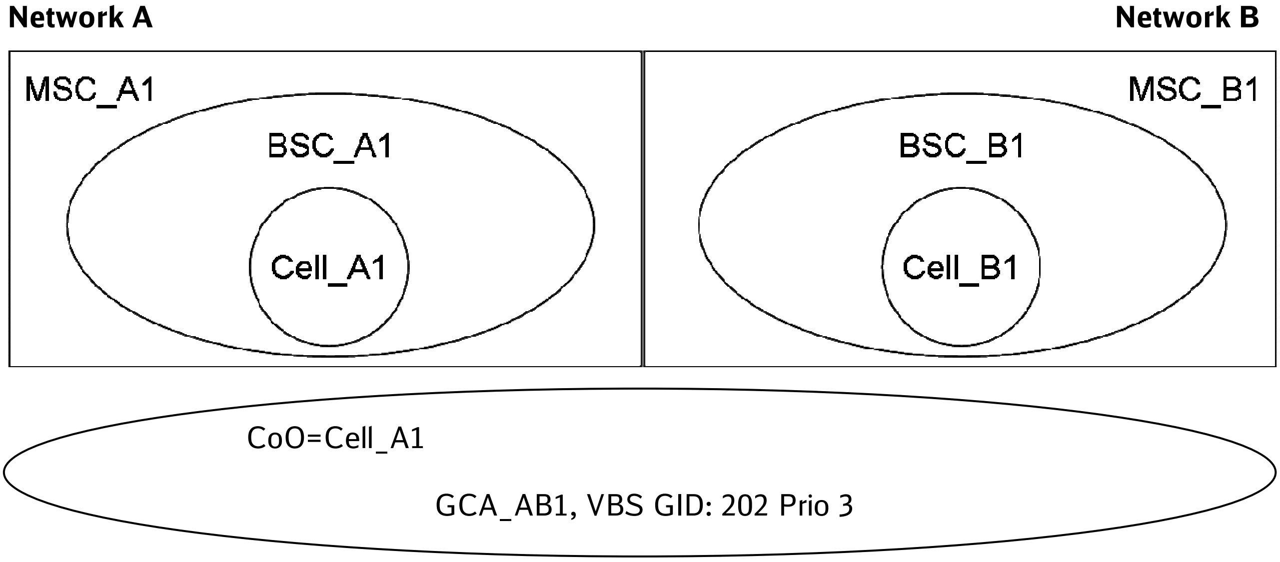
A-MSC_A1	R-MSC_B1
MS_A1 (VBS GID: 202)	MS_B1 (VBS GID: 202)
MS_A2 (VBS GID: 202)	MS_B2 (VBS GID: 202)
CT_A1 (GCA_AB1, VBS GID: 202)	

c) Test procedure

Step 1: VBS call establishment in relay MSC_B1

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A GCCH is allocated in cell_A1. CT_A1, MS_A1, MS_A2 and MS_B2 receive notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
2)	CT_A1, MS_A1, MS_A2 and MS_B2 accept the incoming VBS.	CT_A1, MS_A1, MS_A2 and MS_B2 join VBS call. MS_B1 has two-way voice path, CT_A1 MS_A1, MS_A2 and MS_B2 are only listener.
3)	MS_B1 releases the VBS call.	The call is released and all resources are correctly de-allocated.

Test configuration for step 2



R-MSC_A1	A-MSC_B1
MS_A1 (VBS GID: 202)	MS_B1 (VBS GID: 202)
MS_A2 (VBS GID: 202)	MS_B2 (VBS GID: 202)
	CT_B1 (GCA_AB1, VBS GID: 202)

Test procedure

Step 2: VBS call establishment in relay MSC_A1

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_B1. CT_B1, MS_B1, MS_A2 and MS_B2 receive notification of the incoming call. The DCH (uplink) remains allocated during the whole VBS call.
2)	CT_B1, MS_B1, MS_A2 and MS_B2 accept the incoming VBS.	CT_B1, MS_B1, MS_A2 and MS_B2 join VBS call. MS_B1 has two-way voice path, CT_B1 MS_B1, MS_A2 and MS_B2 are only listener.
3)	MS_A1 releases the VBS call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

The service subscriber can originate and release a VBS call from relay MSC. The controller in anchor MSC is connected to the call..

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.27 Controller originates a VBS call from Relay MSC

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
		2.2.1	

a) Purpose

Verify that a controller can originate and kill a VBS call from relay MSC.

b) Test configuration / initial conditions

CT_A1 is connected to network A.

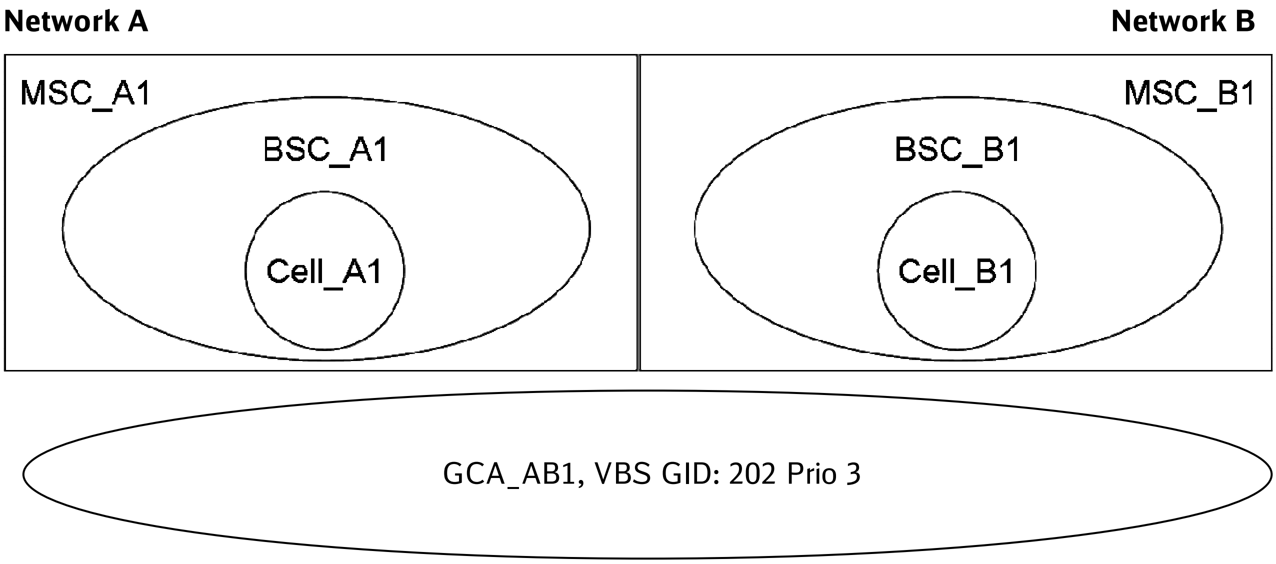
CT_B1 is connected to network B.

This test case has been divided into the following steps:

Step 1: VBS call establishment in anchor MSC_A1.

Step 2: VBS call establishment in anchor MSC_B1.

Test configuration for step 1



A-MSC_A1	**R-MSC_B1**
MS_A1 (VBS GID: 202)	MS_B1 (VBS GID: 202)
	CT_B1 (GCA_AB1, VBS GID: 202)

c) Test procedure

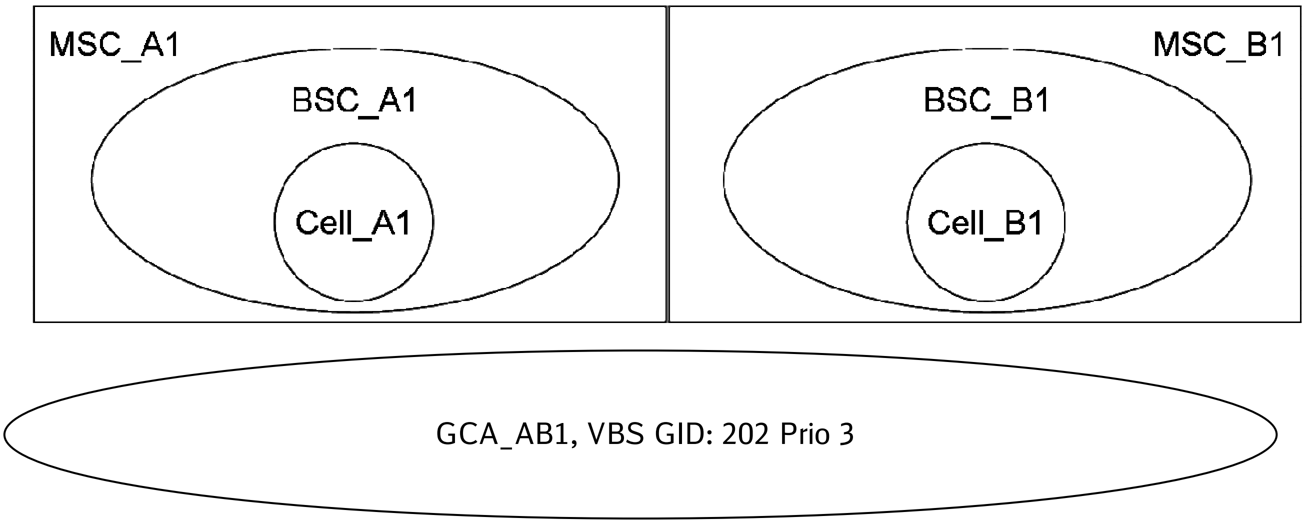
Step 1: VBS call establishment in anchor MSC_A1

Step	Action	Expected result(s)
1)	Controller CT_B1 originates a VBS call by dialling 900 + < IC > + 51 + < GCA > + <GID> (CT 5 Eirene Format)	MS_A1 and MS_B1 receive notification of the incoming VBS call.
2)	MS_A1 and MS_B1 accept the incoming VBS.	MS_A1 and MS_B1 join VBS call. VBS call is correctly established. A group call channel (GCCH) is allocated in cell_A1 and cell_B1 respectively. CT_B1 has two-way voice path during the whole call. MS_A1 and MS_B1 are only listener.
3)	CT_B1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.
4)	Controller CT_B1 originates a VBS call by dialling < CC > + < NDC > + 51 + < GCA > + <GID> (CT 5 ITU Format E.164)	MS_A1 and MS_B1 receive notification of the incoming VBS call.

Step	Action	Expected result(s)
5)	MS_A1 and MS_B1 accept the incoming VBS call.	MS_A1 and MS_B1 join VBS call. VBS call is correctly established. A group call channel (GCCH) is allocated in cell_A1 and cell_B1 respectively. CT_B1 has two-way voice path during the whole call. MS_A1 and MS_B1 are only listener.
6)	CT_B1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

Test configuration for step 2

Network A **Network B**



R-MSC_A1	**A-MSC_B1**
MS_A1 (VBS GID: 202)	MS_B1 (VBS GID: 202)
CT_A1 (GCA_AB1, VBS GID: 202)	

Test procedure

Step 2: VBS call establishment in anchor MSC_B1

Step	Action	Expected result(s)
1)	Controller CT_A1 originates a VBS call by dialling 900 + < IC > + 51 + < GCA > + <GID> (CT 5 Eirene Format)	MS_A1 and MS_B1 receive notification of the incoming VBS call.
2)	MS_A1 and MS_B1 accept the incoming VBS.	MS_A1 and MS_B1 join VBS call. VBS call is correctly established. A group call channel (GCCH) is allocated in cell_A1 and cell_B1 respectively. CT_A1 has two-way voice path during the whole call. MS_A1 and MS_B1 are only listener.
3)	CT_A1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.
4)	Controller CT_A1 originates a VBS call by dialling < CC > + < NDC > + 51 + < GCA > + <GID> (CT 5 ITU Format E.164)	MS_A1 and MS_B1 receive notification of the incoming VBS call.
5)	MS_A1 and MS_B1 accept the incoming VBS call.	MS_A1 and MS_B1 join VBS call. VBS call is correctly established. A group call channel (GCCH) is allocated in cell_A1 and cell_B1 respectively. CT_A1 has two-way voice path during the whole call. MS_A1 and MS_B1 are only listener.
6)	CT_A1 releases the call by using the kill sequence (dialling ***).	The call is released and all resources are correctly de-allocated.

d) Success criteria

The controller can originate and kill a VBS call from relay MSC.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.28 VBS originator notification (MS dedicated mode, incoming PTP call, non roaming case)

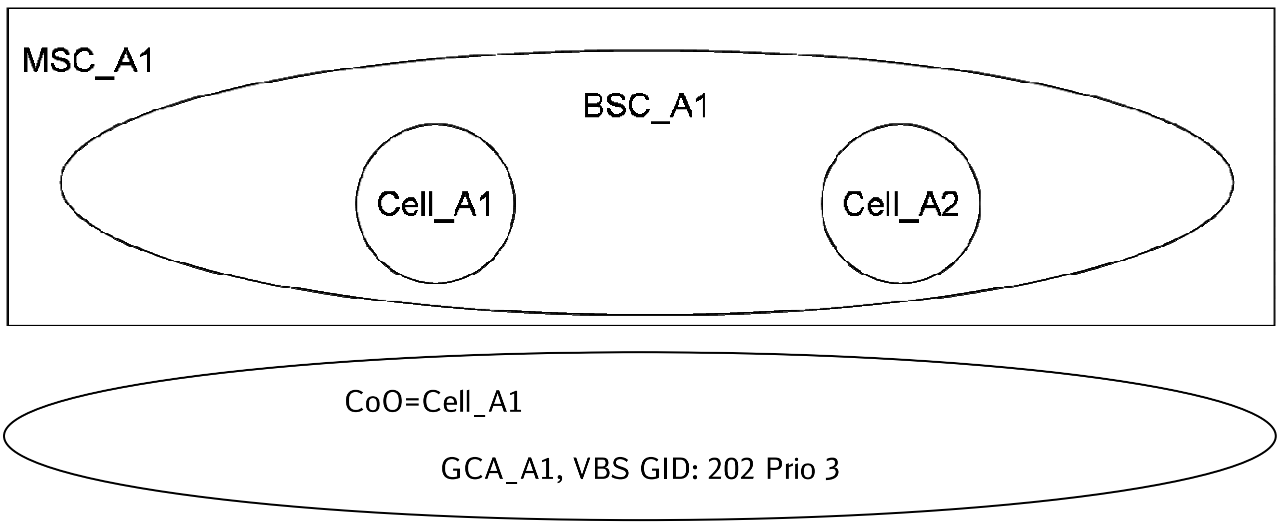
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.2.1 5.2.2.43	2.2.1 5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a VBS originator get a notification about an incoming PTP call.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A3 (VBS GID: 202)
MS_A2 (VBS GID: 202)	MS_A4 (no VGCS / VBS subscriber)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2, MS_A3 receives notification of the incoming VBS call (GID 202).
2)	MS_A2, MS_A3 automatically accepts the incoming VBS call (GID 202).	MS_A2, MS_A3 joins VBS call (GID 202). MS_A1 has two-way voice path. MS_A2, MS_A3 are only listener.
3)	MS_A4 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_A1 advertise the incoming PTP call from MS_A4 optically and acoustically.
4)	MS_A1 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All resources are correctly released by the network.
5)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
6)	Repeat step 1 to 5 with priority 3 for the PTP call.	

d) Success criteria

The VBS (GID 202) originator is able to receive notification about an incoming PTP call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.29 VBS originator notification (MS dedicated mode, incoming VGCS call, non roaming case)

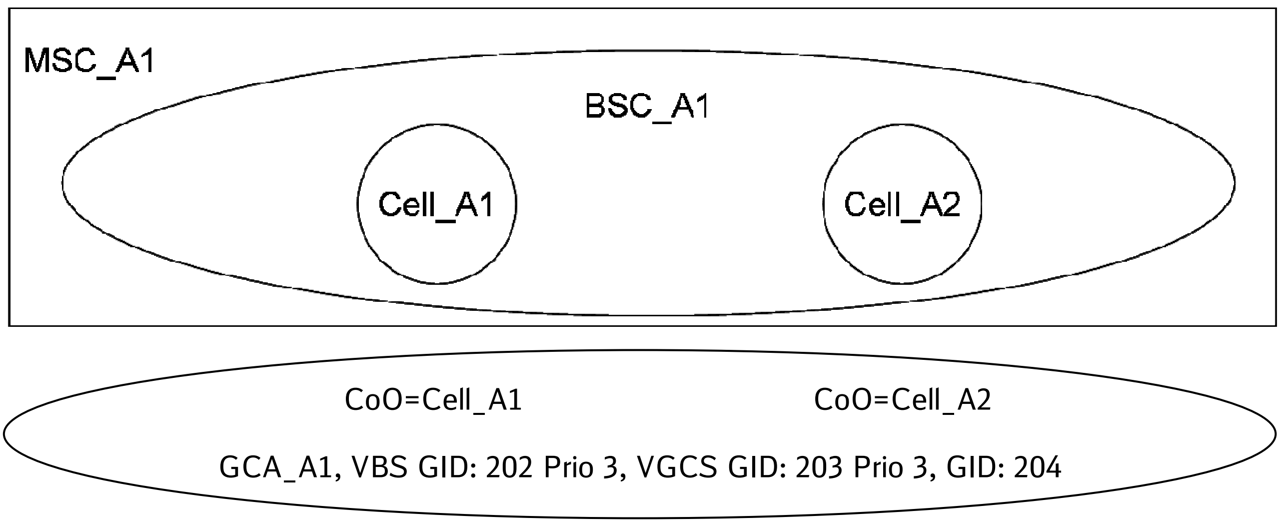
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 5.2.2.47	2.2.1 5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a VBS (GID 202) originator get a notification about an incoming VGCS call.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202, VGCS GID: 203, 204)	MS_A3 (VGCS GID: 203, 204)
MS_A2 (VBS GID: 202)	

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 receives a notification about the incoming VBS call (GID 202).
2)	MS_A2 automatically accepts the incoming VBS call (GID 202).	MS_A2 joins VBS call (GID 202). MS_A1 has two-way voice path. MS_A2 is only listener.
3)	Service subscriber MS_A3 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1. MS_A1 receives an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A1 don't accept the incoming VGCS call (GID 203).	
5)	MS_A3 releases the VGCS call (GID 203).	VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

d) Success criteria

The VBS (GID 202) originator is able to receive notification about an incoming VGCS call (GID 203, 204).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.30 VBS originator notification (MS dedicated mode, incoming VBS call, non roaming case)

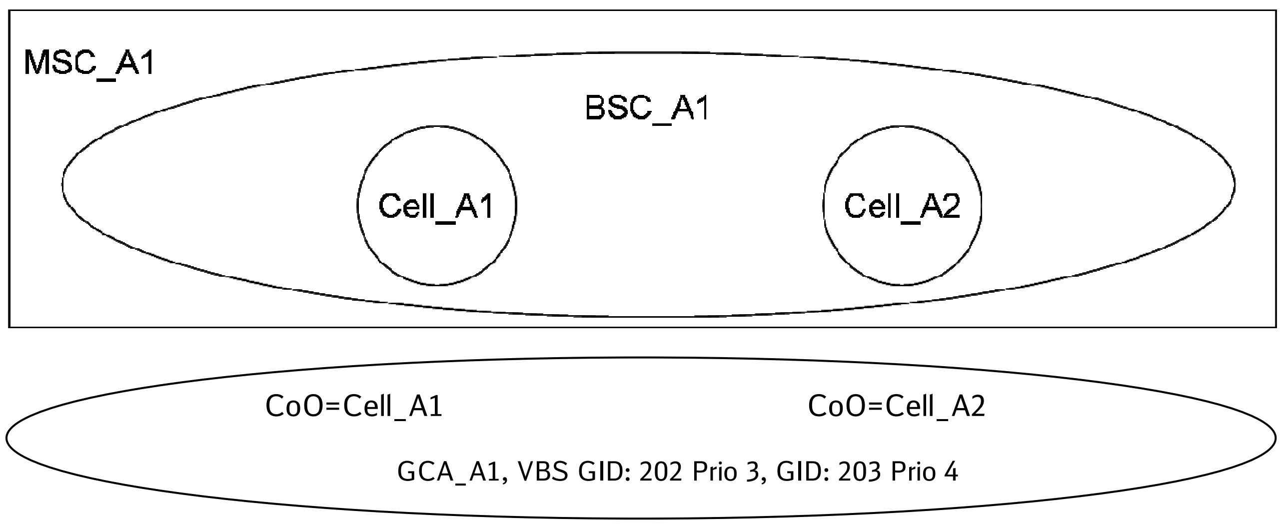
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 5.2.2.47	2.2.1 5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a VBS (GID 202) originator get a notification about an incoming VBS call (GID 200).

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202, 203)	MS_A3 (VBS GID: 203)
MS_A2 (VBS GID: 202)	

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 receives a notification about the incoming VBS call (GID 202).
2)	MS_A2 automatically accepts the incoming VBS call (GID 202).	MS_A2 joins VBS call (GID 202). MS_A1 has two-way voice path. MS_A2 is only listener.
3)	Service subscriber MS_A3 originates a VBS call (GID 203) with priority 4.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1. MS_A1 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A1 don't accept the incoming VBS call (GID 203).	
5)	MS_A3 releases the VBS call (GID 203).	VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

d) Success criteria

The VBS (GID 202) originator is able to receive notification about an incoming VBS call (GID 200).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.31 VBS originator notification (MS dedicated mode, incoming PTP call, roaming)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 5.2.2.43	2.2.1 5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a VBS (GID 202) originator get a notification about an incoming PTP call. This should be verified in different networks (roaming).

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Mobile subscriber of network A originates VBS call in HPLMN (MSC_A1 anchor).

Step 2: Mobile subscriber of network B originates VBS call in VPLMN (MSC_A1 anchor).

Step 3: Mobile subscriber of network B originates VBS call in HPLMN (MSC_A1 anchor).

Step 4: Mobile subscriber of network A originates VBS call in VPLMN (MSC_A1 anchor).

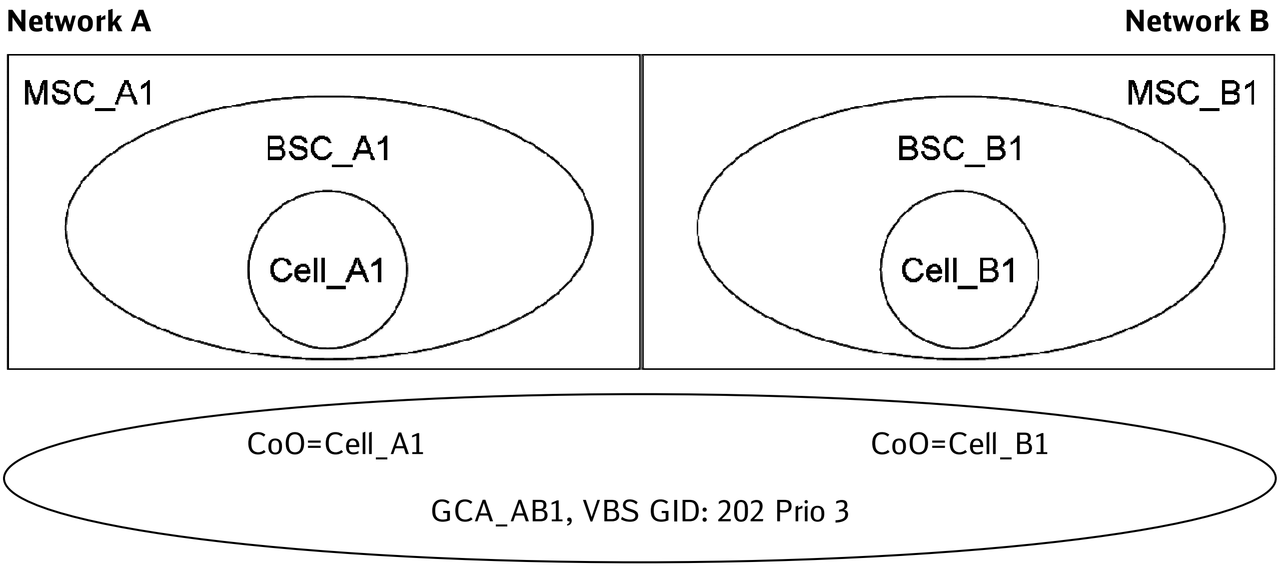
Step 5: Mobile subscriber of network A originates VBS call in HPLMN (MSC_B1 anchor).

Step 6: Mobile subscriber of network B originates VBS call in VPLMN (MSC_B1 anchor).

Step 7: Mobile subscriber of network B originates VBS call in HPLMN (MSC_B1 anchor).

Step 8: Mobile subscriber of network A originates VBS call in VPLMN (MSC_B1 anchor).

Test configuration for step 1 to 4



A-MSC_A1	**R-MSC_B1**
MS_A1 (VBS GID: 202)	MS_B1 (VBS GID: 202)
MS_A2 (no VGCS / VBS subscriber)	MS_B2 (no VGCS / VBS subscriber)
MS_B3 (VBS GID: 202)	MS_A3 (VBS GID: 202)
MS_B4 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)

c) Test procedure

Step 1: Mobile subscriber of network A originates VBS call in HPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
3)	MS_A2 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A2. MS_A1 advertise the incoming PTP call from MS_A2 optically and acoustically.
4)	MS_A1 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
5)	MS_B4 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B4. MS_A1 advertise the incoming PTP call from MS_B4 optically and acoustically.
6)	MS_A1 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
7)	MS_B2 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B2. MS_A1 advertise the incoming PTP call from MS_B2 optically and acoustically.
8)	MS_A1 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
9)	MS_A4 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_A1 advertise the incoming PTP call from MS_A4 optically and acoustically.
10)	MS_A1 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
11)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
12)	Repeat from step 1 to 11 with priority 3 for the PTP calls instead of priority 4.	

Step 2: Mobile subscriber of network B originates VBS call in VPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_B1 and MS_A3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_B1 and MS_A3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_B1 and MS_A3 are joining the VBS call (GID 202). MS_B3 has two-way voice path. MS_A1, MS_B1 and MS_A3 are able to listen to the announcement of MS_B3.
3)	MS_A2 originates a PTP call with priority 4 to MS_A1.	MS_B3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A2. MS_B3 advertise the incoming PTP call from MS_A2 optically and acoustically.
4)	MS_B3 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
5)	MS_B4 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B4. MS_B3 advertise the incoming PTP call from MS_B4 optically and acoustically.
6)	MS_B3 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
7)	MS_B2 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B2. MS_B3 advertise the incoming PTP call from MS_B2 optically and acoustically.
8)	MS_B3 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
9)	MS_A4 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_B3 advertise the incoming PTP call from MS_A4 optically and acoustically.
10)	MS_B3 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
11)	MS_B3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step	Action	Expected result(s)
12)	Repeat from step 1 to 11 with priority 3 for the PTP calls instead of priority 4.	

Step 3: Mobile subscriber of network B originates VBS call in HPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
3)	MS_A2 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A2. MS_B1 advertise the incoming PTP call from MS_A2 optically and acoustically.
4)	MS_B1 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
5)	MS_B4 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B4. MS_B1 advertise the incoming PTP call from MS_B4 optically and acoustically.
6)	MS_B1 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
7)	MS_B2 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B2. MS_B1 advertise the incoming PTP call from MS_B2 optically and acoustically.
8)	MS_B1 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
9)	MS_A4 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_B1 advertise the incoming PTP call from MS_A4 optically and acoustically.

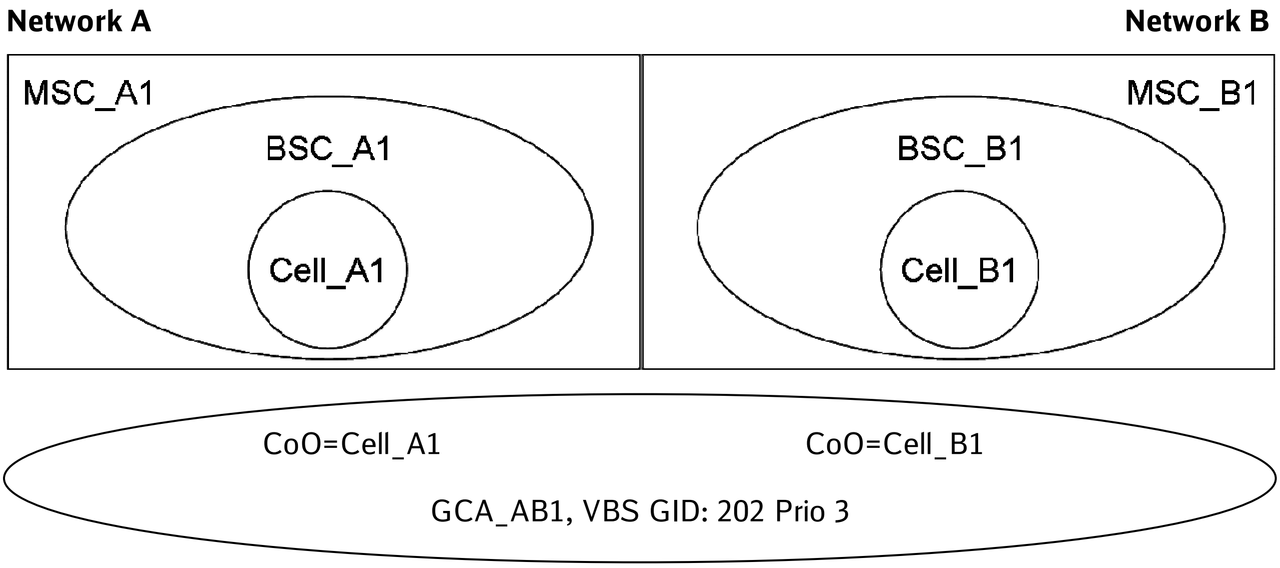
Step	Action	Expected result(s)
10)	MS_B1 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
11)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
12)	Repeat from step 1 to 12 with priority 3 for the PTP calls instead of priority 4.	

Step 4: Mobile subscriber of network A originates VBS call in VPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B3 and MS_B1 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_B3 and MS_B1 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_B3 and MS_B1 are joining the VBS call (GID 202). MS_A3 has two-way voice path. MS_A1, MS_B3 and MS_B1 are able to listen to the announcement of MS_A3.
3)	MS_A2 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A2. MS_A3 advertise the incoming PTP call from MS_A2 optically and acoustically.
4)	MS_A3 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
5)	MS_B4 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B4. MS_A3 advertise the incoming PTP call from MS_B4 optically and acoustically.
6)	MS_A3 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
7)	MS_B2 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B2. MS_A3 advertise the incoming PTP call from MS_B2 optically and acoustically.

Step	Action	Expected result(s)
8)	MS_A3 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
9)	MS_A4 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_A3 advertise the incoming PTP call from MS_A4 optically and acoustically.
10)	MS_A3 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
11)	MS_A3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
12)	Repeat from step 1 to 11 with priority 3 for the PTP calls instead of priority 4.	

Test configuration for step 5 to 8



B-MSC_A1	**A-MSC_B1**
MS_A1 (VBS GID: 202)	MS_B1 (VBS GID: 202)
MS_A2 (no VGCS / VBS subscriber)	MS_B2 (no VGCS / VBS subscriber)
MS_B3 (VBS GID: 202)	MS_A3 (VBS GID: 202)
MS_B4 (no VGCS / VBS subscriber)	MS_A4 (no VGCS / VBS subscriber)

Test procedure

Step 5: Mobile subscriber of network A originates VBS call in HPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
3)	MS_A2 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A2. MS_A1 advertise the incoming PTP call from MS_A2 optically and acoustically.
4)	MS_A1 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
5)	MS_B4 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B4. MS_A1 advertise the incoming PTP call from MS_B4 optically and acoustically.
6)	MS_A1 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
7)	MS_B2 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B2. MS_A1 advertise the incoming PTP call from MS_B2 optically and acoustically.
8)	MS_A1 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
9)	MS_A4 originates a PTP call with priority 4 to MS_A1.	MS_A1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_A1 advertise the incoming PTP call from MS_A4 optically and acoustically.
10)	MS_A1 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
11)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
12)	Repeat from step 1 to 11 with priority 3 for the PTP calls instead of priority 4.	

Step 6: Mobile subscriber of network B originates VBS call in VPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_B1 and MS_A3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_B1 and MS_A3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_B1 and MS_A3 are joining the VBS call (GID 202). MS_B3 has two-way voice path. MS_A1, MS_B1 and MS_A3 are able to listen to the announcement of MS_B3.
3)	MS_A2 originates a PTP call with priority 4 to MS_A1.	MS_B3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A2. MS_B3 advertise the incoming PTP call from MS_A2 optically and acoustically.
4)	MS_B3 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
5)	MS_B4 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B4. MS_B3 advertise the incoming PTP call from MS_B4 optically and acoustically.
6)	MS_B3 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
7)	MS_B2 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B2. MS_B3 advertise the incoming PTP call from MS_B2 optically and acoustically.
8)	MS_B3 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
9)	MS_A4 originates a PTP call with priority 4 to MS_B3.	MS_B3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_B3 advertise the incoming PTP call from MS_A4 optically and acoustically.
10)	MS_B3 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
11)	MS_B3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step	Action	Expected result(s)
12)	Repeat from step 1 to 11 with priority 3 for the PTP calls instead of priority 4.	

Step 7: Mobile subscriber of network B originates VBS call in HPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
3)	MS_A2 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A2. MS_B1 advertise the incoming PTP call from MS_A2 optically and acoustically.
4)	MS_B1 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
5)	MS_B4 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B4. MS_B1 advertise the incoming PTP call from MS_B4 optically and acoustically.
6)	MS_B1 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
7)	MS_B2 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B2. MS_B1 advertise the incoming PTP call from MS_B2 optically and acoustically.
8)	MS_B1 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
9)	MS_A4 originates a PTP call with priority 4 to MS_B1.	MS_B1 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_B1 advertise the incoming PTP call from MS_A4 optically and acoustically.

Step	Action	Expected result(s)
10)	MS_B1 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
11)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
12)	Repeat from step 1 to 11 with priority 3 for the PTP calls instead of priority 4.	

Step 8: Mobile subscriber of network A originates VBS call in VPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B3 and MS_B1 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_B3 and MS_B1 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_B3 and MS_B1 are joining the VBS call (GID 202). MS_A3 has two-way voice path. MS_A1, MS_B3 and MS_B1 are able to listen to the announcement of MS_A3.
3)	MS_A2 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A2. MS_A3 advertise the incoming PTP call from MS_A2 optically and acoustically.
4)	MS_A3 don't accept the incoming PTP call from MS_A2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
5)	MS_B4 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B4. MS_A3 advertise the incoming PTP call from MS_B4 optically and acoustically.
6)	MS_A3 don't accept the incoming PTP call from MS_B4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
7)	MS_B2 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_B2. MS_A3 advertise the incoming PTP call from MS_B2 optically and acoustically.

Step	Action	Expected result(s)
8)	MS_A3 don't accept the incoming PTP call from MS_B2.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
9)	MS_A4 originates a PTP call with priority 4 to MS_A3.	MS_A3 receives an in-band paging on FACCH channel about the incoming PTP call from MS_A4. MS_A3 advertise the incoming PTP call from MS_A4 optically and acoustically.
10)	MS_A3 don't accept the incoming PTP call from MS_A4.	After the paging timer is expired the call will be released by the network. All related resources are correctly de-allocated.
11)	MS_A3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
12)	Repeat from step 1 to 11 with priority 3 for the PTP calls instead of priority 4.	

d) Success criteria

Verify that a VBS (GID 202) originator is able to receive notification about an incoming PTP call.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.32 VBS originator notification (MS dedicated mode, incoming VGCS call, roaming)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 5.2.2.47	2.2.1 5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a VBS (GID 202) originator get a notification about an incoming VGCS call (GID 203, 204) call. This should be verified in different networks (roaming).

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Mobile subscriber of network A originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network A in HPLMN (MSC_A1 anchor).

Step 2: Mobile subscriber of network B originates VBS call in VPLMN. VGCS call originated by mobile subscriber of network A in HPLMN (MSC_A1 anchor).

Step 3: Mobile subscriber of network A originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network B in VPLMN (MSC_A1 anchor).

Step 4: Mobile subscriber of network B originates VBS call in VPLMN. VGCS call originated by mobile subscriber of network B in VPLMN (MSC_A1 anchor).

Step 5: Mobile subscriber of network B originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network B in HPLMN (MSC_A1 anchor).

Step 6: Mobile subscriber of network A originates VBS call in VPLMN. VGCS call originated by mobile subscriber of network B in HPLMN (MSC_A1 anchor).

Step 7: Mobile subscriber of network B originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network A in VPLMN (MSC_A1 anchor).

Step 8: Mobile subscriber of network A originates VBS call in VPLMN. VGCS call originated by mobile subscriber of network A in VPLMN (MSC_A1 anchor).

Step 9: Mobile subscriber of network A originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network A in VPLMN (MSC_A1 anchor).

Step 10: Mobile subscriber of network A originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network B in HPLMN (MSC_A1 anchor).

Step 11: Mobile subscriber of network B originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network B in VPLMN (MSC_A1 anchor).

Step 12: Mobile subscriber of network B originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network A in HPLMN (MSC_A1 anchor).

Step 13: Mobile subscriber of network A originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network A in HPLMN (MSC_B1 anchor).

Step 14: Mobile subscriber of network B originates VBS call in VPLMN. VGCS call originated by mobile subscriber of network A in HPLMN (MSC_B1 anchor).

Step 15: Mobile subscriber of network A originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network B in VPLMN (MSC_B1 anchor).

Step 16: Mobile subscriber of network B originates VBS call in VPLMN. VGCS call originated by mobile subscriber of network B in VPLMN (MSC_B1 anchor).

Step 17: Mobile subscriber of network B originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network B in HPLMN (MSC_B1 anchor).

Step 18: Mobile subscriber of network A originates VBS call in VPLMN. VGCS call originated by mobile subscriber of network B in HPLMN (MSC_B1 anchor).

Step 19: Mobile subscriber of network B originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network A in VPLMN (MSC_B1 anchor).

Step 20: Mobile subscriber of network A originates VBS call in VPLMN. VGCS call originated by mobile subscriber of network A in VPLMN (MSC_B1 anchor).

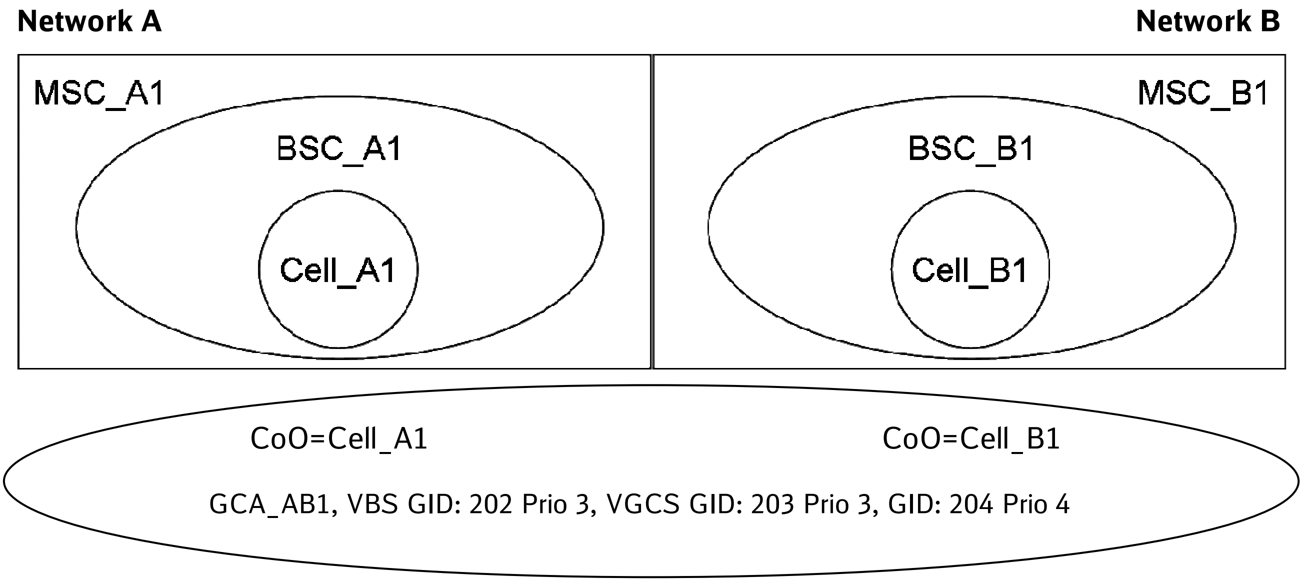
Step 21: Mobile subscriber of network A originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network A in VPLMN (MSC_B1 anchor).

Step 22: Mobile subscriber of network A originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network B in HPLMN (MSC_B1 anchor).

Step 23: Mobile subscriber of network B originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network B in VPLMN (MSC_B1 anchor).

Step 24: Mobile subscriber of network B originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network A in HPLMN (MSC_B1 anchor).

Test configuration for step 1 to 12



A-MSC_A1	**R-MSC_B1**
MS_A1 (VBS GID: 202, VGCS GID: 203, 204)	MS_B1 (VBS GID: 202, VGCS GID: 203, 204)
MS_A2 (VGCS GID: 203, 204)	MS_B2 (VGCS GID: 203, 204)
MS_B3 (VBS GID: 202, VGCS GID: 203, 204)	MS_A3 (VBS GID: 202, VGCS GID: 203, 204)
MS_B4 (VGCS GID: 203, 204)	MS_A4 (VGCS GID: 203, 204)

c) Test procedure

Step 1: Mobile subscriber of network A originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network A in HPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
3)	MS_A2 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_A2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 2: Mobile subscriber of network B originates VBS call in VPLMN. VGCS call originated by mobile subscriber of network A in HPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VBS (202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B1 are joining the VBS call (GID 202). MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
3)	MS_A2 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_A2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
6)	MS_B3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 3: Mobile subscriber of network A originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network B in VPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
3)	MS_B4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.

Step	Action	Expected result(s)
4)	MS_A2 MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_B4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 4: Mobile subscriber of network B originates VBS call in VPLMN. VGCS call originated by mobile subscriber of network B in VPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B1 are joining the VBS call (GID 202). MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.

Step	Action	Expected result(s)
3)	MS_B4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_B4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 5: Mobile subscriber of network B originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network B in HPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
3)	MS_B2 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_B2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
6)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 6: Mobile subscriber of network A originates VBS call in VPLMN. VGCS call originated by mobile subscriber of network B in HPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_B1 and MS_B2 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
3)	MS_B2 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.

Step	Action	Expected result(s)
4)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_B2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 7: Mobile subscriber of network B originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network A in VPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
3)	MS_A4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A2 MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_A4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 8: Mobile subscriber of network A originates VBS call in VPLMN. VGCS call originated by mobile subscriber of network A in VPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
3)	MS_A4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_A4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
6)	MS_A3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 9: Mobile subscriber of network A originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network A in VPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
3)	MS_A4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_42 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.

Step	Action	Expected result(s)
4)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_A4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 10: Mobile subscriber of network A originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network B in HPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
3)	MS_B2 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_B2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 11: Mobile subscriber of network B originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network B in VPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
3)	MS_B4 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS (GID 203). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_B4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
6)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

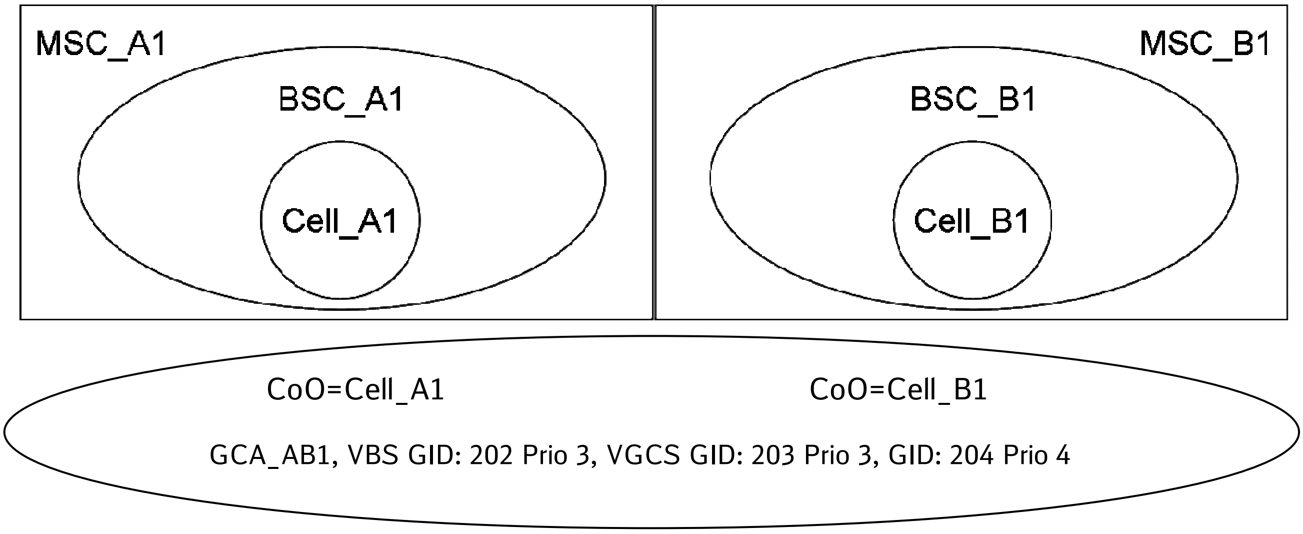
Step 12: Mobile subscriber of network B originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network A in HPLMN (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
3)	MS_A2 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.

Step	Action	Expected result(s)
4)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_A2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 9 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Test configuration for step 13 to 24

Network A **Network B**



R-MSC_A1	**A-MSC_B1**
MS_A1 (VBS GID: 202, VGCS GID: 203, 204)	MS_B1 (VBS GID: 202, VGCS GID: 203, 204)
MS_A2 (VGCS GID: 203, 204)	MS_B2 (VGCS GID: 203, 204)
MS_B3 (VBS GID: 202, VGCS GID: 203, 204)	MS_A3 (VBS GID: 202, VGCS GID: 203, 204)
MS_B4 (VGCS GID: 203, 204)	MS_A4 (VGCS GID: 203, 204)

Test procedure

Step 13: Mobile subscriber of network A originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network A in HPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
3)	MS_A2 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_A2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 14: Mobile subscriber of network B originates VBS call in VPLMN. VGCS call originated by mobile subscriber of network A in HPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VBS (202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B1 are joining the VBS call (GID 202). MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
3)	MS_A2 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_A2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
6)	MS_B3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 15: Mobile subscriber of network A originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network B in VPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
3)	MS_B4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.

Step	Action	Expected result(s)
4)	MS_A2 MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_B4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 16: Mobile subscriber of network B originates VBS call in VPLMN. VGCS call originated by mobile subscriber of network B in VPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B1 are joining the VBS call (GID 202). MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.

Step	Action	Expected result(s)
3)	MS_B4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_B4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 17: Mobile subscriber of network B originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network B in HPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
3)	MS_B2 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_B2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
6)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 18: Mobile subscriber of network A originates VBS call in VPLMN. VGCS call originated by mobile subscriber of network B in HPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_B1 and MS_B2 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
3)	MS_B2 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.

Step	Action	Expected result(s)
4)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_B2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 19: Mobile subscriber of network B originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network A in VPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 200).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.

Step	Action	Expected result(s)
3)	MS_A4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A2 MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_A4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 20: Mobile subscriber of network A originates VBS call in VPLMN. VGCS call originated by mobile subscriber of network A in VPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
3)	MS_A4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_A4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly deallocated.

Step	Action	Expected result(s)
6)	MS_A3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 21: Mobile subscriber of network A originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network A in VPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
3)	MS_A4 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_42 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.

Step	Action	Expected result(s)
4)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_A4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 22: Mobile subscriber of network A originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network B in HPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
3)	MS_B2 originates a VGCS call (GID 203) with priority 3.	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_B2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_B2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 23: Mobile subscriber of network B originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network B in VPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
3)	MS_B4 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS (GID 203). So long the dedicated channel is not released, MS_B4 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don’t accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_B4 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.

Step	Action	Expected result(s)
6)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

Step 24: Mobile subscriber of network B originates VBS call in HPLMN. VGCS call originated by mobile subscriber of network A in HPLMN (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
3)	MS_A2 originates a VGCS call (GID 203).	VGCS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203). So long the dedicated channel is not released, MS_A2 has two-way voice path. MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VGCS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VGCS call (GID 203) optically and acoustically.

Step	Action	Expected result(s)
4)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VGCS call (GID 203), if the priority of the VGCS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VGCS call (GID 203). If the priority is lower than 3, the user has to accept the VGCS call manually.	
5)	MS_A2 releases the VGCS call (GID 203).	The VGCS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.
7)	Repeat from step 1 to 6 with VGCS call (GID 204) instead of VGCS call (GID 203).	

d) Success criteria

Verify that a VBS (GID 202) originator is able to receive notification about an incoming VGCS call (GID 200). This should succeed in different networks (roaming).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.33 VBS originator notification (MS dedicated mode, incoming VBS call, roaming)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 5.2.2.47	2.2.1 5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a VBS (GID 202) originator get a notification about an incoming VBS call (GID 203). This should be verified in different networks (roaming).

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network A in HPLMN originates a second VBS call (MSC_A1 anchor).

Step 2: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network A in HPLMN originates a second VBS call (MSC_A1 anchor).

Step 3: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network B in VPLMN originates a second VBS call (MSC_A1 anchor).

Step 4: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network B in VPLMN originates a second VBS call (MSC_A1 anchor).

Step 5: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network B in HPLMN originates a second VBS call (MSC_A1 anchor).

Step 6: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network B in HPLMN originates a second VBS call (MSC_A1 anchor).

Step 7: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network A in VPLMN originates a second VBS call (MSC_A1 anchor).

Step 8: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network A in VPLMN originates a second VBS call (MSC_A1 anchor).

Step 9: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network A in VPLMN originates a second VBS call (MSC_A1 anchor).

Step 10: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network B in HPLMN originates a second VBS call (MSC_A1 anchor).

Step 11: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network B in VPLMN originates a second VBS call (MSC_A1 anchor).

Step 12: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network A in HPLMN originates a second VBS call (MSC_A1 anchor).

Step 13: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network A in HPLMN originates a second VBS call (MSC_B1 anchor).

Step 14: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network A in HPLMN originates a second VBS call (MSC_B1 anchor).

Step 15: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network B in VPLMN originates a second VBS call (MSC_B1 anchor).

Step 16: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network B in VPLMN originates a second VBS call (MSC_B1 anchor).

Step 17: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network B in HPLMN originates a second VBS call (MSC_B1 anchor).

Step 18: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network B in HPLMN originates a second VBS call (MSC_B1 anchor).

Step 19: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network A in VPLMN originates a second VBS call (MSC_B1 anchor).

Step 20: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network A in VPLMN originates a second VBS call (MSC_B1 anchor).

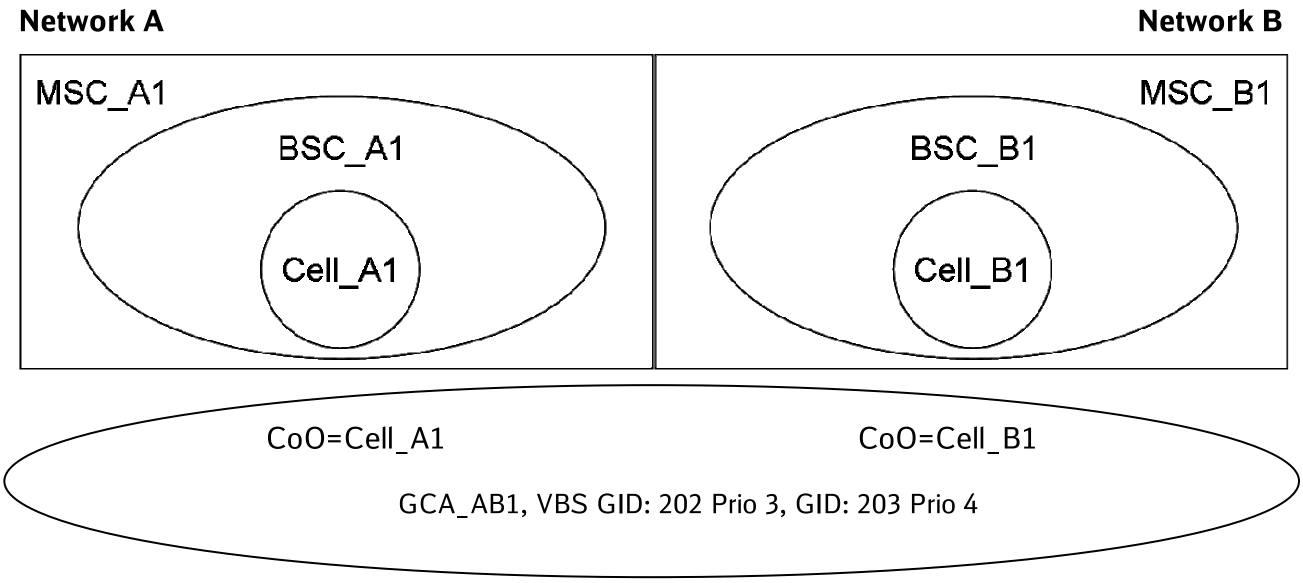
Step 21: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network A in VPLMN originates a second VBS call (MSC_B1 anchor).

Step 22: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network B in HPLMN originates a second VBS call (MSC_B1 anchor).

Step 23: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network B in VPLMN originates a second VBS call (MSC_B1 anchor).

Step 24: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network A in HPLMN originates a second VBS call (MSC_B1 anchor).

Test configuration for step 1 to 12



A-MSC_A1	**R-MSC_B1**
MS_A1 (VBS GID: 202, 203)	MS_B1 (VBS GID: 202, 203)
MS_A2 (VBS GID: 203)	MS_B2 (VBS GID: 203)
MS_B3 (VBS GID: 202, 203)	MS_A3 (VBS GID: 202, 203)
MS_B4 (VBS GID: 203)	MS_A4 (VBS GID: 203)

c) Test procedure

Step 1: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network A in HPLMN originates a second VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
3)	MS_A2 originates a VBS call (GID 203) with priority 4.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. MS_A1, MS_A3, MS_B1 and MS_B3 don't accept the incoming VBS call (GID 203). If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_A2 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 2: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network A in HPLMN originates a second VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VBS call (202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B1 are joining the VBS call (GID 202). MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
3)	MS_A2 originates a VBS call (GID 203) with priority 4.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_A2 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 3: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network B in VPLMN originates a second VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS.
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
3)	MS_B4 originates a VBS call (GID 203) with priority 4.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2 MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user as to accept the VBS call manually.	
5)	MS_B4 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 4: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network B in VPLMN originates a second VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B1 are joining the VBS call (GID 202). MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
3)	MS_B4 originates a VBS call (GID 203) with priority 4.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_B4 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 5: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network B in HPLMN originates a second VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
3)	MS_B2 originates a VBS call (GID 203) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_B2 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 6: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network B in HPLMN originates a second VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_B1 and MS_B2 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_B1 and MS_B3 are joining the VBS Call (GID 202). MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
3)	MS_B2 originates a VBS call (GID 203) with priority 3.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_B2 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 7: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network A in VPLMN originates a second VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
3)	MS_A4 originates a VBS call (GID 203) with priority 3.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2 MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_A4 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 8: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network A in VPLMN originates a second VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
3)	MS_A4 originates a VBS call (GID 203) with priority 3.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_A4 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 9: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network A in VPLMN originates a second VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
3)	MS_A4 originates a VBS call (GID 203) with priority 3.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_A4 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 10: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network B in HPLMN originates a second VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
3)	MS_B2 originates a VBS call (GID 203) with priority 3.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_B2 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

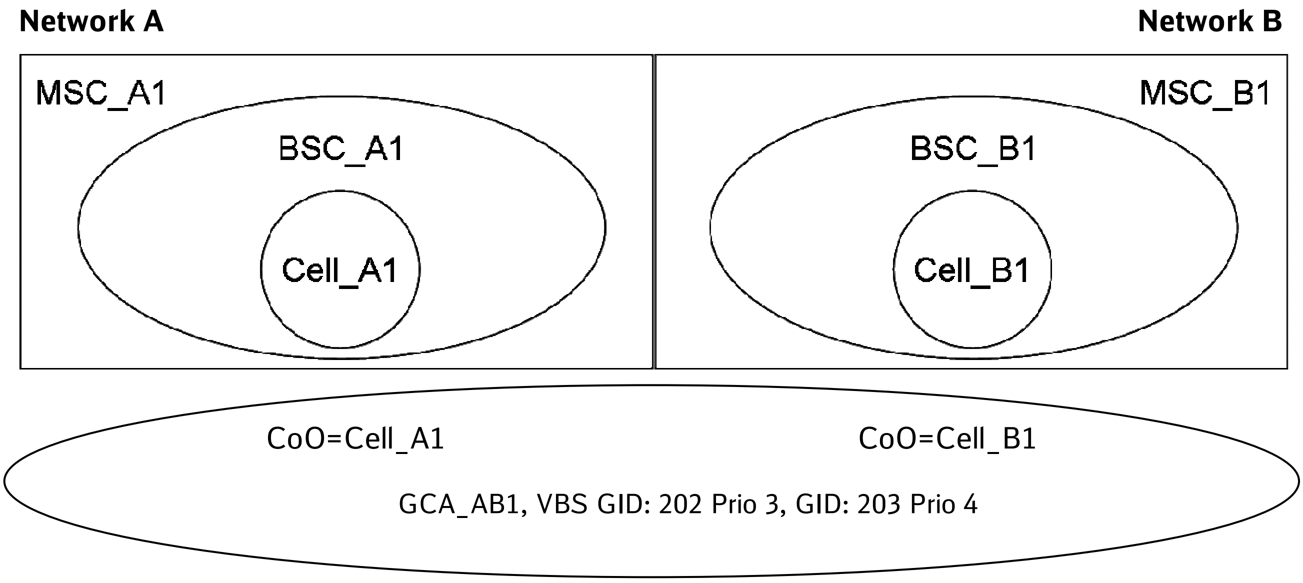
Step 11: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network B in VPLMN originates a second VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
3)	MS_B4 originates a VBS call (GID 203) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_B4 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 12: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network A in HPLMN originates a second VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
3)	MS_A2 originates a VBS call (GID 203) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_A2 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Test configuration for step 13 to 24



R-MSC_A1	**A-MSC_B1**
MS_A1 (VBS GID: 202, 203)	MS_B1 (VBS GID: 202, 203)
MS_A2 (VBS GID: 203)	MS_B2 (VBS GID: 203)
MS_B3 (VBS GID: 202, 203)	MS_A3 (VBS GID: 202, 203)
MS_B4 (VBS GID: 203)	MS_A4 (VBS GID: 203)

Test procedure

Step 13: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network A in HPLMN originates a second VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.

Step	Action	Expected result(s)
3)	MS_A2 originates a VBS call (GID 203) with priority 3.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_A2 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 14: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network A in HPLMN originates a second VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VBS call (202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B1 are joining the VBS call (GID 202). MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.

Step	Action	Expected result(s)
3)	MS_A2 originates a VBS call (GID 203) with priority 3.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_A2 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 15: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network B in VPLMN originates a second VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
3)	MS_B4 originates a VBS call (GID 203) with priority 3.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2 MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user as to accept the VBS call (GID 203) manually.	
5)	MS_B4 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 16: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network B in VPLMN originates a second VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B1 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B1 are joining the VBS call (GID 202). MS_B3 has two-way voice path. MS_A1, MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
3)	MS_B4 originates a VBS call (GID 203) with priority 3.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_B4 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 17: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network B in HPLMN originates a second VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
3)	MS_B2 originates a VBS call (GID 203) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_B2 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 18: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network B in HPLMN originates a second VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_B1 and MS_B2 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_B1 and MS_B3 are joining the VBS Call (GID 202). MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
3)	MS_B2 originates a VBS call (GID 203) with priority 3.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_B2 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 19: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network A in VPLMN originates a second VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
3)	MS_A4 originates a VBS call (GID 203) with priority 3.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2 MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_A4 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 20: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network A in VPLMN originates a second VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A3 has two-way voice path. MS_A1, MS_B1 and MS_B3 are able to listen to the announcement of MS_A3.
3)	MS_A4 originates a VBS call (GID 203) with priority 3.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_A4 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 21: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network A in VPLMN originates a second VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
3)	MS_A4 originates a VBS call (GID 203) with priority 3.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_A4 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 22: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network B in HPLMN originates a second VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B1 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A3, MS_B1 and MS_B3 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A3, MS_B1 and MS_B3 are able to listen to the announcement of MS_A1.
3)	MS_B2 originates a VBS call (GID 203) with priority 3.	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_B2 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 23: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network B in VPLMN originates a second VBS call (MSC_B1 anchor).

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
3)	MS_B4 originates a VBS call (GID 203) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A2, MS_A4 and MS_B2 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_B4 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 24: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network A in HPLMN originates a second VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A3 and MS_B3 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A3 and MS_B3 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A3 and MS_B3 are able to listen to the announcement of MS_B1.
3)	MS_A2 originates a VBS call (GID 203) with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
4)	MS_A4, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 203), if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	
5)	MS_A2 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
6)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

d) Success criteria

Verify that a VBS (GID 202) originator is able to receive notification about an incoming VBS call (GID 200). This should succeed in different networks (roaming).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.34 VBS originator notification (MS dedicated mode, incoming REC, non roaming case)

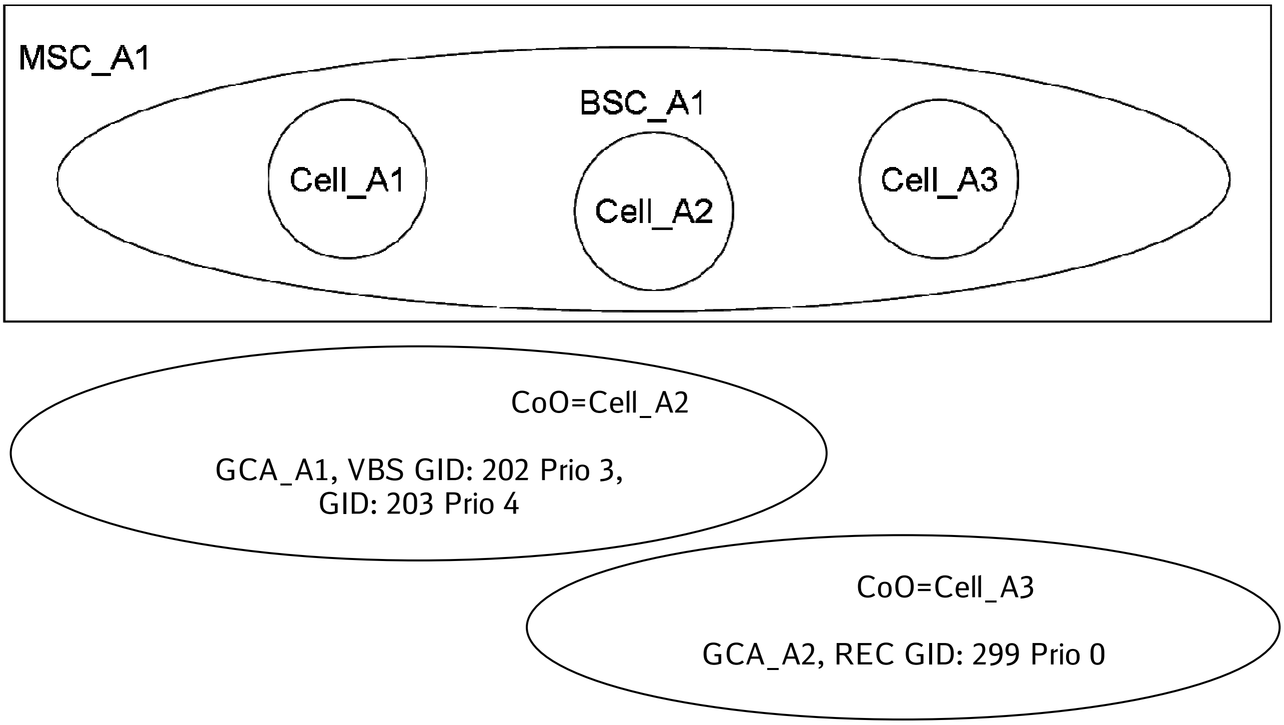
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 5.2.2.47 13.3.1	2.2.1 5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a VBS (GID 202) originator get a notification about an incoming REC (GID 299).

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2	Cell_A3
MS_A1 (REC GID: 299, VBS GID: 202, 203)	MS_A3 (REC GID: 299, VBS GID: 202, 203)	MS_A5 (REC GID: 299)
MS_A2 (REC GID: 299, VBS GID: 202, 203)	MS_A4 (REC GID: 299, VBS GID: 202, 203)	MS_A6 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A2 and MS_A4 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A2 and MS_A4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1, MS_A2 and MS_A4 are joining the VBS call (GID 202). MS_A3 has two-way voice path. MS_A1, MS_A2 and MS_A4 are able to listen to the announcement of MS_A3.
3)	Service subscriber MS_A5 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A3. A group call channel (GCCH) is allocated in cell_A2. MS_A6 receives a notification about the incoming REC (GID 299). MS_A3 and MS_A4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3 and MS_A4 advertise the incoming REC (GID 299) optically and acoustically. So long the dedicated channel is not released, MS_A5 has two-way voice path.
4)	MS_A4 and MS_A6 automatically accepting the incoming REC (GID 299).	MS_A4 and MS_A6 are joining the REC (GID 299).
5)	MS_A3 automatically accepts the incoming REC call (GID 299).	MS_A3 automatically joins the REC (GID 299). The VBS call (GID 202) will be released automatically and all resources are correctly de-allocated.
6)	MS_A5 takes the uplink on DCH.	MS_A5 has two-way voice path. MS_A3, MS_A4 and MS_A6 are able to listen to the announcement of MS_A5.

7)	MS_A5 releases the uplink.	Uplink free message is send in cell_A2 and cell_A3 and the DCH is correctly released.
8)	MS_A5 takes the uplink on GCCH.	MS_A5 has two-way voice path. MS_A3, MS_A4 and MS_A6 are able to listen to the announcement of MS_A5.
9)	MS_A5 releases the uplink.	Uplink free message is send in cell_A2 and cell_A3 and the uplink is correctly released.
10)	MS_A3 takes the uplink on GCCH.	MS_A3 has two-way voice path. MS_A4, MS_A5 and MS_A6 are able to listen to the announcement of MS_A3.
11)	MS_A3 releases the uplink.	Uplink free message is send in cell_A2 and cell_A3 and the uplink is correctly released.
12)	MS_A5 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
13)	Repeat from step 1 to 12 with VBS call (GID 203) instead of VBS call (GID 202).	

d) Success criteria

The VBS (GID 202) originator is able to receive notification about an incoming REC call (GID 299) and will be pre-empted.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.35 VBS originator notification (MS dedicated mode, incoming REC, roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.1 5.2.2.47 13.3.1	5.5.19 5.5.20 5.5.21	

a) Purpose

Verify that a VBS (GID 202) originator get a notification about an incoming REC (GID 299). This should be verified in different networks (roaming).

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network A in HPLMN originates a REC (MSC_A1 anchor).

Step 2: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_A1 anchor).

Step 3: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network A in HPLMN originates a REC (MSC_A1 anchor).

Step 4: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_A1 anchor).

Step 5: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network A in HPLMN originates a REC (MSC_B1 anchor).

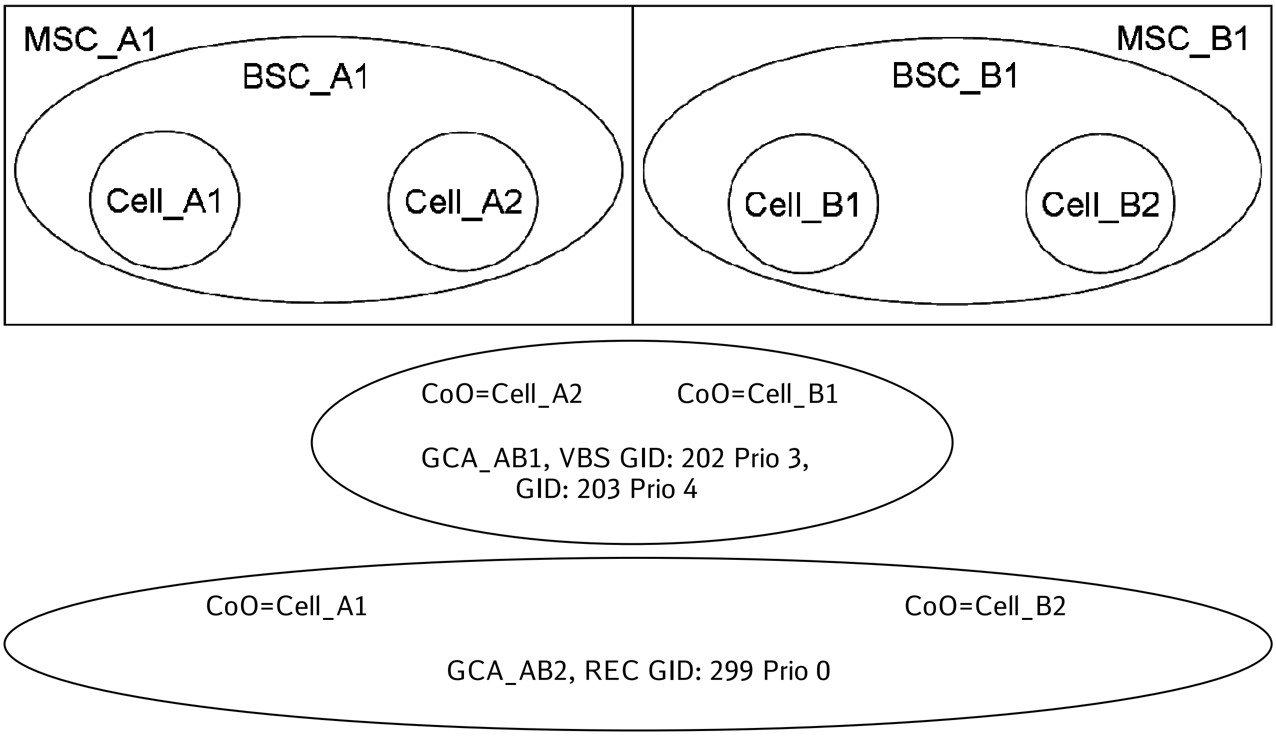
Step 6: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_B1 anchor).

Step 7: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network A in HPLMN originates a REC (MSC_B1 anchor).

Step 8: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_B1 anchor).

Test configuration for step 1 to 4

Network A **Network B**



A-MSC_A1 (GCA_AB1)		**R-MSC_B1 (GCA_AB1)**	
A-MSC_A1 (GCA_AB2)		**R-MSC_B1 (GCA_AB2)**	
Cell_A1	**Cell_A2**	**Cell_B1**	**Cell_B2**
MS_A1 (REC GID: 299	MS_A3 (REC GID: 299, VBS GID: 202, 203)	MS_B3 (REC GID: 299, VBS GID: 202, 203)	MS_B1 (REC GID: 299
MS_A2 (REC GID: 299	MS_B4 (REC GID: 299, VBS GID: 202, 203)	MS_A4 (REC GID: 299, VBS GID: 202, 203)	MS_B2 (REC GID: 299

c) Test procedure

Step 1: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network A in HPLMN originates a REC (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B4 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_A4 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_A4 and MS_B3 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3, MS_A4 and MS_B3 are joining the VBS call (GID 202). MS_B4 has two-way voice path. MS_A3, MS_A4 and MS_B3 are able to listen to the announcement of MS_B4.
3)	Service subscriber MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2, cell_B1 and cell_B2. MS_A2, MS_B1 and MS_B2 receiving a notification about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 advertise the incoming REC (GID 299) optically and acoustically. So long the dedicated channel is not released, MS_A1 has two-way voice path.
4)	MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B3 automatically accepting the incoming REC (GID 299).	MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B3 are joining the REC (GID 299).
5)	MS_B4 automatically accepts the incoming REC call (GID 299).	MS_B4 automatically joins the REC (GID 299). The VBS call (GID 202) will be released automatically and all resources are correctly deallocated.

6)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
7)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the DCH is correctly released.
8)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
10)	MS_B4 takes the uplink on GCCH.	MS_B4 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B3 are able to listen to the announcement of MS_B4.
11)	MS_B4 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
12)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
13)	Repeat from step 1 to 12 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 2: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B4 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_A4 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_A4 and MS_B3 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3, MS_A4 and MS_B3 are joining the VBS call (GID 202). MS_B4 has two-way voice path. MS_A3, MS_A4 and MS_B3 are able to listen to the announcement of MS_B4.

Step	Action	Expected result(s)
3)	Service subscriber MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1, cell_A2 and cell_B2. MS_A1, MS_A2 and MS_B2 receiving a notification about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 advertise the incoming REC (GID 299) optically and acoustically. So long the dedicated channel is not released, MS_B1 has two-way voice path.
4)	MS_A1, MS_A2, MS_A3, MS_A4, MS_B2 and MS_B3 automatically accepting the incoming REC (GID 299).	MS_A1, MS_A2, MS_A3, MS_A4, MS_B2 and MS_B3 are joining the REC (GID 299).
5)	MS_B4 automatically accepts the incoming REC call (GID 299).	MS_B4 automatically joins the REC (GID 299). The VBS call (GID 202) will be released automatically and all resources are correctly deallocated.
6)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
7)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the DCH is correctly released.
8)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
9)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
10)	MS_B4 takes the uplink on GCCH.	MS_B4 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B3 are able to listen to the announcement of MS_B4.
11)	MS_B4 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.

Step	Action	Expected result(s)
12)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
13)	Repeat from step 1 to 12 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 3: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network A in HPLMN originates a REC (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A4 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A2. MS_A3, MS_B3 and MS_B4 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B3 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3, MS_B3 and MS_B4 are joining the VBS call (GID 202). MS_A4 has two-way voice path. MS_A3, MS_B3 and MS_B4 are able to listen to the announcement of MS_A4.
3)	Service subscriber MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2, cell_B1 and cell_B2. MS_A2, MS_B1 and MS_B2 receiving a notification about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 advertise the incoming REC (GID 299) optically and acoustically. So long the dedicated channel is not released, MS_A1 has two-way voice path.
4)	MS_A2, MS_A3, MS_B1, MS_B2, MS_B3 and MS_B4 automatically accepting the incoming REC (GID 299).	MS_A2, MS_A3, MS_B1, MS_B2, MS_B3 and MS_B4 are joining the REC (GID 299).

Step	Action	Expected result(s)
5)	MS_A4 automatically accepts the incoming REC call (GID 299).	MS_A4 automatically joins the REC (GID 299). The VBS call (GID 202) will be released automatically and all resources are correctly de-allocated.
6)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
7)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the DCH is correctly released.
8)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
10)	MS_A4 takes the uplink on GCCH.	MS_A4 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A4.
11)	MS_A4 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
12)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
13)	Repeat from step 1 to 12 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 4: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_A1 anchor)

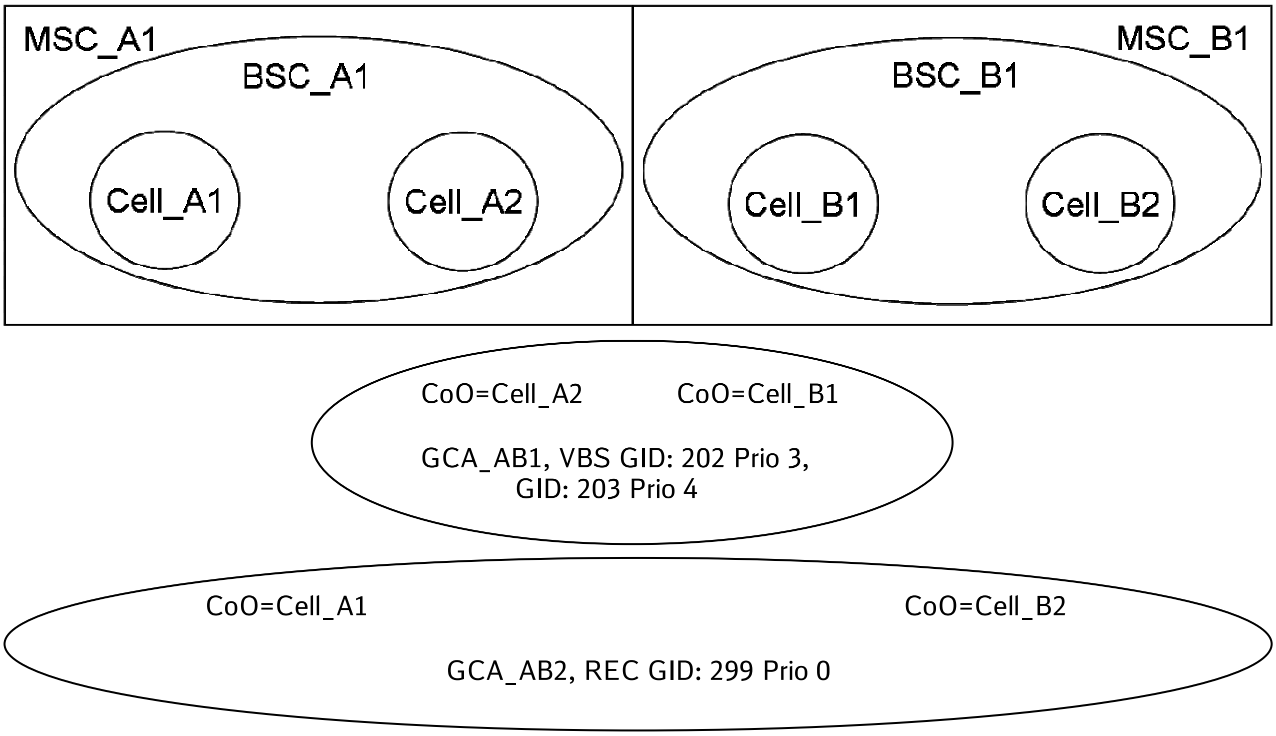
Step	Action	Expected result(s)
1)	Service subscriber MS_A4 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A2. MS_A3, MS_B3 and MS_B4 receive a notification about the incoming VBS call (GID 202).

Step	Action	Expected result(s)
2)	MS_A3, MS_B3 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3, MS_B3 and MS_B4 are joining the VBS call (GID 202). MS_A4 has two-way voice path. MS_A3, MS_B3 and MS_B4 are able to listen to the announcement of MS_A4.
3)	Service subscriber MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1, cell_A2 and cell_B2. MS_A1, MS_A2 and MS_B2 receiving a notification about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 advertise the incoming REC (GID 299) optically and acoustically. So long the dedicated channel is not released, MS_B1 has two-way voice path.
4)	MS_A1, MS_A2, MS_A3, MS_B2, MS_B3 and MS_B4 automatically accepting the incoming REC (GID 299).	MS_A1, MS_A2, MS_A3, MS_B2, MS_B3 and MS_B4 are joining the REC (GID 299).
5)	MS_A4 automatically accepts the incoming REC call (GID 299).	MS_A4 automatically joins the REC (GID 299). The VBS call (GID 202) will be released automatically and all resources are correctly deallocated.
6)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
7)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the DCH is correctly released.
8)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
9)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.

Step	Action	Expected result(s)
10)	MS_A4 takes the uplink on GCCH.	MS_A4 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A4.
11)	MS_A4 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
12)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
13)	Repeat from step 1 to 12 with VBS call (GID 203) instead of VBS call (GID 202).	

Test configuration for step 5 to 8

Network A **Network B**



R-MSC_A1 (GCA_AB1)		**A-MSC_B1 (GCA_AB1)**	
R-MSC_A1 (GCA_AB2)		**A-MSC_B1 (GCA_AB2)**	
Cell_A1	**Cell_A2**	**Cell_B1**	**Cell_B2**
MS_A1 (REC GID: 299	MS_A3 (REC GID: 299, VBS GID: 202, 203)	MS_B3 (REC GID: 299, VBS GID: 202, 203)	MS_B1 (REC GID: 299
MS_A2 (REC GID: 299	MS_B4 (REC GID: 299, VBS GID: 202, 203)	MS_A4 (REC GID: 299, VBS GID: 202, 203)	MS_B2 (REC GID: 299

Test procedure

Step 5: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network A in HPLMN originates a REC (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B4 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_A4 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_A4 and MS_B3 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3, MS_A4 and MS_B3 are joining the VBS call (GID 202). MS_B4 has two-way voice path. MS_A3, MS_A4 and MS_B3 are able to listen to the announcement of MS_B4.
3)	Service subscriber MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2, cell_B1 and cell_B2. MS_A2, MS_B1 and MS_B2 receiving a notification about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 advertise the incoming REC (GID 299) optically and acoustically. So long the dedicated channel is not released, MS_A1 has two-way voice path.
4)	MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B3 automatically accepting the incoming REC (GID 299).	MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B3 are joining the REC (GID 299).
5)	MS_B4 automatically accepts the incoming REC call (GID 299).	MS_B4 automatically joins the REC (GID 299). The VBS call (GID 202) will be released automatically and all resources are correctly deallocated.

6)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
7)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the DCH is correctly released.
8)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
10)	MS_B4 takes the uplink on GCCH.	MS_B4 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B3 are able to listen to the announcement of MS_B4.
11)	MS_B4 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
12)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
13)	Repeat from step 1 to 12 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 6: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B4 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_A4 and MS_B3 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_A4 and MS_B3 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3, MS_A4 and MS_B3 are joining the VBS call (GID 202). MS_B4 has two-way voice path. MS_A3, MS_A4 and MS_B3 are able to listen to the announcement of MS_B4.

Step	Action	Expected result(s)
3)	Service subscriber MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1, cell_A2 and cell_B2. MS_A1, MS_A2 and MS_B2 receiving a notification about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 advertise the incoming REC (GID 299) optically and acoustically. So long the dedicated channel is not released, MS_B1 has two-way voice path.
4)	MS_A1, MS_A2, MS_A3, MS_A4, MS_B2 and MS_B3 automatically accepting the incoming REC (GID 299).	MS_A1, MS_A2, MS_A3, MS_A4, MS_B2 and MS_B3 are joining the REC (GID 299).
5)	MS_B4 automatically accepts the incoming REC call (GID 299).	MS_B4 automatically joins the REC (GID 299). The VBS call (GID 202) will be released automatically and all resources are correctly deallocated.
6)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
7)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the DCH is correctly released.
8)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
9)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
10)	MS_B4 takes the uplink on GCCH.	MS_B4 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B3 are able to listen to the announcement of MS_B4.
11)	MS_B4 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.

Step	Action	Expected result(s)
12)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
13)	Repeat from step 1 to 12 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 7: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network A in HPLMN originates a REC (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A4 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A2. MS_A3, MS_B3 and MS_B4 receive a notification about the incoming VBS call (GID 202).
2)	MS_A3, MS_B3 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3, MS_B3 and MS_B4 are joining the VBS call (GID 202). MS_A4 has two-way voice path. MS_A3, MS_B3 and MS_B4 are able to listen to the announcement of MS_A4.
3)	Service subscriber MS_A1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2, cell_B1 and cell_B2. MS_A2, MS_B1 and MS_B2 receiving a notification about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 advertise the incoming REC (GID 299) optically and acoustically. So long the dedicated channel is not released, MS_A1 has two-way voice path.
4)	MS_A2, MS_A3, MS_B1, MS_B2, MS_B3 and MS_B4 automatically accepting the incoming REC (GID 299).	MS_A2, MS_A3, MS_B1, MS_B2, MS_B3 and MS_B4 are joining the REC (GID 299).

Step	Action	Expected result(s)
5)	MS_A4 automatically accepts the incoming REC call (GID 299).	MS_A4 automatically joins the REC (GID 299). The VBS call (GID 202) will be released automatically and all resources are correctly de-allocated.
6)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
7)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the DCH is correctly released.
8)	MS_A1 takes the uplink on GCCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
9)	MS_A1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
10)	MS_A4 takes the uplink on GCCH.	MS_A4 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A4.
11)	MS_A4 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
12)	MS_A1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
13)	Repeat from step 1 to 12 with VBS call (GID 203) instead of VBS call (GID 202).	

Step 8: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A4 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A2. MS_A3, MS_B3 and MS_B4 receive a notification about the incoming VBS call (GID 202).

Step	Action	Expected result(s)
2)	MS_A3, MS_B3 and MS_B4 automatically accept the incoming VBS call (GID 202), if the priority of the VBS call (GID 202) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3, MS_B3 and MS_B4 are joining the VBS call (GID 202). MS_A4 has two-way voice path. MS_A3, MS_B3 and MS_B4 are able to listen to the announcement of MS_A4.
3)	Service subscriber MS_B1 originates a REC (GID 299).	REC (GID 299) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1, cell_A2 and cell_B2. MS_A1, MS_A2 and MS_B2 receiving a notification about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 receive an in-band notification on FACCH channel about the incoming REC (GID 299). MS_A3, MS_A4, MS_B3 and MS_B4 advertise the incoming REC (GID 299) optically and acoustically. So long the dedicated channel is not released, MS_B1 has two-way voice path.
4)	MS_A1, MS_A2, MS_A3, MS_B2, MS_B3 and MS_B4 automatically accepting the incoming REC (GID 299).	MS_A1, MS_A2, MS_A3, MS_B2, MS_B3 and MS_B4 are joining the REC (GID 299).
5)	MS_A4 automatically accepts the incoming REC call (GID 299).	MS_A4 automatically joins the REC (GID 299). The VBS call (GID 202) will be released automatically and all resources are correctly deallocated.
6)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
7)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the DCH is correctly released.
8)	MS_B1 takes the uplink on GCCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
9)	MS_B1 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.

Step	Action	Expected result(s)
10)	MS_A4 takes the uplink on GCCH.	MS_A4 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A4.
11)	MS_A4 releases the uplink.	Uplink free message is send in cell_A1, cell_A2, cell_B1 and cell_B2 and the uplink is correctly released.
12)	MS_B1 releases the REC (GID 299).	REC (GID 299) is released successfully and all resources are correctly de-allocated.
13)	Repeat from step 1 to 12 with VBS call (GID 203) instead of VBS call (GID 202).	

d) Success criteria

The VBS (GID 202) originator is able to receive notification about an incoming REC call (GID 299) and will be pre-empted.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.36 Multiple VBS membership (non roaming case)

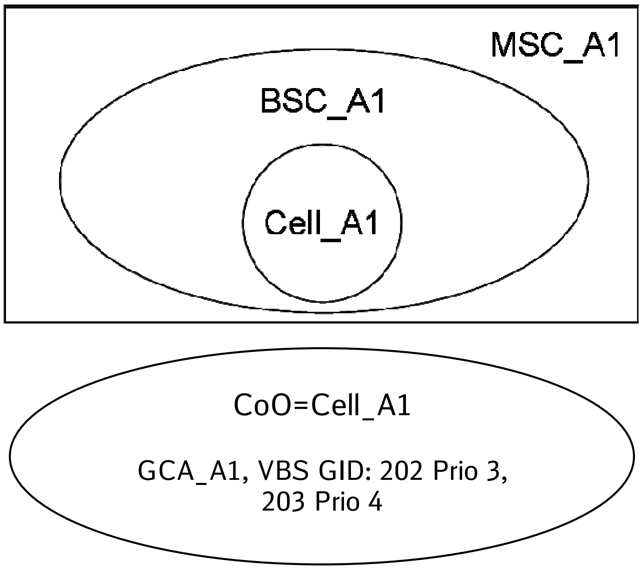
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.9		

a) Purpose

Verify that a service subscriber can be a member of multiple VBS calls (GID 201, GID 202).

b) Test configuration / initial conditions

Network A



MS_A1 (VBS GID: 202, 203)
MS_A2 (VBS GID: 202, 203)
MS_A3 (VBS GID: 202, 203)
MS_A4 (VBS GID: 202, 203)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A2, MS_A3 and MS_A4 receive a notification about the incoming VBS call (GID 202).
2)	MS_A2, MS_A3 and MS_A4 automatically accept the incoming VBS call (GID 202).	MS_A2, MS_A3 and MS_A4 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A2, MS_A3 and MS_A4 are able to listen to the announcement of MS_A1.
3)	MS_A2 leaves the ongoing VBS call (GID 202).	MS_A2 is able to leave VBS call (GID 202).
4)	Service subscriber MS_A2 originates a VBS call (GID 203).	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. MS_A1, MS_A3 and MS_A4 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_A3 and MS_A4 advertise the incoming VBS call (GID 203) optically and acoustically.
5)	MS_A3 joins the VBS (GID 203).	MS_A3 is able to join the VBS (GID 203). MS_A2 has two-way voice path. MS_A3 is able to listen to the announcement of MS_A2.
6)	MS_A2 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
7)	MS_A2 and MS_A3 rejoin the VBS call (GID 202).	MS_A1 has two-way voice path. MS_A2. MS_A3 and MS_A4 are able to listen to the announcement of MS_A1.
8)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 200) is released successfully and all resources are correctly de-allocated.

d) Success criteria

A service subscriber can join multiple VBS calls (GID 202, GID 203).

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.9.37 Multiple VBS membership (roaming case)

Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.2.9		

a) Purpose

Verify that a service subscriber can be a member of multiple VBS calls (GID 202, GID 203). This should be verified in different networks (roaming).

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network B in VPLMN leaves ongoing VBS and originates second VBS call (MSC_A1 anchor).

Step 2: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network A in HPLMN leaves ongoing VBS and originates second VBS call (MSC_A1 anchor).

Step 3: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network A in VPLMN leaves ongoing VBS and originates second VBS call (MSC_A1 anchor).

Step 4: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network B in HPLMN leaves ongoing VBS and originates second VBS call (MSC_A1 anchor).

Step 5: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network B in VPLMN leaves ongoing VBS and originates second VBS call (MSC_B1 anchor).

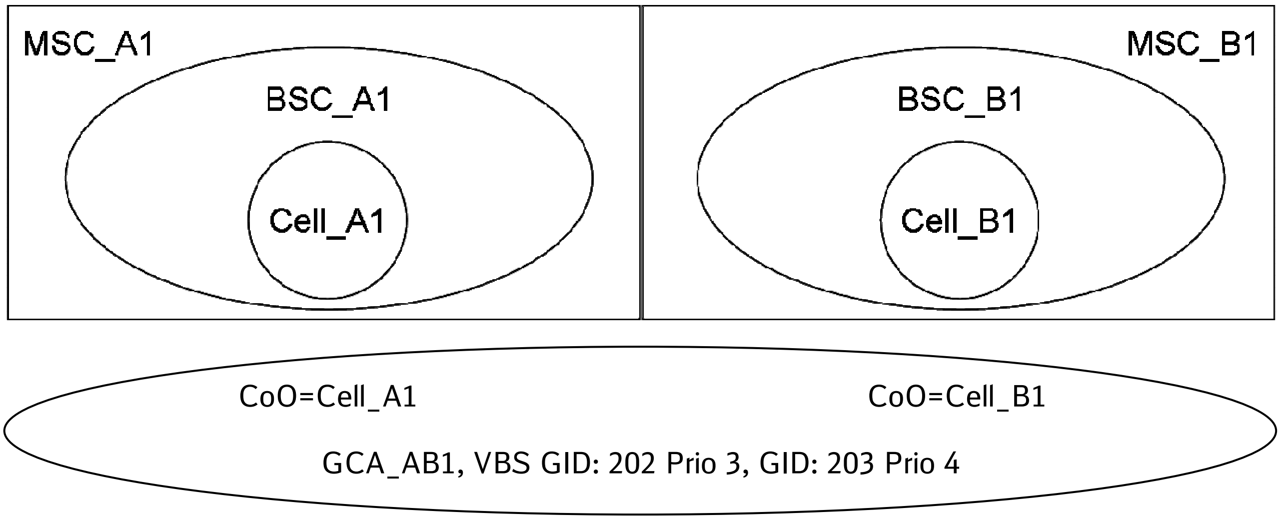
Step 6: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network A in HPLMN leaves ongoing VBS and originates second VBS call (MSC_B1 anchor).

Step 7: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network A in VPLMN leaves ongoing VBS and originates second VBS call (MSC_B1 anchor).

Step 8: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network B in HPLMN leaves ongoing VBS and originates second VBS call (MSC_B1 anchor).

Test configuration for step 1 to 4

Network A **Network B**



A-MSC_A1	**R-MSC_B1**
MS_A1 (VBS GID: 202, 203)	MS_B1 (VBS GID: 202, 203)
MS_A2 (VBS GID: 202)	MS_B2 (VBS GID: 202)
MS_B3 (VBS GID: 202, 203)	MS_A3 (VBS GID: 202, 203)
MS_B4 (VBS GID: 202)	MS_A4 (VBS GID: 202)

c) Test procedure

Step 1: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network B in VPLMN leaves ongoing VBS and originates second VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 receive a notification about the incoming VBS call (GID 202).

2)	MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 automatically accept the incoming VBS call (GID 202).	MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
3)	MS_B3 leaves the ongoing VBS call (GID 202).	MS_B3 is able to leave VBS call (GID 202).
4)	Service subscriber MS_B3 originates a VBS call (GID 203).	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_A3 and MS_B1 advertise the incoming VBS call (GID 203) optically and acoustically.
5)	MS_A3 and MS_B1 automatically accept the incoming VBS call (GID 203) if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3 and MS_B1 are able to join the VBS (GID 203). MS_B3 has two-way voice path. MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
6)	MS_B3 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
7)	MS_A3, MS_B1 and MS_B3 rejoin the VBS call (GID 202).	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
8)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 2: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network A in HPLMN leaves ongoing VBS and originates second VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are joining the VBS call (GID 202). MS_B3 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are able to listen to the announcement of MS_B3.
3)	MS_A1 leaves the ongoing VBS call (GID 202).	MS_A1 is able to leave VBS call (GID 202).
4)	Service subscriber MS_A1 originates a VBS call (GID 203).	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A3, MS_B1 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
5)	MS_A3 and MS_B1 automatically accept the incoming VBS call (GID 203) if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3 and MS_B1 are able to join the VBS (GID 203). MS_A1 has two-way voice path. MS_A3 and MS_B1 are able to listen to the announcement of MS_A1.
6)	MS_A1 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.

7)	MS_A1, MS_A3 and MS_B1 rejoin the VBS call (GID 202).	MS_B3 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are able to listen to the announcement of MS_B3.
8)	MS_B3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 3: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network A in VPLMN leaves ongoing VBS and originates second VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
3)	MS_A3 leaves the ongoing VBS call (GID 202).	MS_A3 is able to leave VBS call (GID 202).
4)	Service subscriber MS_A3 originates a VBS call (GID 203).	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A1 and MS_B3 automatically accept the incoming VBS call (GID 203) if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1 and MS_B3 are able to join the VBS (GID 203). MS_A3 has two-way voice path. MS_A1 and MS_B3 are able to listen to the announcement of MS_A3.
6)	MS_A3 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
7)	MS_A1, MS_A3 and MS_B3 rejoin the VBS call (GID 202).	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
8)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

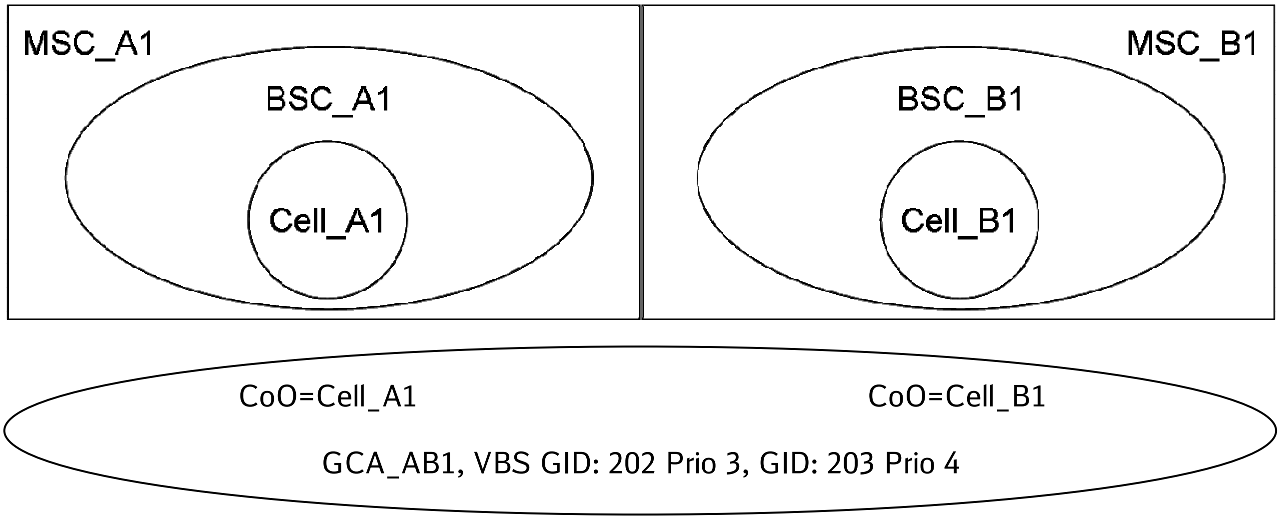
Step 4: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network B in HPLMN leaves ongoing VBS and originates second VBS call (MSC_A1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are joining the VBS call (GID 202). MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A3.
3)	MS_B1 leaves the ongoing VBS call (GID 202).	MS_B1 is able to leave VBS call (GID 202).

4)	Service subscriber MS_B1 originates a VBS call (GID 203).	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
5)	MS_A1 and MS_B3 automatically accept the incoming VBS call (GID 203) if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1 and MS_B3 are able to join the VBS (GID 203). MS_B1 has two-way voice path. MS_A1 and MS_B3 are able to listen to the announcement of MS_B1.
6)	MS_B1 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
7)	MS_A1, MS_B1 and MS_B3 rejoin the VBS call (GID 202).	MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A3.
8)	MS_A3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Test configuration for step 4 to 8

Network A **Network B**



R-MSC_A1	**A-MSC_B1**
MS_A1 (VBS GID: 202, 203)	MS_B1 (VBS GID: 202, 203)
MS_A2 (VBS GID: 202)	MS_B2 (VBS GID: 202)
MS_B3 (VBS GID: 202, 203)	MS_A3 (VBS GID: 202, 203)
MS_B4 (VBS GID: 202)	MS_A4 (VBS GID: 202)

Test procedure

Step 5: Mobile subscriber of network A originates VBS call in HPLMN and mobile subscriber of network B in VPLMN leaves ongoing VBS and originates second VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 receive a notification about the incoming VBS call (GID 202).

2)	MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 automatically accept the incoming VBS call (GID 202).	MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are joining the VBS call (GID 202). MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
3)	MS_B3 leaves the ongoing VBS call (GID 202).	MS_B3 is able to leave VBS call (GID 202).
4)	Service subscriber MS_B3 originates a VBS call (GID 203).	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A3 and MS_B1 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_A3 and MS_B1 advertise the incoming VBS call (GID 203) optically and acoustically.
5)	MS_A3 and MS_B1 automatically accept the incoming VBS call (GID 203) if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3 and MS_B1 are able to join the VBS (GID 203). MS_B3 has two-way voice path. MS_A3 and MS_B1 are able to listen to the announcement of MS_B3.
6)	MS_B3 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
7)	MS_A3, MS_B1 and MS_B3 rejoin the VBS call (GID 202).	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A1.
8)	MS_A1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 6: Mobile subscriber of network B originates VBS call in VPLMN and mobile subscriber of network A in HPLMN leaves ongoing VBS and originates second VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B3 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are joining the VBS call (GID 202). MS_B3 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are able to listen to the announcement of MS_B3.
3)	MS_A1 leaves the ongoing VBS call (GID 202).	MS_A1 is able to leave VBS call (GID 202).
4)	Service subscriber MS_A1 originates a VBS call (GID 203).	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_B1. MS_A3, MS_B1 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A3, MS_B1 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
5)	MS_A3 and MS_B1 automatically accept the incoming VBS call (GID 203) if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A3 and MS_B1 are able to join the VBS (GID 203). MS_A1 has two-way voice path. MS_A3 and MS_B1 are able to listen to the announcement of MS_A1.
6)	MS_A1 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.

7)	MS_A1, MS_A3 and MS_B1 rejoin the VBS call (GID 202).	MS_B3 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B1, MS_B2 and MS_B4 are able to listen to the announcement of MS_B3.
8)	MS_B3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 7: Mobile subscriber of network B originates VBS call in HPLMN and mobile subscriber of network A in VPLMN leaves ongoing VBS and originates second VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are joining the VBS call (GID 202). MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
3)	MS_A3 leaves the ongoing VBS call (GID 202).	MS_A3 is able to leave VBS call (GID 202).
4)	Service subscriber MS_A3 originates a VBS call (GID 203).	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_B1 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_B1 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.

Step	Action	Expected result(s)
5)	MS_A1 and MS_B3 automatically accept the incoming VBS call (GID 203) if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1 and MS_B3 are able to join the VBS (GID 203). MS_A3 has two-way voice path. MS_A1 and MS_B3 are able to listen to the announcement of MS_A3.
6)	MS_A3 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
7)	MS_A1, MS_A3 and MS_B3 rejoin the VBS call (GID 202).	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_A4, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_B1.
8)	MS_B1 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

Step 8: Mobile subscriber of network A originates VBS call in VPLMN and mobile subscriber of network B in HPLMN leaves ongoing VBS and originates second VBS call (MSC_B1 anchor)

Step	Action	Expected result(s)
1)	Service subscriber MS_A3 originates a VBS call (GID 202).	VBS call (GID 202) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 receive a notification about the incoming VBS call (GID 202).
2)	MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 automatically accept the incoming VBS call (GID 202).	MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are joining the VBS call (GID 202). MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A3.
3)	MS_B1 leaves the ongoing VBS call (GID 202).	MS_B1 is able to leave VBS call (GID 202).

4)	Service subscriber MS_B1 originates a VBS call (GID 203).	VBS call (GID 203) is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A group call channel (GCCH) is allocated in cell_A1. MS_A1, MS_A3 and MS_B3 receive an in-band notification on FACCH channel about the incoming VBS call (GID 203). MS_A1, MS_A3 and MS_B3 advertise the incoming VBS call (GID 203) optically and acoustically.
5)	MS_A1 and MS_B3 automatically accept the incoming VBS call (GID 203) if the priority of the VBS call (GID 203) is higher or equal than 3. If the priority is lower than 3, the user has to accept the VBS call manually.	MS_A1 and MS_B3 are able to join the VBS (GID 203). MS_B1 has two-way voice path. MS_A1 and MS_B3 are able to listen to the announcement of MS_B1.
6)	MS_B1 releases the VBS call (GID 203).	The VBS call (GID 203) is released successfully and all resources are correctly de-allocated.
7)	MS_A1, MS_B1 and MS_B3 rejoin the VBS call (GID 202).	MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are able to listen to the announcement of MS_A3.
8)	MS_A3 releases the VBS call (GID 202).	VBS call (GID 202) is released successfully and all resources are correctly de-allocated.

d) Success criteria

A service subscriber can join multiple VGCS calls (GID 200, GID 202) in different networks.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10 Cell Reselection and Handover

General reference for this chapter is the EN 301515, for handover in detail the ETSI TS 100 940. Although cell reselection is mainly performed by the mobile station, cell reselection relays on the correct support of the EIRENE network. This aspect is the focus of the cell reselection test cases. References for cell reselection are in addition the ETSI TS 100 930, ETSI EN 300 908 and ETSI EN 300 911.

5.10.1 Intra BTS cell reselection in idle mode

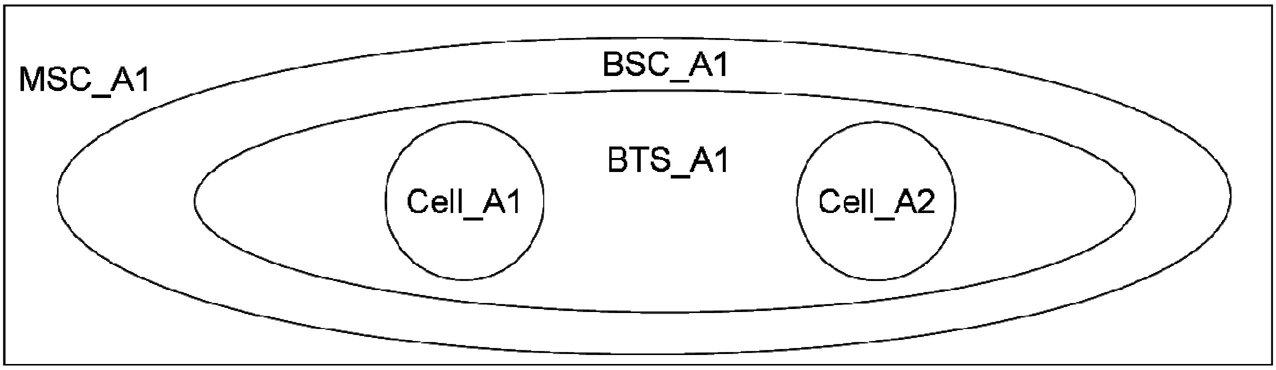
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that intra BTS cell reselection in idle mode is successfully performed.

b) Test configuration / initial conditions

Network A



Cell_A1	
MS_A1	

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 moves in idle mode to cell_A2.	Cell reselection successfully performed. The mobile camps onto the BCCH of the destination cell.

d) Success criteria

Cell reselection of MS_A1 in idle mode has been performed successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.2 Intra BTS cell reselection of a VBS listener

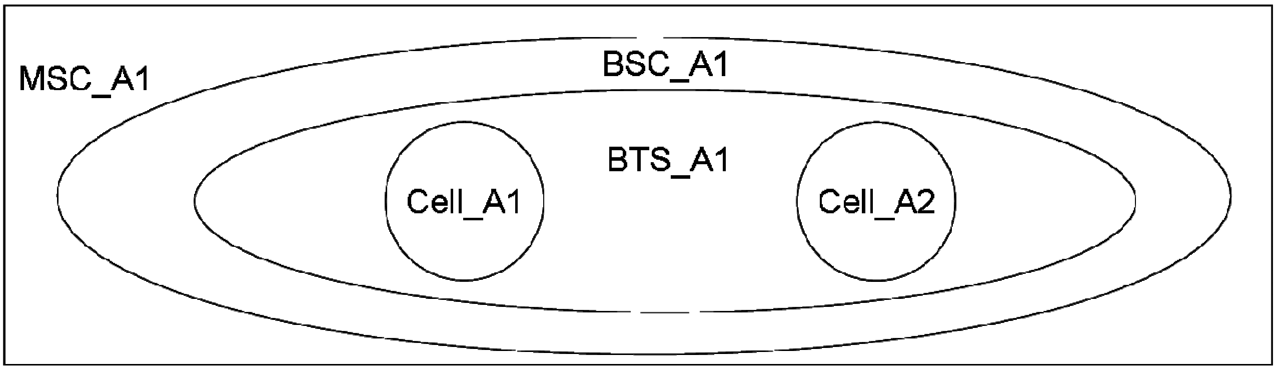
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

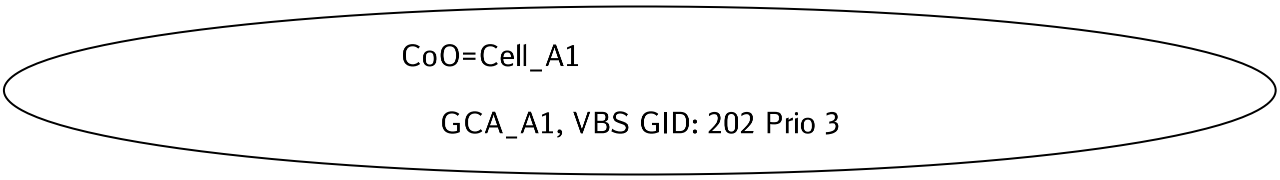
a) Purpose

Verify that an intra BTS cell reselection of a VBS listener has been performed successfully.

b) Test configuration / initial conditions

Network A





Cell_A1	Cell_A2
MS_A1 (VBS GID:202)	MS_A2 (VBS GID:202)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. The DCH (uplink) remains allocated during the whole VBS call. MS_A2 receives notification of the incoming call.
2)	MS_A2 accepts the incoming VBS call.	MS_A2 joins the VBS call. MS_A1 has two-way voice path. MS_A2 is only listener.
3)	MS_A2 moves from cell_A2 to cell_A1.	Cell reselection has been performed. MS_A2 camps onto the BCCH of the destination cell. The call stays connected.
4)	MS_A1 releases the call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

An intra BTS cell reselection of a VBS listener has been performed successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.3 Intra BTS cell reselection of a VGCS listener

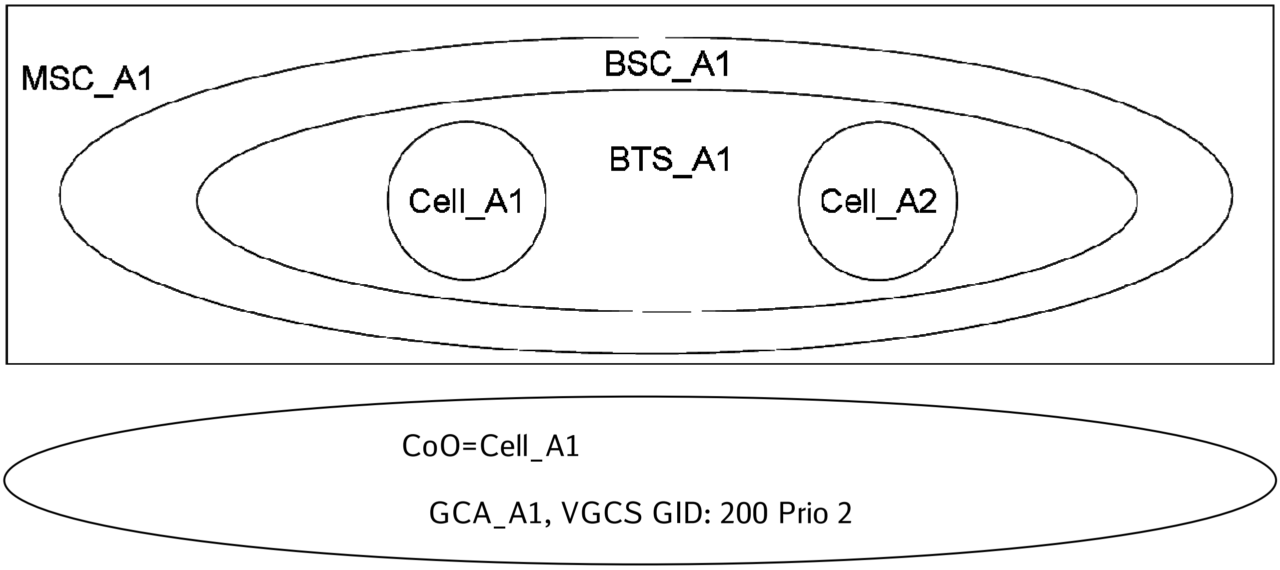
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an intra BTS cell reselection of a VGCS listener is successfully performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID:200)	MS_A2 (VGCS GID:200)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 receives notification of the incoming call. So long the dedicated channel is not released; MS_A1 has two way voice path.
2)	MS_A2 accepts the incoming VGCS call.	MS_A2 joins the VGCS call.
3)	MS_A1 keeps the uplink (dedicated channel).	The dedicated channel is not released. MS_A1 has two-way voice path. MS_A2 is only listener.
4)	MS_A2 moves from cell_A2 to cell_A1.	Cell reselection has been performed. MS_A2 camps onto the BCCH of the destination cell. The call stays connected.
5)	MS_A1 releases the uplink.	The uplink is correctly released.
6)	MS_A1 releases the call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

An intra BTS cell reselection of a VGCS listener has been performed successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.4 Intra BTS cell reselection of a REC listener

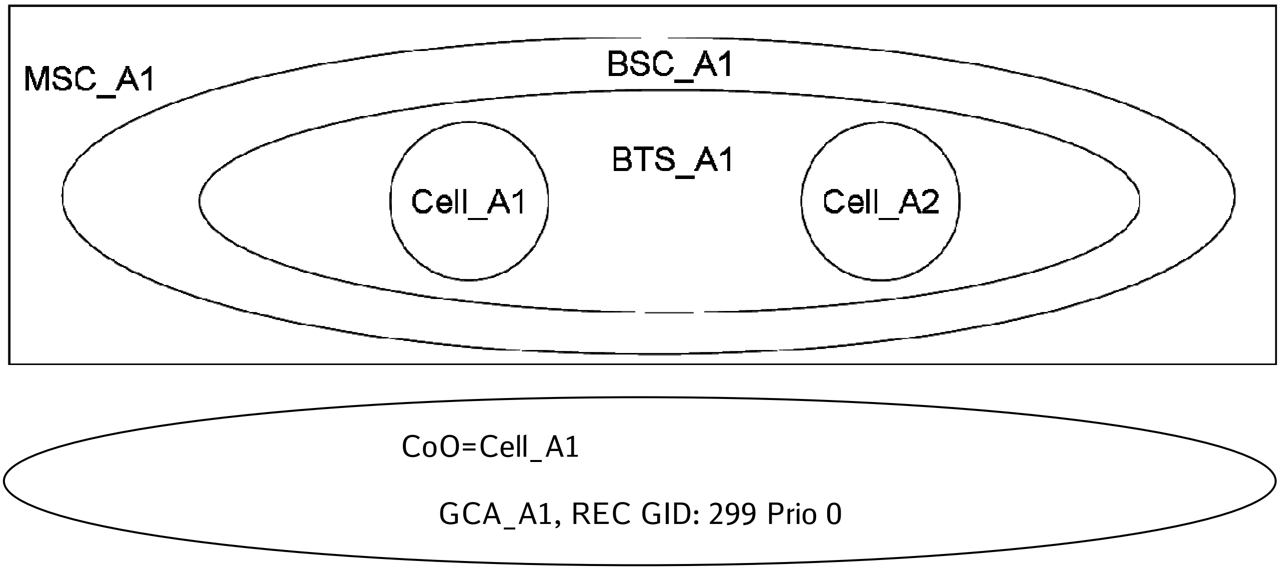
	EIRENE FRS V7	EIRENE SRS V15	Other
Reference to			EN 301515

a) Purpose

Verify that an intra BTS cell reselection of a REC listener is successfully performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (REC GID: 299)	MS_A2 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 is notified about the incoming REC on the NCH. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 automatically accepts the REC.	MS_A2 automatically joins the REC in group receive mode.
3)	MS_A1 keeps the uplink on the dedicated channel (DCH).	MS_A1 is able to keep the uplink on the dedicated channel. MS_A1 has two-way voice path. MS_A2 is only listener.
4)	MS_A2 moves from cell_A2 to cell_A1.	Cell reselection has been performed. MS_A2 camps onto the BCCH of the destination cell. The call stays connected.
5)	MS_A1 releases the uplink.	The uplink is correctly released.
6)	MS_A1 releases the REC.	The call is released and all resources are correctly de-allocated.

d) Success criteria

An intra BTS cell reselection of a REC listener has been performed successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.5 Inter BTS cell reselection in idle mode

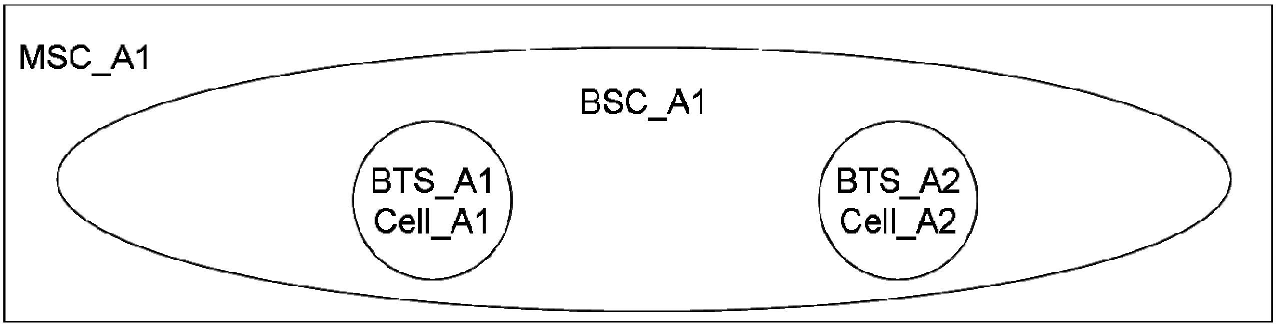
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that inter BTS cell reselection in idle mode is successfully performed.

b) Test configuration / initial conditions

Network A



Cell_A1	
MS_A1	

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 moves in idle mode to cell_A2	Cell reselection successfully performed. The mobile camps onto the BCCH of the destination cell.

d) Success criteria

An inter BTS cell reselection in idle mode has been successfully performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.6 Inter BTS cell reselection of a VBS listener

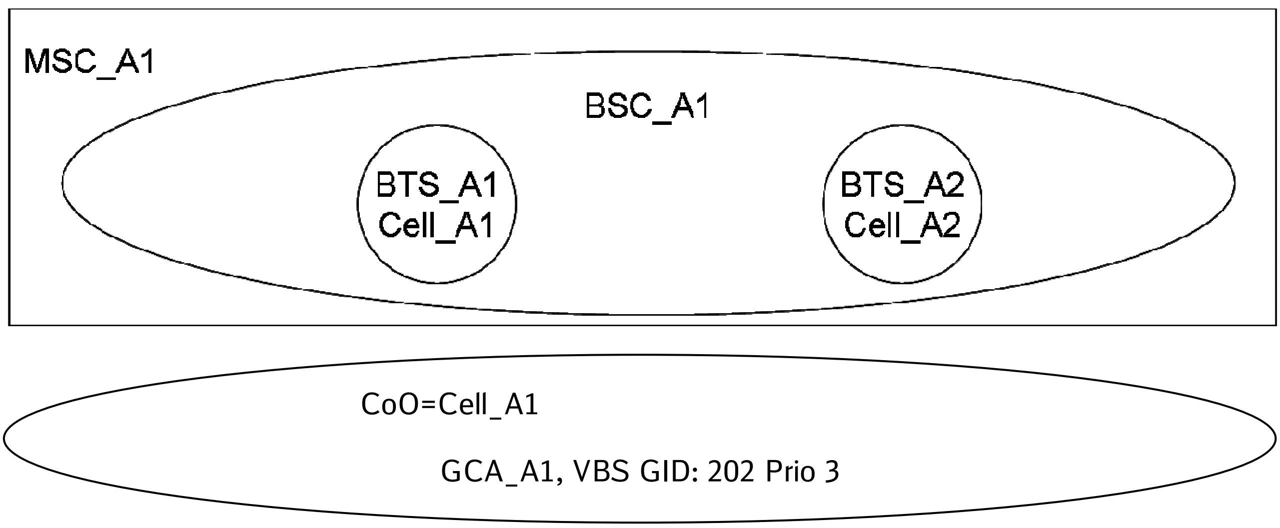
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an inter BTS cell reselection of a VBS listener is successfully performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. The DCH (uplink) remains allocated during the whole VBS call. MS_A2 receives notification of the incoming call.
2)	MS_A2 accepts the incoming VBS call.	MS_A2 joins the VBS call. MS_A1 has two-way voice path. MS_A2 is only listener.
3)	MS_A2 moves from cell_A2 to cell_A1.	Cell reselection has been performed. MS_A2 camps onto the BCCH of the destination cell. The call stays connected.
4)	MS_A1 releases the call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

An inter BTS cell reselection of a VBS listener has been performed successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.7 Inter BTS cell reselection of a VGCS listener

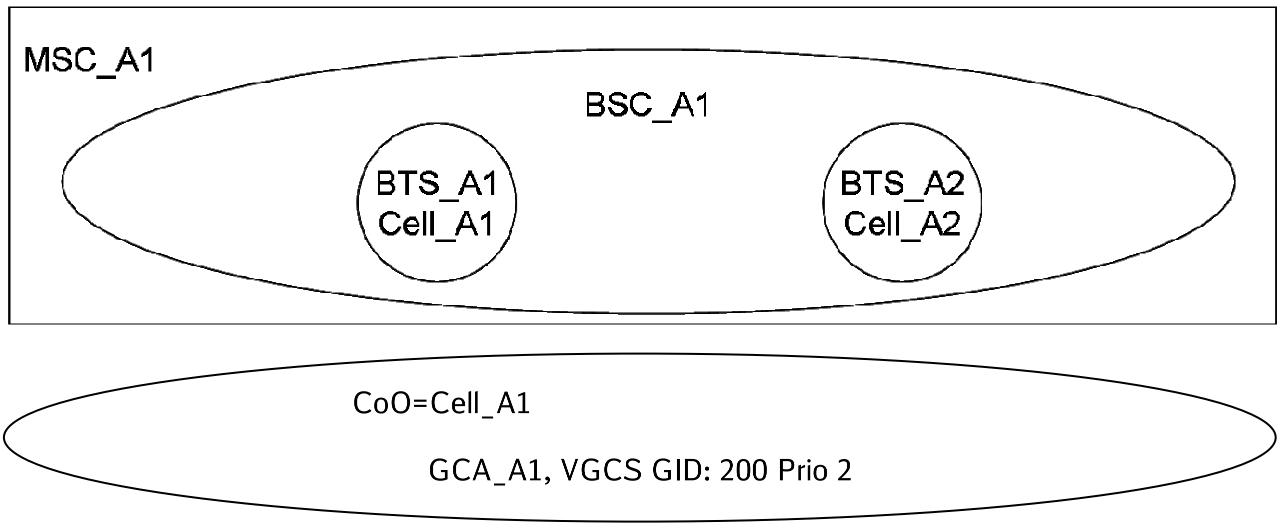
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an inter BTS cell reselection of a VGCS listener is successfully performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID:200)	MS_A2 (VGCS GID:200)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 receives notification of the incoming call. So long the dedicated channel is not released; MS_A1 has two way voice path.
2)	MS_A2 accepts the incoming VGCS call.	MS_A2 joins the VGCS call. MS_A1 has two-way voice path. MS_A2 is only listener.
3)	MS_A1 requests the uplink on the group channel.	MS_A1 takes the uplink on the group channel. MS_A1 has two-way voice path. MS_A2 is only listener.
4)	MS_A2 moves from cell_A2 to cell_A1.	Cell reselection has been performed. MS_A2 camps onto the BCCH of the destination cell. The call stays connected.
5)	MS_A1 releases the uplink.	The uplink is correctly released.
6)	MS_A1 releases the call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

An inter BTS cell reselection of a VGCS listener has been performed successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.8 Inter BTS cell reselection of a REC listener

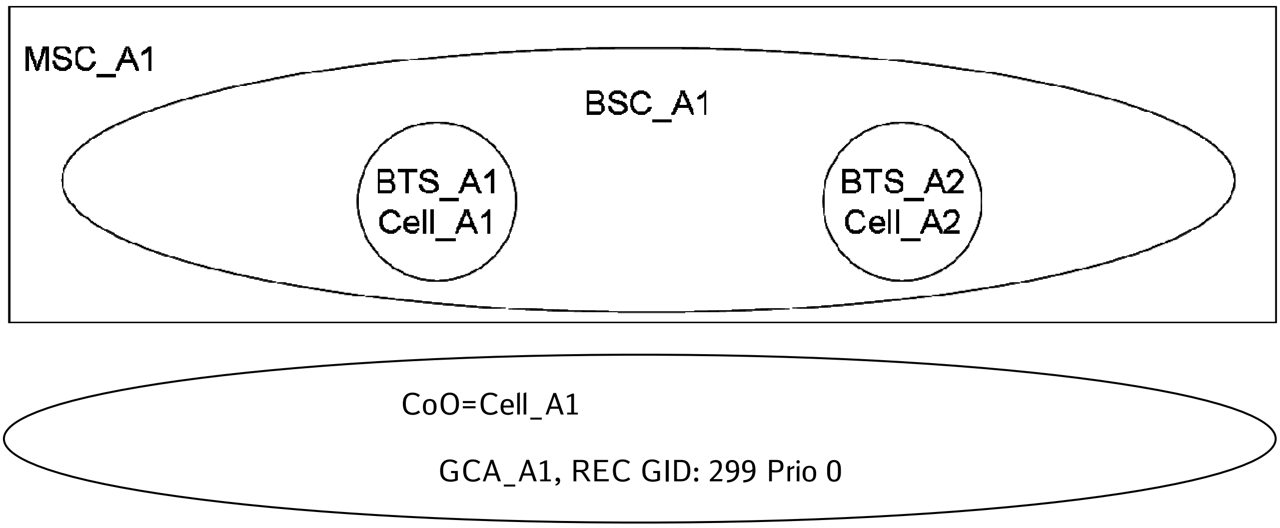
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an inter BTS cell reselection of a REC listener is successfully performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (REC GID: 299)	MS_A2 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 is notified about the incoming REC on the NCH. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 automatically accepts the REC.	MS_A2 automatically joins the REC in group receive mode.
3)	MS_A1 keeps the uplink on the dedicated channel (DCH).	MS_A1 is able to keep the uplink on the dedicated channel. MS_A1 has two-way voice path. MS_A2 is only listener.
4)	MS_A2 moves from cell_A2 to cell_A1.	Cell reselection has been performed. MS_A2 camps onto the BCCH of the destination cell. The call stays connected.
5)	MS_A1 releases the uplink.	The uplink is correctly released.
6)	MS_A1 releases the REC.	The call is released and all resources are correctly de-allocated.

d) Success criteria

An inter BTS cell reselection of a REC listener has been performed successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.9 Inter BSC cell reselection in idle mode

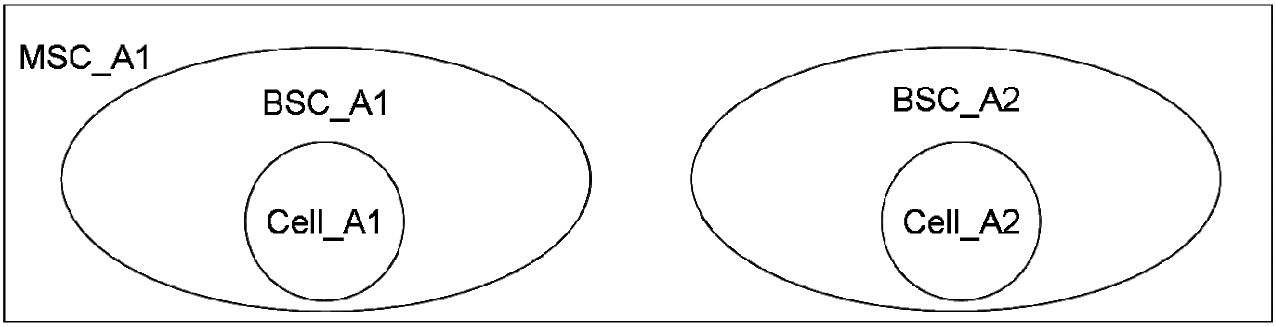
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that inter BSC cell reselection in idle mode is successfully performed.

b) Test configuration / initial conditions

Network A



Cell_A1	
MS_A1	

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 moves in idle mode to cell_A2.	Cell reselection successfully performed. Location Update has been done. MS_A1 camps onto the BCCH of the destination cell.
2)	MS_A1 moves in idle mode to cell_A1.	Cell reselection successfully performed. Location Update has been done. MS_A1 camps the BCCH of the destination cell.

d) Success criteria

An inter BSC cell reselection in idle mode has been performed successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**

5.10.10 Inter BSC cell reselection of a VBS listener

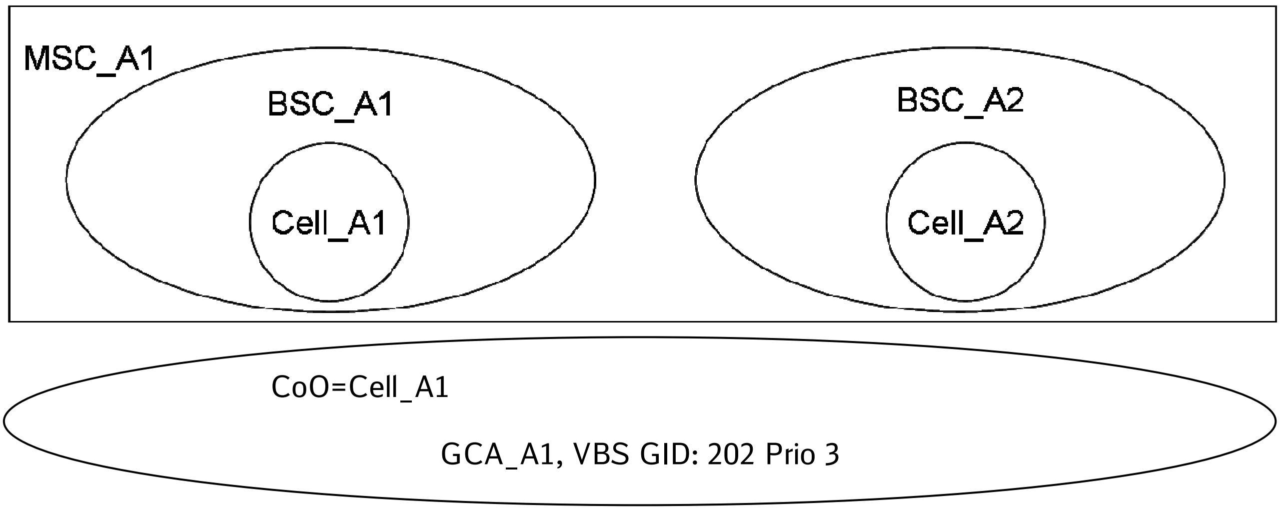
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an inter BCS cell reselection of a VBS listener is successfully performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID:202)	MS_A2 (VBS GID:202)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. The DCH (uplink) remains allocated during the whole VBS call. MS_A2 receives notification of the incoming call.
2)	MS_A2 accepts the incoming VBS call.	MS_A2 joins the VBS call. MS_A1 has two-way voice path. MS_A2 is only listener.
3)	MS_A2 moves from cell_A2 to cell_A1.	Cell reselection has been performed. MS_A2 camps onto the BCCH of the destination cell and location update has been performed. The call stays connected.
4)	MS_A2 moves from cell_A1 to cell_A2.	Cell reselection has been performed. MS_A2 camps onto the BCCH of the destination cell and location update has been performed. The call stays connected.
5)	MS_A1 releases the call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

An inter BSC cell reselection of a VBS listener has been performed successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.11 Inter BSC cell reselection of a VGCS listener

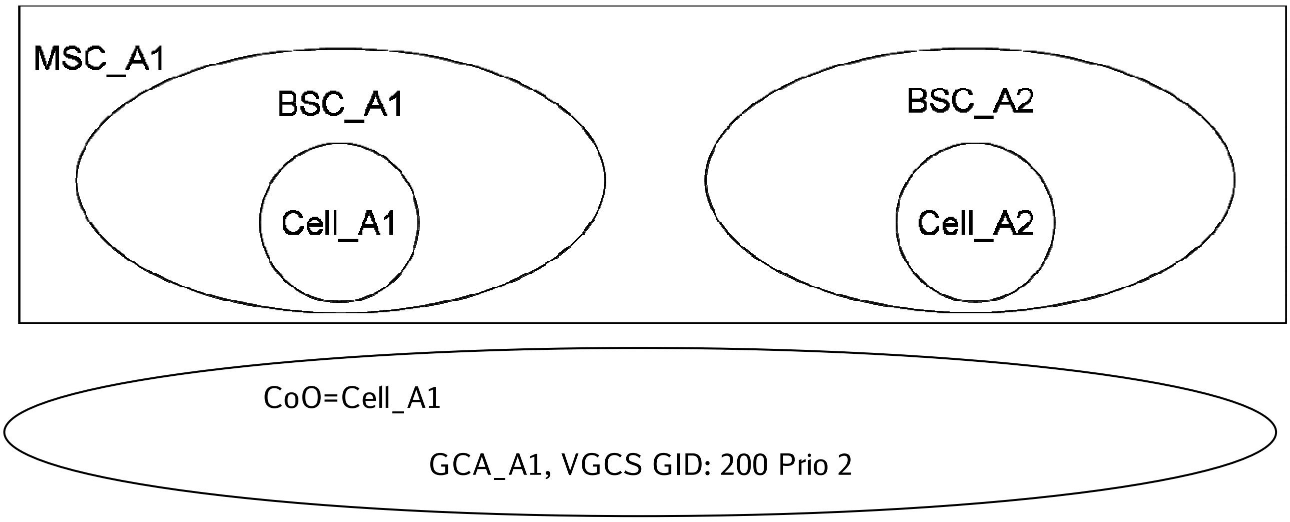
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an inter BCS cell reselection of a VGCS listener is successfully performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_A2. MS_A2 receives notification of the incoming call. So long the dedicated channel is not released; MS_A1 has two way voice path.
2)	MS_A2 accepts the incoming VGCS call.	MS_A2 joins the VGCS call.
3)	MS_A1 requests the uplink on the group channel.	MS_A1 takes the uplink on the group channel. MS_A1 has two-way voice path. MS_A2 is only listener.
4)	MS_A2 moves from cell_A2 to cell_A1.	Cell reselection has been performed. MS_A2 camps onto the BCCH of the destination cell. Location update has been performed. The call stays connected.
5)	MS_A2 moves from cell_A1 to cell_A2.	Cell reselection has been performed. MS_A2 camps onto the BCCH of the destination cell. Location update has been performed. The call stays connected.
6)	MS_A1 releases the uplink.	The uplink is correctly released.
7)	MS_A1 releases the call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

An inter BSC cell reselection of a VGCS listener has been performed successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.12 Inter BSC cell reselection of a REC listener

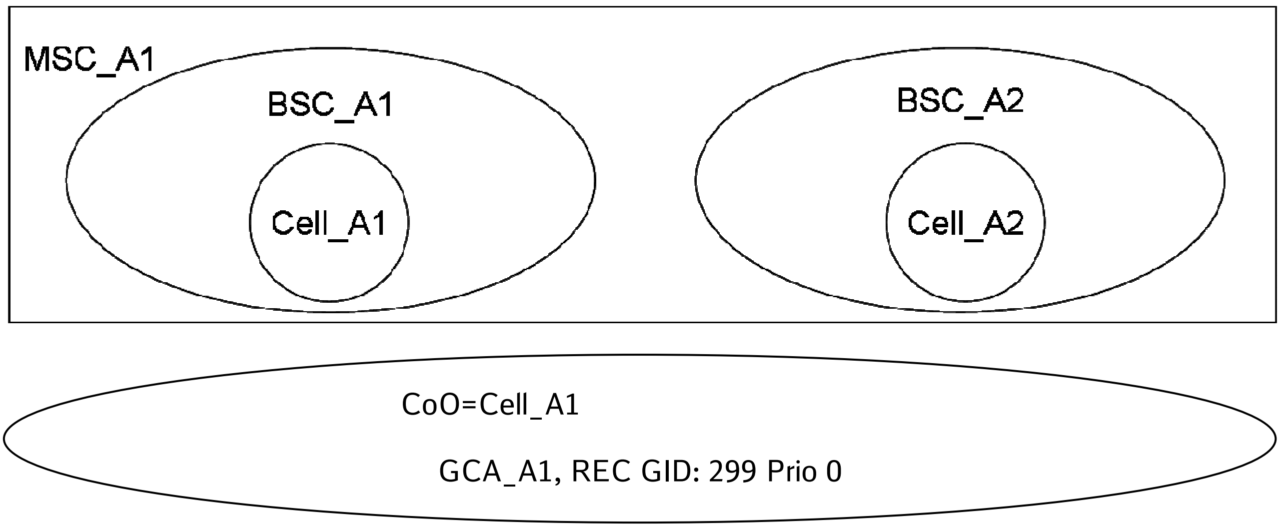
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an inter BCS cell reselection of a REC listener is successfully performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (REC GID: 299)	MS_A2 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 is notified about the incoming REC on the NCH. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 automatically accepts the REC.	MS_A2 automatically joins the REC in group receive mode.
3)	MS_A1 keeps the uplink on the dedicated channel (DCH).	MS_A1 is able to keep the uplink on the dedicated channel. MS_A1 has two-way voice path. MS_A2 is only listener.
4)	MS_A2 moves from cell_A2 to cell_A1.	Cell reselection has been performed. MS_A2 camps onto the BCCH of the destination cell. Location update has been done. The call stays connected.
5)	MS_A2 moves from cell_A1 to cell_A2.	Cell reselection has been performed. MS_A2 camps onto the BCCH of the destination cell. Location update has been done. The call stays connected.
6)	MS_A1 releases the uplink.	The uplink is correctly released.
7)	MS_A1 releases the REC.	The call is released and all resources are correctly de-allocated.

d) Success criteria

An inter BSC cell reselection of a REC listener has been performed successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.13 Inter MSC reselection of a VBS listener

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an inter MSC reselection of a VBS listener is successfully performed.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

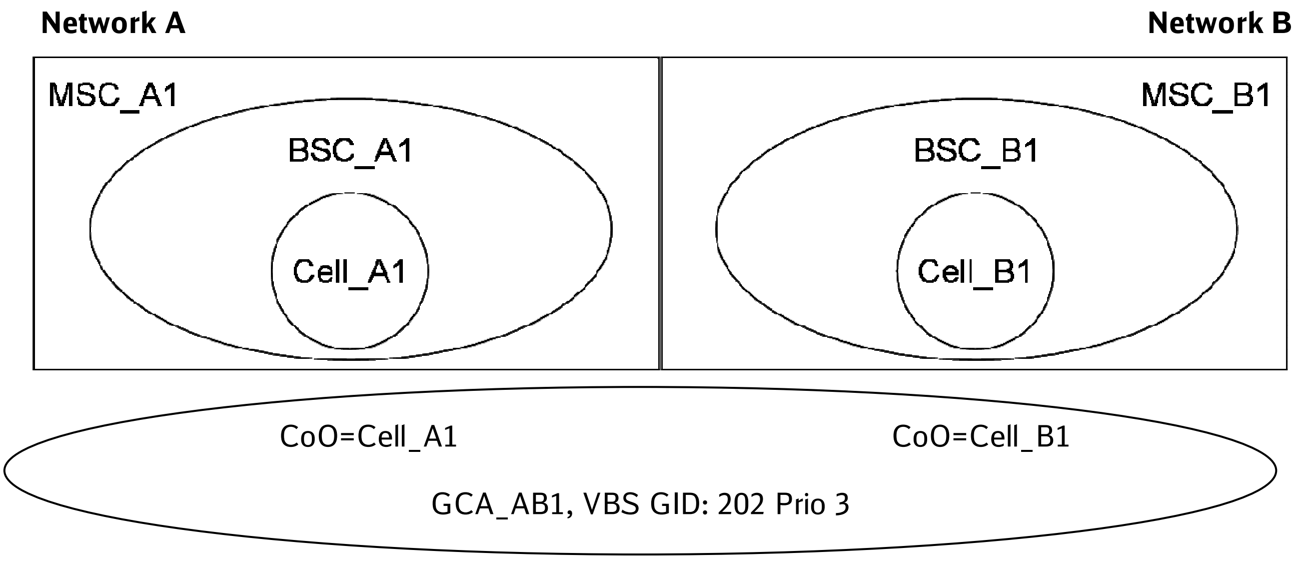
Step 1: VBS call establishment in anchor MSC_A1.

Step 2: VBS call establishment in relay MSC_B1.

Step 3: VBS call establishment in relay MSC_A1.

Step 4: VBS call establishment in anchor MSC_B1.

Test configuration for steps 1 and 2



A-MSC_A1	R-MSC_B1
MS_A1 (VBS GID: 202)	MS_B1 (VBS GID: 202)
MS_B2 (VBS GID: 202)	MS_A2 (VBS GID: 202)
MS_A3 (VBS GID: 202)	MS_B3 (VBS GID: 202)

c) Test procedure

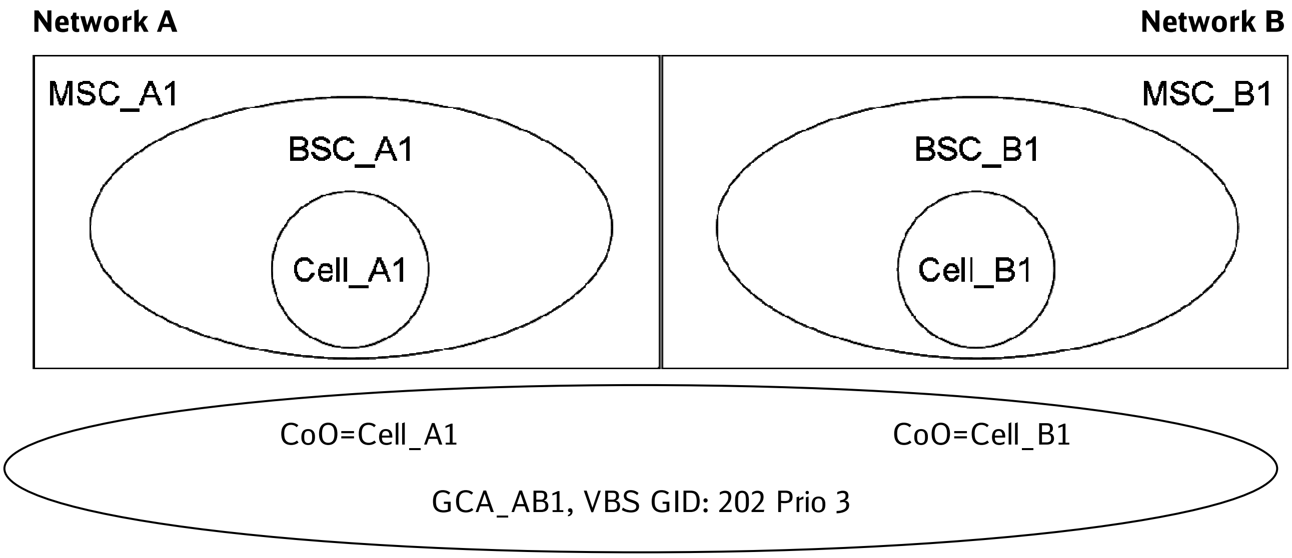
Step 1: VBS call establishment in anchor MSC_A1.

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_B1. The DCH (uplink) remains allocated during the whole VBS call. MS_A2, MS_A3, MS_B1, MS_B2 and MS_B3 receive notification of the incoming call.
2)	MS_A2, MS_A3, MS_B1, MS_B2 and MS_B3 accept the incoming VBS call.	MS_A2, MS_A3, MS_B1, MS_B2 and MS_B3 join the VBS call. MS_A1 has two-way voice path. MS_A2, MS_A3, MS_B1, MS_B2 and MS_B3 are only listeners.
3)	MS_B1 moves from cell_B1 to cell_A1.	Network reselection has been performed. MS_B1 receives the notification on the NCH about the VBS call and rejoins it.
4)	MS_B1 moves back to cell_B1.	Network reselection has been performed again.
5)	MS_A2 moves from cell_B1 to cell_A1.	Network reselection has been performed. MS_A2 receives the notification on the NCH about the VBS call and rejoins it.
6)	MS_A2 moves back to cell_B1.	Network reselection has been performed again.
7)	MS_B2 moves from cell_A1 to cell_B1.	Network reselection has been performed. MS_B2 receives the notification on the NCH about the VBS call and rejoins it.
8)	MS_B2 moves back to cell_A1.	Network reselection has been performed again.
9)	MS_A3 moves from cell_A1 to cell_B1.	Network reselection has been performed. MS_A3 receives the notification on the NCH about the VBS call and rejoins it.
10)	MS_A3 moves back to cell_A1.	Network reselection has been performed again.
11)	MS_A1 releases the call.	The call is released and all resources are correctly de-allocated.

Step 2: VBS call establishment in relay MSC_B1.

1)	Service subscriber MS_B1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A GCCH is allocated in cell_A1. The DCH (uplink) remains allocated during the whole VBS call. MS_A1, MS_A2, MS_A3, MS_B2 and MS_B3 receive notification of the incoming call.
2)	MS_A1, MS_A2, MS_A3, MS_B2 and MS_B3 accept the incoming VBS call.	MS_A1, MS_A2, MS_A3, MS_B2 and MS_B3 join the VBS call. MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_B2 and MS_B3 are only listener.
3)	MS_A1 moves from cell_A1 to cell_B1.	Network reselection has been performed. MS_A1 receives the notification on the NCH about the VBS call and rejoins it.
4)	MS_A1 moves back to cell_A1.	Network reselection has been performed again.
5)	MS_B2 moves from cell_A1 to cell_B1.	Network reselection has been performed. MS_B2 receives the notification on the NCH about the VBS call and rejoins it.
6)	MS_B2 moves back to cell_A1.	Network reselection has been performed again.
7)	MS_A2 moves from cell_B1 to cell_A1.	Network reselection has been performed. MS_A2 receives the notification on the NCH about the VBS call and rejoins it.
8)	MS_A2 moves back to cell_B1.	Network reselection has been performed again.
9)	MS_B3 moves from cell_B1 to cell_A1.	Network reselection has been performed. MS_B3 receives the notification on the NCH about the VBS call and rejoins it.
10)	MS_B3 moves back to cell_B1.	Network reselection has been performed again.
11)	MS_B1 releases the call.	The call is released and all resources are correctly de-allocated.

Test configuration for steps 3 and 4



R-MSC_A1	**A-MSC_B1**
MS_A1 (VBS GID: 202)	MS_B1 (VBS GID: 202)
MS_B2 (VBS GID: 202)	MS_A2 (VBS GID: 202)
MS_A3 (VBS GID: 202)	MS_B3 (VBS GID: 202)

Test procedure

Step 3: VBS call establishment in relay MSC_A1.

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_B1. The DCH (uplink) remains allocated during the whole VBS call. MS_A2, MS_A3, MS_B1, MS_B2 and MS_B3 receive notification of the incoming call.
2)	MS_A2, MS_A3, MS_B1, MS_B2 and MS_B3 accept the incoming VBS call.	MS_A2, MS_A3, MS_B1, MS_B2 and MS_B3 join the VBS call. MS_A1 has two-way voice path. MS_A2, MS_A3, MS_B1, MS_B2 and MS_B3 are only listeners.

Step	Action	Expected result(s)
3)	MS_B1 moves from cell_B1 to cell_A1.	Network reselection has been performed. MS_B1 receives the notification on the NCH about the VBS call and rejoins it.
4)	MS_B1 moves back to cell_B1.	Network reselection has been performed again.
5)	MS_A2 moves from cell_B1 to cell_A1.	Network reselection has been performed. MS_A2 receives the notification on the NCH about the VBS call and rejoins it.
6)	MS_A2 moves back to cell_B1.	Network reselection has been performed again.
7)	MS_B2 moves from cell_A1 to cell_B1.	Network reselection has been performed. MS_B2 receives the notification on the NCH about the VBS call and rejoins it.
8)	MS_B2 moves back to cell_A1.	Network reselection has been performed again.
9)	MS_A3 moves from cell_A1 to cell_B1.	Network reselection has been performed. MS_A3 receives the notification on the NCH about the VBS call and rejoins it.
10)	MS_A3 moves back to cell_A1.	Network reselection has been performed again.
11)	MS_A1 releases the call.	The call is released and all resources are correctly de-allocated.

Step 4: VBS call establishment in anchor MSC_B1.

1)	Service subscriber MS_B1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A GCCH is allocated in cell_A1. The DCH (uplink) remains allocated during the whole VBS call. MS_A1, MS_A2, MS_A3, MS_B2 and MS_B3 receive notification of the incoming call.
2)	MS_A1, MS_A2, MS_A3, MS_B2 and MS_B3 accept the incoming VBS call.	MS_A1, MS_A2, MS_A3, MS_B2 and MS_B3 join the VBS call. MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_B2 and MS_B3 are only listener.
3)	MS_A1 moves from cell_A1 to cell_B1.	Network reselection has been performed. MS_A1 receives the notification on the NCH about the VBS call and rejoins it.

4)	MS_A1 moves back to cell_A1.	Network reselection has been performed again.
5)	MS_B2 moves from cell_A1 to cell_B1.	Network reselection has been performed. MS_B2 receives the notification on the NCH about the VBS call and rejoins it.
6)	MS_B2 moves back to cell_A1.	Network reselection has been performed again.
7)	MS_A2 moves from cell_B1 to cell_A1.	Network reselection has been performed. MS_A2 receives the notification on the NCH about the VBS call and rejoins it.
8)	MS_A2 moves back to cell_B1.	Network reselection has been performed again.
9)	MS_B3 moves from cell_B1 to cell_A1.	Network reselection has been performed. MS_B3 receives the notification on the NCH about the VBS call and rejoins it.
10)	MS_B3 moves back to cell_B1.	Network reselection has been performed again.
11)	MS_B1 releases the call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

An inter MSC reselection of a VBS listener is successfully performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.14 Inter MSC reselection of a VGCS listener

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an inter MSC reselection of a VGCS listener is successfully performed.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

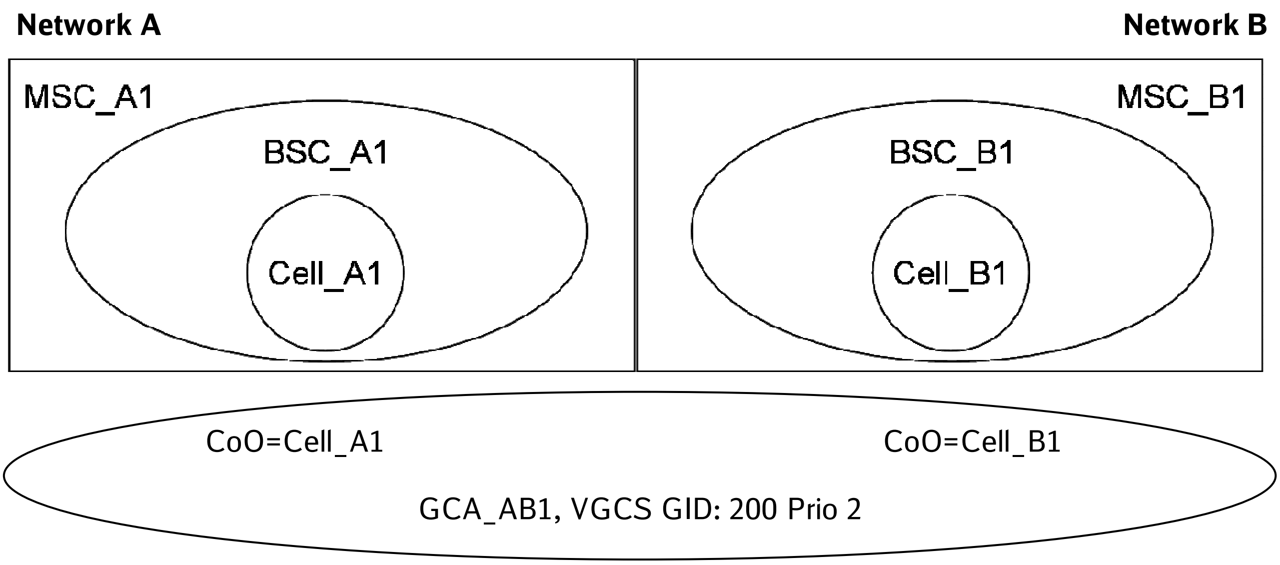
Step 1: VGCS call establishment in anchor MSC_A1.

Step 2: VGCS call establishment in relay MSC_B1.

Step 3: VGCS call establishment in relay MSC_A1.

Step 4: VGCS call establishment in anchor MSC_B1.

Test configuration for steps 1 and 2



A-MSC_A1	R-MSC_B1
MS_A1 (VGCS GID: 200)	MS_B1 (VGCS GID: 200)
MS_B2 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A3 (VGCS GID: 200)	MS_B3 (VGCS GID: 200)

c) Test procedure

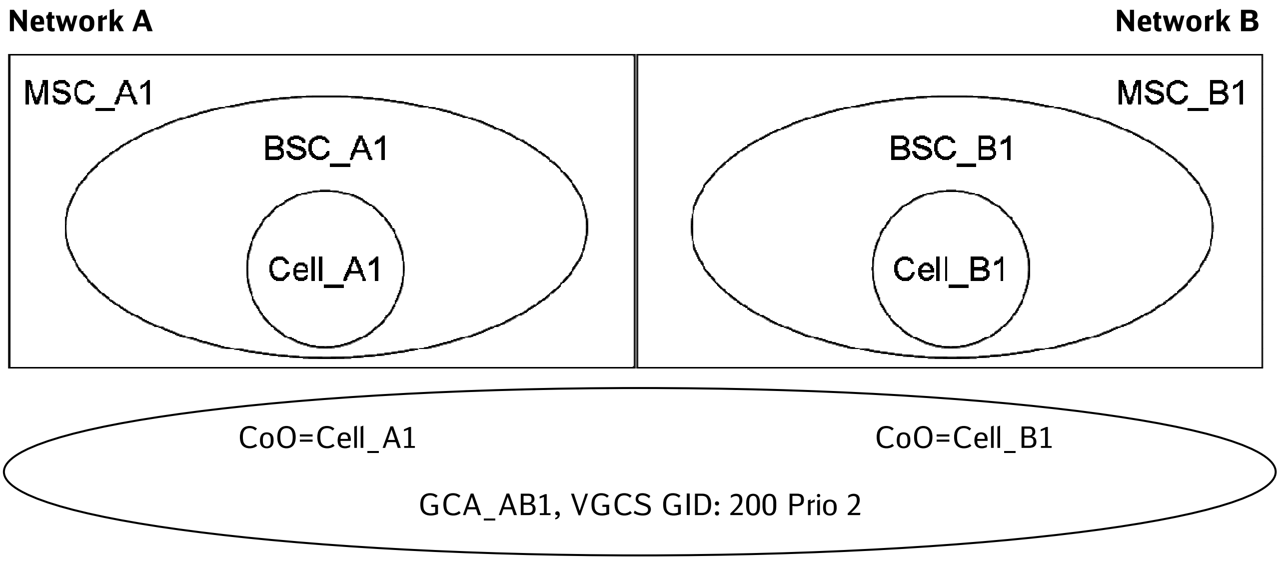
Step 1: VGCS call establishment in anchor MSC_A1.

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_B1. So long the dedicated channel is not released; MS_A1 has two way voice path. MS_A2, MS_A3, MS_B1, MS_B2 and MS_B3 receive notification of the incoming call.
2)	MS_A2, MS_A3, MS_B1, MS_B2 and MS_B3 accept the incoming VGCS call.	MS_A2, MS_A3, MS_B1, MS_B2 and MS_B3 join the VGCS call.
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_B1, MS_B2 and MS_B3 are only listeners.
4)	MS_B1 moves from cell_B1 to cell_A1.	Network reselection has been performed. MS_B1 receives the notification on the NCH about the VGCS call and rejoins it.
5)	MS_B1 moves back to cell_B1.	Network reselection has been performed again.
6)	MS_A2 moves from cell_B1 to cell_A1.	Network reselection has been performed. MS_A2 receives the notification on the NCH about the VGCS call and rejoins it.
7)	MS_A2 moves back to cell_B1.	Network reselection has been performed again.
8)	MS_B2 moves from cell_A1 to cell_B1.	Network reselection has been performed. MS_B2 receives the notification on the NCH about the VGCS call and rejoins it.
9)	MS_B2 moves back to cell_A1.	Network reselection has been performed again.
10)	MS_A3 moves from cell_A1 to cell_B1.	Network reselection has been performed. MS_A3 receives the notification on the NCH about the VGCS call and rejoins it.
11)	MS_A3 moves back to cell_A1.	Network reselection has been performed again.
12)	MS_A1 releases the uplink.	The uplink is correctly released.
13)	MS_A1 releases the call.	The call is released and all resources are correctly de-allocated.

Step 2: VGCS call establishment in relay MSC_B1.

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A GCCH is allocated in cell_A1. So long the dedicated channel is not released; MS_B1 has two way voice path. MS_A1, MS_A2, MS_A3, MS_B2 and MS_B3 receive notification of the incoming call.
2)	MS_A1, MS_A2, MS_A3, MS_B2 and MS_B3 accept the incoming VGCS call.	MS_A1, MS_A2, MS_A3, MS_B2 and MS_B3 join the VGCS call.
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_B2 and MS_B3 are only listeners.
4)	MS_A1 moves from cell_A1 to cell_B1.	Network reselection has been performed. MS_A1 receives the notification on the NCH about the VGCS call and rejoins it.
5)	MS_A1 moves back to cell_A1.	Network reselection has been performed again.
6)	MS_B2 moves from cell_A1 to cell_B1.	Network reselection has been performed. MS_B2 receives the notification on the NCH about the VGCS call and rejoins it.
7)	MS_B2 moves back to cell_A1.	Network reselection has been performed again.
8)	MS_A2 moves from cell_B1 to cell_A1.	Network reselection has been performed. MS_A2 receives the notification on the NCH about the VGCS call and rejoins it.
9)	MS_A2 moves back to cell_B1.	Network reselection has been performed again.
10)	MS_B3 moves from cell_B1 to cell_A1.	Network reselection has been performed. MS_B3 receives the notification on the NCH about the VGCS call and rejoins it.
11)	MS_B3 moves back to cell_B1.	Network reselection has been performed again.
12)	MS_B1 releases the uplink.	The uplink is correctly released.
13)	MS_B1 releases the call.	The call is released and all resources are correctly de-allocated.

Test configuration for steps 3 and 4



R-MSC_A1	A-MSC_B1
MS_A1 (VGCS GID: 200)	MS_B1 (VGCS GID: 200)
MS_B2 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)
MS_A3 (VGCS GID: 200)	MS_B3 (VGCS GID: 200)

Test procedure

Step 3: VGCS call establishment in relay MSC_A1.

Step	Action	Expected result(s)
1)	Service subscriber MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A GCCH is allocated in cell_B1. So long the dedicated channel is not released; MS_A1 has two way voice path. MS_A2, MS_A3, MS_B1, MS_B2 and MS_B3 receive notification of the incoming call.
2)	MS_A2, MS_A3, MS_B1, MS_B2 and MS_B3 accept the incoming VGCS call.	MS_A2, MS_A3, MS_B1, MS_B2 and MS_B3 join the VGCS call.
3)	MS_A1 takes the uplink on DCH.	MS_A1 has two-way voice path. MS_A2, MS_A3, MS_B1, MS_B2 and MS_B3 are only listeners.

Step	Action	Expected result(s)
4)	MS_B1 moves from cell_B1 to cell_A1.	Network reselection has been performed. MS_B1 receives the notification on the NCH about the VGCS call and rejoins it.
5)	MS_B1 moves back to cell_B1.	Network reselection has been performed again.
6)	MS_A2 moves from cell_B1 to cell_A1.	Network reselection has been performed. MS_A2 receives the notification on the NCH about the VGCS call and rejoins it.
7)	MS_A2 moves back to cell_B1.	Network reselection has been performed again.
8)	MS_B2 moves from cell_A1 to cell_B1.	Network reselection has been performed. MS_B2 receives the notification on the NCH about the VGCS call and rejoins it.
9)	MS_B2 moves back to cell_A1.	Network reselection has been performed again.
10)	MS_A3 moves from cell_A1 to cell_B1.	Network reselection has been performed. MS_A3 receives the notification on the NCH about the VGCS call and rejoins it.
11)	MS_A3 moves back to cell_A1.	Network reselection has been performed again.
12)	MS_A1 releases the uplink.	The uplink is correctly released.
13)	MS_A1 releases the call.	The call is released and all resources are correctly de-allocated.

Step 4: VGCS call establishment in anchor MSC_B1.

Step	Action	Expected result(s)
1)	Service subscriber MS_B1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1. A GCCH is allocated in cell_A1. So long the dedicated channel is not released; MS_B1 has two way voice path. MS_A1, MS_A2, MS_A3, MS_B2 and MS_B3 receive notification of the incoming call.
2)	MS_A1, MS_A2, MS_A3, MS_B2 and MS_B3 accept the incoming VGCS call.	MS_A1, MS_A2, MS_A3, MS_B2 and MS_B3 join the VGCS call.
3)	MS_B1 takes the uplink on DCH.	MS_B1 has two-way voice path. MS_A1, MS_A2, MS_A3, MS_B2 and MS_B3 are only listeners.

Step	Action	Expected result(s)
4)	MS_A1 moves from cell_A1 to cell_B1.	Network reselection has been performed. MS_A1 receives the notification on the NCH about the VGCS call and rejoins it.
5)	MS_A1 moves back to cell_A1.	Network reselection has been performed again.
6)	MS_B2 moves from cell_A1 to cell_B1.	Network reselection has been performed. MS_B2 receives the notification on the NCH about the VGCS call and rejoins it.
7)	MS_B2 moves back to cell_A1.	Network reselection has been performed again.
8)	MS_A2 moves from cell_B1 to cell_A1.	Network reselection has been performed. MS_A2 receives the notification on the NCH about the VGCS call and rejoins it.
9)	MS_A2 moves back to cell_B1.	Network reselection has been performed again.
10)	MS_B3 moves from cell_B1 to cell_A1.	Network reselection has been performed. MS_B3 receives the notification on the NCH about the VGCS call and rejoins it.
11)	MS_B3 moves back to cell_B1.	Network reselection has been performed again.
12)	MS_B1 releases the uplink.	The uplink is correctly released.
13)	MS_B1 releases the call.	The call is released and all resources are correctly de-allocated.

d) Success criteria

An inter MSC reselection of a VGCS listener is successfully performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.15 Intra BTS handover of a point to point voice call

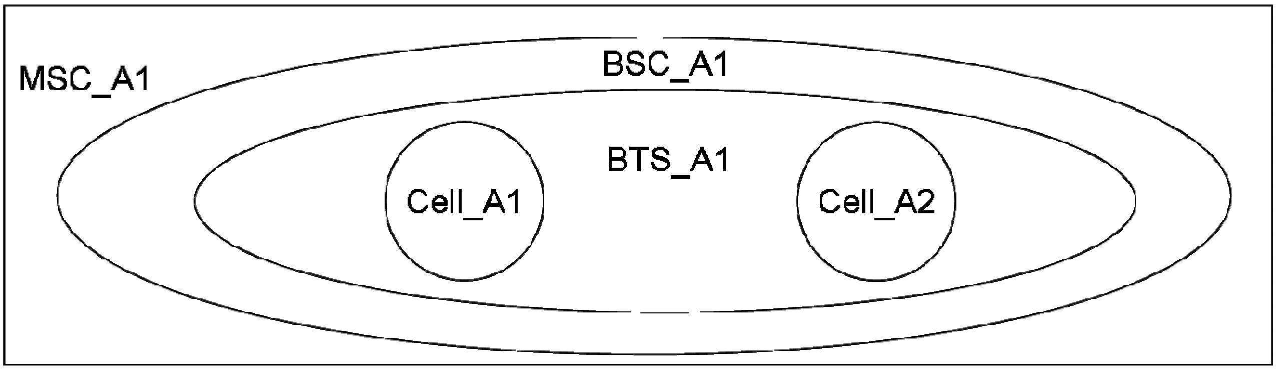
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the originator of a PTP voice call can perform an intra BTS handover successfully.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1	MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	The PTP call is successfully established.
2)	MS_A1 moves from cell_A1 to cell_A2.	MS_A1 performs a handover from cell_A1 to cell_A2.
3)	MS_A1 releases the call.	PTP call successfully released and all resources are de-allocated correctly.

d) Success criteria

The originator of a PTP voice call performs an intra BTS handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.16 Intra BTS handover of a circuit switched data call

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		2.3.1	EN 301515

a) Purpose

Verify that the originator of a PTP data call can perform an intra BTS handover successfully.

b) Test configuration / initial conditions

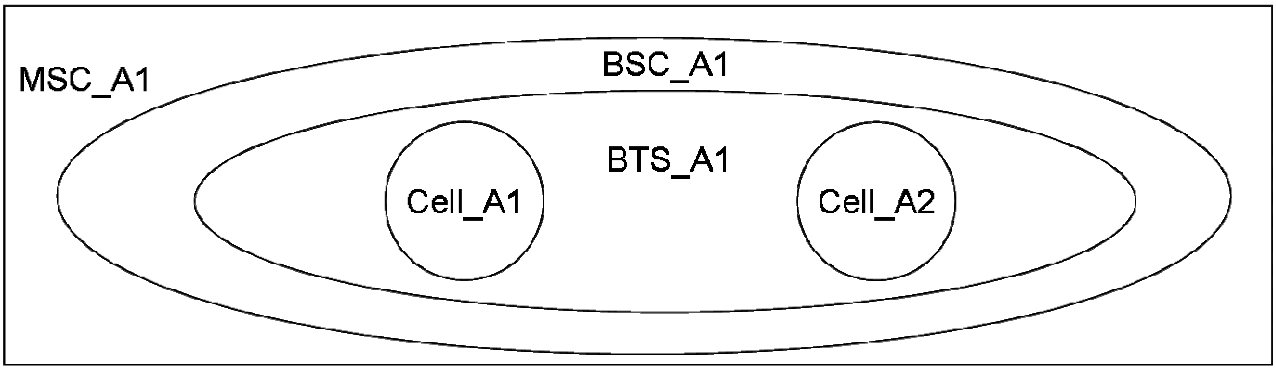
MS_A1 and MS_A2 are terminals with subscriptions to the following bearer services:

Service	EIRENE SRS v15
BS 24 Asynchronous 2,4 Kbit/s T for full-rate channel	M
BS 25 Asynchronous 4,8 Kbit/s T for full-rate channel	M
BS 26 Asynchronous 9,6 Kbit/s T for full-rate channel	M

Terminal application needed to send and receive test data.

To configure the bearer services and to set up a call with the terminal, refer to chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”.

Network A



Cell_A1	Cell_A2
MS_A1	MS_A2

c) Test procedure

A subset of the mandatory data services will be used for the handover test.

Case	Data service	Digital interworking (UDI / ISDN) V.110	Analogue interworking (3,1 kHz) V.22bis, V.32	Transparent	eMLPP Priority
1	BS 24 2400 bps		X (V.22bis)	X	4
2	BS 25 4800 bps	X		X	4
3	BS 26 9600 bps	X		X	4

Step	Action	Expected result(s)
1)	Configure MS_A1 and MS_A2 to perform a data call with the settings indicated in table above case 1. To configure the bearer services refer to “Annex - Configuration of User Equipment for Data Calls”	MS_A1 and MS_A2 are configured with the correct bearer service.
2)	MS_A1 establishes a data call to MS_A2 by dialling: ATD <MSISDN> (Reference 3GPP TS27.007)	MS_A2 is notified of the incoming data call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A2.
3)	MS_A2 takes the data call.	The data call between MS_A1 and MS_A2 is successfully established with the correct bearer service and line speed. These are seen on messages: From BSC to BTS: Channel activation. From BTS to BSC and from BSC to MSC: Call confirmed.
4)	Send test data from MS_A1 to MS_A2 and from MS_A2 to MS_A1.	Test data is transmitted and received correctly.
5)	MS_A1 moves from cell_A1 to cell_A2.	MS_A1 performs a handover from cell_A1 to cell_A2.
6)	Send test data from MS_A1 to MS_A2 and from MS_A2 to MS_A1.	Test data is transmitted and received correctly.
7)	MS_A1 releases the call.	Data call is successfully released and all resources are de-allocated correctly.
8)	Repeat the test using case 2 and 3 from table above.	

d) Success criteria

The originator of a PTP data call performs an intra BTS handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.17 Intra BTS handover of a railway emergency call originator

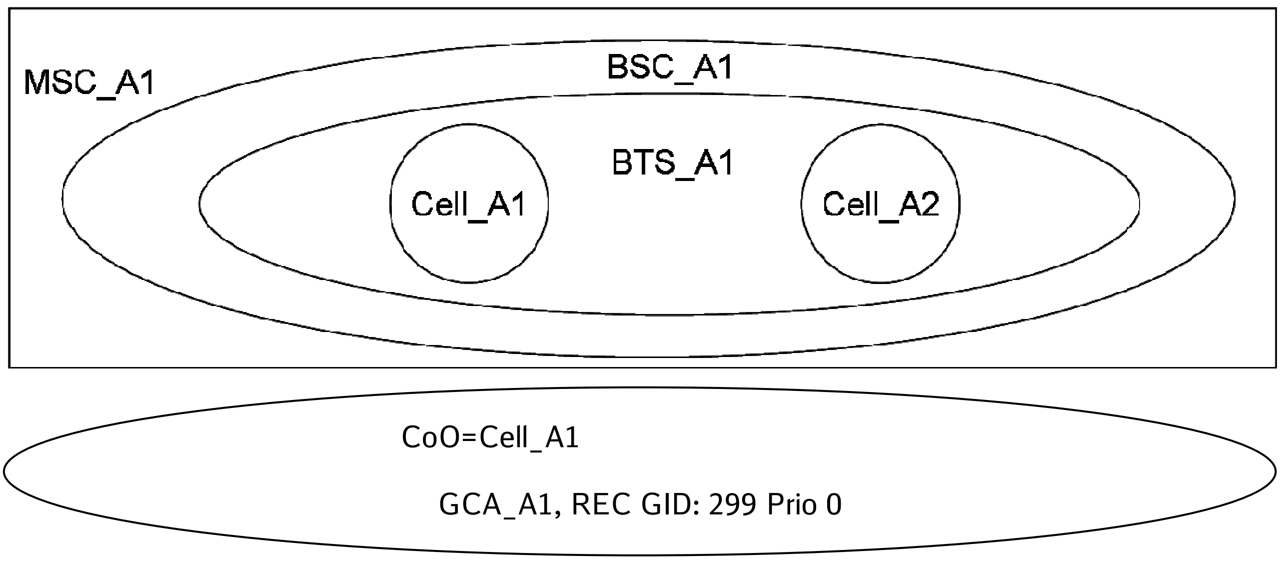
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the originator of a Railway Emergency Call (REC) can perform an intra BTS handover successfully on the dedicated channel as well as on the group call channel.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (REC GID: 299)	MS_A2 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 is notified about the incoming REC on the NCH. So long the dedicated channel is not released; MS_A1 has two way voice path.
2)	MS_A2 automatically accepts the REC.	MS_A2 automatically joins the REC in group receive mode.
3)	MS_A1 keeps the uplink on the dedicated channel (DCH).	MS_A1 is able to keep the uplink on the dedicated channel. MS_A1 has two-way voice path. MS_A2 is only listener.
4)	MS_A1 moves from cell_A1 to cell_A2.	Intra BTS handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
5)	MS_A1 moves from cell_A2 to cell_A1.	Intra BTS handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
6)	MS_A1 releases the uplink on DCH.	The uplink is correctly released.
7)	MS_A1 requests the uplink on GCCH.	MS_A1 takes the uplink (GCCH). MS_A1 has two-way voice path. MS-A2 is only listener.
8)	MS_A1 moves from cell_A1 to cell_A2.	Intra BTS handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
9)	MS_A1 moves from cell_A2 to cell_A1.	Intra BTS handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
10)	MS_A1 releases the uplink.	The uplink is correctly released.
11)	MS_A1 releases the REC.	REC is released and all resources are correctly de-allocated.

d) Success criteria

The originator of a Railway Emergency Call (REC) performs an intra BTS handover successfully on the dedicated channel as well as on the group call channel.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.18 Intra BTS handover of a VGCS call uplink

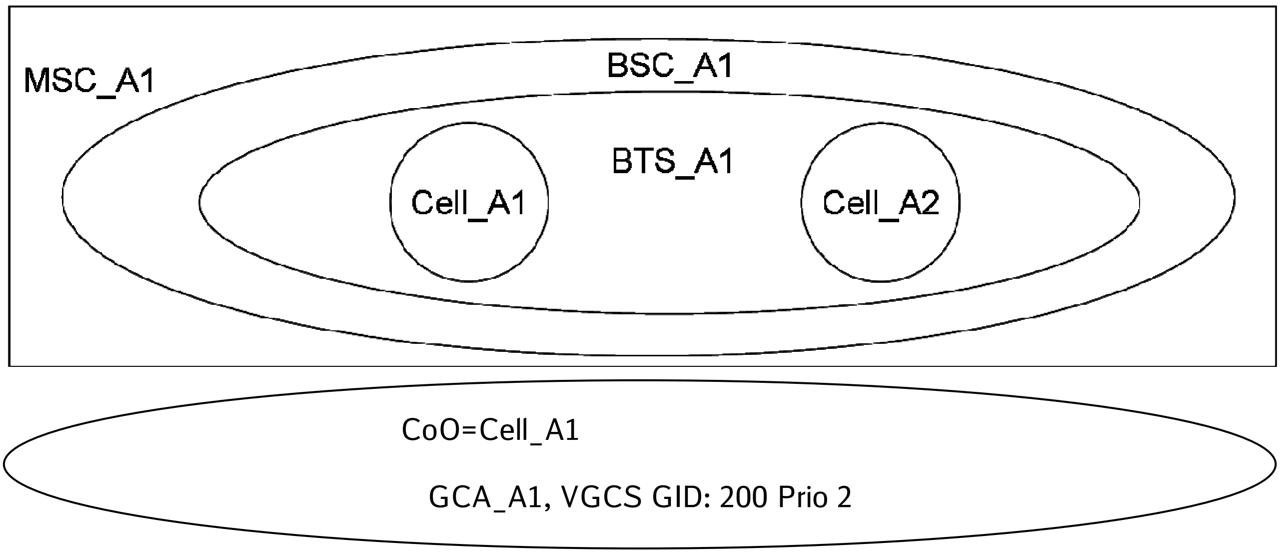
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the subsequent talker of a VGCS call can perform an intra BTS handover successfully.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a VGCS call and keeps the uplink on the dedicated channel (DCH)	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 is notified about the incoming VGCS call. So long the dedicated channel is not released; MS_A1 has two way voice path.
2)	MS_A2 accepts the VGCS call.	MS_A2 joins the VGCS call and is in listening mode. MS_A1 has two-way voice path.
3)	MS_A1 releases the uplink.	The DCH in cell_A1 is released after MS_A1 releases the uplink. Uplink free is sent to all cells of the GCA.
4)	MS_A2 requests the uplink on the GCCH.	MS_A2 is able to take the uplink and has a two-way voice path. MS_A1 is only listener.
5)	MS_A2 moves from cell_A2 to cell_A1	An intra BTS handover is successfully performed. MS_A2 has still two-way voice path. MS_A1 is still listener.
6)	MS_A2 releases the uplink on GCCH.	The uplink is correctly released.
7)	MS_A1 in cell_A1 requests the uplink on GCCH.	MS_A1 is able to take the uplink and has two-way voice path. MS_A2 is only listener
8)	MS_A1 releases the uplink on GCCH.	The uplink is correctly released.
9)	MS_A1 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.

d) Success criteria

The subsequent talker of a VGCS call performs an intra BTS handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.19 Intra BTS handover of a VGCS dedicated channel

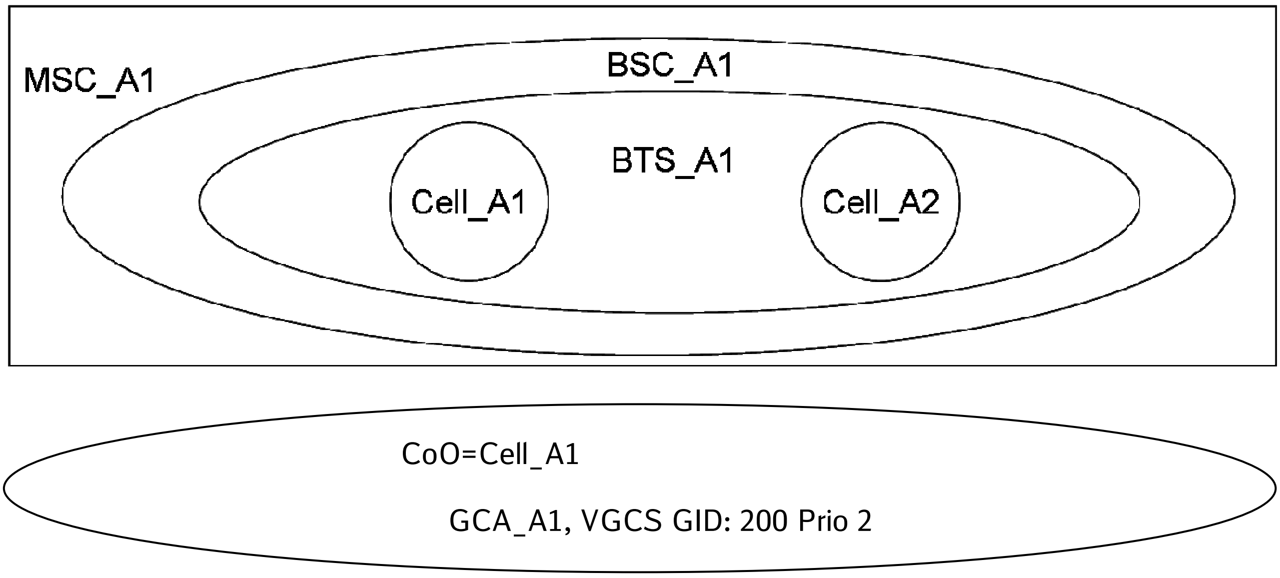
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the originator of a VGCS call (on the dedicated channel) can perform an intra BTS handover successfully.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 is notified about the incoming VGCS call. So long the dedicated channel is not released; MS_A1 has two way voice path.
2)	MS_A2 accepts the VGCS call.	MS_A2 joins the VGCS call.
3)	MS_A1 keeps the uplink on DCH.	MS_A1 is able to take the uplink on DCH and has two-way voice path. MS_A2 is only listener.
4)	MS_A1 moves from cell_A1 to cell_A2.	MS_A1 performs a handover from cell_A1 to cell_A2. The VGCS call stays connected. MS_A1 has still two-way voice path. MS_A2 is only listener.
5)	MS_A1 releases the uplink.	The uplink is correctly released.
6)	MS_A1 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.

d) Success criteria

The originator of a VGCS call (on the dedicated channel) performs an intra BTS handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.20 Intra BTS handover of a VBS originator

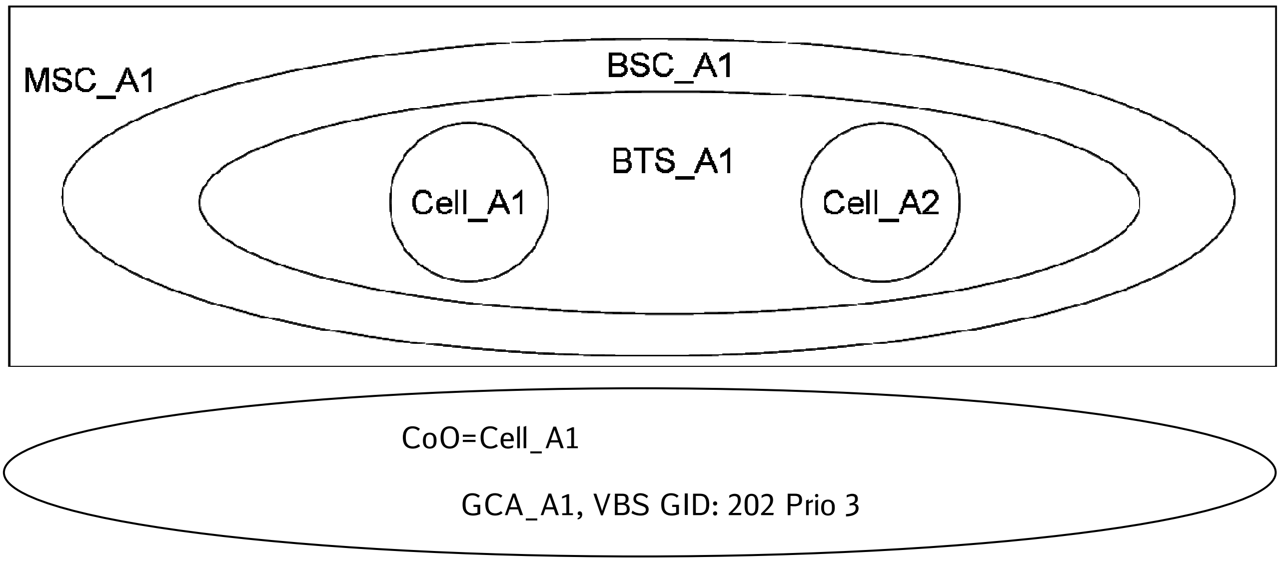
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the originator of a VBS call performed an intra BTS handover successfully.

b) Test configuration / initial conditions.

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. The DCH (uplink) remains allocated during the whole VBS call. MS_A2 is notified about the incoming VBS call.
2)	MS_A2 accepts the VBS call.	MS_A2 joins the VBS call and is listener. MS_A1 has two-way voice path.
3)	MS_A1 moves from cell_A1 to cell_A2.	MS_A1 performs a handover from cell_A1 to cell_A2. The VBS call stays connected. MS_A1 has still two-way voice path. MS_A2 is only listener.
4)	MS_A1 releases the VBS call.	VBS call is released and all resources are correctly de-allocated.

d) Success criteria

The originator of a VBS call performs an intra BTS handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.21 Inter BTS handover of a point to point voice call

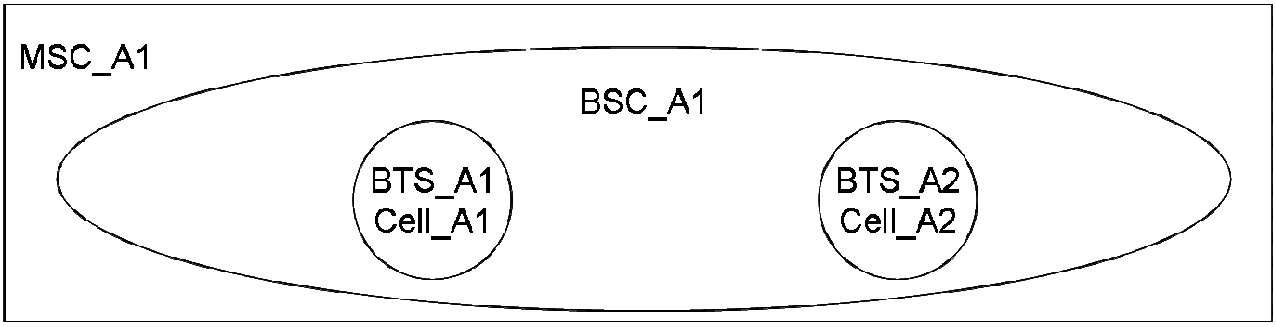
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the originator of a PTP voice call can perform an inter BTS handover successfully.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1	MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	The PTP call is successfully established.
2)	MS_A1 moves from cell_A1 to cell_A2.	MS_A1 performs an inter BTS handover from cell_A1 to cell_A2.
3)	MS_A1 releases the call.	PTP call is successfully released and all resources are de-allocated correctly.

d) Success criteria

The originator of a PTP voice call performs an inter BTS handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.22 Inter BTS handover of a circuit switched data call

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		2.3.1	EN 301515

a) Purpose

Verify that the originator of a PTP data call can perform an inter BTS handover successfully.

b) Test configuration / initial conditions

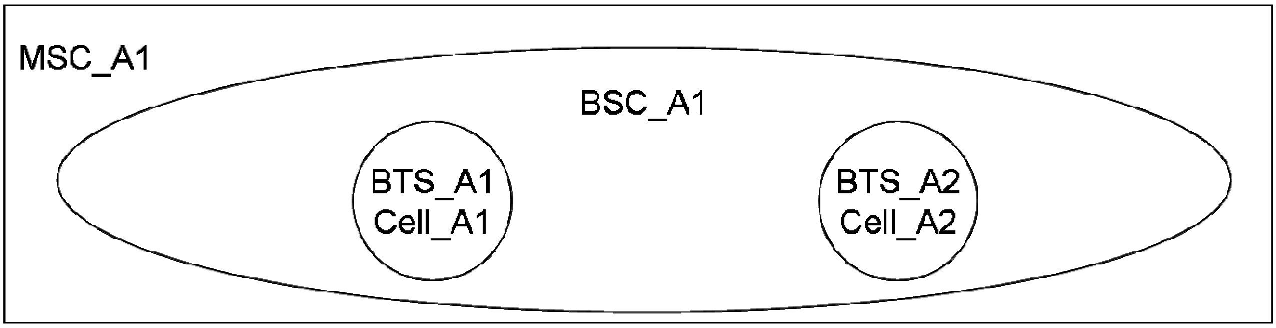
MS_A1 and MS_A2 are terminals with subscriptions to the following bearer services:

Service	EIRENE SRS v15
BS 24 Asynchronous 2,4 Kbit/s T for full-rate channel	M
BS 25 Asynchronous 4,8 Kbit/s T for full-rate channel	M
BS 26 Asynchronous 9,6 Kbit/s T for full-rate channel	M

Terminal application needed to send and receive test data.

To configure the bearer services and to set up a call with the terminal, refer to chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”.

Network A



Cell_A1	Cell_A2
MS_A1	MS_A2

c) Test procedure

A subset of the mandatory data services will be used for the handover test.

Case	Data service	Digital interworking (UDI / ISDN) V.110	Analogue interworking (3,1 kHz) V.22bis, V.32	Transparent	eMLPP Priority
1	BS 24 2400 bps		X (V.22bis)	X	4
2	BS 25 4800 bps	X		X	4
3	BS 26 9600 bps	X		X	4

Step	Action	Expected result(s)
1)	Configure MS_A1 and MS_A2 to perform a data call with the settings indicated in table above case 1. To configure the bearer services refer to “Annex - Configuration of User Equipment for Data Calls”	MS_A1 and MS_A2 are configured with the correct bearer service.
2)	MS_A1 establishes a data call to MS_A2 by dialling: ATD <MSISDN> (Reference 3GPP TS27.007)	MS_A2 is notified of the incoming data call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A2.
3)	MS_A2 takes the data call.	The data call between MS_A1 and MS_A2 is successfully established with the correct bearer service and line speed. These are seen on messages: From BSC to BTS: Channel activation. From BTS to BSC and from BSC to MSC: Call confirmed.
4)	Send test data from MS_A1 to MS_A2 and from MS_A2 to MS_A1.	Test data is transmitted and received correctly.
5)	MS_A1 moves from cell_A1 to cell_A2.	MS_A1 performs a handover from cell_A1 to cell_A2.
6)	Send test data from MS_A1 to MS_A2 and from MS_A2 to MS_A1.	Test data is transmitted and received correctly.
7)	MS_A1 releases the call.	Data call is successfully released and all resources are de-allocated correctly.
8)	Repeat the test using case 2 and 3 from table above.	

d) Success criteria

The originator of a PTP data call performs an inter BTS handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.23 Inter BTS handover of a railway emergency call originator

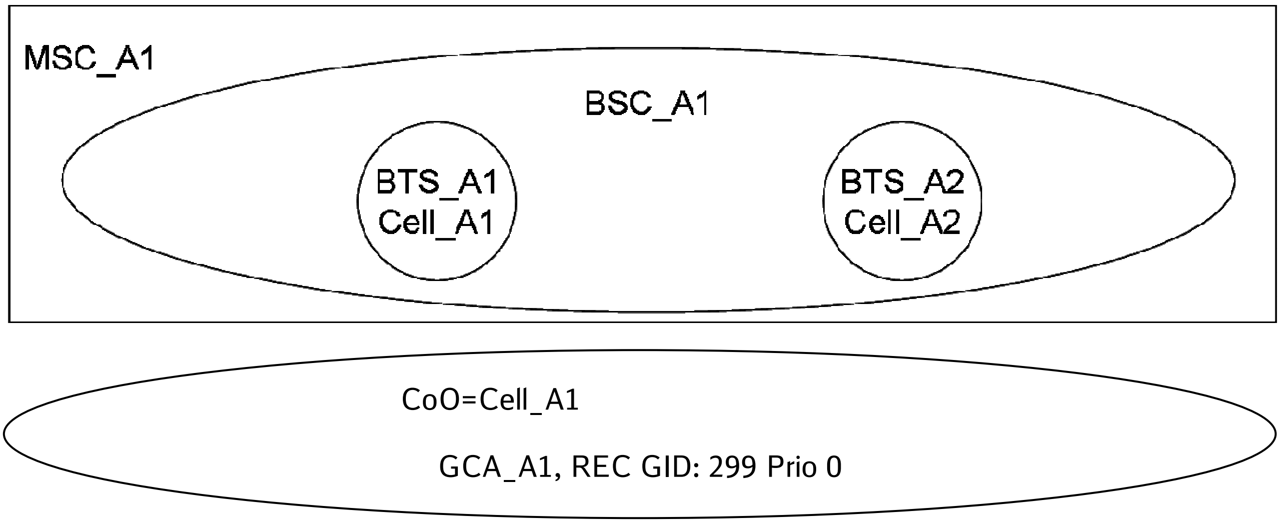
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the originator of a Railway Emergency Call (REC) can perform an inter BTS handover successfully on the dedicated channel as well as on the group call channel.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (REC GID: 299)	MS_A2 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 is notified about the incoming REC on the NCH. So long the dedicated channel is not released; MS_A1 has two way voice path.
2)	MS_A2 automatically accepts the REC.	MS_A2 automatically joins the REC in group receive mode.
3)	MS_A1 keeps the uplink on the dedicated channel (DCH).	MS_A1 is able to keep the uplink on the dedicated channel. MS_A1 has two-way voice path. MS_A2 is only listener.
4)	MS_A1 moves from cell_A1 to cell_A2.	Inter BTS handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
5)	MS_A1 moves from cell_A2 to cell_A1.	Inter BTS handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
6)	MS_A1 releases the uplink on DCH.	The uplink is correctly released.
7)	MS_A1 requests the uplink on GCCH.	MS_A1 takes the uplink (GCCH). MS_A1 has two-way voice path. MS-A2 is only listener.
8)	MS_A1 moves from cell_A1 to cell_A2.	Inter BTS handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
9)	MS_A1 moves from cell_A2 to cell_A1.	Inter BTS handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
10)	MS_A1 releases the uplink.	The uplink is correctly released.
11)	MS_A1 releases the REC.	REC is released and all resources are correctly de-allocated.

d) Success criteria

The originator of a Railway Emergency Call (REC) performs an inter BTS handover successfully on the dedicated channel as well as on the group call channel.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.24 Inter BTS handover of a VGCS call uplink

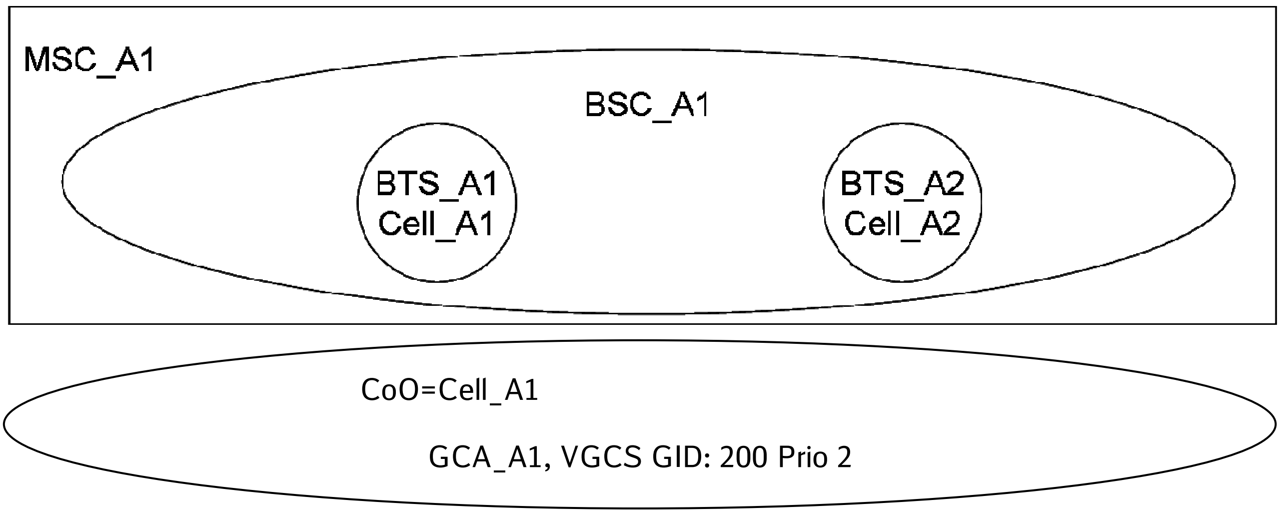
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the subsequent talker of a VGCS call can perform an inter BTS handover successfully.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 is notified about the incoming VGCS call. So long the dedicated channel is not released; MS_A1 has two way voice path.
2)	MS_A2 accepts the VGCS call.	MS_A2 joins the VGCS call and is in listening mode.
3)	MS_A1 keeps the uplink on the DCH.	MS_A1 is able to keep the uplink. MS_A1 has two-way voice path. MS_A2 is listener.
4)	MS_A1 releases the uplink.	The DCH in cell_A1 is released. Uplink free is sent to all cells of the GCA.
5)	MS_A2 in cell_A2 takes the uplink on the GCCH.	MS_A2 is able to take the uplink and has a two-way-voice path. MS_A1 is only listener.
6)	MS_A2 moves from cell_A2 to cell_A1.	An inter BTS handover is successfully performed. MS_A2 has still two-way voice path.
7)	MS_A2 releases the uplink on GCCH.	The uplink is released.
8)	MS_A1 in cell_A1 takes the uplink.	MS_A1 is able to take the uplink and has two-way voice path. MS_A2 is listener.
9)	MS_A1 releases the uplink.	The uplink is correctly released.
10)	MS_A1 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.

d) Success criteria

The subsequent talker of a VGCS call performs an inter BTS handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.25 Inter BTS handover of a VGCS dedicated channel

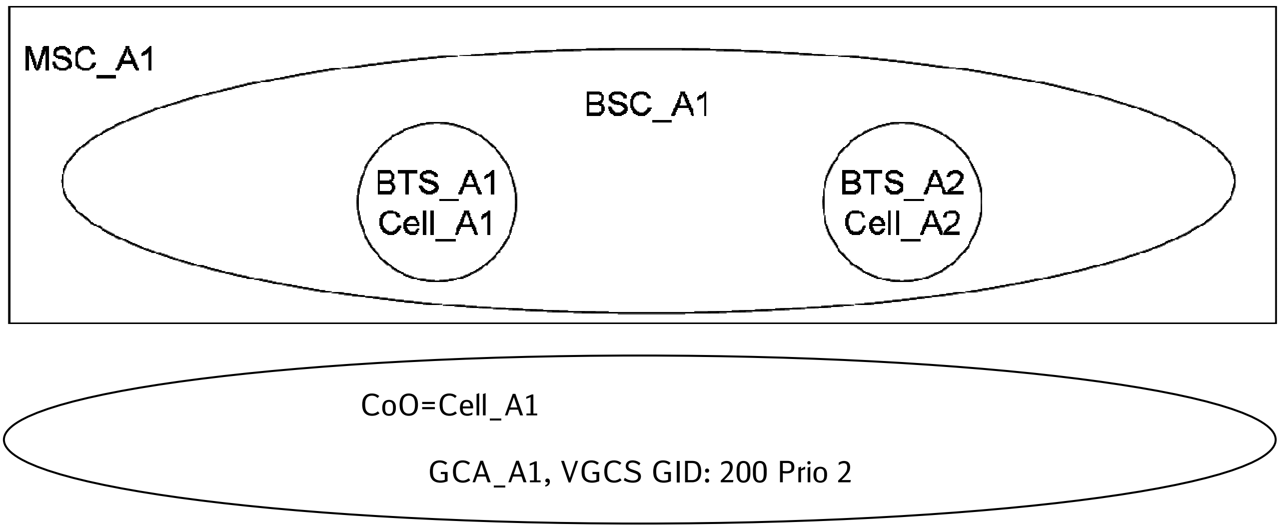
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the originator of a VGCS call (on the dedicated channel) can perform an inter BTS handover successfully.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 is notified about the incoming VGCS call. So long the dedicated channel is not released; MS_A1 has two way voice path.
2)	MS_A2 accepts the VGCS call.	MS_A2 joins the VGCS call.
3)	MS_A1 keeps the uplink on the DCH.	MS_A1 has two-way voice path. MS_A2 is only listener.
4)	MS_A1 moves from cell_A1 to cell_A2.	MS_A1 performs a handover from cell_A1 to cell_A2. The VGCS call stays connected. MS_A1 has still two-way voice path.
5)	MS_A1 releases the uplink.	The uplink is correctly released.
6)	MS_A1 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.

d) Success criteria

The originator of a VGCS call (on the dedicated channel) can perform an inter BTS handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

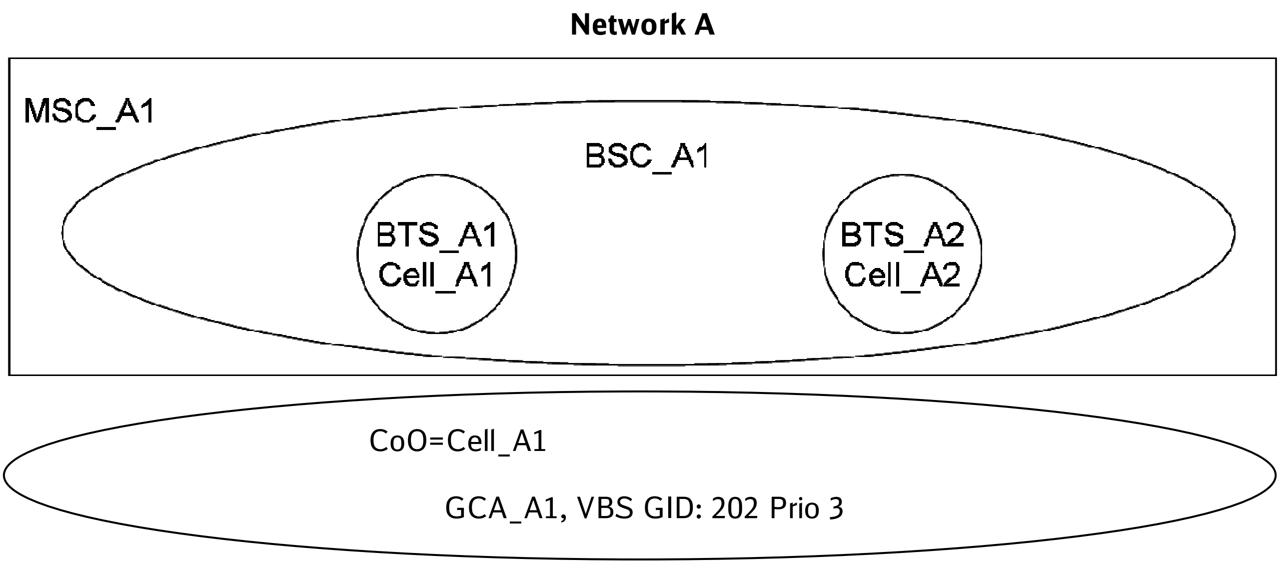
5.10.26 Inter BTS handover of a VBS originator

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verity that the originator of a VBS call can perform an inter BTS handover successfully.

b) Test configuration / initial conditions



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. The DCH (uplink) remains allocated during the whole VBS call. MS_A2 is notified about the incoming VBS call.
2)	MS_A2 accepts the VBS call.	MS_A2 joins the VBS call and is listener. MS_A1 has two-way voice path.
3)	MS_A1 moves from cell_A1 to cell_A2.	MS_A1 performs a handover from cell_A1 to cell_A2. The VBS call stays connected. MS_A1 has still two-way voice path. MS_A2 is only listener.
4)	MS_A1 releases the VBS call.	VBS call is released and all resources are correctly de-allocated.

d) Success criteria

The originator of a VBS call performs an inter BTS handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.27 Inter BSC handover of a point to point voice call

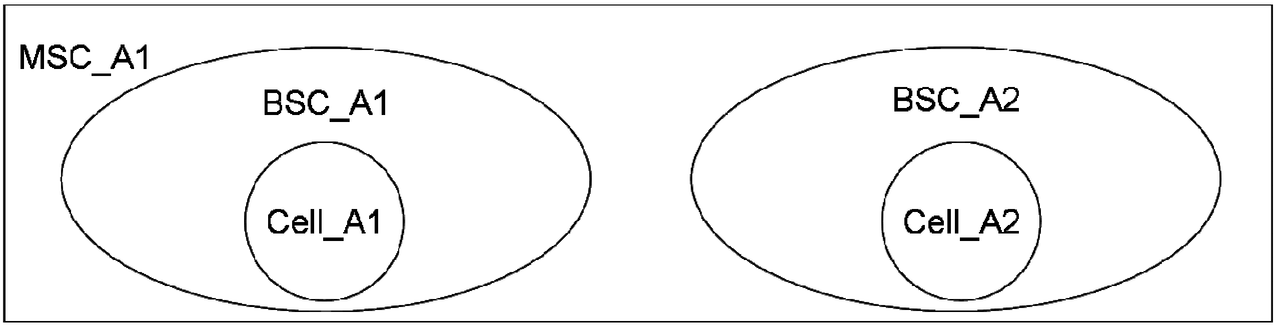
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the originator of a PTP voice call can perform an inter BSC handover successfully.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1	MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	The PTP call is successfully established.
2)	MS_A1 moves from cell_A1 to cell_A2.	MS_A1 performs a handover from cell_A1 to cell_A2.
3)	MS_A1 moves from cell_A2 to cell_A1.	MS_A1 performs a handover from cell_A2 to cell_A1.
4)	MS_A1 releases the call.	PTP call successfully released and all re-sources are de-allocated correctly.

d) Success criteria

The originator of a PTP voice call performs an inter BSC handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.28 Inter BSC handover of a circuit switched data call

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		2.3.1	EN 301515

a) Purpose

Verify that the originator of a PTP data call can perform an inter BSC handover successfully.

b) Test configuration / initial conditions

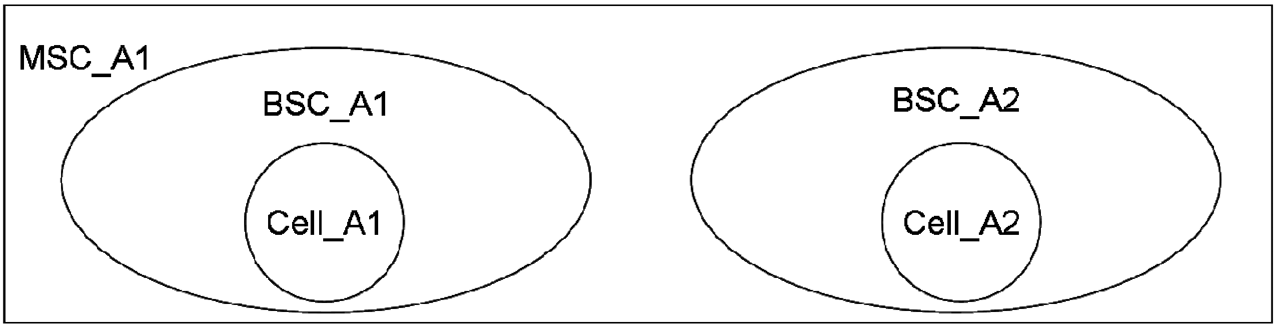
MS_A1 and MS_A2 are terminals with subscriptions to the following bearer services:

Service	EIRENE SRS v15
BS 24 Asynchronous 2,4 Kbit/s T for full-rate channel	M
BS 25 Asynchronous 4,8 Kbit/s T for full-rate channel	M
BS 26 Asynchronous 9,6 Kbit/s T for full-rate channel	M

Terminal application needed to send and receive test data.

To configure the bearer services and to set up a call with the terminal, refer to chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”.

Network A



Cell_A1	Cell_A2
MS_A1	MS_A2

c) Test procedure

A subset of the mandatory data services will be used for the handover test.

Case	Data service	Digital interworking (UDI / ISDN) V.110	Analogue interworking (3,1 kHz) V.22bis, V.32	Transparent	eMLPP Priority
1	BS 24 2400 bps		X (V.22bis)	X	4
2	BS 25 4800 bps	X		X	4
3	BS 26 9600 bps	X		X	4

Step	Action	Expected result(s)
1)	Configure MS_A1 and MS_A2 to perform a data call with the settings indicated in table above case 1. To configure the bearer services refer to “Annex - Configuration of User Equipment for Data Calls”	MS_A1 and MS_A2 are configured with the correct bearer service.
2)	MS_A1 establishes a data call to MS_A2 by dialling: ATD <MSISDN> (Reference 3GPP TS27.007)	MS_A2 is notified of the incoming data call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A2.
3)	MS_A2 takes the data call.	The data call between MS_A1 and MS_A2 is successfully established with the correct bearer service and line speed. These are seen on messages: From BSC to BTS: Channel activation. From BTS to BSC and from BSC to MSC: Call confirmed.
4)	Send test data from MS_A1 to MS_A2 and from MS_A2 to MS_A1.	Test data is transmitted and received correctly.
5)	MS_A1 moves from cell_A1 to cell_A2.	MS_A1 performs a handover from cell_A1 to cell_A2.
6)	Send test data from MS_A1 to MS_A2 and from MS_A2 to MS_A1.	Test data is transmitted and received correctly.
7)	MS_A1 moves from cell_A2 to cell_A1.	MS_A1 performs a handover from cell_A2 to cell_A1.
8)	Send test data from MS_A1 to MS_A2 and from MS_A2 to MS_A1.	Test data is transmitted and received correctly.

Step	Action	Expected result(s)
9)	MS_A1 releases the call.	Data call is successfully released and all resources are de-allocated correctly.
10)	Repeat the test using case 2 and 3 from table above.	

d) Success criteria

The originator of a PTP data call performs an inter BSC handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.29 Inter BSC handover of a railway emergency call originator

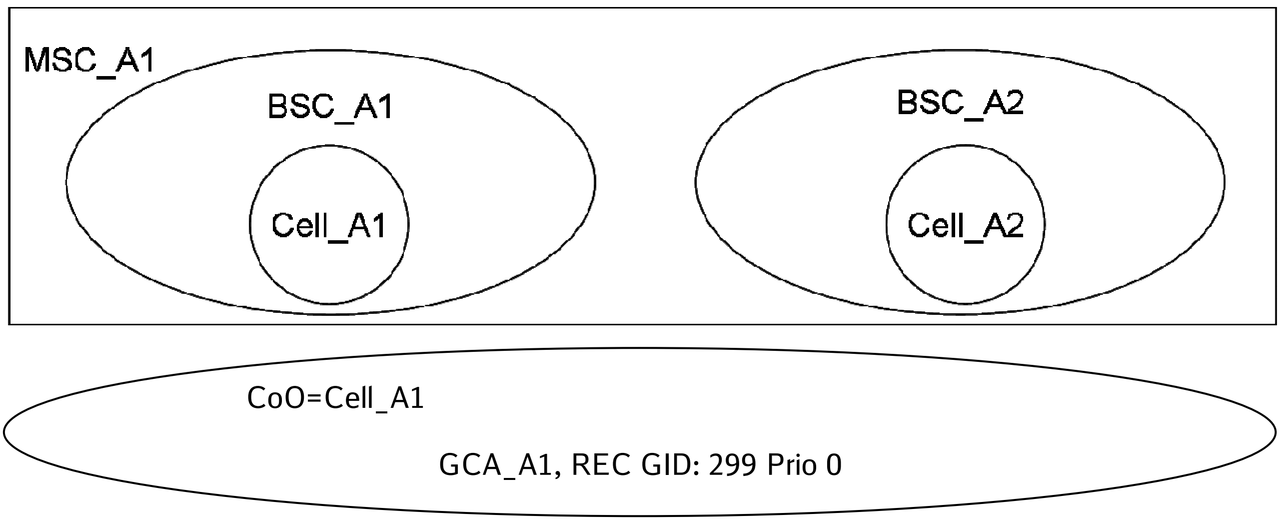
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the originator of a Railway Emergency Call (REC) can perform an inter BSC handover successfully on the dedicated channel as well as on the group call channel.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (REC GID: 299)	MS_A2 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 is notified about the incoming REC on the NCH. So long the dedicated channel is not released; MS_A1 has two way voice path.
2)	MS_A2 automatically accepts the REC.	MS_A2 automatically joins the REC in group receive mode.
3)	MS_A1 keeps the uplink on the dedicated channel (DCH).	MS_A1 is able to keep the uplink on the dedicated channel. MS_A1 has two-way voice path. MS_A2 is only listener.
4)	MS_A1 moves from cell_A1 to cell_A2.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
5)	MS_A2 moves from cell_A2 to cell_A1.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
6)	MS_A1 releases the uplink on DCH.	The uplink is correctly released.
7)	MS_A1 requests the uplink on GCCH.	MS_A1 takes the uplink (GCCH). MS_A1 has two-way voice path. MS-A2 is only listener.
8)	MS_A1 moves from cell_A1 to cell_A2.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
9)	MS_A1 moves from cell_A2 to cell_A1.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
10)	MS_A1 releases the uplink.	The uplink is correctly released.
11)	MS_A1 releases the REC.	REC is released and all resources are correctly de-allocated.

d) Success criteria

The originator of a Railway Emergency Call (REC) performs an inter BSC handover successfully on the dedicated channel as well as on the group call channel.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.30 Inter BSC handover of a VGCS call uplink

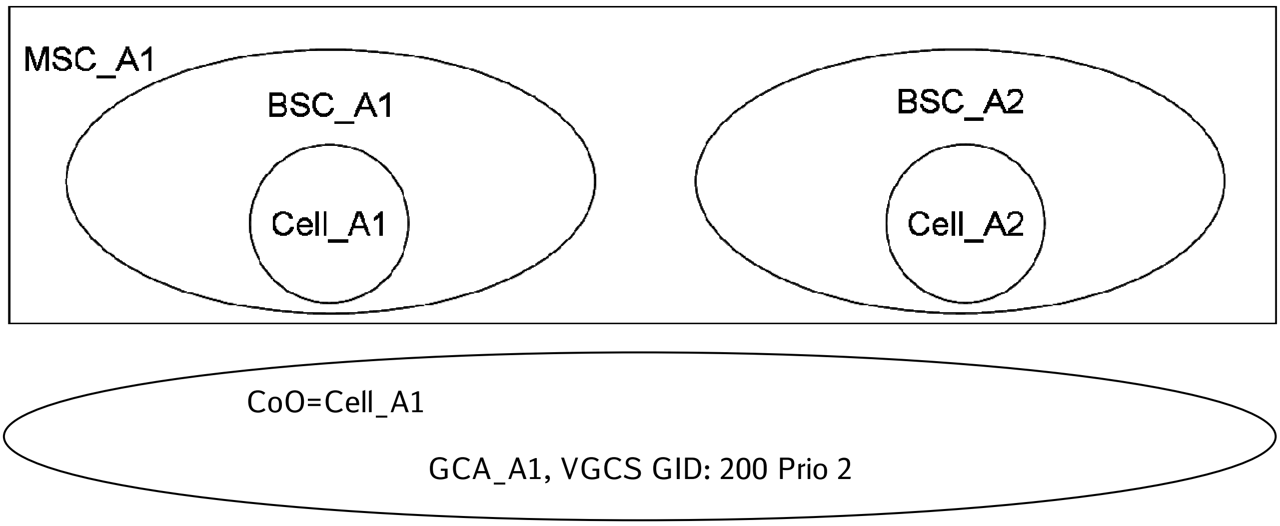
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the subsequent talker of a VGCS call can perform an inter BSC handover successfully.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A1
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 is notified about the incoming VGCS on the NCH. So long the dedicated channel is not released; MS_A1 has two way voice path.
2)	MS_A2 accepts the VGCS call.	MS_A2 joins the VGCS call and is in listening mode. MS_A1 has two-way voice path.
3)	MS_A1 releases the uplink.	The DCH in cell_A1 is released after MS_A1 releases the uplink. Uplink free is sent to all cells of the GCA.
4)	MS_A2 in cell_A2 takes the uplink on the GCCH.	MS_A2 is able to take the uplink and has a two-way-voice path. MS_A1 is only listener.
5)	MS_A2 moves from cell_A2 to cell_A1.	An inter BSC handover is successfully performed MS_A2 has still two-way voice path. MS_A1 is still listener.
6)	MS_A2 moves from cell_A1 to cell_A2.	An inter BSC handover is successfully performed MS_A2 has still two-way voice path. MS_A1 is still listener.
7)	MS_A2 releases the uplink on GCCH.	The uplink is correctly released.
8)	MS_A1 in cell_A1 takes the uplink.	MS_A1 is able to take the uplink and has two-way voice path. MS_A2 is only listener.
9)	MS_A1 releases the uplink.	The uplink is correctly released.
10)	MS_A1 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.

d) Success criteria

Verify that the subsequent talker of a VGCS call can perform an inter BSC handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.31 Inter BSC handover of a VGCS dedicated channel

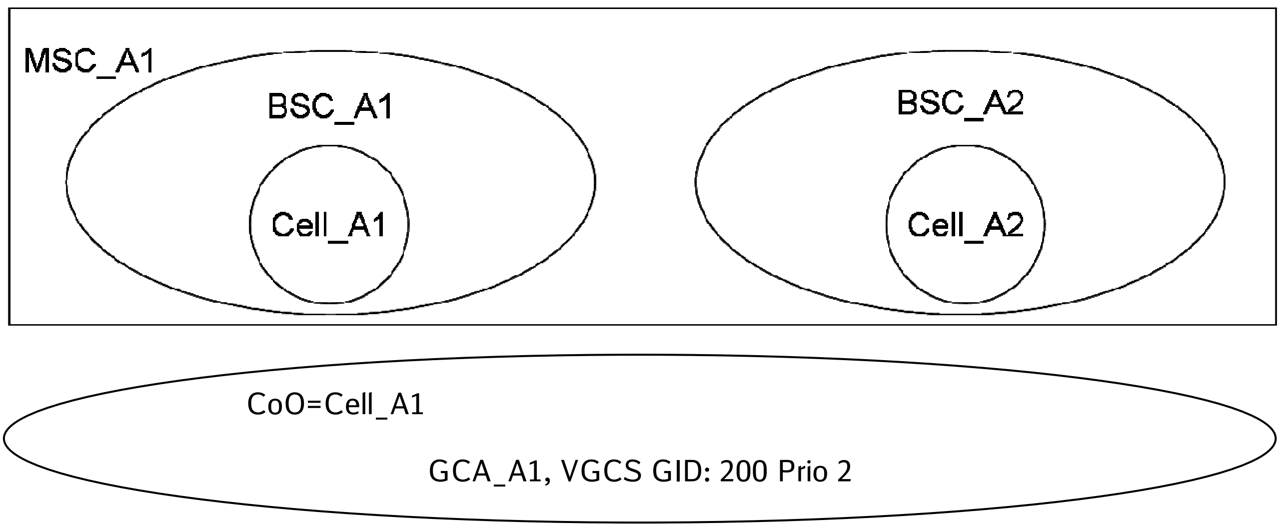
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the originator of a VGCS call (on the dedicated channel) can perform an inter BSC handover successfully.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 is notified about the incoming VGCS call on the NCH. So long the dedicated channel is not released; MS_A1 has two way voice path.
2)	MS_A2 accepts the VGCS call.	MS_A2 joins the VGCS call.
3)	MS_A1 keeps the uplink on the DCH.	MS_A1 has two-way voice path. MS_A2 is listener.
4)	MS_A1 moves from cell_A1 to cell_A2.	MS_A1 performs a handover from cell_A1 to cell_A2. The VGCS call stays connected. MS_A1 has still two-way voice path. MS_A2 is still listener.
5)	MS_A1 moves from cell_A2 to cell_A1.	MS_A1 performs a handover from cell_A2 to cell_A1. The VGCS call stays connected. MS_A1 has still two-way voice path. MS_A2 is still listener.
6)	MS_A1 releases the uplink.	The uplink is correctly released.
7)	MS_A1 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.

d) Success criteria

The originator of a VGCS call (on the dedicated channel) can perform an inter BSC handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.32 Inter BSC handover of a VBS originator

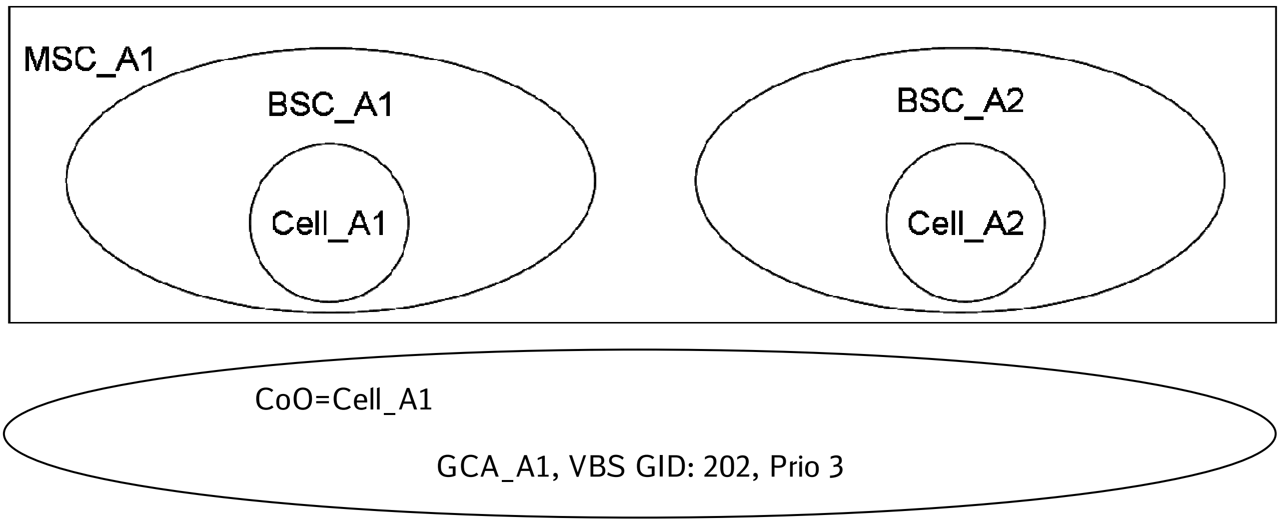
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verity that the originator of a VBS call can perform an inter BSC handover successfully.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. The DCH (uplink) remains allocated during the whole VBS call. MS_A2 is notified about the incoming VBS on the NCH.
2)	MS_A2 accepts the VBS call.	MS_A2 joins the VBS call and is listener. MS_A1 has two-way voice path.
3)	MS_A1 moves from cell_A1 to cell_A2.	MS_A1 performs a handover from cell_A1 to cell_A2. The VBS call stays connected. MS_A1 has still two-way voice path. MS_A2 is still listener.
4)	MS_A1 moves from cell_A2 to cell_A1.	MS_A1 performs a handover from cell_A2 to cell_A1. The VBS call stays connected. MS_A1 has still two-way voice path. MS_A2 is still listener.
5)	MS_A1 releases the VBS call.	VBS call is released and all resources are correctly de-allocated.

d) Success criteria

The originator of a VBS call performs an inter BSC handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.33 Inter MSC handover of a point to point voice call

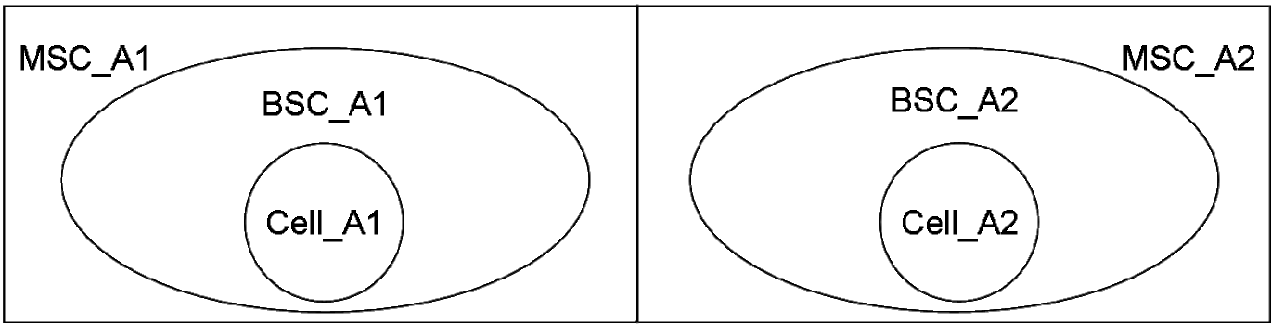
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the originator of a PTP voice call can perform an inter MSC handover successfully.

b) Test configuration / initial conditions

Network A



MSC_A1	MSC_A2
MS_A1	MS_A2

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2.	The PTP call is successfully established.
2)	MS_A1 moves from cell_A1 to cell_A2.	MS_A1 performs a handover from cell_A1 to cell_A2.
3)	MS_A1 moves back to cell_A1.	MS_A1 performs a handover from cell_A2 to cell_A1.
4)	MS_A1 releases the call.	PTP call successfully released and all resources are de-allocated correctly.
5)	MS_A2 establishes a PTP call to MS_A1.	The PTP call is successfully established.

Step	Action	Expected result(s)
6)	MS_A2 moves from cell_A2 to cell_A1.	MS_A2 performs a handover from cell_A2 to cell_A1.
7)	MS_A2 moves back to cell_A2.	MS_A2 performs a handover from cell_A1 to cell_A2.
8)	MS_A2 releases the call.	PTP call successfully released and all re-sources are de-allocated correctly.

d) Success criteria

The originator of a PTP voice call performs an inter MSC handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.34 Inter MSC handover of a circuit switched data call

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		2.3.1	EN 301515

a) Purpose

Verify that the originator of a PTP data call can perform an inter MSC handover successfully.

b) Test configuration / initial conditions

MS_A1 and MS_A2 are terminals with subscriptions to the following bearer services:

Service	EIRENE SRS v15
BS 24 Asynchronous 2,4 Kbit/s T for full-rate channel	M
BS 25 Asynchronous 4,8 Kbit/s T for full-rate channel	M
BS 26 Asynchronous 9,6 Kbit/s T for full-rate channel	M

Terminal application needed to send and receive test data.

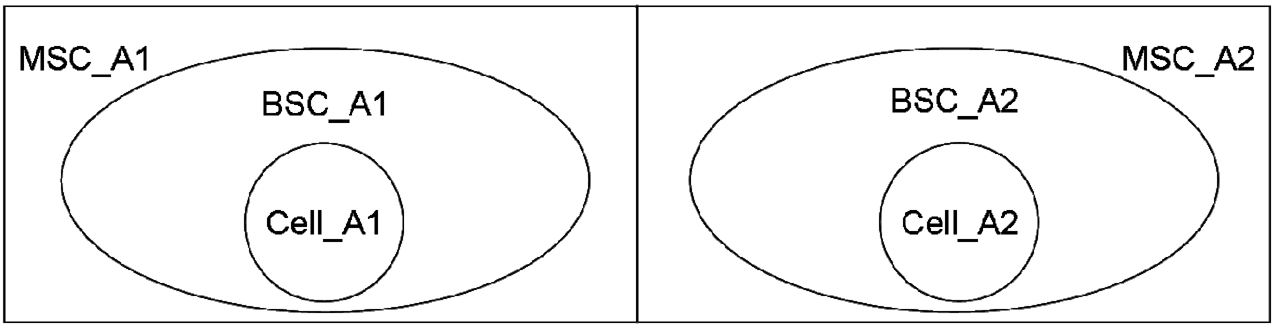
To configure the bearer services and to set up a call with the terminal, refer to chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”.

This test case has been divided into the following steps:

Step 1: Data call establishment in MSC_A1.

Step 2: Data call establishment in MSC_A2.

Network A



MSC_A1	**MSC_** A2
MS_A1	MS_A2

c) Test procedure

A subset of the mandatory data services will be used for the handover test.

Case	Data service	Digital interworking (UDI / ISDN) V.110	Analogue interworking (3,1 kHz) V.22bis, V.32	Transparent	eMLPP Priority
1	BS 24 2400 bps		X (V.22bis)	X	4
2	BS 25 4800 bps	X		X	4
3	BS 26 9600 bps	X		X	4

Step 1: Data call establishment in MSC_A1.

Step	Action	Expected result(s)
1)	Configure MS_A1and MS_A2 to perform a data call with the settings indicated in table above case 1. To configure the bearer services refer to “Annex - Configuration of User Equipment for Data Calls”	MS_A1 and MS_A2 are configured with the correct bearer service.
2)	MS_A1 establishes a data call to MS_ A2 by dialling: ATD <MSISDN> (Reference 3GPP TS27.007)	MS_ A2 is notified of the incoming data call from MS_A1. The MSISDN of MS_A1 is displayed on MS_ A2.

Step	Action	Expected result(s)
3)	MS_ A2 takes the data call.	The data call between MS_A1 and MS_ A2 is successfully established with the correct bearer service and line speed. These are seen on messages: From BSC to BTS: ‘Channel activation’. From BTS to BSC and from BSC to MSC: `Call confirmed’.
4)	Send test data from MS_A1 to MS_ A2 and from MS_ A2 to MS_A1.	Test data is transmitted and received correctly.
5)	MS_A1 moves from cell_A1 to cell_ A2.	MS_A1 performs a handover from cell_A1 to cell_ A2.
6)	Send test data from MS_A1 to MS_ A2 and from MS_ A2 to MS_A1.	Test data is transmitted and received correctly.
7)	MS_A1 moves back to cell_A1.	MS_A1 performs a handover from cell_ A2 to cell_A1.
8)	Send test data from MS_A1 to MS_ A2 and from MS_ A2 to MS_A1.	Test data is transmitted and received correctly.
9)	MS_A1 releases the call.	Data call is successfully released and all resources are de-allocated correctly.
10)	Repeat the test using case 2 and 3 from table above.	

Step 2: Data call establishment in MSC_A2.

1)	Configure MS_A1 and MS_A2 to perform a data call with the settings indicated in table above case 1. To configure the bearer services refer to “Annex - Configuration of User Equipment for Data Calls”	MS_A1 and MS_A2 are configured with the correct bearer service.
2)	MS_A2 establishes a data call to MS_A1 by dialling: ATD <MSISDN> (Reference 3GPP TS27.007)	MS_A1 is notified of the incoming data call from MS_ A2. The MSISDN of MS_ A2 is displayed on MS_A1.
3)	MS_A1 takes the data call.	The data call between MS_A1 and MS_ A2 is successfully established with the correct bearer service and line speed. These are seen on messages: From BSC to BTS: ‘Channel activation’. From BTS to BSC and from BSC to MSC: `Call confirmed’.

4)	Send test data from MS_ A2 to MS_A1 and from MS_A1 to MS_ A2.	Test data is transmitted and received correctly.
5)	MS_ A2 moves from cell_ A2 to cell_A1.	MS_ A2 performs a handover from cell_ A2 to cell_A1.
6)	Send test data from MS_ A2 to MS_A1 and from MS_A1 to MS_ A2.	Test data is transmitted and received correctly.
7)	MS_ A2 moves back to cell_ A2.	MS_ A2 performs a handover from cell_A1 to cell_ A2.
8)	Send test data from MS_ A2 to MS_A1 and from MS_A1 to MS_ A2.	Test data is transmitted and received correctly.
9)	MS_ A2 releases the call.	Data call is successfully released and all re-sources are de-allocated correctly.
10)	Repeat the test using case 2 and 3 from table above	

d) Success criteria

The originator of a PTP data call can perform an inter MSC handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.35 Inter MSC handover of a railway emergency call originator

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the originator of a Railway Emergency Call (REC) can perform an inter MSC handover successfully on the dedicated channel as well as on the group call channel.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: REC establishment in anchor MSC_A1.

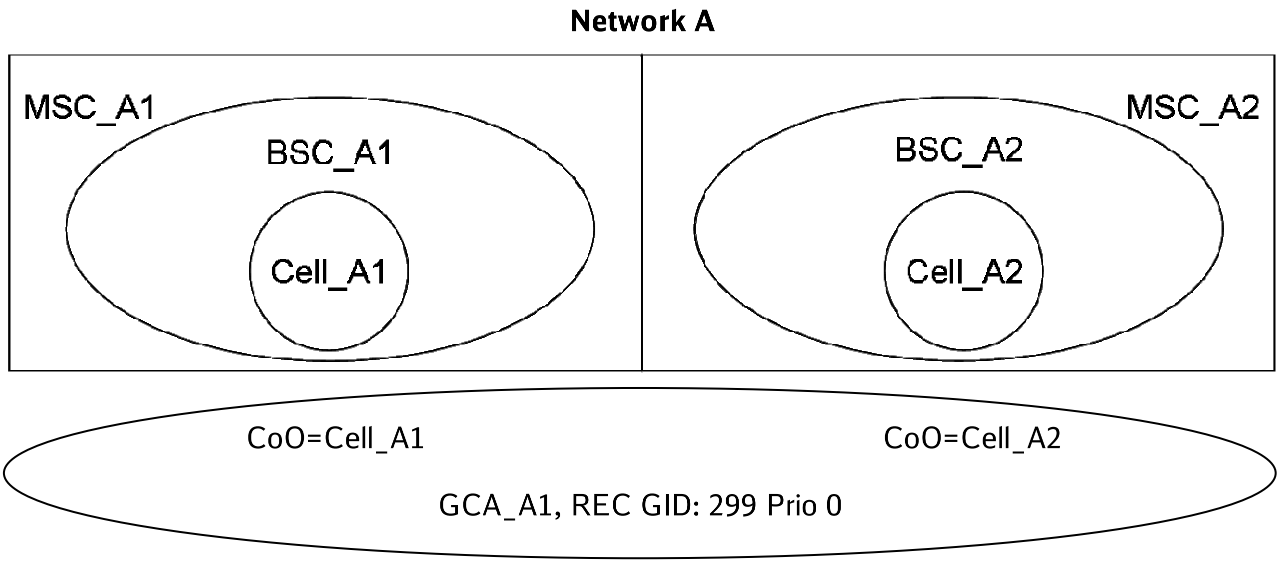
Step 2: REC establishment in relay MSC_A2.

Step 3: REC establishment in relay MSC_A1.

Step 4: REC establishment in anchor MSC_ A2.

Steps 3 and 4 only applicable in case MSC_A1 and MSC_A2 are from different vendors.

Test configuration for steps 1 and 2



A-MSC_A1	**R-MSC_** A2
MS_A1 (REC GID: 299)	MS_A2 (REC GID: 299)

c) Test procedure

Step 1: REC establishment in anchor MSC_A1.

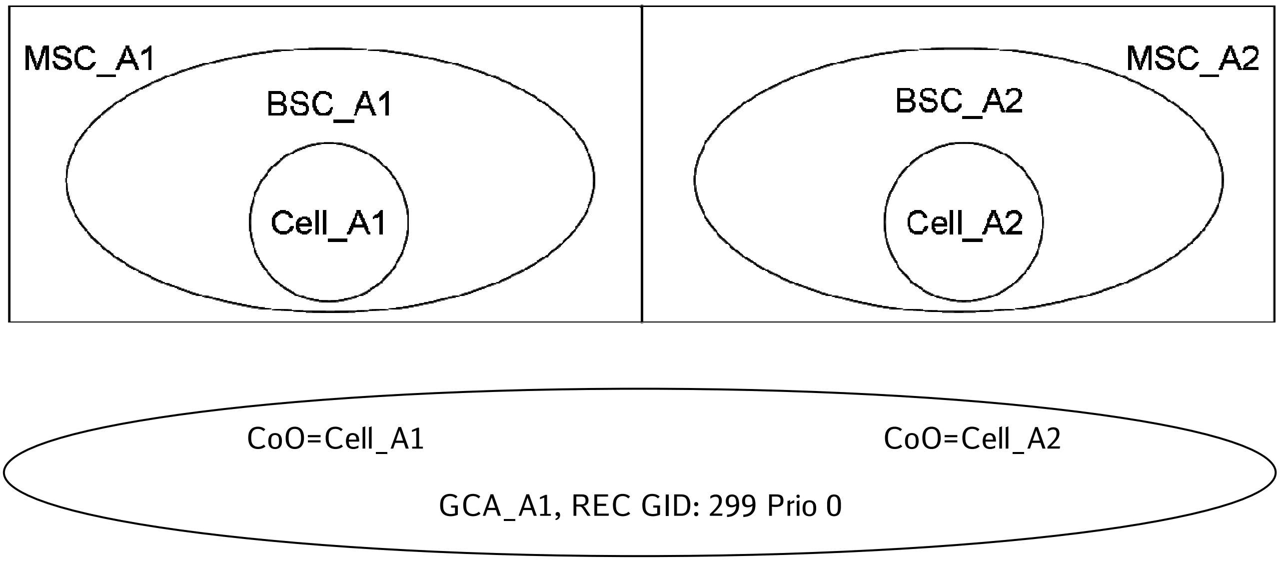
Step	Action	Expected result(s)
1)	MS_A1 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_ A2. MS_ A2 is notified about the incoming REC on the NCH. So long the dedicated channel is not released; MS_A1 has two way voice path.
2)	MS_A2 automatically accepts the REC.	MS_A2 automatically joins the REC in group receive mode.
3)	MS_A1 keeps the uplink on the dedicated channel (DCH).	MS_A1 is able to keep the uplink on the dedicated channel. MS_A1 has two-way voice path. MS_A2 is only listener.
4)	MS_A1 moves from cell_A1 to cell_ A2.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener
5)	MS_A1 moves back to cell_A1.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener
6)	MS_A1 releases the uplink on DCH.	The uplink is correctly released.
7)	MS_A1 requests the uplink on GCCH.	MS_A1 takes the uplink (GCCH). MS_A1 has two-way voice path. MS_A2 is only listener.
8)	MS_A1 moves from cell_A1 to cell_ A2.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener
9)	MS_A1 moves back to cell_A1.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener
10)	MS_A1 releases the uplink.	The uplink is correctly released.
11)	MS_A1 releases the REC.	REC is released and all resources are correctly de-allocated.

Step 2: REC establishment in relay MSC_ A2.

Step	Action	Expected result(s)
1)	MS_A2 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A2. A group call channel (GCCH) is allocated in cell_A1. MS_A1 is notified about the incoming REC on the NCH. So long the dedicated channel is not released; MS_ A2 has two way voice path.
2)	MS_A1 automatically accepts the REC.	MS_A1 automatically joins the REC in group receive mode.
3)	MS_ A2 keeps the uplink on the dedicated channel (DCH).	MS_ A2 is able to keep the uplink on the dedicated channel. MS_ A2 has two-way voice path. MS_A1 is only listener.
4)	MS_ A2 moves from cell_ A2 to cell_A1.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
5)	MS_ A2 moves back to cell_ A2.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
6)	MS_ A2 releases the uplink on DCH.	The uplink is correctly released.
7)	MS_ A2 requests the uplink on GCCH.	MS_ A2 takes the uplink (GCCH). MS_A2 has two-way voice path. MS_A1 is only listener.
8)	MS_ A2 moves from cell_ A2 to cell_A1.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
9)	MS_ A2 moves back to cell_ A2.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
10)	MS_ A2 releases the uplink.	The uplink is correctly released.
11)	MS_ A2 releases the REC.	REC is released and all resources are correctly de-allocated.

Test configuration for steps 3 and 4

Network A



R-MSC_A1	**A-MSC_** A2
MS_A1 (REC GID: 299)	MS_A2 (REC GID: 299)

Test procedure

Step 3: REC establishment in relay MSC_A1.

Step	Action	Expected result(s)
1)	MS_A1 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_ A2. MS_ A2 is notified about the incoming REC on the NCH. So long the dedicated channel is not released; MS_A1 has two way voice path.
2)	MS_A2 automatically accepts the REC.	MS_A2 automatically joins the REC in group receive mode.
3)	MS_A1 keeps the uplink on the dedi-cated channel (DCH).	MS_A1 is able to keep the uplink on the dedi-cated channel. MS_A1 has two-way voice path. MS_A2 is only listener.

Step	Action	Expected result(s)
4)	MS_A1 moves from cell_A1 to cell_A2.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener
5)	MS_A1 moves back to cell_A1.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener
6)	MS_A1 releases the uplink on DCH.	The uplink is correctly released.
7)	MS_A1 requests the uplink on GCCH.	MS_A1 takes the uplink (GCCH). MS_A1 has two-way voice path. MS_A2 is only listener.
8)	MS_A1 moves from cell_A1 to cell_ A2.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener
9)	MS_A1 moves back to cell_A1.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener
10)	MS_A1 releases the uplink.	The uplink is correctly released.
11)	MS_A1 releases the REC.	REC is released and all resources are correctly de-allocated.

Step 4: REC establishment in anchor MSC_A2.

Step	Action	Expected result(s)
1)	MS_A2 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A2. A group call channel (GCCH) is allocated in cell_A1. MS_A1 is notified about the incoming REC on the NCH. So long the dedicated channel is not released; MS_ A2 has two way voice path.
2)	MS_A1 automatically accepts the REC.	MS_A1 automatically joins the REC in group receive mode.
3)	MS_ A2 keeps the uplink on the dedicated channel (DCH).	MS_ A2 is able to keep the uplink on the dedicated channel. MS_ A2 has two-way voice path. MS_A1 is only listener.
4)	MS_ A2 moves from cell_ A2 to cell_A1.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
5)	MS_ A2 moves back to cell_ A2.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
6)	MS_ A2 releases the uplink on DCH.	The uplink is correctly released.

7)	MS_ A2 requests the uplink on GCCH.	MS_ A2 takes the uplink (GCCH). MS_A2 has two-way voice path. MS_A1 is only listener.
8)	MS_ A2 moves from cell_ A2 to cell_A1.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
9)	MS_ A2 moves back to cell_ A2.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
10)	MS_ A2 releases the uplink.	The uplink is correctly released.
11)	MS_ A2 releases the REC.	REC is released and all resources are correctly de-allocated.

d) Success criteria

The originator of a Railway Emergency Call (REC) performs an inter MSC handover successfully on the dedicated channel as well as on the group call channel.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.36 Inter MSC handover of a VGCS call uplink.

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the originator of a VGCS call can perform an inter MSC handover successfully on the group call channel.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: VGCS call establishment in anchor MSC_A1.

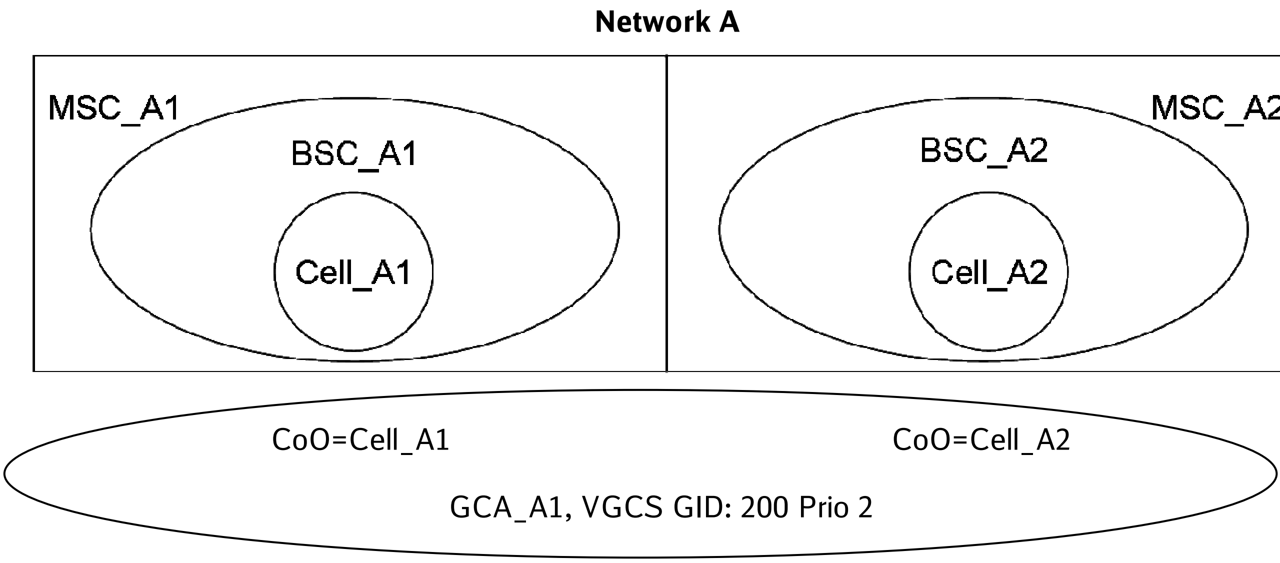
Step 2: VGCS call establishment in relay MSC_A2.

Step 3: VGCS call establishment in relay MSC_A1.

Step 4: VGCS call establishment in anchor MSC_ A2.

Steps 3 and 4 only applicable in case MSC_A1 and MSC_A2 are from different vendors.

Test configuration for steps 1 and 2



A-MSC_A1	**R-MSC_B1**
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)

c) Test procedure

Step 1: VGCS call establishment in anchor MSC_A1.

Step	Action	Expected result(s)
1)	MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_ A2. MS_A2 is notified about the incoming VGCS call on the NCH. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 automatically accepts the VGCS call.	MS_A2 automatically joins the VGCS call in group receive mode.
3)	MS_A1 requests the uplink on GCCH.	MS_A1 takes the uplink (GCCH). MS_A1 has two-way voice path. MS_A2 is only listener.

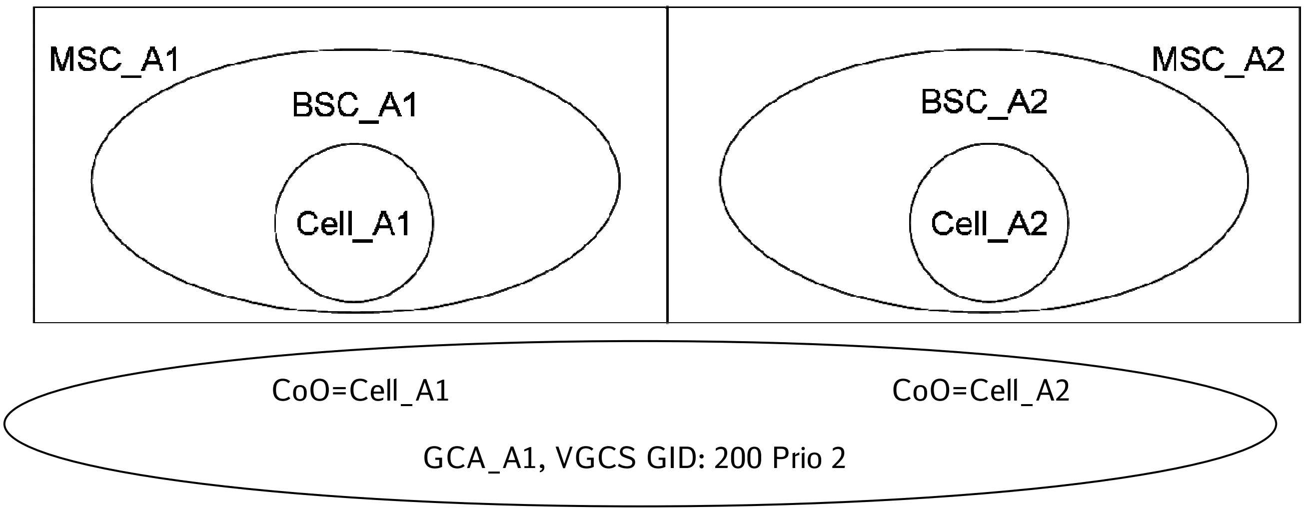
Step	Action	Expected result(s)
4)	MS_A1 moves from cell_A1 to cell_ A2.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
5)	MS_A1 moves back to cell_A1.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
6)	MS_A1 releases the uplink.	The uplink is correctly released.
7)	MS_A1 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.

Step 2: VGCS call establishment in relay MSC_ A2.

Step	Action	Expected result(s)
1)	MS_ A2 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A2. A group call channel (GCCH) is allocated in cell_A1. MS_A1 is notified about the incoming VGCS call on the NCH. So long the dedicated channel is not released, MS_ A2 has two-way voice path.
2)	MS_A1 automatically accepts the VGCS call.	MS_A1 automatically joins the VGCS call in group receive mode.
3)	MS_ A2 requests the uplink on GCCH.	MS_ A2 takes the uplink (GCCH). MS_ A2 has two-way voice path. MS_A1 is only listener.
4)	MS_ A2 moves from cell_ A2 to cell_A1.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
5)	MS_ A2 moves back to cell_ A2.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
6)	MS_ A2 releases the uplink.	The uplink is correctly released.
7)	MS_ A2 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.

Test configuration for steps 3 and 4

Network A



R-MSC_A1	**A-MSC_A2**
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)

Test procedure

Step 3: VGCS call establishment in relay MSC_A1.

Step	Action	Expected result(s)
1)	MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_ A2. MS_A2 is notified about the incoming VGCS call on the NCH. So long the dedicated channel is not released, MS_A1 has two-way voice path.
2)	MS_A2 automatically accepts the VGCS call.	MS_A2 automatically joins the VGCS call in group receive mode.
3)	MS_A1 requests the uplink on GCCH.	MS_A1 takes the uplink (GCCH). MS_A1 has two-way voice path. MS_A2 is only listener.

Step	Action	Expected result(s)
4)	MS_A1 moves from cell_A1 to cell_ A2.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
5)	MS_A1 moves back to cell_A1.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
6)	MS_A1 releases the uplink.	The uplink is correctly released.
7)	MS_A1 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.

Step 4: VGCS call establishment in anchor MSC_A2.

Step	Action	Expected result(s)
1)	MS_ A2 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A2. A group call channel (GCCH) is allocated in cell_A1. MS_A1 is notified about the incoming VGCS call on the NCH. So long the dedicated channel is not released, MS_ A2 has two-way voice path.
2)	MS_A1 automatically accepts the VGCS call.	MS_A1 automatically joins the VGCS call in group receive mode.
3)	MS_ A2 requests the uplink on GCCH.	MS_ A2 takes the uplink (GCCH). MS_ A2 has two-way voice path. MS_A1 is only listener.
4)	MS_ A2 moves from cell_ A2 to cell_A1.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
5)	MS_ A2 moves back to cell_ A2.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
6)	MS_ A2 releases the uplink.	The uplink is correctly released.
7)	MS_ A2 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.

d) Success criteria

The originator of a VGCS call performs an inter MSC handover successfully on the group call channel.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.37 Inter MSC handover of a VGCS dedicated channel

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the originator of a VGCS call can perform an inter MSC handover successfully on the dedicated channel.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: VGCS call establishment in anchor MSC_A1.

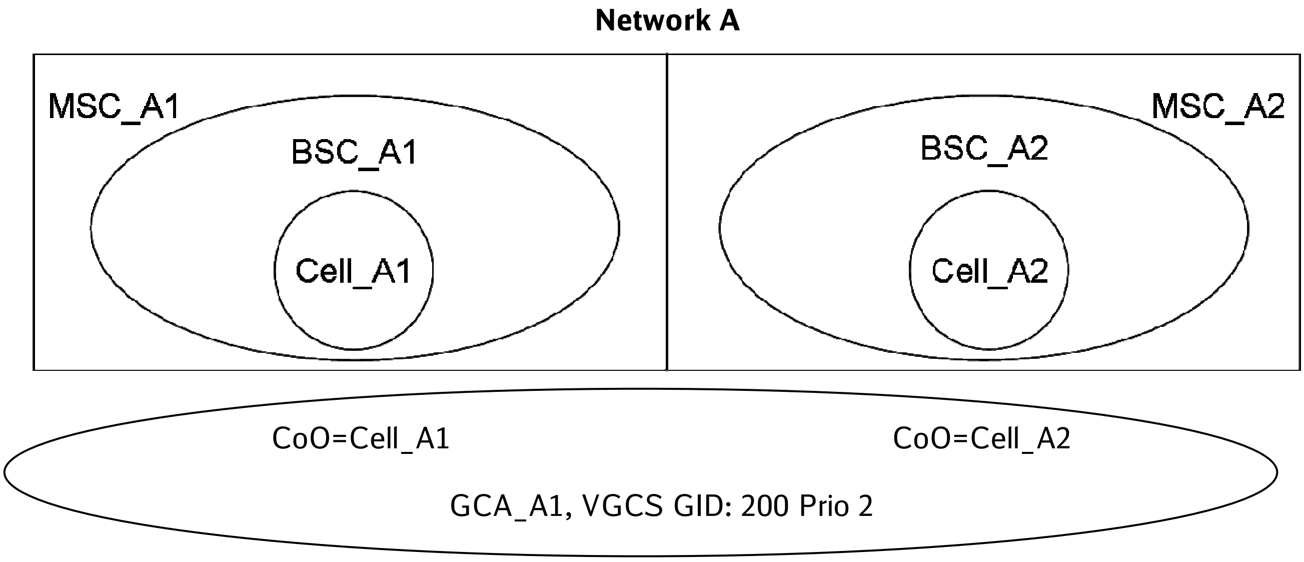
Step 2: VGCS call establishment in relay MSC_A2.

Step 3: VGCS call establishment in relay MSC_A1.

Step 4: VGCS call establishment in anchor MSC_A2.

Steps 3 and 4 only applicable in case MSC_A1 and MSC_A2 are from different vendors.

Test configuration for steps 1 and 2



A-MSC_A1	R-MSC_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)

c) Test procedure

Step 1: VGCS call establishment in anchor MSC_A1.

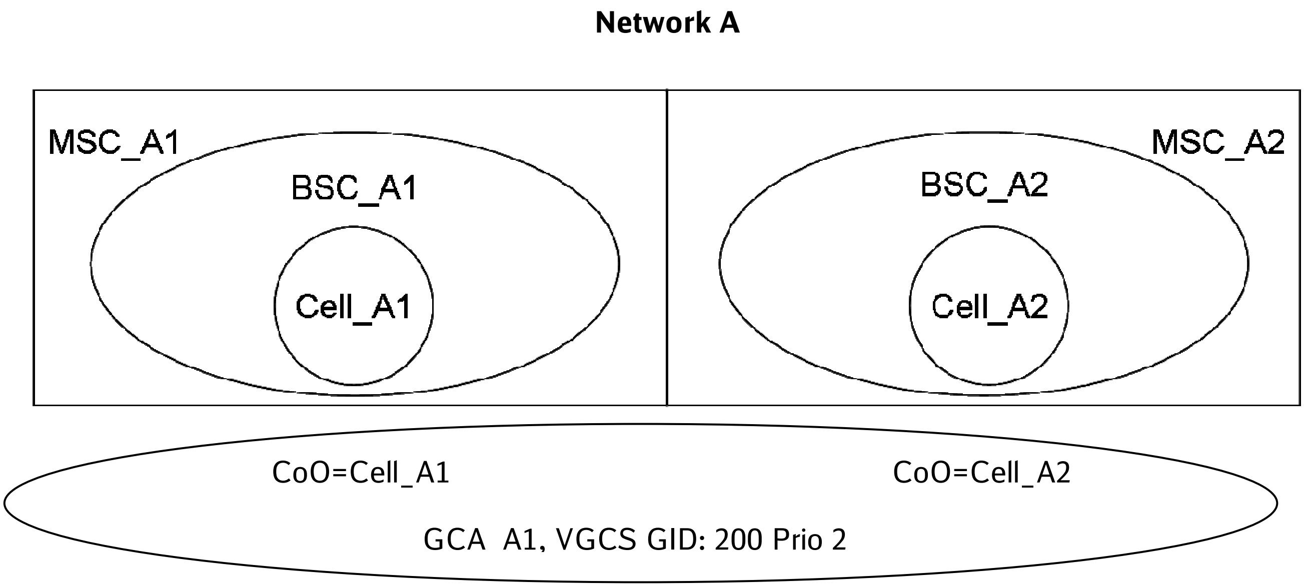
Step	Action	Expected result(s)
1)	MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 is notified about the incoming VGCS call on the NCH. So long the dedicated channel is not released; MS_A1 has two way voice path.
2)	MS_A2 automatically accepts the VGCS call.	MS_A2 automatically joins the VGCS call in group receive mode.
3)	MS_A1 requests the uplink on DCH.	MS_A1 takes the uplink (DCH). MS_A1 has two-way voice path. MS_A2 is only listener.
4)	MS_A1 moves from cell_A1 to cell_ A2.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener
5)	MS_A1 moves back to cell_A1.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener
6)	MS_A1 releases the uplink.	The uplink is correctly released.
7)	MS_A1 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.

Step 2: VGCS call establishment in relay MSC_A2.

Step	Action	Expected result(s)
1)	MS_ A2 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A2. A group call channel (GCCH) is allocated in cell_A1. MS_A1 is notified about the incoming VGCS call on the NCH. So long the dedicated channel is not released, MS_ A2 has two-way voice path.
2)	MS_A1 automatically accepts the VGCS call.	MS_A1 automatically joins the VGCS call in group receive mode.

3)	MS_ A2 requests the uplink on DCH.	MS_ A2 takes the uplink (DCH). MS_ A2 has two-way voice path. MS_A1 is only listener.
4)	MS_ A2 moves from cell_ A2 to cell_A1.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
5)	MS_ A2 moves back to cell_ A2.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
6)	MS_ A2 releases the uplink.	The uplink is correctly released.
7)	MS_ A2 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.

Test configuration for steps 3 and 4



R-MSC_A1	A-MSC_A2
MS_A1 (VGCS GID: 200)	MS_A2 (VGCS GID: 200)

Test procedure

Step 3: VGCS call establishment in relay MSC_A1.

Step	Action	Expected result(s)
1)	MS_A1 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A2 is notified about the incoming VGCS call on the NCH. So long the dedicated channel is not released; MS_A1 has two way voice path.
2)	MS_A2 automatically accepts the VGCS call.	MS_A2 automatically joins the VGCS call in group receive mode.
3)	MS_A1 requests the uplink on DCH.	MS_A1 takes the uplink (DCH). MS_A1 has two-way voice path. MS_A2 is only listener.
4)	MS_A1 moves from cell_A1 to cell_ A2.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener
5)	MS_A1 moves back to cell_A1.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener
6)	MS_A1 releases the uplink.	The uplink is correctly released.
7)	MS_A1 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.

Step 4: VGCS call establishment in anchor MSC_A2.

Step	Action	Expected result(s)
1)	MS_ A2 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A2. A group call channel (GCCH) is allocated in cell_A1. MS_A1 is notified about the incoming VGCS call on the NCH. So long the dedicated channel is not released, MS_ A2 has two-way voice path.
2)	MS_A1 automatically accepts the VGCS call.	MS_A1 automatically joins the VGCS call in group receive mode.
3)	MS_ A2 requests the uplink on DCH.	MS_ A2 takes the uplink (DCH). MS_ A2 has two-way voice path. MS_A1 is only listener.

4)	MS_ A2 moves from cell_ A2 to cell_A1.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
5)	MS_ A2 moves back to cell_ A2.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
6)	MS_ A2 releases the uplink.	The uplink is correctly released.
7)	MS_ A2 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.

d) Success criteria

The originator of a VGCS call performs an inter MSC handover successfully on the dedicated channel.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.38 Inter MSC handover of a VBS originator

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the originator of a VBS call can perform an inter MSC handover successfully.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: VBS call establishment in anchor MSC_A1.

Step 2: VBS call establishment in relay MSC_A2.

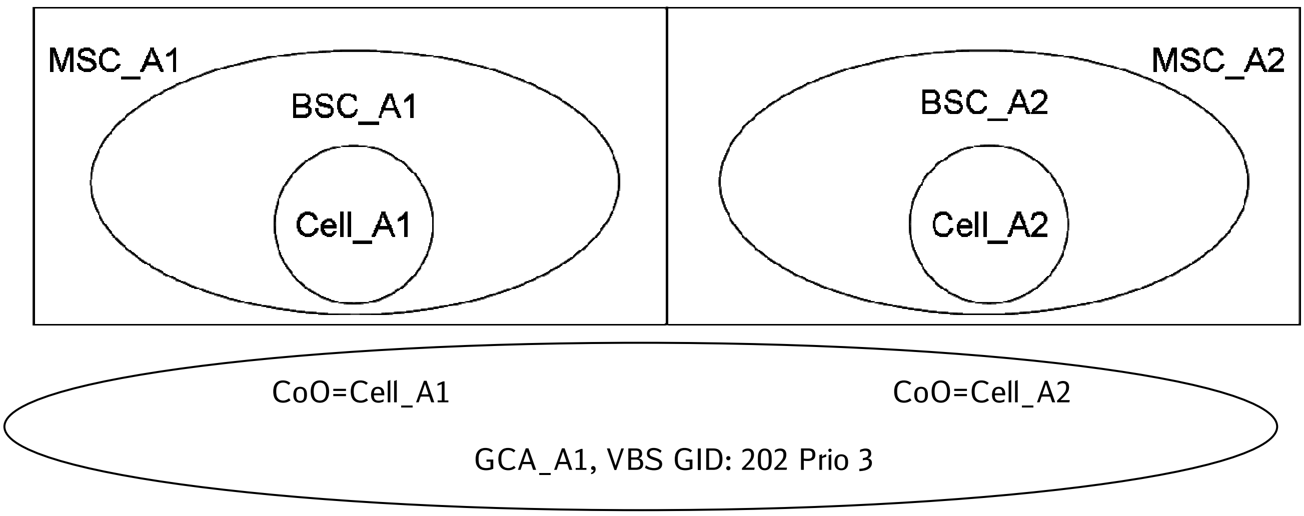
Step 3: VBS call establishment in relay MSC_A1.

Step 4: VBS call establishment in anchor MSC_A2.

Steps 3 and 4 only applicable in case MSC_A1 and MSC_A2 are from different vendors.

Test configuration for steps 1 and 2

Network A



A-MSC_A1	R-MSC_A2
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)

c) Test procedure

Step 1: VBS call establishment in anchor MSC_A1.

Step	Action	Expected result(s)
1)	MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. The DCH (uplink) remains allocated during the whole VBS call. MS_A2 is notified about the incoming VBS call on the NCH.
2)	MS_A2 automatically accepts the VBS call.	MS_A2 automatically joins the VBS call in group receive mode. MS_A1 has two-way voice path. MS_A2 is only listener.
3)	MS_A1 moves from cell_A1 to cell_A2.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
4)	MS_A1 moves back to cell_A1.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
5)	MS_A1 releases the VBS call.	VBS call is released and all resources are correctly de-allocated.

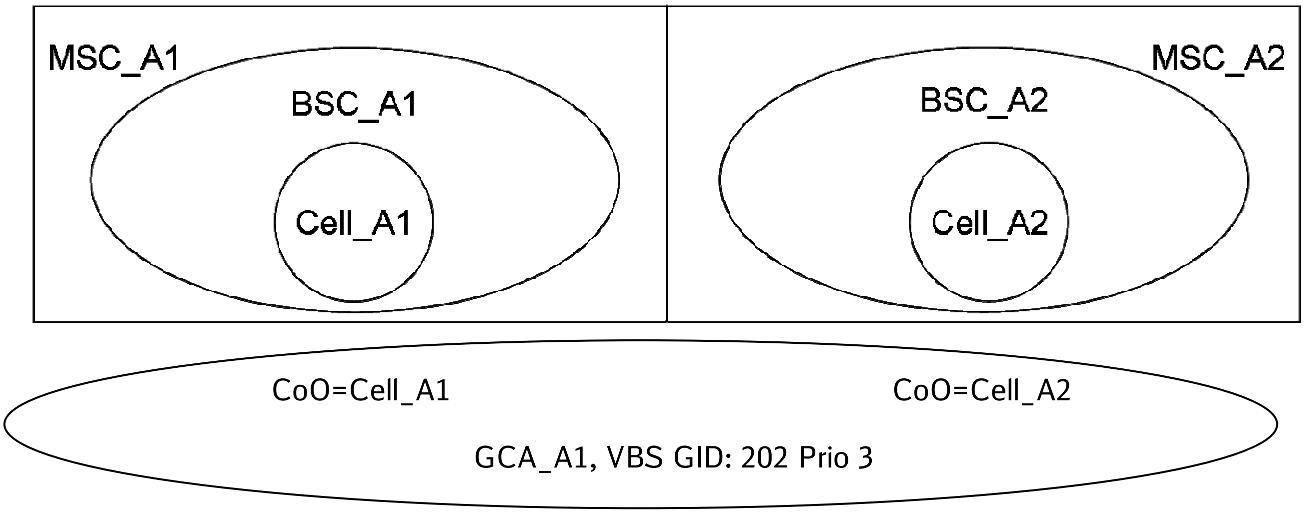
Step 2: VBS call establishment in relay MSC_A2.

Step	Action	Expected result(s)
1)	MS_ A2 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A2. A group call channel (GCCH) is allocated in cell_A1. The DCH (uplink) remains allocated during the whole VBS call. MS_A1 is notified about the incoming VBS call on the NCH.

2)	MS_A1 automatically accepts the VBS call.	MS_A1 automatically joins the VBS call in group receive mode. MS_ A2 has two-way voice path. MS_A1 is only listener.
3)	MS_ A2 moves from cell_ A2 to cell_A1.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
4)	MS_ A2 moves back to cell_ A2.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
5)	MS_ A2 releases the VBS call.	VBS call is released and all resources are cor-rectly de-allocated.

Test configuration for steps 3 and 4

Network A



R-MSC_A1	**A-MSC_A2**
MS_A1 (VBS GID: 202)	MS_A2 (VBS GID: 202)

Test procedure

Step 3: VBS call establishment in relay MSC_A1.

Step	Action	Expected result(s)
1)	MS_A1 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. The DCH (uplink) remains allocated during the whole VBS call. MS_A2 is notified about the incoming VBS call on the NCH.
2)	MS_A2 automatically accepts the VBS call.	MS_A2 automatically joins the VBS call in group receive mode. MS_A1 has two-way voice path. MS_A2 is only listener.
3)	MS_A1 moves from cell_A1 to cell_A2.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
4)	MS_A1 moves back to cell_A1.	Handover successfully performed. MS_A1 has still two-way voice path. MS_A2 is only listener.
5)	MS_A1 releases the VBS call.	VBS call is released and all resources are correctly de-allocated.

Step 4: VBS call establishment in anchor MSC_A2.

Step	Action	Expected result(s)
1)	MS_ A2 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A2. A group call channel (GCCH) is allocated in cell_A1. The DCH (uplink) remains allocated during the whole VBS call. MS_A1 is notified about the incoming VBS call on the NCH.
2)	MS_A1 automatically accepts the VBS call.	MS_A1 automatically joins the VBS call in group receive mode. MS_ A2 has two-way voice path. MS_A1 is only listener.

3)	MS_ A2 moves from cell_ A2 to cell_A1.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
4)	MS_ A2 moves back to cell_ A2.	Handover successfully performed. MS_ A2 has still two-way voice path. MS_A1 is only listener.
5)	MS_ A2 releases the VBS call.	VBS call is released and all resources are correctly de-allocated.

d) Success criteria

The originator of a VBS call performs an inter MSC handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.39 Intra BTS handover failure of a point to point voice call (pre-emption Um-IF not possible)

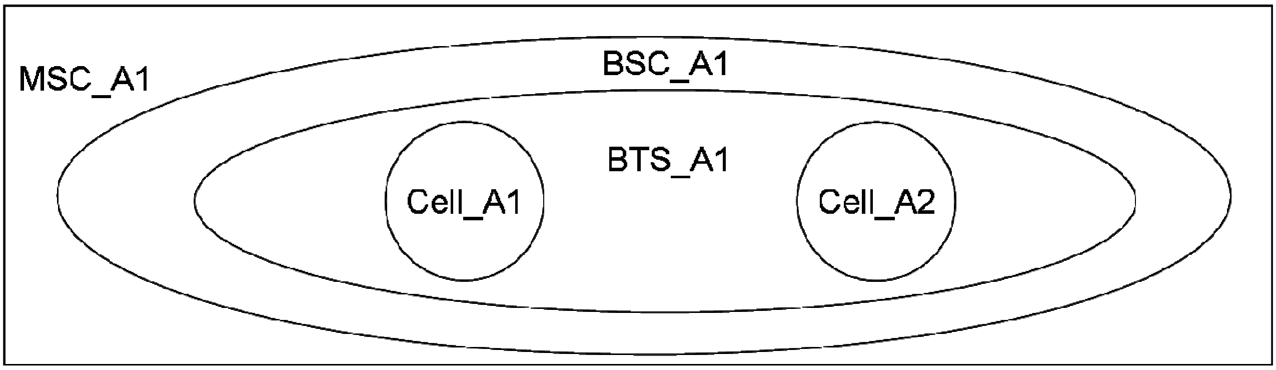
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming intra BTS handover of a subscriber of another ongoing point to point voice call with the same or lower priority with the result that no handover is performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A7	MS_A1
MS_A8	MS_A2
	MS_A3
	MS_A4
	MS_A5
	MS_A6

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call to MS_A2 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 originates a PTP call to MS_A4 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 originates a PTP call to MS_A6 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. There is no traffic channel available in cell_A2.
4)	MS_A7 establishes a PTP call to MS_A8 with priority 4.	The call is established correctly, there is a speech path between MS_A7 and MS_A8. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
5)	MS_A7 moves from cell_A1 to cell_A2.	Intra BTS handover from cell_A1 to cell_A2 is not performed because the priority of the in-coming call is the same as the ongoing call. The call stays connected until the mobile is out of coverage of cell A1.
6)	MS_A7 releases the call if not already dropped.	PTP call is successfully released and all re-sources are correctly de-allocated.
7)	Release all PTP calls in cell A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming intra BTS handover of a subscriber of another ongoing point to point voice call with the same or lower priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.40 Intra BTS handover failure of a circuit switched data call (pre-emption Um-IF not possible)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		2.3.1	EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming intra BTS handover of a subscriber of another ongoing point to point data call with the same or lower priority with the result that no handover is performed.

b) Test configuration / initial conditions

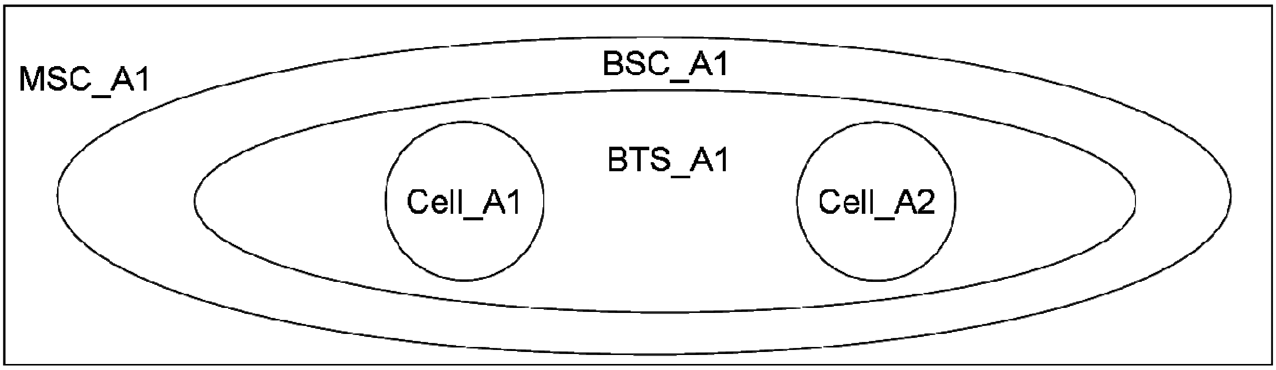
MS_A7 and MS_A8 are terminals with subscriptions to the following bearer services:

Service	EIRENE SRS v15
BS 24 Asynchronous 2,4 Kbit/s T for full-rate channel	M
BS 25 Asynchronous 4,8 Kbit/s T for full-rate channel	M
BS 26 Asynchronous 9,6 Kbit/s T for full-rate channel	M

Terminal application needed to send and receive test data.

To configure the bearer services and to set up a call with the terminal, refer to chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”.

Network A



Cell_A1	**Cell_A2**
MS_A7	MS_A1
MS_A8	MS_A2
	MS_A3
	MS_A4
	MS_A5
	MS_A6

c) Test procedure

A subset of the mandatory data services will be used for the test.

Case	Data service	Digital interworking (UDI / ISDN) V.110	Analogue interworking (3,1 kHz) V.22bis, V.32	Transparent	eMLPP Priority
1	BS 24 2400 bps		X (V.22bis)	X	4
2	BS 25 4800 bps	X		X	4
3	BS 26 9600 bps	X		X	4

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call with priority 4 to MS_A2.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
2)	MS_A3 originates a PTP call with priority 4 to MS_A4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
3)	MS_A5 originates a PTP call with priority 4 to MS_A6.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’. There is no traffic channel available in cell_A2.
4)	Configure MS_A7 and MS_A8 to perform a data call with the settings indicated in table above case 1. To configure the bearer services refer to “Annex - Configuration of User Equipment for Data Calls”	MS_A7 and MS_A8 are configured with the correct bearer service.
5)	MS_A7 establishes a data call to MS_A8 with priority 4 by dialling: ATD<MSISDN> (Reference 3GPP TS27.007)	MS_A8 is notified of the incoming data call from MS_A7. The MSISDN of MS_A7 is displayed on MS_A8.
6)	MS_A8 takes the data call.	The data call between MS_A7 and MS_A8 is successfully established with the correct bearer service and line speed. These are seen on messages: From BSC to BTS: ‘Channel activation’. From BTS to BSC and from BSC to MSC: `Call confirmed’. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
7)	Send test data from MS_A7 to MS_A8 and from MS_A8 to MS_A7.	Test data is transmitted and received correctly.

Step	Action	Expected result(s)
8)	MS_A7 moves from cell_A1 to cell_A2.	Intra BTS handover from cell_A1 to cell_A2 is not performed because the priority of the incoming call is the same as the ongoing call. The call stays connected until the mobile is out of coverage of cell A1.
9)	MS_A7 releases the data call if not already dropped.	Data call successfully released and all resources are de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.
11)	Repeat the test using case 2 and 3 from table above.	

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming intra BTS handover of a subscriber of another ongoing point to point data call with the same or lower priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.41 Intra BTS Handover failure of a railway emergency originator (DCH) (pre-emption Um-IF not possible)

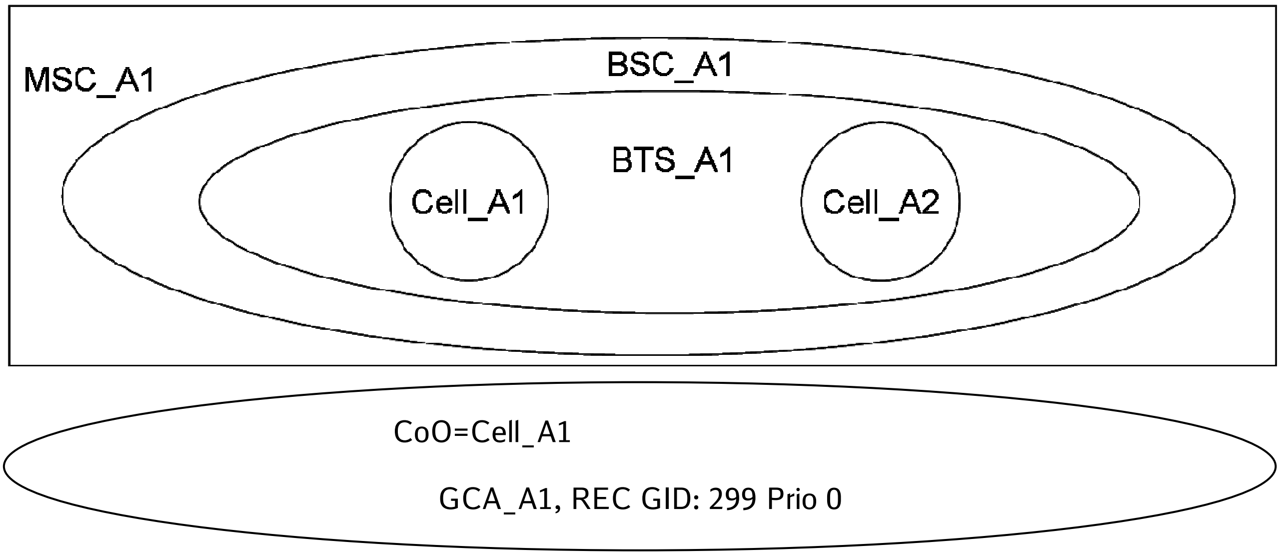
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming intra BTS handover of the originator (on dedicated channel) of an ongoing railway emergency call with the same priority with the result that no handover is performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (REC GID: 299)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (REC GID: 299)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 establishes a PTP call to MS_A4 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 and MS_A9 are notified about the in-coming REC on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the REC.	MS_A8 and MS_A9 automatically join the REC in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.

Step	Action	Expected result(s)
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 is able to take the uplink on DCH. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.
7)	MS_A7 moves from cell_A1 to cell_A2.	Intra BTS handover from cell_A1 to cell_A2 is not performed because the priority of the incoming call is the same as the ongoing call. The DCH remains allocated until the mobile is out of coverage of cell A1.
8)	MS_A7 releases the uplink if not already released.	The uplink is correctly released.
9)	MS_A7 releases the REC.	REC is successfully released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming intra BTS handover of the originator (on dedicated channel) of an ongoing railway emergency call with the same priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.42 Intra BTS Handover failure of a VGCS dedicated channel (pre-emption Um-IF not possible)

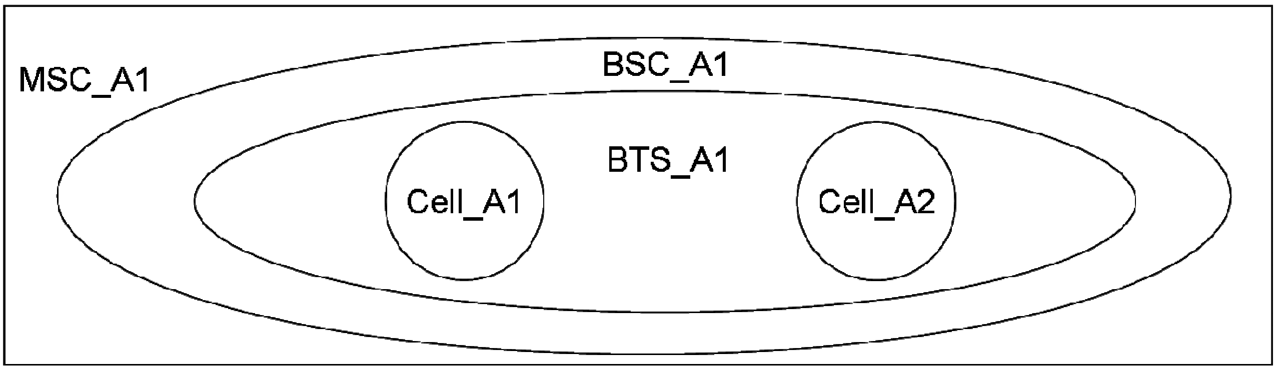
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

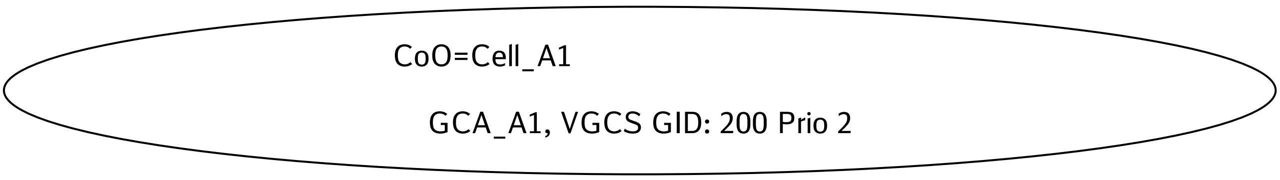
a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming intra BTS handover of the originator (on dedicated channel) of an ongoing VGCS call with the same priority with the result that no handover is performed.

b) Test configuration / initial conditions

Network A





Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VGCS GID: 200)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VGCS GID: 200)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
2)	MS_A3 establishes a PTP call to MS_A4 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 and MS_A9 are notified about the in-coming VGCS call on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the VGCS call.	MS_A8 and MS_A9 automatically join the VGCS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: ‘Notification Command’ sent from the BSC.

Step	Action	Expected result(s)
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 is able to take the uplink on DCH. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.
7)	MS_A7 moves from cell_A1 to cell_A2.	Intra BTS handover from cell_A1 to cell_A2 is not performed because the priority of the incoming call is the same as the ongoing call. The DCH remains allocated until the mobile is out of coverage of cell A1.
8)	MS_A7 releases the uplink if not already released.	The uplink is correctly released.
9)	MS_A7 releases the VGCS call.	VGCS call is successfully released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming intra BTS handover of the originator (on dedicated channel) of an ongoing VGCS call with the same priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.43 Intra BTS Handover failure of a VBS originator (pre-emption Um-IF not possible)

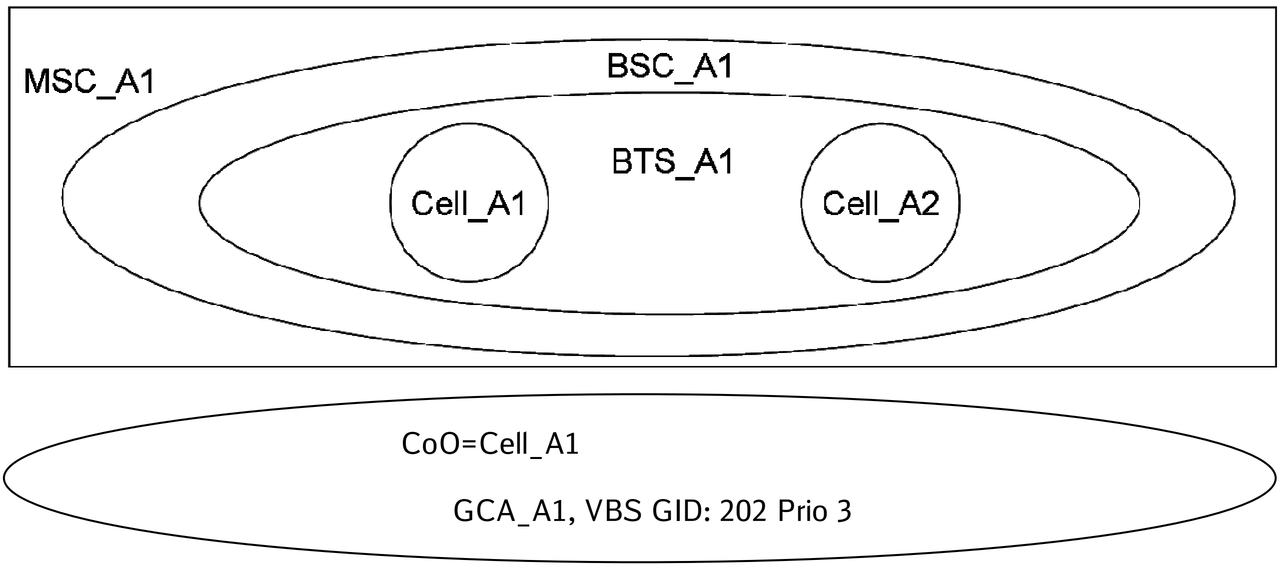
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming intra BTS handover of the originator of an ongoing VBS call with the same priority with the result that no handover is performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VBS GID: 202)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VBS GID: 202)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
2)	MS_A3 establishes a PTP call to MS_A4 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. The DCH (uplink) remains allocated during the whole VBS call. MS_A8 and MS_A9 are notified about the in-coming VBS call on the NCH. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the VBS call.	MS_A8 and MS_A9 automatically join the VBS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: ‘Notification Command’ sent from the BSC. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.

Step	Action	Expected result(s)
6)	MS_A7 moves from cell_A1 to cell_A2.	Intra BTS handover from cell_A1 to cell_A2 is not performed because the priority of the in-coming call is the same as the ongoing call. The VBS call stays connected until the mobile is out of coverage of cell A1.
7)	MS_A7 releases the VBS call if not al-ready released.	VBS call successfully released and all re-sources de-allocated.
8)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming intra BTS handover of the originator of an ongoing VBS call with the same priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.44 Inter BTS handover failure of a point to point voice call (pre-emption Um-IF not possible)

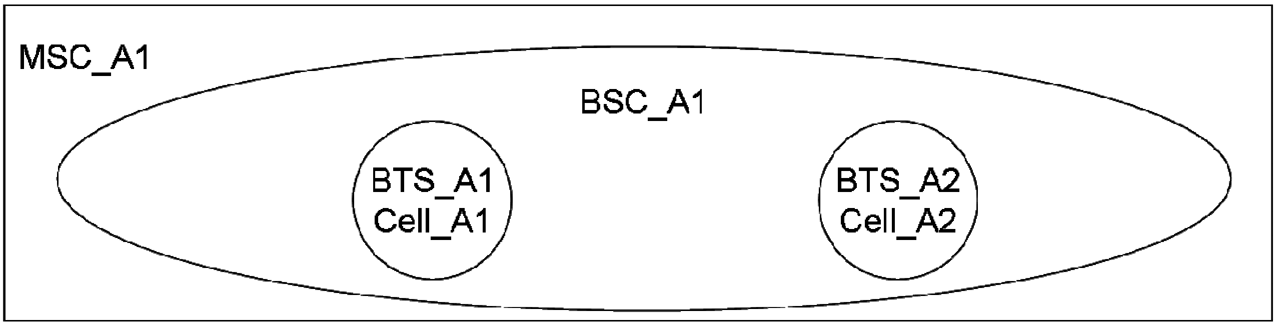
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an in-coming inter BTS handover of a subscriber of another ongoing point to point voice call with the same or lower priority with the result that no handover is performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A7	MS_A1
MS_A8	MS_A2
	MS_A3
	MS_A4
	MS_A5
	MS_A6

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call to MS_A2 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 originates a PTP call to MS_A4 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 originates a PTP call to MS_A6 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. There is no traffic channel available in cell_A2.
4)	MS_A7 establishes a PTP call to MS_A8 with priority 4.	The call is established correctly, there is a speech path between MS_A7 and MS_A8. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
5)	MS_A7 moves from cell_A1 to cell_A2.	Inter BTS handover from cell_A1 to cell_A2 is not performed because the priority of the in-coming call is the same as the ongoing call. The call stays connected until the mobile is out of coverage of cell A1.
6)	MS_A7 releases the call if not already dropped.	PTP call is successfully released and all re-sources are correctly de-allocated.
7)	Release all PTP calls in cell A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BTS handover of a subscriber of another ongoing point to point voice call with the same or lower priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.45 Inter BTS handover failure of a circuit switched data call (pre-emption Um-IF not possible)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		2.3.1	EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BTS handover of a subscriber of another ongoing point to point data call with the same or lower priority with the result that no handover is performed.

b) Test configuration / initial conditions

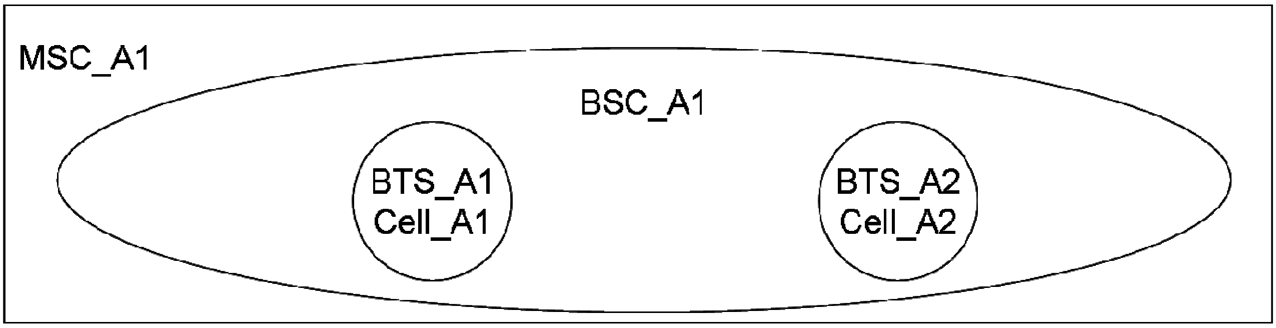
MS_A7 and MS_A8 are terminals with subscriptions to the following bearer services:

Service	EIRENE SRS v15
BS 24 Asynchronous 2,4 Kbit/s T for full-rate channel	M
BS 25 Asynchronous 4,8 Kbit/s T for full-rate channel	M
BS 26 Asynchronous 9,6 Kbit/s T for full-rate channel	M

Terminal application needed to send and receive test data.

To configure the bearer services and to set up a call with the terminal, refer to chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”.

Network A



Cell_A1	Cell_A2
MS_A7	MS_A1
MS_A8	MS_A2
	MS_A3
	MS_A4
	MS_A5
	MS_A6

c) Test procedure

A subset of the mandatory data services will be used for the test.

Case	Data service	Digital interworking (UDI / ISDN) V.110	Analogue interworking (3,1 kHz) V.22bis, V.32	Transparent	eMLPP Priority
1	BS 24 2400 bps		X (V.22bis)	X	4
2	BS 25 4800 bps	X		X	4
3	BS 26 9600 bps	X		X	4

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call with priority 4 to MS_A2.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
2)	MS_A3 originates a PTP call with priority 4 to MS_A4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
3)	MS_A5 originates a PTP call with priority 4 to MS_A6.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’. There is no traffic channel available in cell_A2.
4)	Configure MS_A7 and MS_A8 to perform a data call with the settings indicated in table above case 1. To configure the bearer services refer to “Annex - Configuration of User Equipment for Data Calls”	MS_A7 and MS_A8 are configured with the correct bearer service.
5)	MS_A7 establishes a data call to MS_A8 with priority 4 by dialling: ATD<MSISDN> (Reference 3GPP TS27.007)	MS_A8 is notified of the incoming data call from MS_A7. The MSISDN of MS_A7 is displayed on MS_A8.
6)	MS_A8 takes the data call.	The data call between MS_A7 and MS_A8 is successfully established with the correct bearer service and line speed. These are seen on messages: From BSC to BTS: ‘Channel activation’. From BTS to BSC and from BSC to MSC: `Call confirmed’. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.

Step	Action	Expected result(s)
7)	Send test data from MS_A7 to MS_A8 and from MS_A8 to MS_A7.	Test data is transmitted and received correctly.
8)	MS_A7 moves from cell_A1 to cell_A2.	Inter BTS handover from cell_A1 to cell_A2 is not performed because the priority of the in-coming call is the same as the ongoing call. The call stays connected until the mobile is out of coverage of cell A1.
9)	MS_A7 releases the data call if not al-ready dropped.	Data call successfully released and all re-sources are de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.
11)	Repeat the test using case 2 and 3 from table above.	

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BTS handover of a subscriber of another ongoing point to point data call with the same or lower priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.46 Inter BTS Handover failure of a railway emergency originator (DCH) (pre-emption Um-IF not possible)

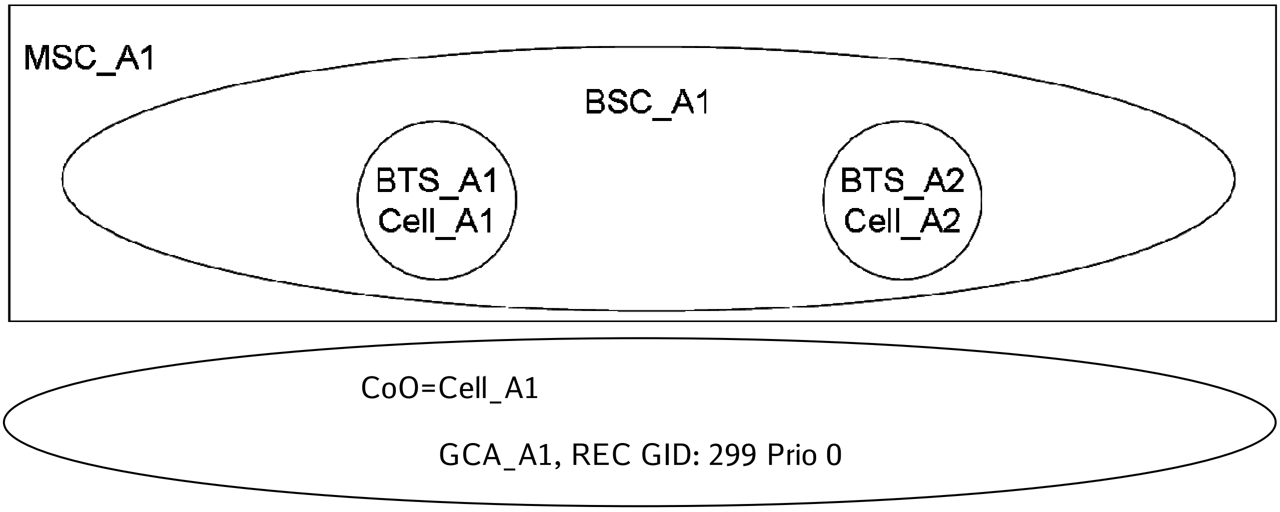
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BTS handover of the originator (on dedicated channel) of an ongoing railway emergency call with the same priority with the result that no handover is performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (REC GID: 299)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (REC GID: 299)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 establishes a PTP call to MS_A4 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 and MS_A9 are notified about the in-coming REC on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the REC.	MS_A8 and MS_A9 automatically join the REC in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.

Step	Action	Expected result(s)
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 is able to take the uplink on DCH. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.
7)	MS_A7 moves from cell_A1 to cell_A2.	Inter BTS handover from cell_A1 to cell_A2 is not performed because the priority of the in-coming call is the same as the ongoing call. The DCH remains allocated until the mobile is out of coverage of cell A1.
8)	MS_A7 releases the uplink if not already released.	The uplink is correctly released.
9)	MS_A7 releases the REC.	REC is successfully released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BTS handover of the originator (on dedicated channel) of an ongoing railway emergency call with the same priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.47 Inter BTS Handover failure of a VGCS dedicated channel (pre-emption Um-IF not possible)

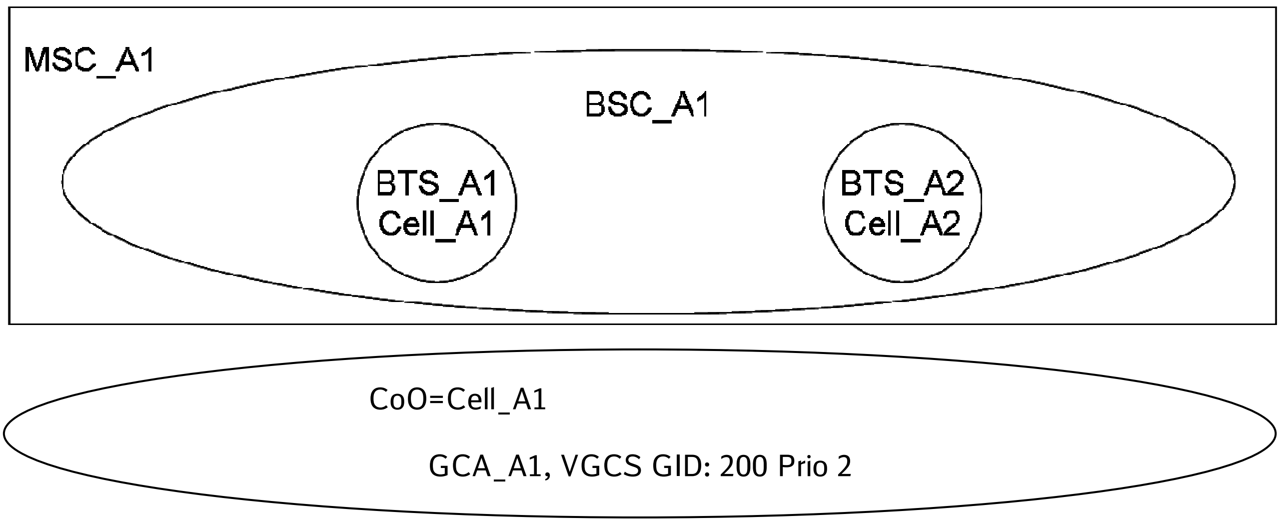
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BTS handover of the originator (on dedicated channel) of an ongoing VGCS call with the same priority with the result that no handover is performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VGCS GID: 200)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VGCS GID: 200)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 establishes a PTP call to MS_A4 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 and MS_A9 are notified about the in-coming VGCS call on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the VGCS call.	MS_A8 and MS_A9 automatically join the VGCS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 is able to take the uplink on DCH. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.

Step	Action	Expected result(s)
7)	MS_A7 moves from cell_A1 to cell_A2.	Inter BTS handover from cell_A1 to cell_A2 is not performed because the priority of the in-coming call is the same as the ongoing call. The DCH remains allocated until the mobile is out of coverage of cell A1.
8)	MS_A7 releases the uplink if not already released.	The uplink is correctly released.
9)	MS_A7 releases the VGCS call.	VGCS call is successfully released and all re-sources are correctly de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BTS handover of the originator (on dedicated channel) of an ongoing VGCS call with the same priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.48 Inter BTS Handover failure of a VBS originator (pre-emption Um-IF not possible)

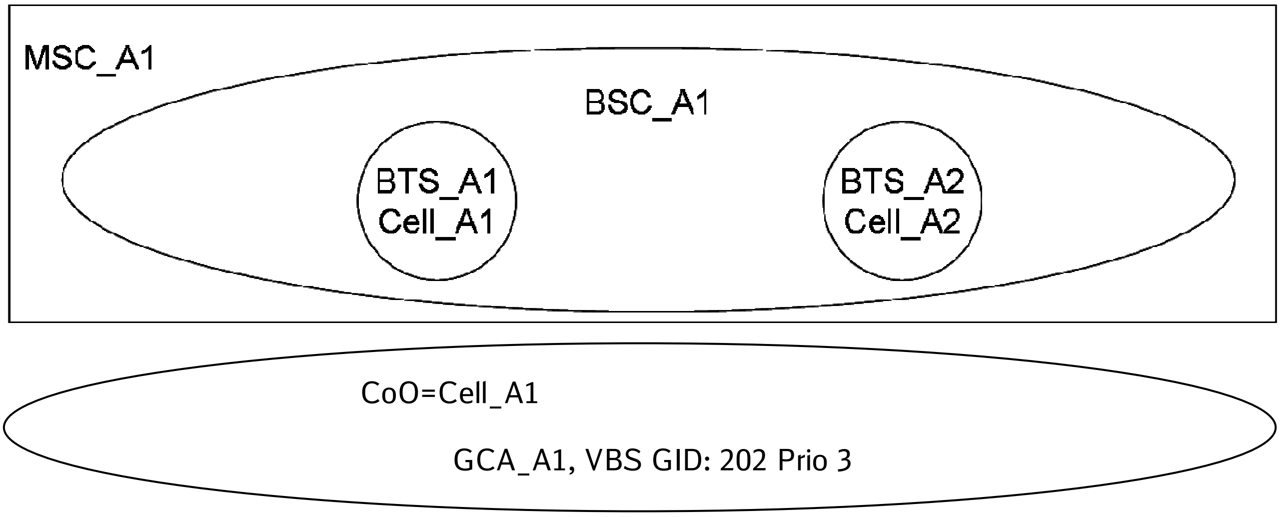
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BTS handover of the originator of an ongoing VBS call with the same priority with the result that no handover is performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VBS GID: 202)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VBS GID: 202)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 establishes a PTP call to MS_A4 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. The DCH (uplink) remains allocated during the whole VBS call. MS_A8 and MS_A9 are notified about the in-coming VBS call on the NCH. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the VBS call.	MS_A8 and MS_A9 automatically join the VBS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.

Step	Action	Expected result(s)
6)	MS_A7 moves from cell_A1 to cell_A2.	Inter BTS handover from cell_A1 to cell_A2 is not performed because the priority of the incoming call is the same as the ongoing call. The VBS call stays connected until the mobile is out of coverage of cell A1.
7)	MS_A7 releases the VBS call if not already released.	VBS call successfully released and all resources de-allocated.
8)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BTS handover of the originator of an ongoing VBS call with the same priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.49 Inter BSC handover failure of a point to point voice call (pre-emption Um-IF not possible)

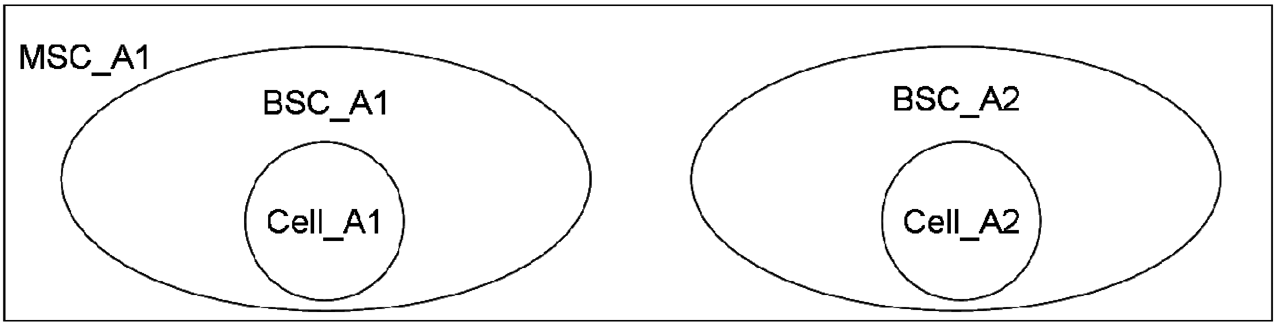
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an in-coming inter BSC handover of a subscriber of another ongoing point to point voice call with the same or lower priority with the result that no handover is performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A7	MS_A1
MS_A8	MS_A2
	MS_A3
	MS_A4
	MS_A5
	MS_A6

c) Test procedure

Step	Action	Expected result(s)

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call to MS_A2 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 originates a PTP call to MS_A4 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 originates a PTP call to MS_A6 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. There is no traffic channel available in cell_A2.
4)	MS_A7 establishes a PTP call to MS_A8 with priority 4.	The call is established correctly, there is a speech path between MS_A7 and MS_A8. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
5)	MS_A7 moves from cell_A1 to cell_A2.	Inter BSC handover from cell_A1 to cell_A2 is not performed because the priority of the in-coming call is the same as the ongoing call. The BSC_A2 sends "Handover Failure" with cause "No radio resource available" to the MSC. The MSC sends "Handover Required Reject" to the BSC_A1. The call stays connected until the mobile is out of coverage of cell A1.
6)	MS_A7 releases the call if not already dropped.	PTP call is successfully released and all re-sources are correctly de-allocated. MS_A7 performs a normal location update successfully.

Step	Action	Expected result(s)
7)	Release all PTP calls in cell A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BSC handover of a subscriber of another ongoing point to point voice call with the same or lower priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.50 Inter BSC handover failure of a circuit switched data call (pre-emption Um-IF not possible)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		2.3.1	EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BSC handover of a subscriber of an ongoing point to point data call with the same or lower priority with the result that no handover is performed.

b) Test configuration / initial conditions

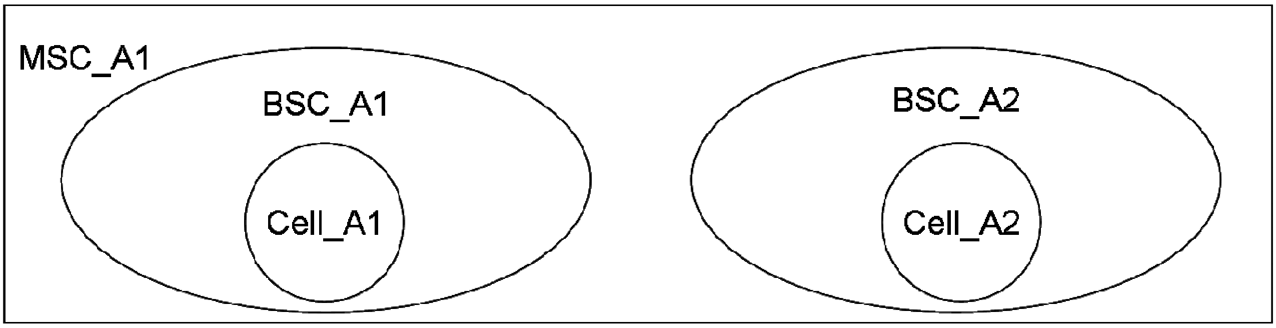
MS_A7 and MS_A8 are terminals with subscriptions to the following bearer services:

Service	EIRENE SRS v15
BS 24 Asynchronous 2,4 Kbit/s T for full-rate channel	M
BS 25 Asynchronous 4,8 Kbit/s T for full-rate channel	M
BS 26 Asynchronous 9,6 Kbit/s T for full-rate channel	M

Terminal application needed to send and receive test data.

To configure the bearer services and to set up a call with the terminal, refer to chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”.

Network A



Cell_A1	**Cell_A2**
MS_A7	MS_A1
MS_A8	MS_A2
	MS_A3
	MS_A4
	MS_A5
	MS_A6

c) Test procedure

A subset of the mandatory data services will be used for the test.

Case	Data service	Digital interworking (UDI / ISDN) V.110	Analogue interworking (3,1 kHz) V.22bis, V.32	Transparent	eMLPP Priority
1	BS 24 2400 bps		X (V.22bis)	X	4
2	BS 25 4800 bps	X		X	4
3	BS 26 9600 bps	X		X	4

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call with priority 4 to MS_A2.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
2)	MS_A3 originates a PTP call with priority 4 to MS_A4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
3)	MS_A5 originates a PTP call with priority 4 to MS_A6.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’. There is no traffic channel available in cell_A2.
4)	Configure MS_A7 and MS_A8 to perform a data call with the settings indicated in table above case 1. To configure the bearer services refer to “Annex - Configuration of User Equipment for Data Calls”	MS_A7 and MS_A8 are configured with the correct bearer service.
5)	MS_A7 establishes a data call to MS_A8 with priority 4 by dialling: ATD<MSISDN> (Reference 3GPP TS27.007)	MS_A8 is notified of the incoming data call from MS_A7. The MSISDN of MS_A7 is displayed on MS_A8.
6)	MS_A8 takes the data call.	The data call between MS_A7 and MS_A8 is successfully established with the correct bearer service and line speed. These are seen on messages: From BSC to BTS: ‘Channel activation’. From BTS to BSC and from BSC to MSC: `Call confirmed’. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.

Step	Action	Expected result(s)
7)	Send test data from MS_A7 to MS_A8 and from MS_A8 to MS_A7.	Test data is transmitted and received correctly.
8)	MS_A7 moves from cell_A1 to cell_A2.	Inter BSC handover from cell_A1 to cell_A2 is not performed because the priority of the incoming call is the same as the ongoing call. The BSC_A2 sends “Handover Failure” with cause “No radio resource available” to the MSC. The MSC sends “Handover Required Reject” to the BSC_A1. The call stays connected until the mobile is out of coverage of cell A1.
9)	MS_A7 releases the data call if not already dropped.	Data call successfully released and all resources are de-allocated. MS_A7 performs a normal location update successfully.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.
11)	Repeat the test using case 2 and 3 from table above.	

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BSC handover of a subscriber of an ongoing point to point data call with the same or lower priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.51 Inter BSC Handover failure of a railway emergency originator (DCH) (pre-emption Um-IF not possible)

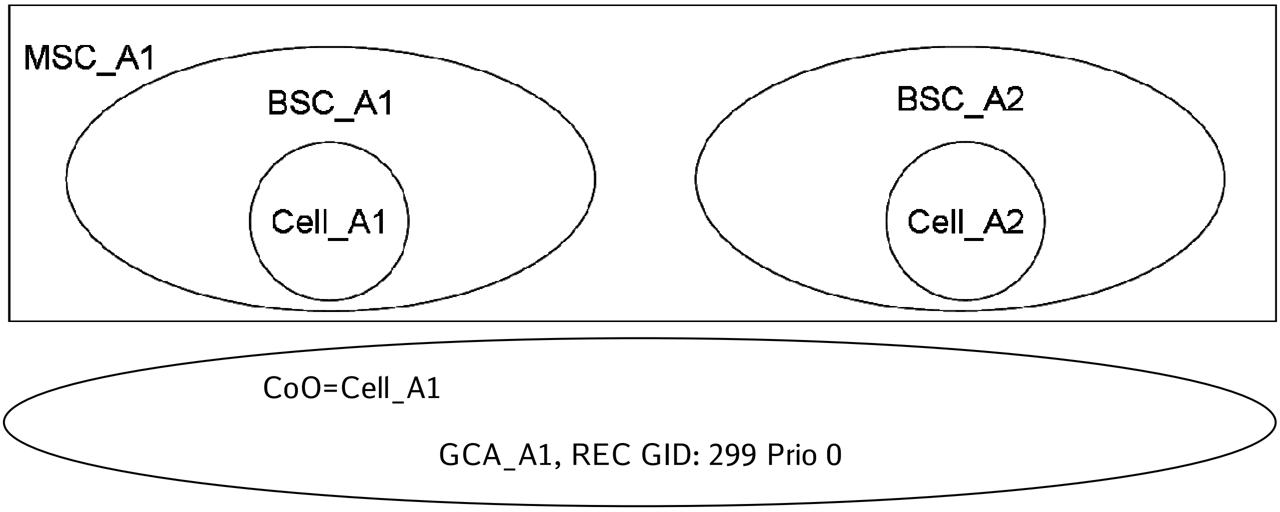
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BSC handover of the originator (on dedicated channel) of an ongoing railway emergency call with the same priority with the result that no handover is performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (REC GID: 299)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (REC GID: 299)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 establishes a PTP call to MS_A4 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 and MS_A9 are notified about the in-coming REC on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the REC.	MS_A8 and MS_A9 automatically join the REC in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.

Step	Action	Expected result(s)
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 is able to take the uplink on DCH. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.
7)	MS_A7 moves from cell_A1 to cell_A2.	Inter BSC handover from cell_A1 to cell_A2 is not performed because the priority of the in-coming call is the same as the ongoing call. The BSC_A2 sends “Handover Failure” with cause “No radio resource available” to the MSC. The MSC sends “Handover Required Reject” to the BSC_A1. The DCH remains allocated until the mobile is out of coverage of cell A1.
8)	MS_A7 releases the uplink if not already released.	The uplink is correctly released. MS_A7 performs a normal location update successfully.
9)	MS_A7 releases the REC.	REC is successfully released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BSC handover of the originator (on dedicated channel) of an ongoing railway emergency call with the same priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.52 Inter BSC Handover failure of a VGCS dedicated channel (pre-emption Um-IF not possible)

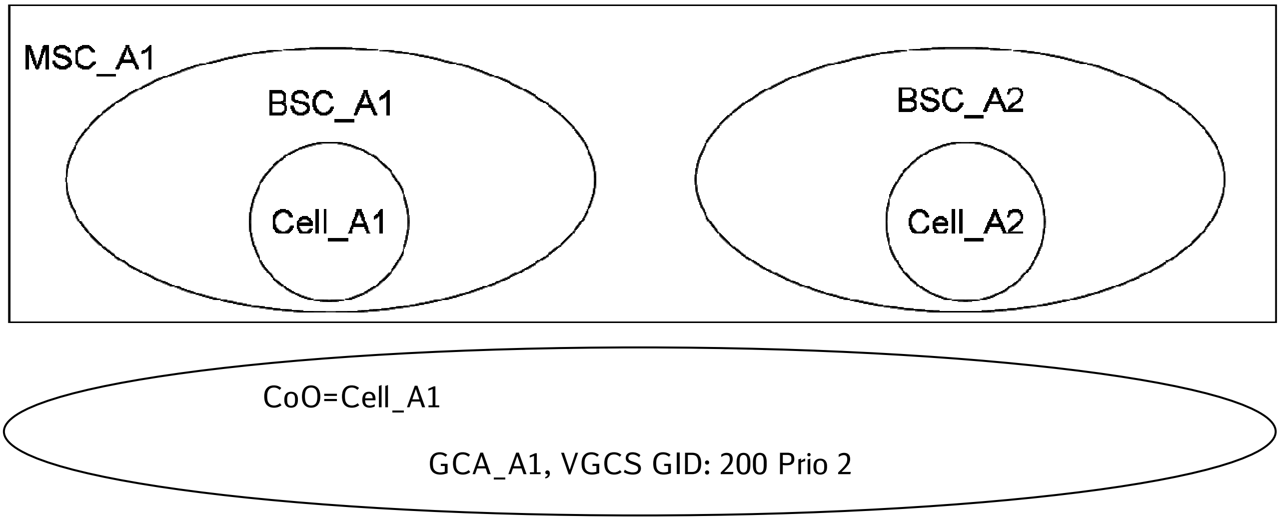
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BSC handover of the originator (on dedicated channel) of an ongoing VGCS call with the same priority with the result that no handover is performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VGCS GID: 200)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VGCS GID: 200)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 establishes a PTP call to MS_A4 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 and MS_A9 are notified about the in-coming VGCS call on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the VGCS call.	MS_A8 and MS_A9 automatically join the VGCS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.

Step	Action	Expected result(s)
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 is able to take the uplink on DCH. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.
7)	MS_A7 moves from cell_A1 to cell_A2.	Inter BSC handover from cell_A1 to cell_A2 is not performed because the priority of the in-coming call is the same as the ongoing call. The BSC_A2 sends “Handover Failure” with cause “No radio resource available” to the MSC. The MSC sends “Handover Required Reject” to the BSC_A1. The DCH remains allocated until the mobile is out of coverage of cell A1.
8)	MS_A7 releases the uplink if not already released.	The uplink is correctly released. MS_A7 performs a normal location update successfully.
9)	MS_A7 releases the VGCS call.	VGCS call is successfully released and all re-sources are correctly de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BSC handover of the originator (on dedicated channel) of an ongoing VGCS call with the same priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.53 Inter BSC Handover failure of a VBS originator (pre-emption Um-IF not possible)

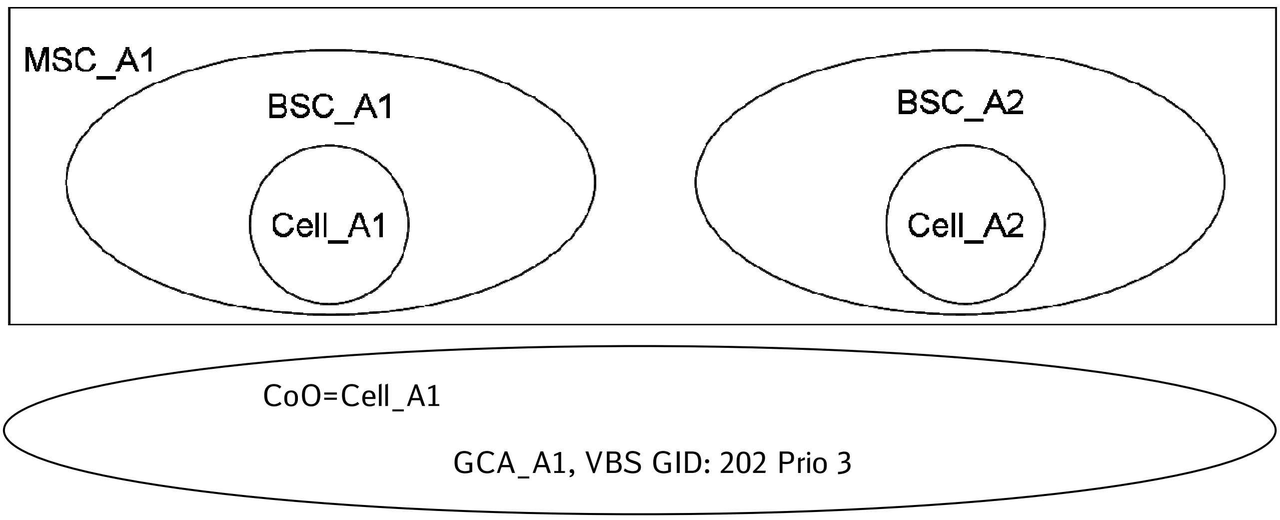
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BSC handover of the originator of an ongoing VBS call with the same priority with the result that no handover is performed.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VBS GID: 202)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VBS GID: 202)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 establishes a PTP call to MS_A4 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 and MS_A9 are notified about the in-coming VBS call on the NCH. The DCH (uplink) remains allocated during the whole VBS call. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the VBS call.	MS_A8 and MS_A9 automatically join the VBS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.

Step	Action	Expected result(s)
6)	MS_A7 moves from cell_A1 to cell_A2.	Inter BSC handover from cell_A1 to cell_A2 is not performed because the priority of the incoming call is the same as the ongoing call. The BSC_A2 sends "Handover Failure" with cause "No radio resource available" to the MSC. The MSC sends "Handover Required Reject" to the BSC_A1. The VBS call stays connected until the mobile is out of coverage of cell A1.
7)	MS_A7 releases the VBS call if not already released.	VBS call successfully released and all resources are de-allocated. MS_A7 performs a normal location update successfully.
8)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter BSC handover of the originator of an ongoing VBS call with the same priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.54 Inter MSC handover failure of a point to point voice call (pre-emption Um-IF not possible)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter MSC handover of a subscriber of another ongoing point to point voice call with the same or lower priority with the result that no handover is performed.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

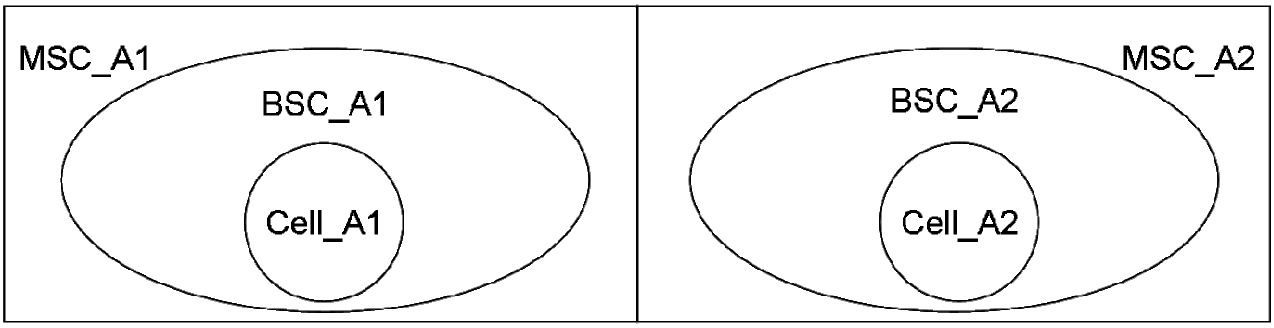
Step 1: PTP call to be handovered is established in MSC_A1.

Step 2: PTP call to be handovered is established in MSC_A2.

Step 2 only applicable in case MSC_A1 and MSC_A2 are from different vendors.

Test configuration for step 1

Network A



MSC_A1	MSC_A2
MS_A1	MS_A3
MS_A2	MS_A4
	MS_A5
	MS_A6
	MS_A7
	MS_A8

c) Test procedure

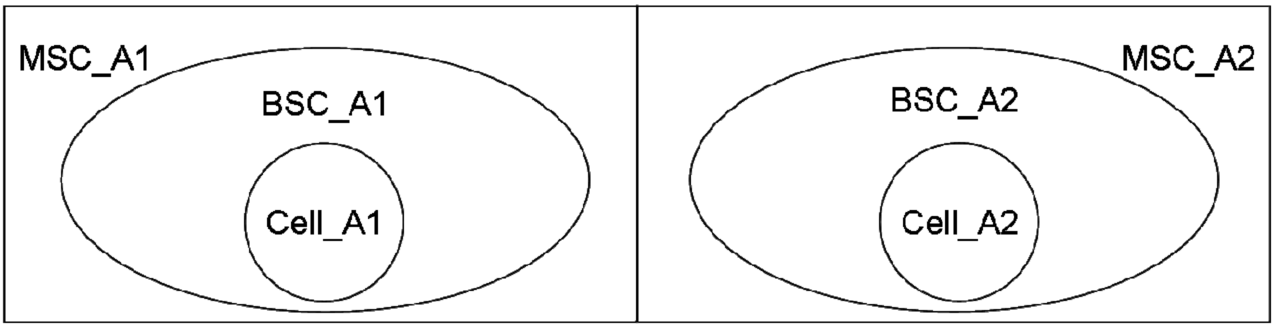
Step 1: PTP call to be handovered is established in MSC_A1.

Step	Action	Expected result(s)
1)	MS_A3 originates a PTP call to MS_A4 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A5 originates a PTP call to MS_A6 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A7 originates a PTP call to MS_A8 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A7 and MS_A8. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. There is no traffic channel available in cell_A2.
4)	MS_A1 establishes a PTP call to MS_A2 with priority 4.	The call is established correctly, there is a speech path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
5)	MS_A1 moves from cell_A1 to cell_A2.	Inter MSC handover from cell_A1 to cell_A2 is not performed because the priority of the incoming call is the same as the ongoing call. The BSC_A2 sends "Handover Failure" with cause "No radio resource available" to the MSC_A2. The MSC_A1 sends "Handover Required Reject" to the BSC_A1. The call stays connected until the mobile is out of coverage of cell_A1.

Step	Action	Expected result(s)
6)	MS_A1 releases the call if not already dropped.	PTP call is successfully released and all resources are correctly de-allocated. MS_A1 performs a normal location update successfully.
7)	Release all PTP calls in cell A2.	PTP calls are successfully released and all resources are correctly de-allocated.

Test configuration for step 2

Network A



MSC_A1	MSC_A2
MS_A3	MS_A1
MS_A4	MS_A2
MS_A5	
MS_A6	
MS_A7	
MS_A8	

Test procedure

Step 2: PTP call to be handovered is established in MSC_A2.

Step	Action	Expected result(s)
1)	MS_A3 originates a PTP call to MS_A4 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
2)	MS_A5 originates a PTP call to MS_A6 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
3)	MS_A7 originates a PTP call to MS_A8 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A7 and MS_A8. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’. There is no traffic channel available in cell_A1.
4)	MS_A1 establishes a PTP call to MS_A2 with priority 4.	The call is established correctly, there is a speech path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
5)	MS_A1 moves from cell_A2 to cell_A1.	Inter MSC handover from cell_A2 to cell_A1 is not performed because the priority of the in-coming call is the same as the ongoing call. The BSC_A1 sends “Handover Failure” with cause “No radio resource available” to the MSC_A1. The MSC_A2 sends “Handover Required Re-ject” to the BSC_A2. The call stays connected until the mobile is out of coverage of cell_A2.

Step	Action	Expected result(s)
6)	MS_A1 releases the call if not already dropped.	PTP call is successfully released and all re-sources are correctly de-allocated. MS_A1 performs a normal location update successfully.
7)	Release all PTP calls in cell A1.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter MSC handover of a subscriber of another ongoing point to point voice call with the same or lower priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.55 Inter MSC handover failure of a circuit switched data call (pre-emption Um-IF not possible)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		2.3.1	EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter MSC handover of a subscriber of an ongoing point to point data call with the same or lower priority with the result that no handover is performed.

b) Test configuration / initial conditions

MS_A1 and MS_A2 are terminals with subscriptions to the following bearer services:

Service	EIRENE SRS v15
BS 24 Asynchronous 2,4 Kbit/s T for full-rate channel	M
BS 25 Asynchronous 4,8 Kbit/s T for full-rate channel	M
BS 26 Asynchronous 9,6 Kbit/s T for full-rate channel	M

Terminal application needed to send and receive test data.

To configure the bearer services and to set up a call with the terminal, refer to chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”.

This test case has been divided into the following steps:

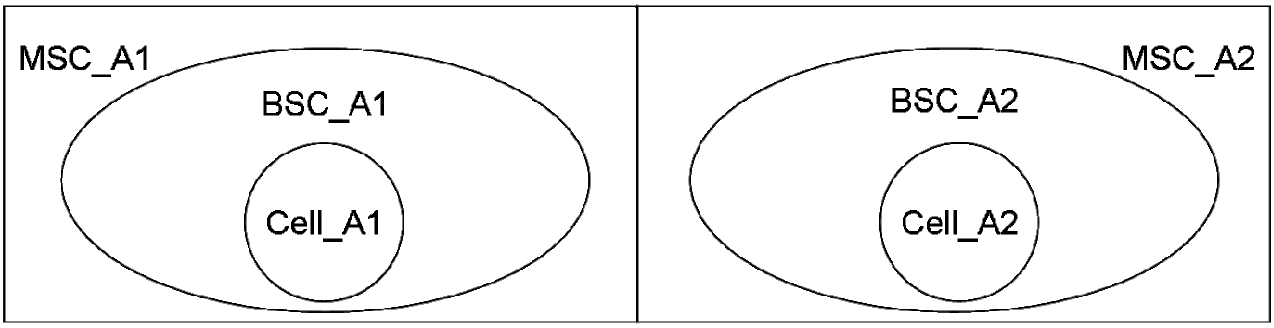
Step 1: Data call established in MSC_A1.

Step 2: Data call established in MSC_A2.

Step 2 only applicable in case MSC_A1 and MSC_A2 are from different vendors.

Test configuration for step 1

Network A



MSC_A1	**MSC_A2**
MS_A1	MS_A3
MS_A2	MS_A4
	MS_A5
	MS_A6
	MS_A7
	MS_A8

c) Test procedure

A subset of the mandatory data services will be used for the test.

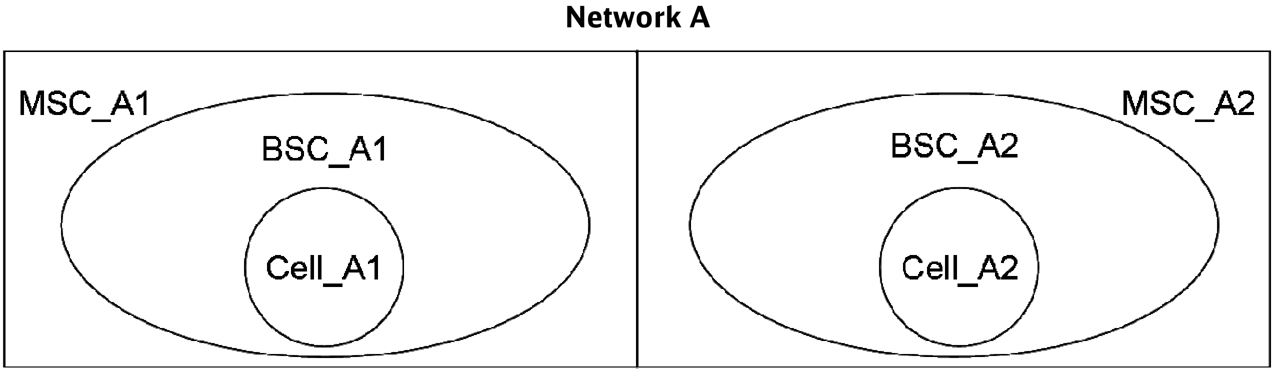
Case	Data service	Digital interworking (UDI / ISDN) V.110	Analogue interworking (3,1 kHz) V.22bis, V.32	Transparent	eMLPP Priority
1	BS 24 2400 bps		X (V.22bis)	X	4
2	BS 25 4800 bps	X		X	4
3	BS 26 9600 bps	X		X	4

Step 1: Data call established in MSC_A1.

Step	Action	Expected result(s)
1)	MS_A3 originates a PTP call to MS_A4 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
2)	MS_A5 originates a PTP call to MS_A6 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
3)	MS_A7 originates a PTP call to MS_A8 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A7 and MS_A8. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’. There is no traffic channel available in cell_A2.
4)	Configure MS_A1 and MS_A2 to perform a data call with the settings indicated in the table above case 1. To configure the bearer services refer to “Annex - Configuration of User Equipment for Data Calls”	MS_A2 and MS_A2 are configured with the correct bearer service.
5)	MS_A1 establishes a data call to MS_A2 with priority 4 by dialling: ATD<MSISDN> (Reference 3GPP TS27.007)	MS_A2 is notified of the incoming data call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A2.

Step	Action	Expected result(s)
6)	MS_A2 takes the data call.	The data call between MS_A1 and MS_A2 is successfully established with the correct bearer service and line speed. These are seen on messages: From BSC to BTS: 'Channel activation'. From BTS to BSC and from BSC to MSC: `Call confirmed'. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
7)	Send test data from MS_A1 to MS_A2 and from MS_A2 to MS_A1.	Test data is transmitted and received correctly.
8)	MS_A1 moves from cell_A1 to cell_A2.	Inter MSC handover from cell_A1 to cell_A2 is not performed because the priority of the incoming call is the same as the ongoing call. The BSC_A2 sends "Handover Failure" with cause "No radio resource available" to the MSC_A2. The MSC_A1 sends "Handover Required Reject" to the BSC_A1. The call stays connected until the mobile is out of coverage of cell A1.
9)	MS_A1 releases the data call if not already dropped.	Data call successfully released and all resources are de-allocated. MS_A1 performs a normal location update successfully.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.
11)	Repeat the test using case 2 and 3 from the table above.	

Test configuration for step 2



MSC_A1	MSC_A2
MS_A3	MS_A1
MS_A4	MS_A2
MS_A5	
MS_A6	
MS_A7	
MS_A8	

Test procedure

A subset of the mandatory data services will be used for the test.

Case	Data service	Digital interworking (UDI / ISDN) V.110	Analogue interworking (3,1 kHz) V.22bis, V.32	Transparent	eMLPP Priority
1	BS 24 2400 bps		X (V.22bis)	X	4
2	BS 25 4800 bps	X		X	4
3	BS 26 9600 bps	X		X	4

Step 2: Data call established in MSC_A2.

Step	Action	Expected result(s)
1)	MS_A3 originates a PTP call to MS_A4 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A5 originates a PTP call to MS_A6 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A7 originates a PTP call to MS_A8 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A7 and MS_A8. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. There is no traffic channel available in cell_A1.
4)	Configure MS_A1 and MS_A2 to perform a data call with the settings indicated in the table above case 1. To configure the bearer services refer to "Annex - Configuration of User Equipment for Data Calls"	MS_A2 and MS_A2 are configured with the correct bearer service.
5)	MS_A1 establishes a data call to MS_A2 with priority 4 by dialling: ATD<MSISDN> (Reference 3GPP TS27.007)	MS_A2 is notified of the incoming data call from MS_A1. The MSISDN of MS_A1 is displayed on MS_A2.

6)	MS_A2 takes the data call.	The data call between MS_A1 and MS_A2 is successfully established with the correct bearer service and line speed. These are seen on messages: From BSC to BTS: 'Channel activation'. From BTS to BSC and from BSC to MSC: `Call confirmed'. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
7)	Send test data from MS_A1 to MS_A2 and from MS_A2 to MS_A1.	Test data is transmitted and received correctly.
8)	MS_A1 moves from cell_A2 to cell_A1.	Inter MSC handover from cell_A2 to cell_A1 is not performed because the priority of the incoming call is the same as the ongoing call. The BSC_A1 sends "Handover Failure" with cause "No radio resource available" to the MSC_A1. The MSC_A2 sends "Handover Required Reject" to the BSC_A2. The call stays connected until the mobile is out of coverage of cell A2.
9)	MS_A1 releases the data call if not already dropped.	Data call successfully released and all resources are de-allocated. MS_A1 performs a normal location update successfully.
10)	Release all PTP calls in cell_A1.	PTP calls are successfully released and all resources are correctly de-allocated.
11)	Repeat the test using case 2 and 3 from the table above.	

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter MSC handover of a subscriber of an ongoing point to point data call with the same or lower priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.56 Inter MSC Handover failure of a railway emergency originator (DCH) (pre-emption Um-IF not possible

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter MSC handover of the originator (on dedicated channel) of an ongoing railway emergency call with the same priority with the result that no handover is performed.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: REC establishment in anchor MSC_A1.

Step 2: REC establishment in relay MSC_A2.

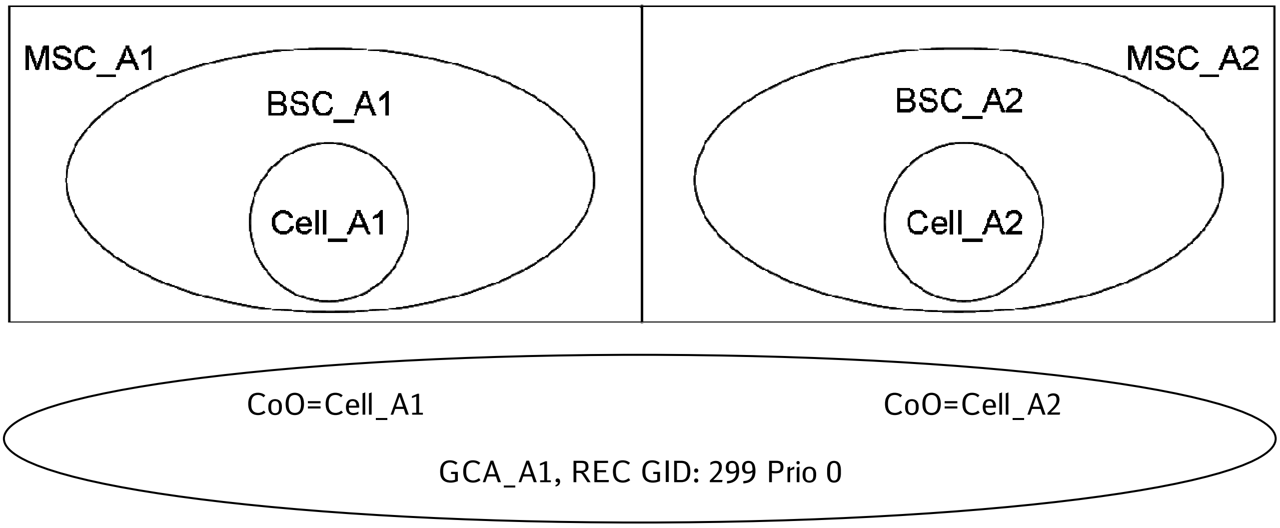
Step 3: REC establishment in relay MSC_A1.

Step 4: REC establishment in anchor MSC_A2.

Steps 3 and 4 only applicable in case MSC_A1 and MSC_A2 are from different vendors.

Test configuration for step 1

Network A



A-MSC_A1	**R-MSC_A2**
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (REC GID: 299)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (REC GID: 299)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)

c) Test procedure

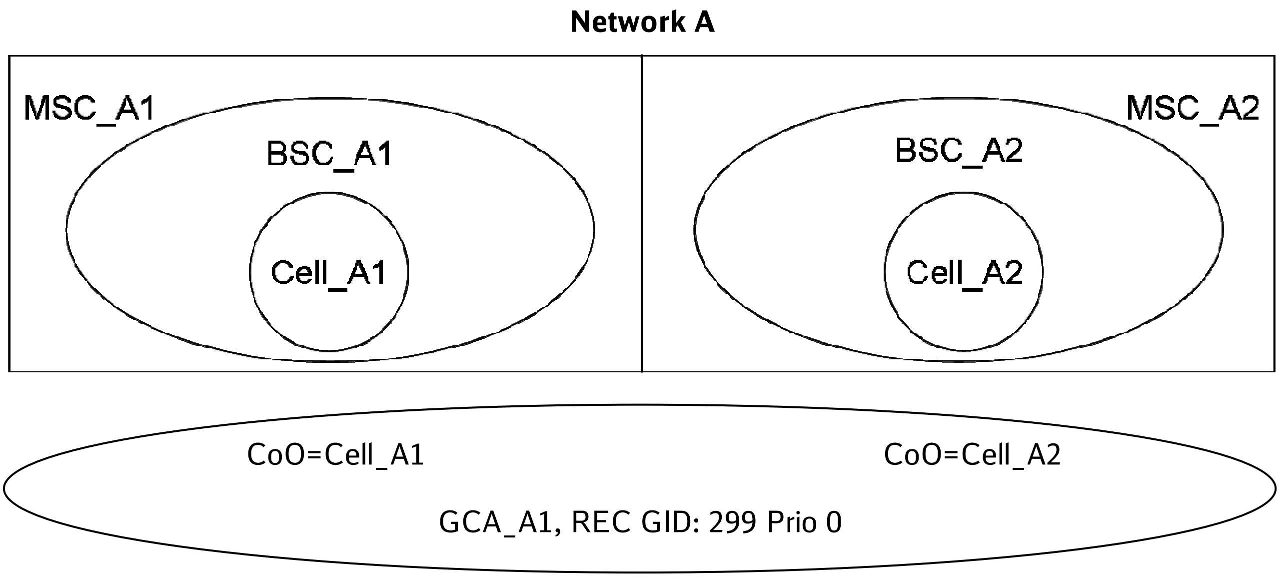
Step 1: REC establishment in anchor MSC_A1.

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.

Step	Action	Expected result(s)
2)	MS_A3 establishes a PTP call to MS_A4 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’. Only 1 TCH is available in cell A2.
4)	MS_A7 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 is notified about the incoming REC on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A2.
5)	MS_A8 automatically accepts the REC.	MS_A8 automatically joins the REC in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: ‘Notification Command’ sent from the BSC.
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 has two-way voice path. MS_A8 is only listener.

Step	Action	Expected result(s)
7)	MS_A7 moves from cell_A1 to cell_A2.	Inter MSC handover from cell_A1 to cell_A2 is not performed because the priority of the in-coming call is the same as the ongoing call. The BSC_A2 sends "Handover Failure" with cause "No radio resource available" to the MSC_A2. The MSC_A1 sends "Handover Required Re-ject" to the BSC_A1. The DCH remains allocated until the mobile is out of coverage of cell A1.
8)	MS_A7 releases the uplink if not already released.	The uplink is correctly released. MS_A7 performs a normal location update successfully.
9)	MS_A7 releases the REC.	REC is released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

Test configuration for step 2



A-MSC_A1	R-MSC_A2
MS_A1 (no VGCS / VBS subscriber)	MS_A6 (no VGCS / VBS subscriber)
MS_A2 (no VGCS / VBS subscriber)	MS_A7 (REC GID: 299)
MS_A3 (no VGCS / VBS subscriber)	MS_A8 (REC GID: 299)
MS_A4 (no VGCS / VBS subscriber)	
MS_A5 (no VGCS / VBS subscriber)	

Test procedure

Step 2: REC establishment in relay MSC_A2.

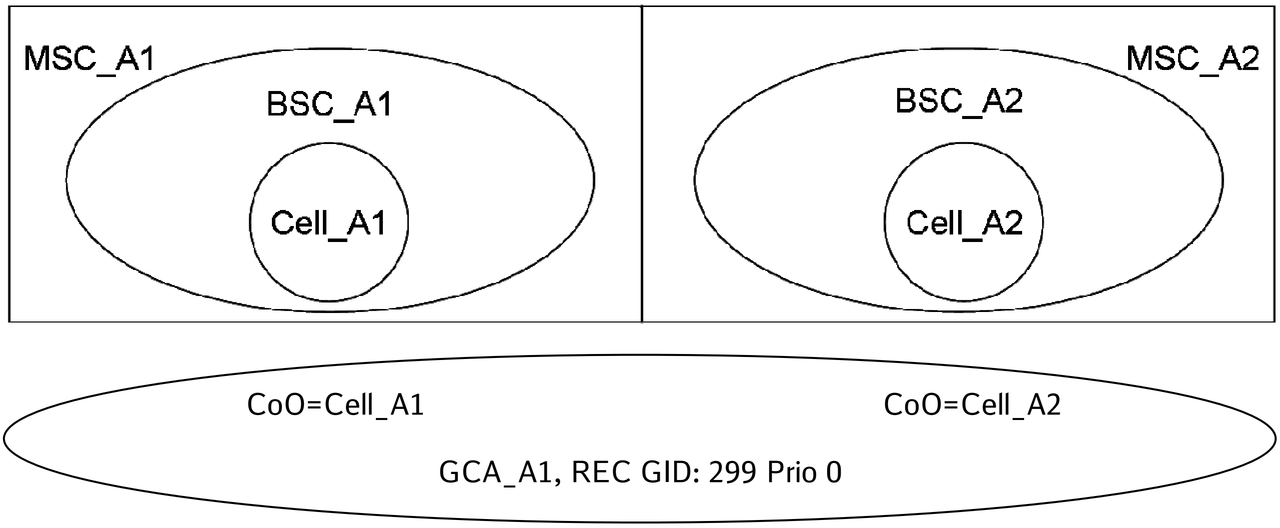
Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.

Step	Action	Expected result(s)
2)	MS_A3 establishes a PTP call to MS_A4 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell A1.
4)	MS_A7 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1. MS_A8 is notified about the incoming REC on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A1.
5)	MS_A8 automatically accepts the REC.	MS_A8 automatically joins the REC in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 has two-way voice path. MS_A8 is only listener.

Step	Action	Expected result(s)
7)	MS_A7 moves from cell_A2 to cell_A1.	Inter MSC handover from cell_A2 to cell_A1 is not performed because the priority of the incoming call is the same as the ongoing call. The BSC_A1 sends "Handover Failure" with cause "No radio resource available" to the MSC_A1. The MSC_A2 sends "Handover Required Reject" to the BSC_A2. The DCH remains allocated until the mobile is out of coverage of cell A2.
8)	MS_A7 releases the uplink if not already released.	The uplink is correctly released. MS_A7 performs a normal location update successfully.
9)	MS_A7 releases the REC.	REC is released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A1.	PTP calls are successfully released and all resources are correctly de-allocated.

Test configuration for step 3

Network A



R-MSC_A1	**A-MSC_A2**
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (REC GID: 299)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (REC GID: 299)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)

Test procedure

Step 3: REC establishment in relay MSC_A1.

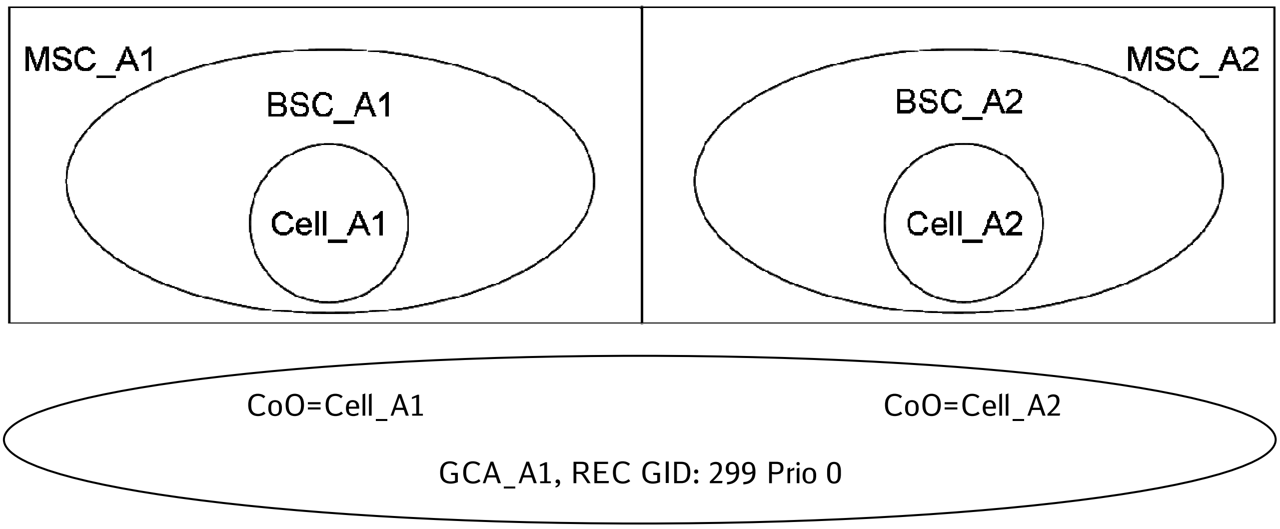
Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.

Step	Action	Expected result(s)
2)	MS_A3 establishes a PTP call to MS_A4 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell A2.
4)	MS_A7 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 is notified about the incoming REC on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A2.
5)	MS_A8 automatically accepts the REC.	MS_A8 automatically joins the REC in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 has two-way voice path. MS_A8 is only listener.

Step	Action	Expected result(s)
7)	MS_A7 moves from cell_A1 to cell_A2.	Inter MSC handover from cell_A1 to cell_A2 is not performed because the priority of the in-coming call is the same as the ongoing call. The BSC_A2 sends “Handover Failure” with cause “No radio resource available” to the MSC_A2. The MSC_A1 sends “Handover Required Re-ject” to the BSC_A1. The DCH remains allocated until the mobile is out of coverage of cell A1.
8)	MS_A7 releases the uplink if not already released.	The uplink is correctly released. MS_A7 performs a normal location update successfully.
9)	MS_A7 releases the REC.	REC is released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

Test configuration for step 4

Network A



R-MSC_A1	**A-MSC_A2**
MS_A1 (no VGCS / VBS subscriber)	MS_A6 (no VGCS / VBS subscriber)
MS_A2 (no VGCS / VBS subscriber)	MS_A7 (REC GID: 299)
MS_A3 (no VGCS / VBS subscriber)	MS_A8 (REC GID: 299)
MS_A4 (no VGCS / VBS subscriber)	
MS_A5 (no VGCS / VBS subscriber)	

Test procedure

Step 4: REC establishment in anchor MSC_A2.

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.

Step	Action	Expected result(s)
2)	MS_A3 establishes a PTP call to MS_A4 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 0 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell A1.
4)	MS_A7 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1. MS_A8 is notified about the incoming REC on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A1.
5)	MS_A8 automatically accepts the REC.	MS_A8 automatically joins the REC in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 has two-way voice path. MS_A8 is only listener.

Step	Action	Expected result(s)
7)	MS_A7 moves from cell_A2 to cell_A1.	Inter MSC handover from cell_A2 to cell_A1 is not performed because the priority of the in-coming call is the same as the ongoing call. The BSC_A1 sends "Handover Failure" with cause "No radio resource available" to the MSC_A1. The MSC_A2 sends "Handover Required Reject" to the BSC_A2. The DCH remains allocated until the mobile is out of coverage of cell A2.
8)	MS_A7 releases the uplink if not already released.	The uplink is correctly released. MS_A7 performs a normal location update successfully.
9)	MS_A7 releases the REC.	REC is released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A1.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter MSC handover of the originator (on dedicated channel) of an ongoing railway emergency call with the same priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.57 Inter MSC Handover failure of a VGCS dedicated channel (pre-emption Um-IF not possible

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter MSC handover of the originator (on dedicated channel) of a VGCS call with the same priority with the result that no handover is performed.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: VGCS call establishment in anchor MSC_A1.

Step 2: VGCS call establishment in relay MSC_A2.

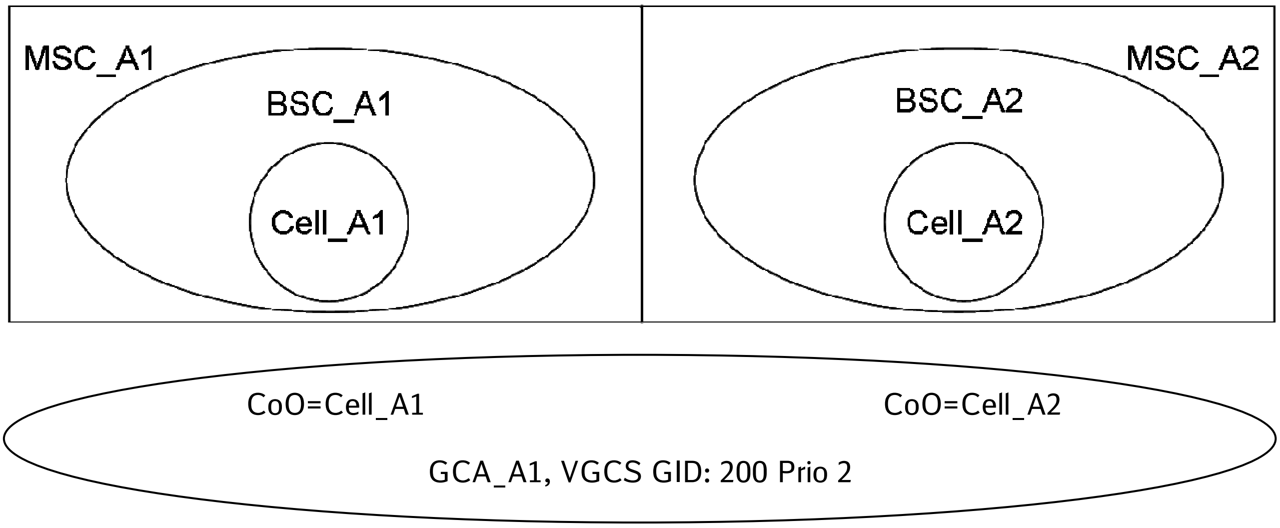
Step 3: VGCS call establishment in relay MSC_A1.

Step 4: VGCS call establishment in anchor MSC_A2.

Steps 3 and 4 only applicable in case MSC_A1 and MSC_A2 are from different vendors.

Test configuration for step 1

Network A



A-MSC_A1	**R-MSC_A2**
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VGCS GID: 200)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VGCS GID: 200)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)

c) Test procedure

Step 1: VGCS establishment in anchor MSC_A1.

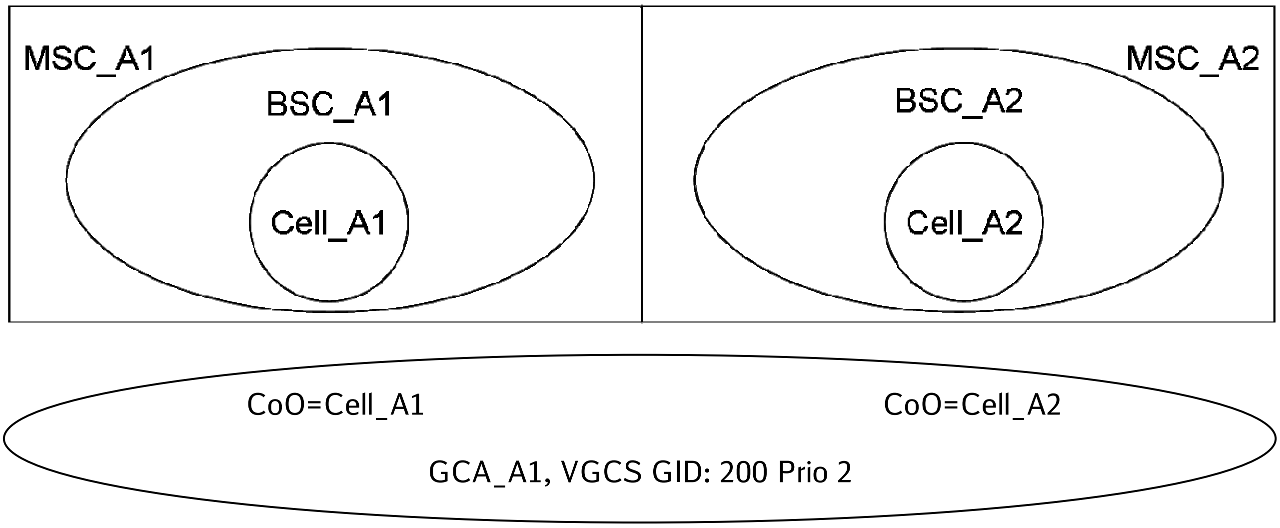
Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.

Step	Action	Expected result(s)
2)	MS_A3 establishes a PTP call to MS_A4 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell A2.
4)	MS_A7 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 is notified about the incoming VGCS call on the NCH. So long the dedicated channel is not released, MS_A7 has two way voice path. No TCH is available in cell_A2.
5)	MS_A8 automatically accepts the VGCS call.	MS_A8 automatically joins the VGCS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 has two-way voice path. MS_A8 is only listener.

Step	Action	Expected result(s)
7)	MS_A7 moves from cell_A1 to cell_A2.	Inter MSC handover from cell_A1 to cell_A2 is not performed because the priority of the in-coming call is the same as the ongoing call. The BSC_A2 sends “Handover Failure” with cause “No radio resource available” to the MSC_A2. The MSC_A1 sends “Handover Required Re-ject” to the BSC_A1. The DCH remains allocated until the mobile is out of coverage of cell A1.
8)	MS_A7 releases the uplink if not already released.	The uplink is correctly released. MS_A7 performs a normal location update successfully.
9)	MS_A7 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

Test configuration for step 2

Network A



A-MSC_A1	**R-MSC_A2**
MS_A1 (no VGCS / VBS subscriber)	MS_A6 (no VGCS / VBS subscriber)
MS_A2 (no VGCS / VBS subscriber)	MS_A7 (VGCS GID: 200)
MS_A3 (no VGCS / VBS subscriber)	MS_A8 (VGCS GID: 200)
MS_A4 (no VGCS / VBS subscriber)	
MS_A5 (no VGCS / VBS subscriber)	

Test procedure

Step 2: VGCS establishment in relay MSC_A2.

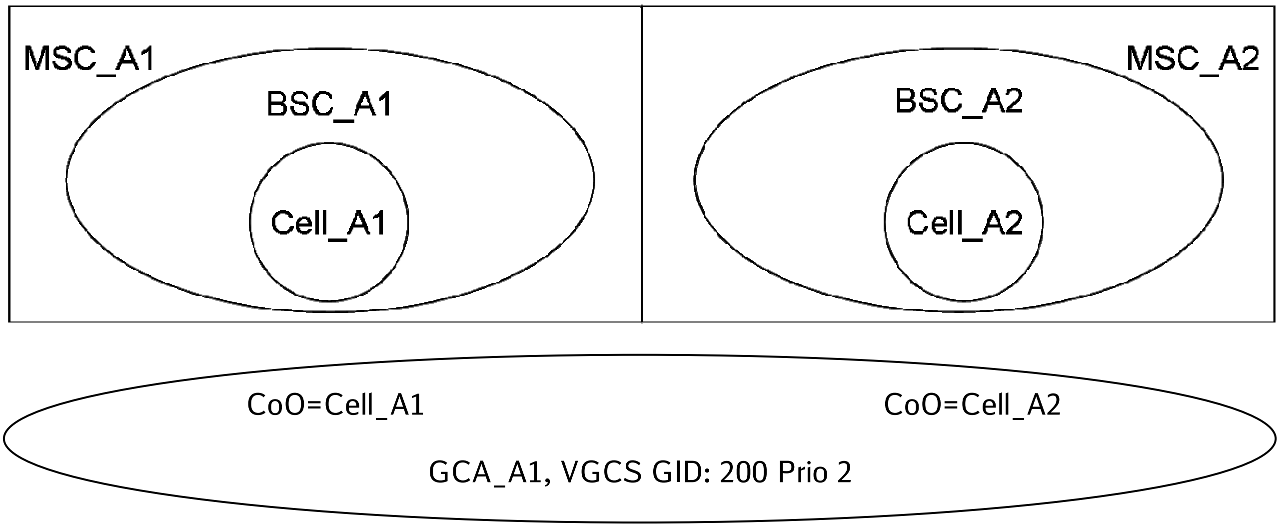
Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.

Step	Action	Expected result(s)
2)	MS_A3 establishes a PTP call to MS_A4 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell A1.
4)	MS_A7 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1. MS_A8 is notified about the incoming VGCS call on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A1.
5)	MS_A8 automatically accepts the VGCS call.	MS_A8 automatically joins the VGCS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 has two-way voice path. MS_A8 is only listener.

Step	Action	Expected result(s)
7)	MS_A7 moves from cell_A2 to cell_A1.	Inter MSC handover from cell_A2 to cell_A1 is not performed because the priority of the in-coming call is the same as the ongoing call. The BSC_A1 sends “Handover Failure” with cause “No radio resource available” to the MSC_A1. The MSC_A2 sends “Handover Required Re-ject” to the BSC_A2. The DCH remains allocated until the mobile is out of coverage of cell A2.
8)	MS_A7 releases the uplink if not already released.	The uplink is correctly released. MS_A7 performs a normal location update successfully.
9)	MS_A7 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A1.	PTP calls are successfully released and all resources are correctly de-allocated.

Test configuration for step 3

Network A



R-MSC_A1	**A-MSC_A2**
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VGCS GID: 200)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VGCS GID: 200)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)

Test procedure

Step 3: VGCS establishment in relay MSC_A1.

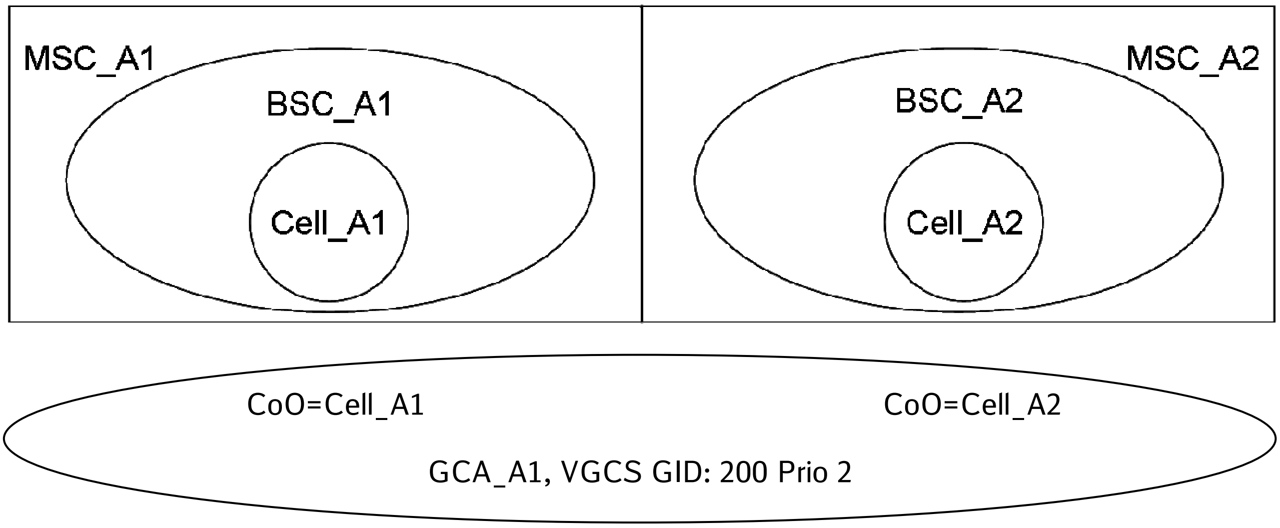
Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.

Step	Action	Expected result(s)
2)	MS_A3 establishes a PTP call to MS_A4 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’. Only 1 TCH is available in cell A2.
4)	MS_A7 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 is notified about the incoming VGCS call on the NCH. So long the dedicated channel is not released, MS_A7 has two way voice path. No TCH is available in cell_A2.
5)	MS_A8 automatically accepts the VGCS call.	MS_A8 automatically joins the VGCS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: ‘Notification Command’ sent from the BSC.
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 has two-way voice path. MS_A8 is only listener.

Step	Action	Expected result(s)
7)	MS_A7 moves from cell_A1 to cell_A2.	Inter MSC handover from cell_A1 to cell_A2 is not performed because the priority of the in-coming call is the same as the ongoing call. The BSC_A2 sends “Handover Failure” with cause “No radio resource available” to the MSC_A2. The MSC_A1 sends “Handover Required Re-ject” to the BSC_A1. The DCH remains allocated until the mobile is out of coverage of cell A1.
8)	MS_A7 releases the uplink if not already released.	The uplink is correctly released. MS_A7 performs a normal location update successfully.
9)	MS_A7 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

Test configuration for step 4

Network A



R-MSC_A1	**A-MSC_A2**
MS_A1 (no VGCS / VBS subscriber)	MS_A6 (no VGCS / VBS subscriber)
MS_A2 (no VGCS / VBS subscriber)	MS_A7 (VGCS GID: 200)
MS_A3 (no VGCS / VBS subscriber)	MS_A8 (VGCS GID: 200)
MS_A4 (no VGCS / VBS subscriber)	
MS_A5 (no VGCS / VBS subscriber)	

Test procedure

Step 4: VGCS establishment in anchor MSC_A2.

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.

Step	Action	Expected result(s)
2)	MS_A3 establishes a PTP call to MS_A4 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 2 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell A1.
4)	MS_A7 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1. MS_A8 is notified about the incoming VGCS call on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A1.
5)	MS_A8 automatically accepts the VGCS call.	MS_A8 automatically joins the VGCS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 has two-way voice path. MS_A8 is only listener.

Step	Action	Expected result(s)
7)	MS_A7 moves from cell_A2 to cell_A1.	Inter MSC handover from cell_A2 to cell_A1 is not performed because the priority of the in-coming call is the same as the ongoing call. The BSC_A1 sends “Handover Failure” with cause “No radio resource available” to the MSC_A1. The MSC_A2 sends “Handover Required Re-ject” to the BSC_A2. The DCH remains allocated until the mobile is out of coverage of cell A2.
8)	MS_A7 releases the uplink if not already released.	The uplink is correctly released. MS_A7 performs a normal location update successfully.
9)	MS_A7 releases the VGCS call.	VGCS call is released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A1.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter MSC handover of the originator (on dedicated channel) of a VGCS call with the same priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.58 Inter MSC Handover failure of a VBS originator (pre-emption Um-IF not possible

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter MSC handover of the originator of a VBS call with the same priority with the result that no handover is performed.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: VBS call establishment in anchor MSC_A1.

Step 2: VBS call establishment in relay MSC_A2.

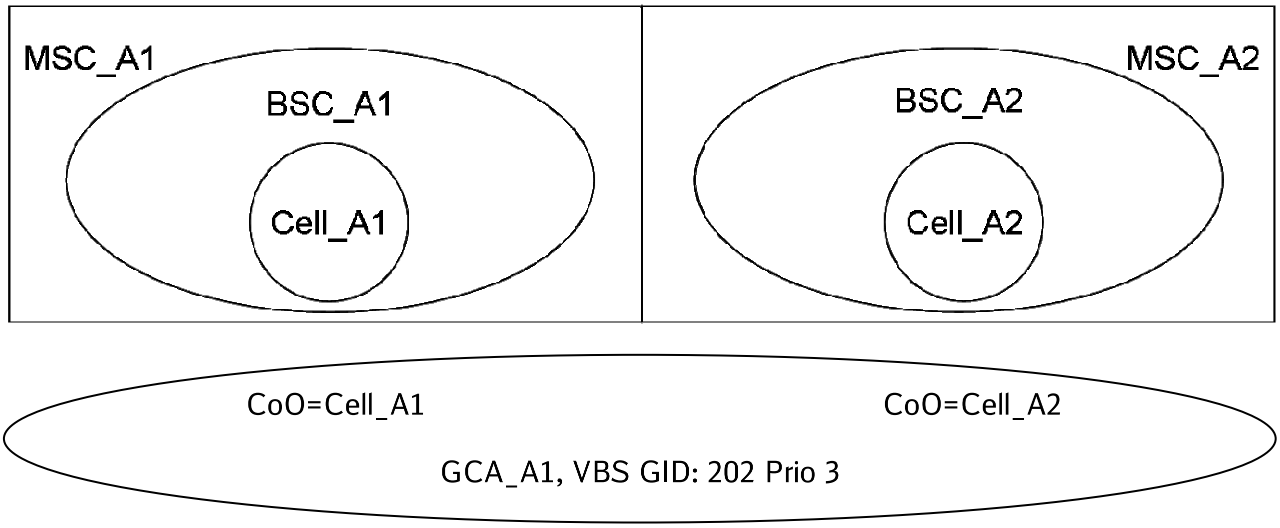
Step 3: VBS call establishment in relay MSC_A1.

Step 4: VBS call establishment in anchor MSC_A2.

Steps 3 and 4 only applicable in case MSC_A1 and MSC_A2 are from different vendors.

Test configuration for step 1

Network A



A-MSC_A1	**R-MSC_A2**
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VBS GID: 202)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VBS GID: 202)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)

c) Test procedure

Step 1: VBS establishment in anchor MSC_A1.

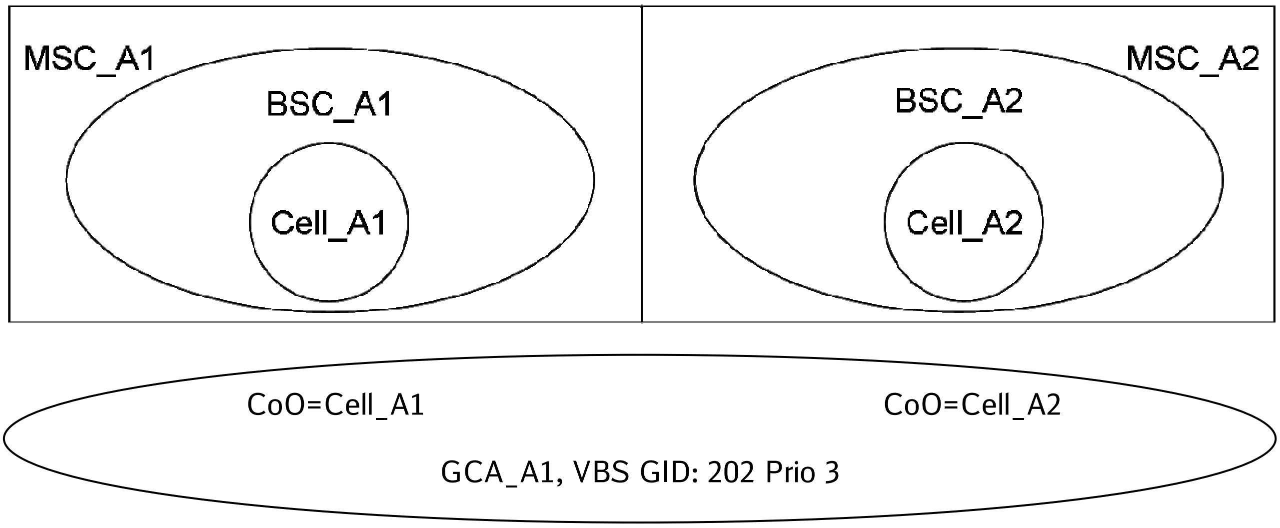
Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.

Step	Action	Expected result(s)
2)	MS_A3 establishes a PTP call to MS_A4 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell A2.
4)	MS_A7 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 is notified about the incoming VBS call on the NCH. The DCH (uplink) remains allocated during the whole VBS call. No TCH is available in cell_A2.
5)	MS_A8 automatically accepts the VBS call.	MS_A8 automatically joins the VBS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC. MS_A7 has two-way voice path. MS_A8 is only listener.

Step	Action	Expected result(s)
6)	MS_A7 moves from cell_A1 to cell_A2.	Inter MSC handover from cell_A1 to cell_A2 is not performed because the priority of the incoming call is the same as the ongoing call. The BSC_A2 sends “Handover Failure” with cause “No radio resource available” to the MSC_A2. The MSC_A1 sends “Handover Required Reject” to the BSC_A1. The VBS call stays connected until the mobile is out of coverage of cell A1.
7)	MS_A7 releases the VBS call if not already released.	VBS call is released and all resources are correctly de-allocated. MS_A7 performs a normal location update successfully.
8)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

Test configuration for step 2

Network A



A-MSC_A1	**R-MSC_A2**
MS_A1 (no VGCS / VBS subscriber)	MS_A6 (no VGCS / VBS subscriber)
MS_A2 (no VGCS / VBS subscriber)	MS_A7 (VBS GID: 202)
MS_A3 (no VGCS / VBS subscriber)	MS_A8 (VBS GID: 202)
MS_A4 (no VGCS / VBS subscriber)	
MS_A5 (no VGCS / VBS subscriber)	

Test procedure

Step 2: VBS establishment in relay MSC_A2.

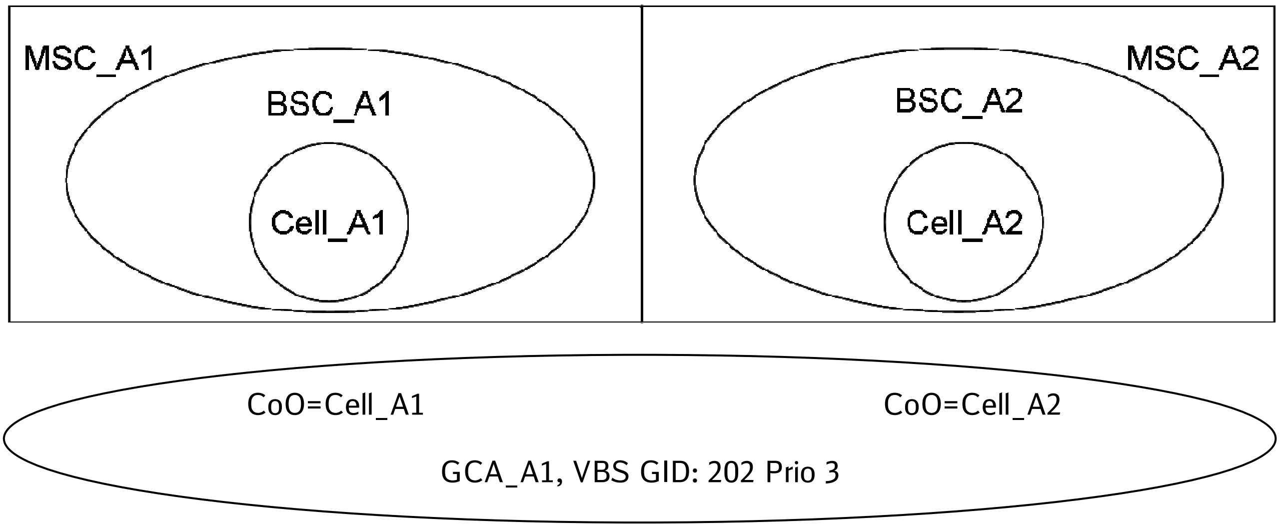
Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.

Step	Action	Expected result(s)
2)	MS_A3 establishes a PTP call to MS_A4 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’. Only 1 TCH is available in cell A1.
4)	MS_A7 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1. MS_A8 is notified about the incoming VBS call on the NCH. The DCH (uplink) remains allocated during the whole VBS call. No TCH is available in cell_A1.
5)	MS_A8 automatically accepts the VBS call.	MS_A8 automatically joins the VBS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: ‘Notification Command’ sent from the BSC. MS_A7 has two-way voice path. MS_A8 is only listener.

Step	Action	Expected result(s)
6)	MS_A7 moves from cell_A2 to cell_A1.	Inter MSC handover from cell_A2 to cell_A1 is not performed because the priority of the in-coming call is the same as the ongoing call. The BSC_A1 sends "Handover Failure" with cause "No radio resource available" to the MSC_A1. The MSC_A2 sends "Handover Required Re-ject" to the BSC_A2. The VBS call stays connected until the mobile is out of coverage of cell A2.
7)	MS_A7 releases the VBS call not already released.	VBS call is released and all resources are cor-rectly de-allocated. MS_A7 performs a normal location update successfully.
8)	Release all PTP calls in cell_A1.	PTP calls are successfully released and all resources are correctly de-allocated.

Test configuration for step 3

Network A



R-MSC_A1	**A-MSC_A2**
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VBS GID: 202)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VBS GID: 202)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)

Test procedure

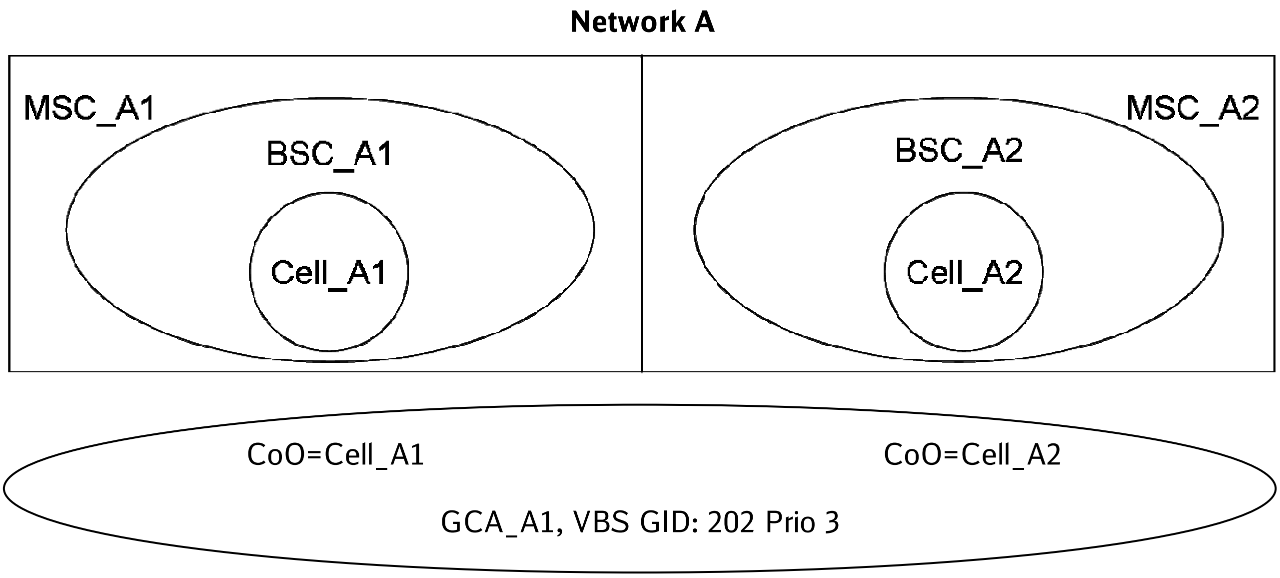
Step 3: VBS establishment in relay MSC_A1.

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.

Step	Action	Expected result(s)
2)	MS_A3 establishes a PTP call to MS_A4 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell A2.
4)	MS_A7 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 is notified about the incoming VBS call on the NCH. The DCH (uplink) remains allocated during the whole VBS call. No TCH is available in cell_A2.
5)	MS_A8 automatically accepts the VBS call.	MS_A8 automatically joins the VBS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC. MS_A7 has two-way voice path. MS_A8 is only listener.

Step	Action	Expected result(s)
6)	MS_A7 moves from cell_A1 to cell_A2.	Inter MSC handover from cell_A1 to cell_A2 is not performed because the priority of the in-coming call is the same as the ongoing call. The BSC_A2 sends “Handover Failure” with cause “No radio resource available” to the MSC_A2. The MSC_A1 sends “Handover Required Re-ject” to the BSC_A1. The VBS call stays connected until the mobile is out of coverage of cell A1.
7)	MS_A7 releases the VBS call if not al-ready released.	VBS call is released and all resources are cor-rectly de-allocated. MS_A7 performs a normal location update successfully.
8)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

Test configuration for step 4



R-MSC_A1	**A-MSC_A2**
MS_A1 (no VGCS / VBS subscriber)	MS_A6 (no VGCS / VBS subscriber)
MS_A2 (no VGCS / VBS subscriber)	MS_A7 (VBS GID: 202)
MS_A3 (no VGCS / VBS subscriber)	MS_A8 (VBS GID: 202)
MS_A4 (no VGCS / VBS subscriber)	
MS_A5 (no VGCS / VBS subscriber)	

Test procedure

Step 4: VBS establishment in anchor MSC_A2.

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.

Step	Action	Expected result(s)
2)	MS_A3 establishes a PTP call to MS_A4 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell A1.
4)	MS_A7 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1. MS_A8 is notified about the incoming VBS call on the NCH. The DCH (uplink) remains allocated during the whole VBS call. No TCH is available in cell_A1.
5)	MS_A8 automatically accepts the VBS call.	MS_A8 automatically joins the VBS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC. MS_A7 has two-way voice path. MS_A8 is only listener.

Step	Action	Expected result(s)
6)	MS_A7 moves from cell_A2 to cell_A1.	Inter MSC handover from cell_A2 to cell_A1 is not performed because the priority of the incoming call is the same as the ongoing call. The BSC_A1 sends “Handover Failure” with cause “No radio resource available” to the MSC_A1. The MSC_A2 sends “Handover Required Reject” to the BSC_A2. The VBS call stays connected until the mobile is out of coverage of cell A2.
7)	MS_A7 releases the VBS call not already released.	VBS call is released and all resources are correctly de-allocated. MS_A7 performs a normal location update successfully.
8)	Release all PTP calls in cell_A1.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is not pre-empted by an incoming inter MSC handover of the originator of a VBS call with the same priority with the result that no handover is performed.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.59 Point to Point voice call performing intra BTS handover followed by an Inter BTS and a BSC handover

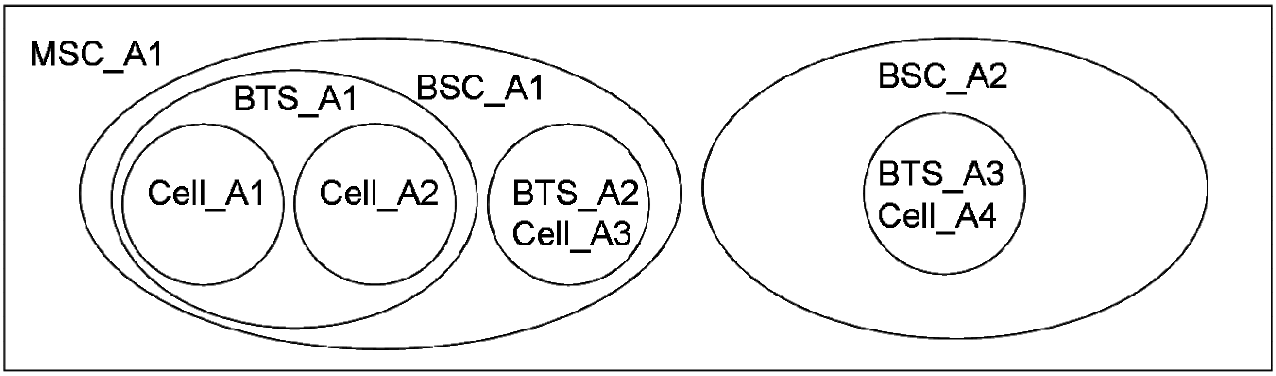
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that the originator of a PTP voice call can perform an intra BTS handover, followed by an inter BTS handover and an inter BSC handover successfully.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2	Cell_A3	Cell_A4
MS_A1	MS_A2		

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call with priority 4 to MS_A2.	The PTP call is successfully established, there is a two-way voice path between MS_A1 and MS_A2.
2)	MS_A1 moves from cell_A1 to cell_A2.	MS_A1 performs an intra BTS handover from cell_A1 to cell_A2.There is a two-way voice path between MS_A1 and MS_A2.

Step	Action	Expected result(s)
3)	MS_A1 moves from cell_A2 to cell_A3.	MS_A1 performs an inter BTS handover from cell_A2 to cell_A3. There is a two-way voice path between MS_A1 and MS_A2.
4)	MS_A1 moves from cell_A3 to cell_A4.	MS_A1 performs an inter BSC handover from cell_A3 to cell_A4. There is a two-way voice path between MS_A1 and MS_A2.
5)	MS_A1 releases the call.	PTP call successfully released and all resources are de-allocated correctly. MS_A1 performs a normal location update successfully.

d) Success criteria

The originator of a PTP voice call performs an intra BTS handover, followed by an inter BTS handover and an inter BSC handover successfully.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.60 Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by an intra BTS Handover of a point to point voice call

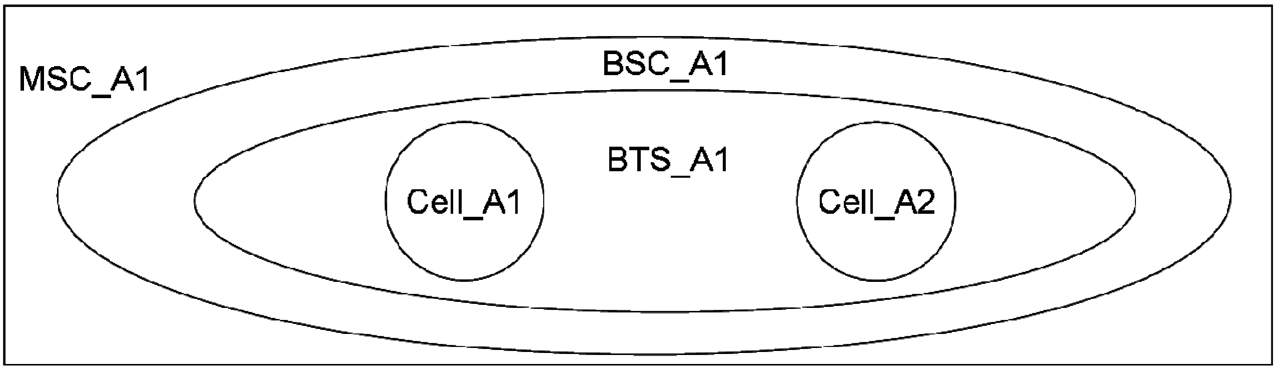
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is pre-empted by an incoming intra BTS handover of a subscriber of another ongoing point to point voice call with higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A7	MS_A1
MS_A8	MS_A2
	MS_A3
	MS_A4
	MS_A5
	MS_A6

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call to MS_A2 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 originates a PTP call to MS_A4 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 originates a PTP call to MS_A6 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. There is no traffic channel available in cell_A2.
4)	MS_A7 establishes a PTP call to MS_A8 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A7 and MS_A8. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
5)	MS_A7 moves from cell_A1 to cell_A2.	Intra BTS handover from cell_A1 to cell_A2 successfully performed. One ongoing PTP call in cell_A2 is pre-empted in order to allocate MS_A7. Clear request is sent from the BSC to the MSC with cause "pre-emption". Clear command is sent from the MSC to the BSC with cause "pre-emption". MS_A7 has speech path to MS_A8.
6)	MS_A7 releases the call.	PTP call is successfully released and all resources are correctly de-allocated.
7)	Release all PTP calls in cell A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is pre-empted by an incoming intra BTS handover of a subscriber of another ongoing point to point voice call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.61 Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by an intra BTS Handover of a circuit switched data call

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		2.3.1	EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is pre-empted by an incoming intra BTS handover of a subscriber of an ongoing point to point data call with higher priority.

b) Test configuration / initial conditions

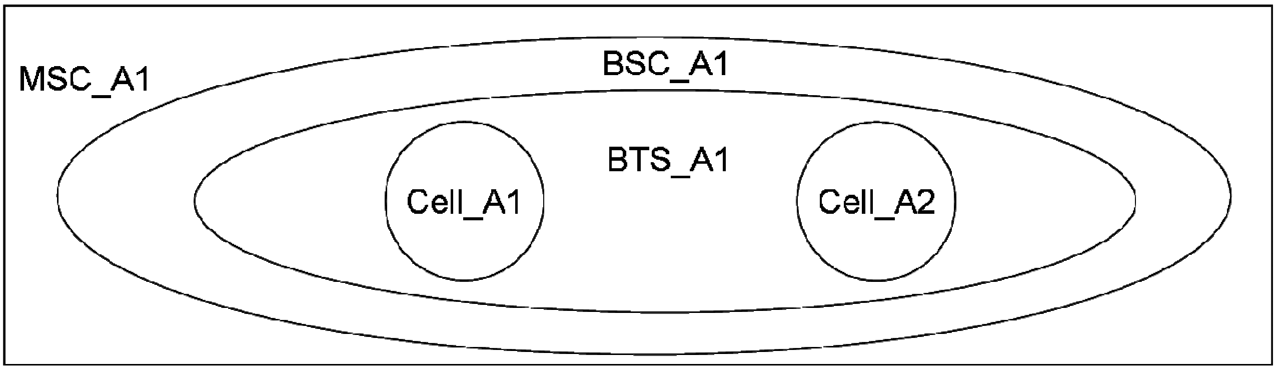
MS_A7 and MS_A8 are terminals with subscriptions to the following bearer services:

Service	EIRENE SRS v15
BS 24 Asynchronous 2,4 Kbit/s T for full-rate channel	M
BS 25 Asynchronous 4,8 Kbit/s T for full-rate channel	M
BS 26 Asynchronous 9,6 Kbit/s T for full-rate channel	M

Terminal application needed to send and receive test data.

To configure the bearer services and to set up a call with the terminal, refer to chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”.

Network A



Cell_A1	**Cell_A2**
MS_A7	MS_A1
MS_A8	MS_A2
	MS_A3
	MS_A4
	MS_A5
	MS_A6

c) Test procedure

A subset of the mandatory data services will be used for the test.

Case	Data service	Digital interworking (UDI / ISDN) V.110	Analogue interworking (3,1 kHz) V.22bis, V.32	Transparent	eMLPP Priority
1	BS 24 2400 bps		X (V.22bis)	X	3
2	BS 25 4800 bps	X		X	3
3	BS 26 9600 bps	X		X	3

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call with priority 4 to MS_A2.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.

Step	Action	Expected result(s)
2)	MS_A3 originates a PTP call with priority 4 to MS_A4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 originates a PTP call with priority 4 to MS_A6.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. There is no traffic channel available in cell_A2.
4)	Configure MS_A7 and MS_A8 to perform a data call with the settings indicated in table above case 1. To configure the bearer services refer to "Annex - Configuration of User Equipment for Data Calls"	MS_A7 and MS_A8 are configured with the correct bearer service.
5)	MS_A7 establishes a data call to MS_A8 with priority 3 by dialling: ATD*75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_A8 is notified of the incoming data call from MS_A7. The MSISDN of MS_A7 is displayed on MS_A8.
6)	MS_A8 takes the data call.	The data call between MS_A7 and MS_A8 is successfully established with the correct bearer service and line speed. These are seen on messages: From BSC to BTS: 'Channel activation'. From BTS to BSC and from BSC to MSC: `Call confirmed'. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
7)	Send test data from MS_A7 to MS_A8 and from MS_A8 to MS_A7.	Test data is transmitted and received correctly.

Step	Action	Expected result(s)
8)	MS_A7 moves from cell_A1 to cell_A2.	Intra BTS handover from cell_A1 to cell_A2 successfully performed. One ongoing PTP call in cell_A2 is pre-empted in order to allocate MS_A7. Clear request is sent from the BSC to the MSC with cause "pre-emption". Clear command is sent from the MSC to the BSC with cause "pre-emption".
9)	Send test data from MS_A7 to MS_A8 and from MS_A8 to MS_A7.	Test data is transmitted and received correctly.
10)	MS_A7 releases the data call.	Data call successfully released and all re-sources are de-allocated.
11)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.
12)	Repeat the test using case 2 and 3 from table above.	

d) Success criteria

An ongoing point to point voice call in the destination cell is pre-empted by an incoming intra BTS handover of a subscriber of an ongoing point to point data call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.62 Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by an intra BTS Handover of a railway emergency call originator (DCH)

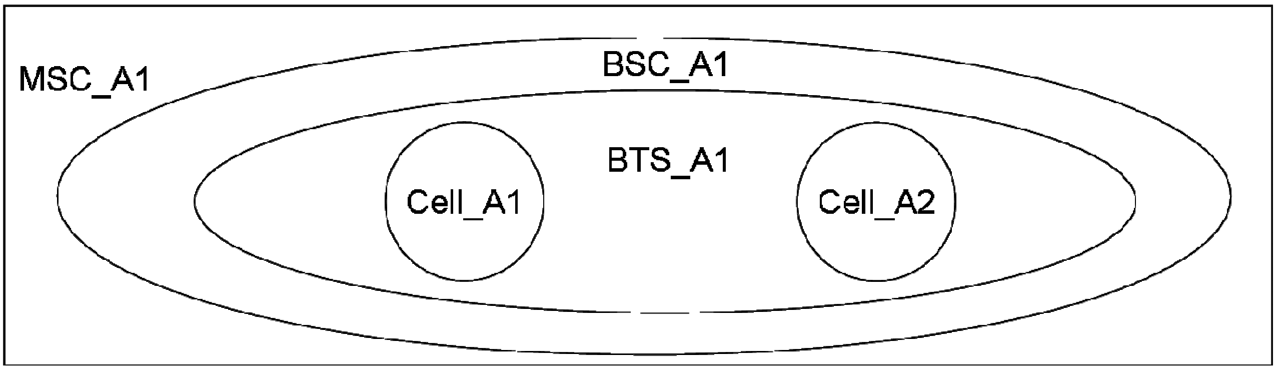
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

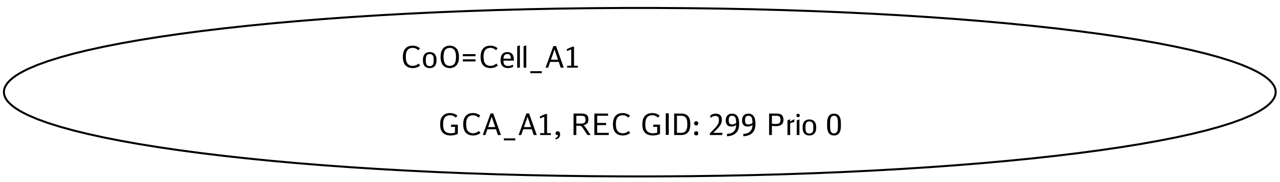
a) Purpose

Verify that an ongoing point to point voice call in the destination cell is pre-empted by an incoming intra BTS handover of the originator (on dedicated channel) of an ongoing railway emergency call with a higher priority.

b) Test configuration / initial conditions

Network A





Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (REC GID: 299)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (REC GID: 299)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call with priority 4 to MS_A2.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 originates a PTP call with priority 4 to MS_A4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A6 originates a PTP call with priority 4 to MS_A5.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 and MS_A9 are notified about the in-coming REC on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the REC.	MS_A8 and MS_A9 automatically join the REC in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.

Step	Action	Expected result(s)
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 is able to take the uplink on DCH. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.
7)	MS_A7 moves from cell_A1 to cell_A2.	Intra BTS handover from cell_A1 to cell_A2 successfully performed. One ongoing PTP call in cell_A2 is pre-empted in order to allocate MS_A7. Clear request is sent from BSC to the MSC with cause “pre-emption”. Clear command is sent from MSC to the BSC with cause “pre-emption”.
8)	MS_A7 releases the uplink.	The uplink is correctly released.
9)	MS_A7 releases the REC.	REC successfully released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is pre-empted by an incoming intra BTS handover of the originator (on dedicated channel) of an ongoing railway emergency call with a higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.63 Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by an intra BTS Handover of VGCS dedicated channel

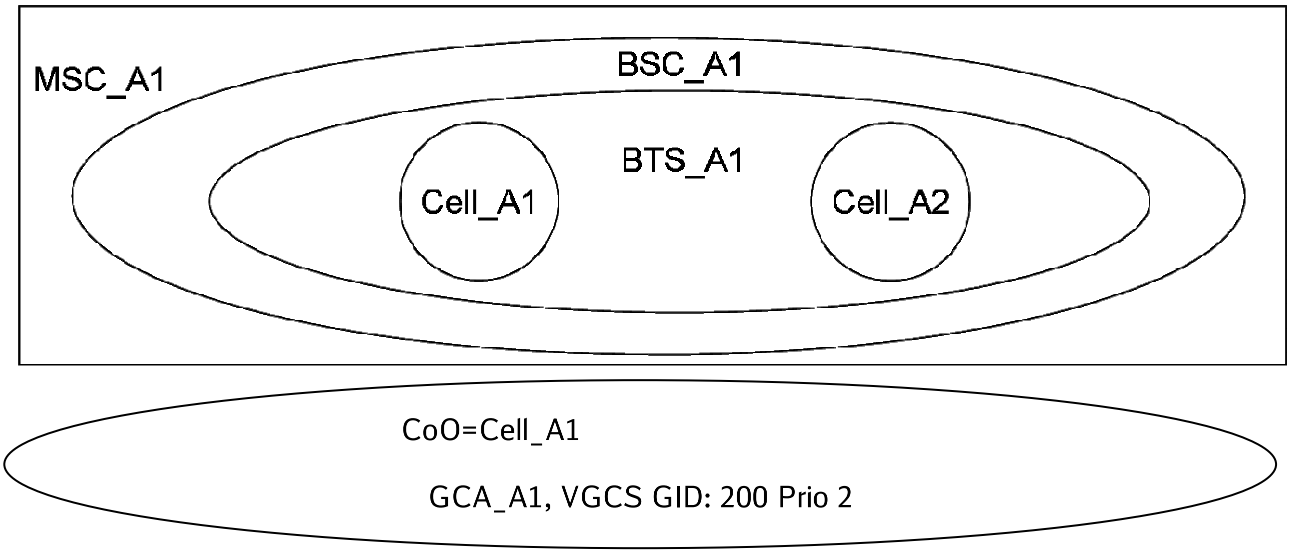
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is pre-empted by an incoming intra BTS handover of the originator (on dedicated channel) of an ongoing VGCS call with higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VGCS GID: 200)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VGCS GID: 200)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call with priority 4 to MS_A2.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 originates a PTP call with priority 4 to MS_A4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A6 originates a PTP call with priority 4 to MS_A5.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 and MS_A9 are notified about the incoming VGCS call on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the VGCS call.	MS_A8 and MS_A9 automatically join the VGCS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 is able to take the uplink on DCH. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.
7)	MS_A7 moves from cell_A1 to cell_A2.	Intra BTS handover from cell_A1 to cell_A2 successfully performed. One ongoing PTP call in cell_A2 is pre-empted in order to allocate MS_A7.

Step	Action	Expected result(s)
		Clear request is sent from BSC to the MSC with cause “pre-emption”. Clear command is sent from MSC to the BSC with cause “pre-emption”.
8)	MS_A7 releases the uplink.	The uplink is correctly released.
9)	MS_A7 releases the VGCS call.	VGCS call is successfully released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is pre-empted by an incoming intra BTS handover of the originator (on dedicated channel) of an ongoing VGCS call with a higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.64 Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by an intra BTS Handover of VBS originator

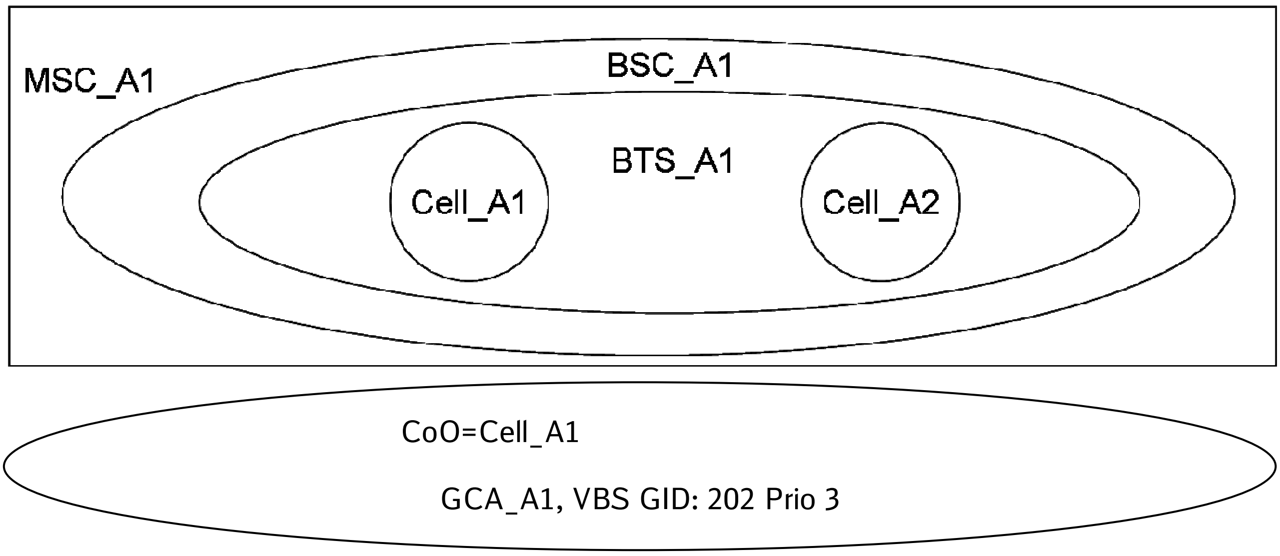
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is pre-empted by an incoming intra BTS handover of the originator of an ongoing VBS call with higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VBS GID: 202)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VBS GID: 202)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call with priority 4 to MS_A2.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 originates a PTP call with priority 4 to MS_A4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A6 originates a PTP call with priority 4 to MS_A5.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a VBS call with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 and MS_A9 are notified about the in-coming VBS on the NCH. The DCH (uplink) remains allocated during the whole VBS call. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the VBS call.	MS_A8 and MS_A9 automatically join the VBS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.
6)	MS_A7 moves from cell_A1 to cell_A2.	Intra BTS handover from cell_A1 to cell_A2 successfully performed. One ongoing PTP call in cell_A2 is pre-empted

Step	Action	Expected result(s)
		in order to allocate MS_A7. Clear request is sent from BSC to the MSC with cause “pre-emption”. Clear command is sent from MSC to the BSC with cause “pre-emption”.
7)	MS_A7 releases the VBS call.	VBS call successfully released and all resources de-allocated.
8)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is pre-empted by an incoming intra BTS handover of the originator of an ongoing VBS call with a higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.65 Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by an inter BTS Handover of a point to point voice call

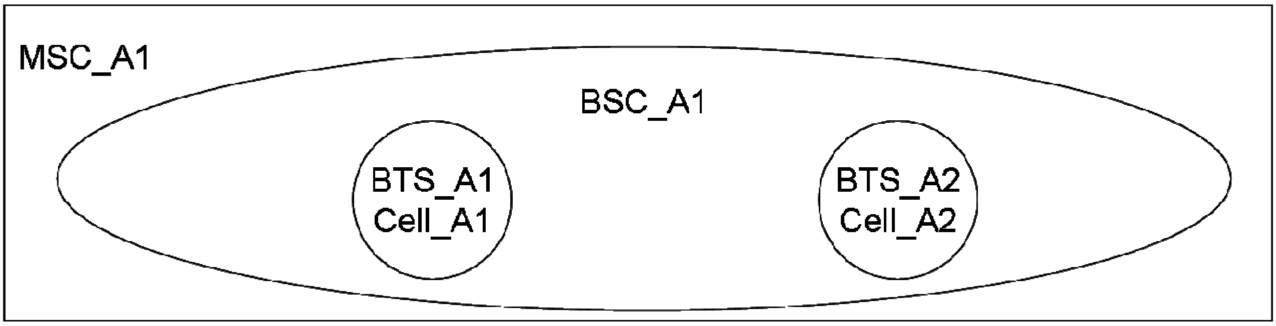
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BTS handover of a subscriber of another ongoing point to point voice call with higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A7	MS_A1
MS_A8	MS_A2
	MS_A3
	MS_A4
	MS_A5
	MS_A6

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call to MS_A2 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
2)	MS_A3 originates a PTP call to MS_A4 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
3)	MS_A5 originates a PTP call to MS_A6 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’. There is no traffic channel available in cell_A2.
4)	MS_A7 establishes a PTP call to MS_A8 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A7 and MS_A8. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
5)	MS_A7 moves from cell_A1 to cell_A2.	Inter BTS handover from cell_A1 to cell_A2 successfully performed. One ongoing PTP call in cell_A2 is pre-empted in order to allocate MS_A7. Clear request is sent from the BSC to the MSC with cause “pre-emption”. Clear command is sent from the MSC to the BSC with cause “pre-emption”. MS_A7 has speech path to MS_A8.
6)	MS_A7 releases the call.	PTP call is successfully released and all re-sources are correctly de-allocated.
7)	Release all PTP calls in cell A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BTS handover of a subscriber of another ongoing point to point voice call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.66 Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by an inter BTS Handover of a circuit switched data call

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		2.3.1	EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BTS handover of a subscriber of an ongoing point to point data call with higher priority.

b) Test configuration / initial conditions

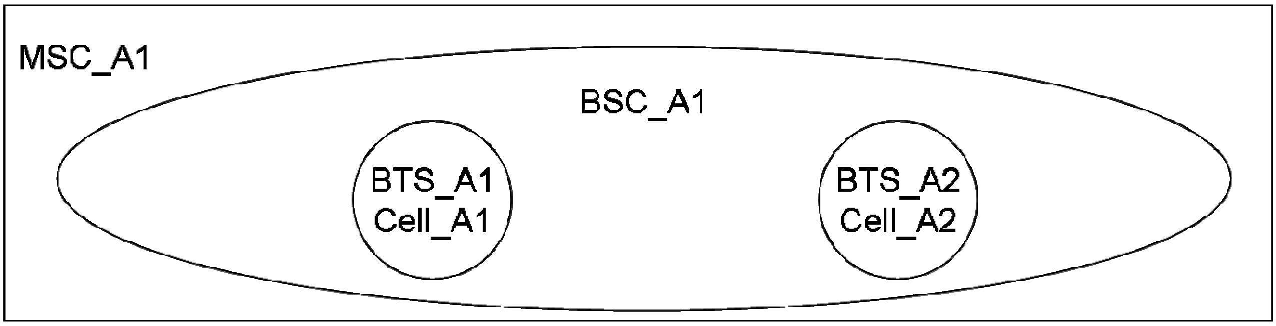
MS_A7 and MS_A8 are terminals with subscriptions to the following bearer services:

Service	EIRENE SRS v15
BS 24 Asynchronous 2,4 Kbit/s T for full-rate channel	M
BS 25 Asynchronous 4,8 Kbit/s T for full-rate channel	M
BS 26 Asynchronous 9,6 Kbit/s T for full-rate channel	M

Terminal application needed to send and receive test data.

To configure the bearer services and to set up a call with the terminal, refer to chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”.

Network A



Cell_A1	Cell_A2
MS_A7	MS_A1
MS_A8	MS_A2
	MS_A3
	MS_A4
	MS_A5
	MS_A6

c) Test procedure

A subset of the mandatory data services will be used for the test.

Case	Data service	Digital interworking (UDI / ISDN) V.110	Analogue interworking (3,1 kHz) V.22bis, V.32	Transparent	eMLPP Priority
1	BS 24 2400 bps		X (V.22bis)	X	3
2	BS 25 4800 bps	X		X	3
3	BS 26 9600 bps	X		X	3

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call with priority 4 to MS_A2.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 originates a PTP call with priority 4 to MS_A4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 originates a PTP call with priority 4 to MS_A6.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. There is no traffic channel available in cell_A2.
4)	Configure MS_A7 and MS_A8 to perform a data call with the settings indicated in table above case 1. To configure the bearer services refer to "Annex - Configuration of User Equipment for Data Calls"	MS_A7 and MS_A8 are configured with the correct bearer service.
5)	MS_A7 establishes a data call to MS_A8 with priority 3 by dialling: ATD*75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_A8 is notified of the incoming data call from MS_A7. The MSISDN of MS_A7 is displayed on MS_A8.
6)	MS_A8 takes the data call.	The data call between MS_A7 and MS_A8 is successfully established with the correct bearer service and line speed. These are seen on messages: From BSC to BTS: 'Channel activation'. From BTS to BSC and from BSC to MSC: `Call confirmed'. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.

Step	Action	Expected result(s)
7)	Send test data from MS_A7 to MS_A8 and from MS_A8 to MS_A7.	Test data is transmitted and received correctly.
8)	MS_A7 moves from cell_A1 to cell_A2.	Inter BTS handover from cell_A1 to cell_A2 successfully performed. One ongoing PTP call in cell_A2 is pre-empted in order to allocate MS_A7. Clear request is sent from the BSC to the MSC with cause "pre-emption". Clear command is sent from the MSC to the BSC with cause "pre-emption".
9)	Send test data from MS_A7 to MS_A8 and from MS_A8 to MS_A7.	Test data is transmitted and received correctly.
10)	MS_A7 releases the data call.	Data call successfully released and all resources are de-allocated.
11)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.
12)	Repeat the test using case 2 and 3 from table above.	

d) Success criteria

An ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BTS handover of a subscriber of an ongoing point to point data call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.67 Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by an inter BTS Handover of a railway emergency call originator (DCH)

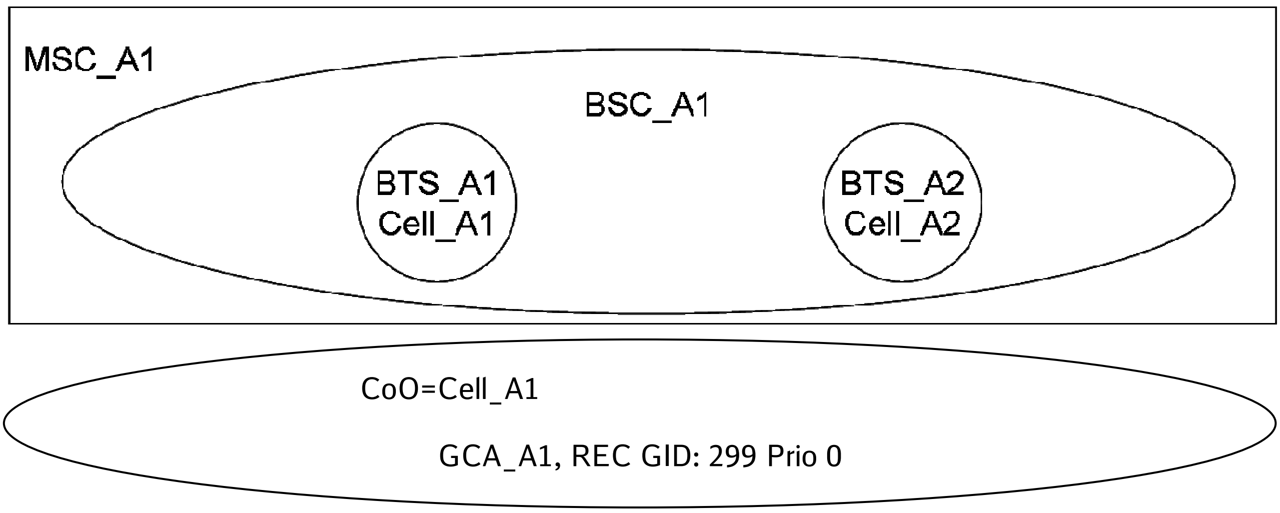
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BTS handover of the originator (on dedicated channel) of an ongoing railway emergency call with a higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (REC GID: 299)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (REC GID: 299)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call with priority 4 to MS_A2.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 originates a PTP call with priority 4 to MS_A4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A6 originates a PTP call with priority 4 to MS_A5.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 and MS_A9 are notified about the in-coming REC on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the REC.	MS_A8 and MS_A9 automatically join the REC in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 is able to take the uplink on DCH. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.

Step	Action	Expected result(s)
7)	MS_A7 moves from cell_A1 to cell_A2.	Inter BTS handover from cell_A1 to cell_A2 successfully performed. One ongoing PTP call in cell_A2 is pre-empted in order to allocate MS_A7. Clear request is sent from BSC to the MSC with cause "pre-emption". Clear command is sent from MSC to the BSC with cause "pre-emption".
8)	MS_A7 releases the uplink.	The uplink is correctly released.
9)	MS_A7 releases the REC.	REC is successfully released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BTS handover of the originator (on dedicated channel) of an ongoing railway emergency call with a higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.68 Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by an inter BTS Handover of VGCS dedicated channel

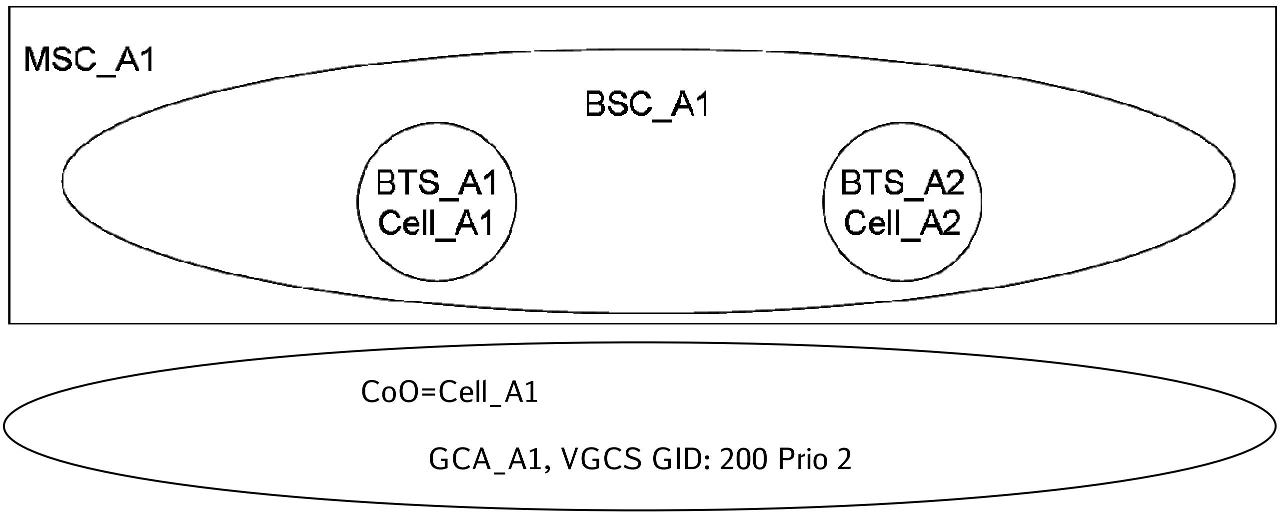
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BTS handover of the originator (on dedicated channel) of an ongoing VGCS call with higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VGCS GID: 200)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VGCS GID: 200)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call with priority 4 to MS_A2.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 originates a PTP call with priority 4 to MS_A4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A6 originates a PTP call with priority 4 to MS_A5.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 and MS_A9 are notified about the incoming VGCS on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the VGCS call.	MS_A8 and MS_A9 automatically join the VGCS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 is able to take the uplink on DCH. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.

Step	Action	Expected result(s)
7)	MS_A7 moves from cell_A1 to cell_A2.	Inter BTS handover from cell_A1 to cell_A2 successfully performed. One ongoing PTP call in cell_A2 is pre-empted in order to allocate MS_A7. Clear request is sent from BSC to the MSC with cause "pre-emption". Clear command is sent from MSC to the BSC with cause "pre-emption".
8)	MS_A7 releases the uplink.	The uplink is correctly released.
9)	MS_A7 releases the VGCS call.	VGCS call is successfully released and all re-sources are correctly de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BTS handover of the originator (on dedicated channel) of an ongoing VGCS call with a higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.69 Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by an inter BTS Handover of VBS originator

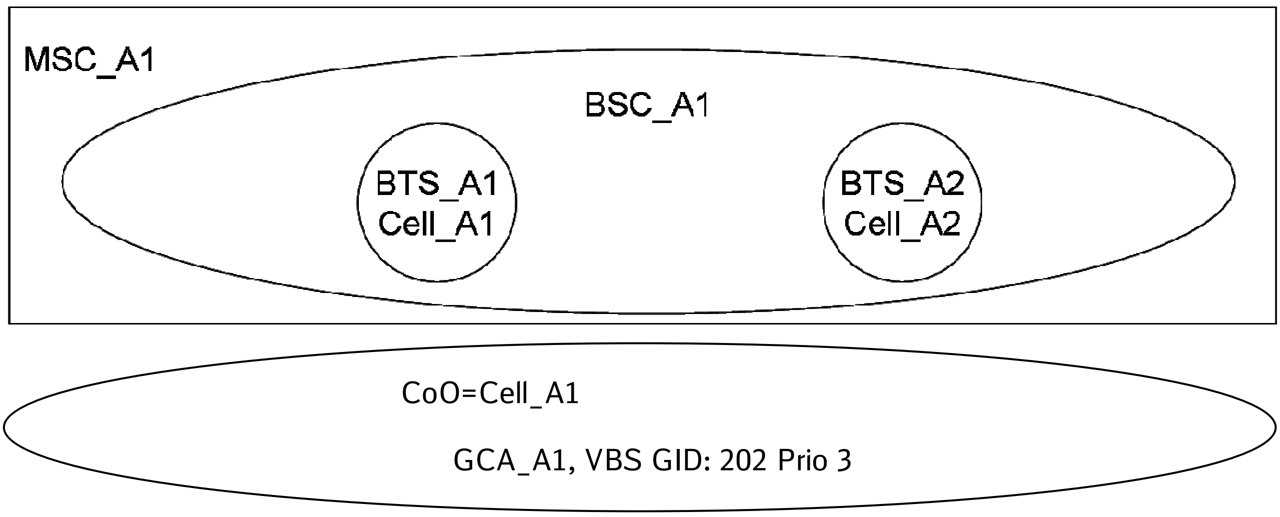
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BTS handover of the originator of an ongoing VBS call with higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VBS GID: 202)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VBS GID: 202)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call with priority 4 to MS_A2.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 originates a PTP call with priority 4 to MS_A4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A6 originates a PTP call with priority 4 to MS_A5.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a VBS call with priority 3.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 and MS_A9 are notified about the in-coming VBS on the NCH. The DCH (uplink) remains allocated during the whole VBS call. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the VBS call.	MS_A8 and MS_A9 automatically join the VBS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.

Step	Action	Expected result(s)
6)	MS_A7 moves from cell_A1 to cell_A2.	Inter BTS handover from cell_A1 to cell_A2 successfully performed. One ongoing PTP call in cell_A2 is pre-empted in order to allocate MS_A7. Clear request is sent from BSC to the MSC with cause “pre-emption”. Clear command is sent from MSC to the BSC with cause “pre-emption”.
7)	MS_A7 releases the VBS call.	VBS call successfully released and all re-sources de-allocated.
8)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BTS handover of the originator of an ongoing VBS call with a higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.70 Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by an inter BSC Handover of a point to point voice call

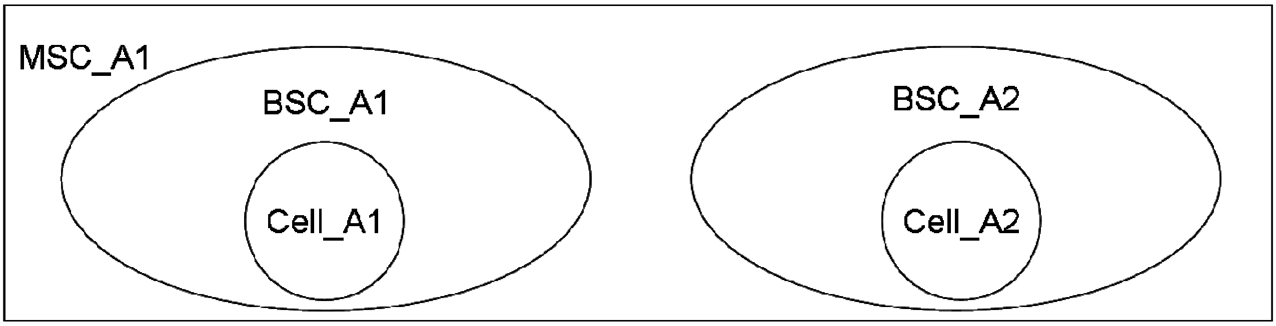
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BSC handover of a subscriber of another ongoing point to point voice call with higher priority.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A7	MS_A1
MS_A8	MS_A2
	MS_A3
	MS_A4
	MS_A5
	MS_A6

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call to MS_A2 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 originates a PTP call to MS_A4 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 originates a PTP call to MS_A6 with priority 4.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. There is no traffic channel available in cell_A2.
4)	MS_A7 establishes a PTP call to MS_A8 with priority 3 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a speech path between MS_A7 and MS_A8. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
5)	MS_A7 moves from cell_A1 to cell_A2.	Inter BSC handover from cell_A1 to cell_A2 successfully performed. One ongoing PTP call in cell_A2 is pre-empted in order to allocate MS_A7. Clear request is sent from the BSC to the MSC with cause "pre-emption". Clear command is sent from the MSC to the BSC with cause "pre-emption". MS_A7 has speech path to MS_A8.
6)	MS_A7 releases the call.	PTP call is successfully released and all re-sources are correctly de-allocated. MS_A7 performs a normal location update successfully.

Step	Action	Expected result(s)
7)	Release all PTP calls in cell A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BSC handover of a subscriber of another ongoing point to point voice call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.71 Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by an inter BSC Handover of a circuit switched data call

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
		2.3.1	EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BSC handover of a subscriber of an ongoing point to point data call with higher priority.

b) Test configuration / initial conditions

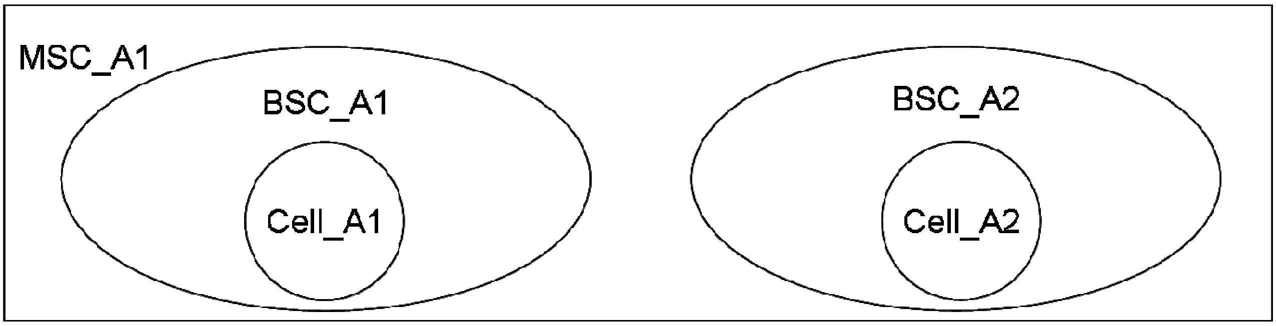
MS_A7 and MS_A8 are terminals with subscriptions to the following bearer services:

Service	EIRENE SRS v15
BS 24 Asynchronous 2,4 Kbit/s T for full-rate channel	M
BS 25 Asynchronous 4,8 Kbit/s T for full-rate channel	M
BS 26 Asynchronous 9,6 Kbit/s T for full-rate channel	M

Terminal application needed to send and receive test data.

To configure the bearer services and to set up a call with the terminal, refer to chapter 6.2 “Annex - Configuration of User Equipment for Data Calls”.

Network A



Cell_A1	**Cell_A2**
MS_A7	MS_A1
MS_A8	MS_A2
	MS_A3
	MS_A4
	MS_A5
	MS_A6

c) Test procedure

A subset of the mandatory data services will be used for handover test.

Case	Data service	Digital interworking (UDI / ISDN) V.110	Analogue interworking (3,1 kHz) V.22bis, V.32	Transparent	eMLPP Priority
1	BS 24 2400 bps		X (V.22bis)	X	3
2	BS 25 4800 bps	X		X	3
3	BS 26 9600 bps	X		X	3

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call with priority 4 to MS_A2.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
2)	MS_A3 originates a PTP call with priority 4 to MS_A4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
3)	MS_A5 originates a PTP call with priority 4 to MS_A6.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’. There is no traffic channel available in cell_A2.
4)	Configure MS_A7 and MS_A8 to perform a data call with the settings indicated in table above case 1. To configure the bearer services refer to “Annex - Configuration of User Equipment for Data Calls”	MS_A7 and MS_A8 are configured with the correct bearer service.
5)	MS_A7 establishes a data call to MS_A8 with priority 3 by dialling: ATD*75<Priority>#<MSISDN> (Reference 3GPP TS27.007)	MS_A8 is notified of the incoming data call from MS_A7. The MSISDN of MS_A7 is displayed on MS_A8.
6)	MS_A8 takes the data call.	The data call between MS_A7 and MS_A8 is successfully established with the correct bearer service and line speed. These are seen on messages: From BSC to BTS: ‘Channel activation’. From BTS to BSC and from BSC to MSC: `Call confirmed’. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.

Step	Action	Expected result(s)
7)	Send test data from MS_A7 to MS_A8 and from MS_A8 to MS_A7.	Test data is transmitted and received correctly.
8)	MS_A7 moves from cell_A1 to cell_A2.	Inter BSC handover from cell_A1 to cell_A2 successfully performed. One ongoing PTP call in cell_A2 is pre-empted in order to allocate MS_A7. Clear request is sent from the BSC to the MSC with cause “pre-emption”. Clear command is sent from the MSC to the BSC with cause “pre-emption”.
9)	Send test data from MS_A7 to MS_A8 and from MS_A8 to MS_A7.	Test data is transmitted and received correctly.
10)	MS_A7 releases the data call.	Data call successfully released and all re-sources are de-allocated. MS_A7 performs a normal location update successfully.
11)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.
12)	Repeat the test using case 2 and 3 from table above.	

d) Success criteria

An ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BSC handover of a subscriber of an ongoing point to point data call with higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

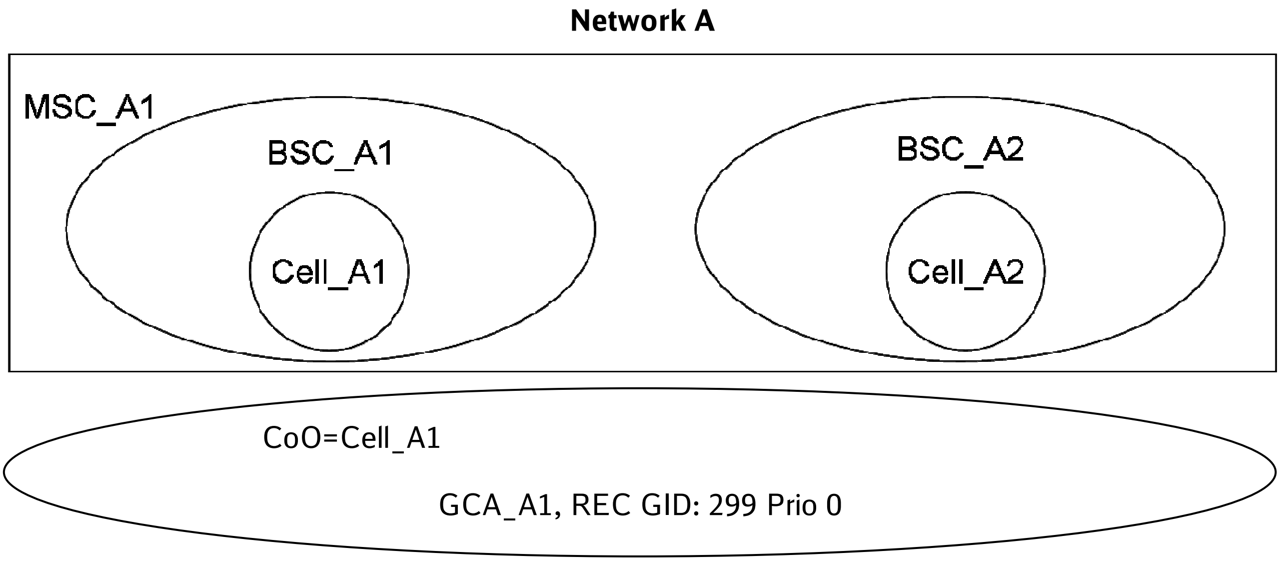
5.10.72 Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by an inter BSC Handover of a railway emergency call originator (DCH)

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BSC handover of the originator (on dedicated channel) of an ongoing railway emergency call with higher priority.

b) Test configuration / initial conditions



Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (REC GID: 299)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (REC GID: 299)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (REC GID: 299)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call with priority 4 to MS_A2.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 originates a PTP call with priority 4 to MS_A4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A6 originates a PTP call with priority 4 to MS_A5.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a REC.	REC is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 and MS_A9 are notified about the in-coming REC on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the REC.	MS_A8 and MS_A9 automatically join the REC (GID 299) in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.

Step	Action	Expected result(s)
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 is able to take the uplink on DCH. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.
7)	MS_A7 moves from cell_A1 to cell_A2.	Inter BSC handover from cell_A1 to cell_A2 successfully performed. One ongoing PTP call in cell_A2 is pre-empted in order to allocate MS_A7. Clear request is sent from BSC to the MSC with cause "pre-emption". Clear command is sent from MSC to the BSC with cause "pre-emption".
8)	MS_A7 releases the uplink.	The uplink is correctly released. MS_A7 performs a normal location update successfully.
9)	MS_A7 releases the REC.	REC is successfully released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BSC handover of the originator (on dedicated channel) of an ongoing railway emergency call with a higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.73 Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by an inter BSC Handover of VGCS dedicated channel

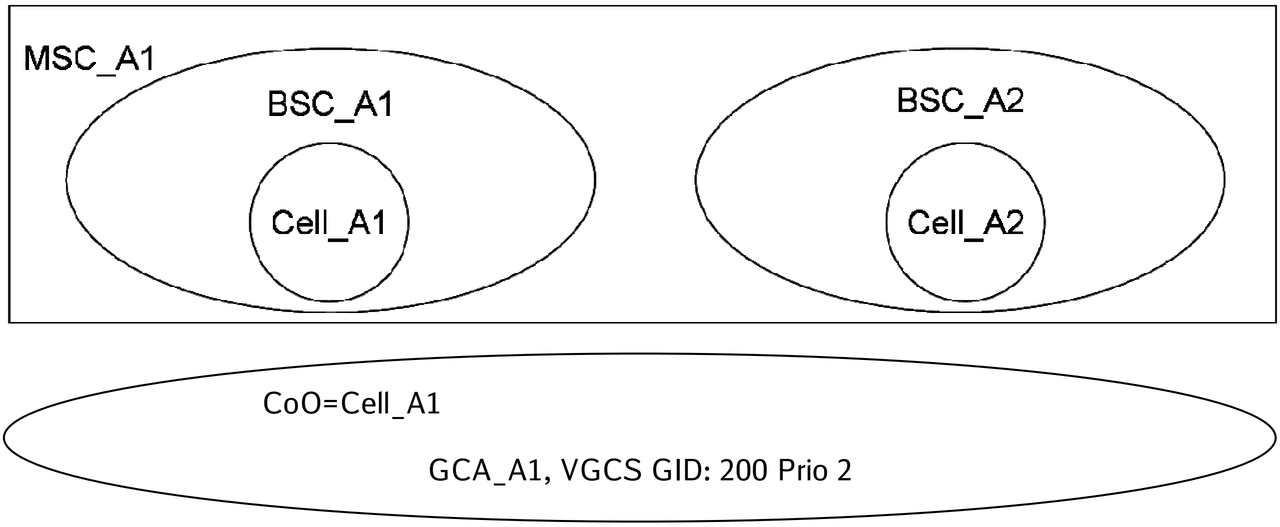
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BSC handover of the originator (on dedicated channel) of an ongoing VGCS call with higher priority

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VGCS GID: 200)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VGCS GID: 200)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (VGCS GID: 200)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call with priority 4 to MS_A2.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 originates a PTP call with priority 4 to MS_A4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A6 originates a PTP call with priority 4 to MS_A5.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a VGCS call.	VGCS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 and MS_A9 are notified about the in-coming VGCS call on the NCH. So long the dedicated channel is not released; MS_A7 has two way voice path. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the VGCS call.	MS_A8 and MS_A9 automatically join the VGCS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC.
6)	MS_A7 keeps the uplink on the DCH.	MS_A7 is able to take the uplink on DCH. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.
7)	MS_A7 moves from cell_A1 to cell_A2.	Inter BSC handover from cell_A1 to cell_A2 successfully performed. One ongoing PTP call in cell_A2 is pre-empted

Step	Action	Expected result(s)
		in order to allocate MS_A7. Clear request is sent from BSC to the MSC with cause “pre-emption”. Clear command is sent from MSC to the BSC with cause “pre-emption”.
8)	MS_A7 releases the uplink.	The uplink is correctly released. MS_A7 performs a normal location update successfully.
9)	MS_A7 releases the VGCS call.	VGCS call is successfully released and all resources are correctly de-allocated.
10)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BSC handover of the originator (on dedicated channel) of an ongoing VGCS call with a higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

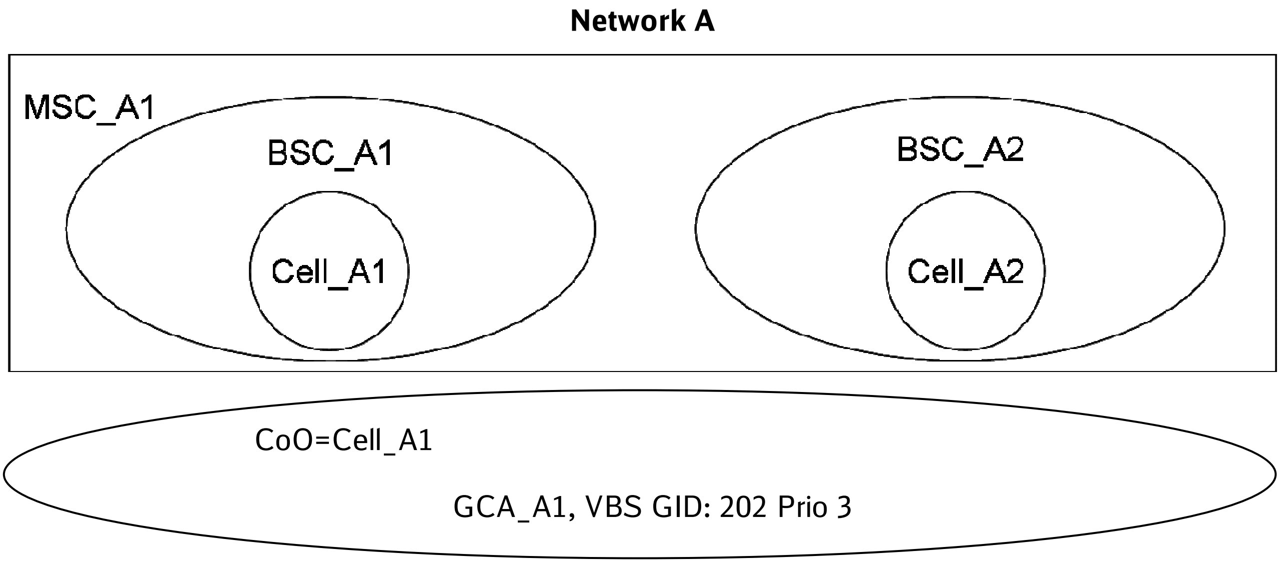
5.10.74 Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by an inter BSC handover of VBS originator

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BSC handover of the originator of an ongoing VBS call with higher priority.

b) Test configuration / initial conditions



Cell_A1	Cell_A2
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VBS GID: 202)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VBS GID: 202)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)
	MS_A9 (VBS GID: 202)

c) Test procedure

Step	Action	Expected result(s)
1)	MS_A1 originates a PTP call with priority 4 to MS_A2.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 originates a PTP call with priority 4 to MS_A4.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A6 originates a PTP call with priority 4 to MS_A5.	The call is established correctly, there is a two-way voice path between MS_A6 and MS_A5. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A2.
4)	MS_A7 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 and MS_A9 are notified about the in-coming VBS call on the NCH. The DCH (uplink) remains allocated during the whole VBS call. No TCH is available in cell_A2.
5)	MS_A8 and MS_A9 automatically accept the VBS call.	MS_A8 and MS_A9 automatically join the VBS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC. MS_A7 has two-way voice path. MS_A8 and MS_A9 are only listeners.

Step	Action	Expected result(s)
6)	MS_A7 moves from cell_A1 to cell_A2.	Inter BSC handover from cell_A1 to cell_A2 successfully performed. One ongoing PTP call in cell_A2 is pre-empted in order to allocate MS_A7. Clear request is sent from BSC to the MSC with cause “pre-emption”. Clear command is sent from MSC to the BSC with cause “pre-emption”.
7)	MS_A7 releases the VBS call.	VBS call successfully released and all re-sources de-allocated. MS_A7 performs a normal location update successfully.
8)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is pre-empted by an incoming inter BSC handover of the originator of an ongoing VBS call with a higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.75 Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by an inter MSC handover of VBS originator

Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
			EN 301515

a) Purpose

Verify that an ongoing point to point voice call in the destination cell is pre-empted by an incoming inter MSC handover of the originator of an ongoing VBS call with higher priority.

b) Test configuration / initial conditions

This test case has been divided into the following steps:

Step 1: VBS call establishment in anchor MSC_A1.

Step 2: VBS call establishment in relay MSC_A2.

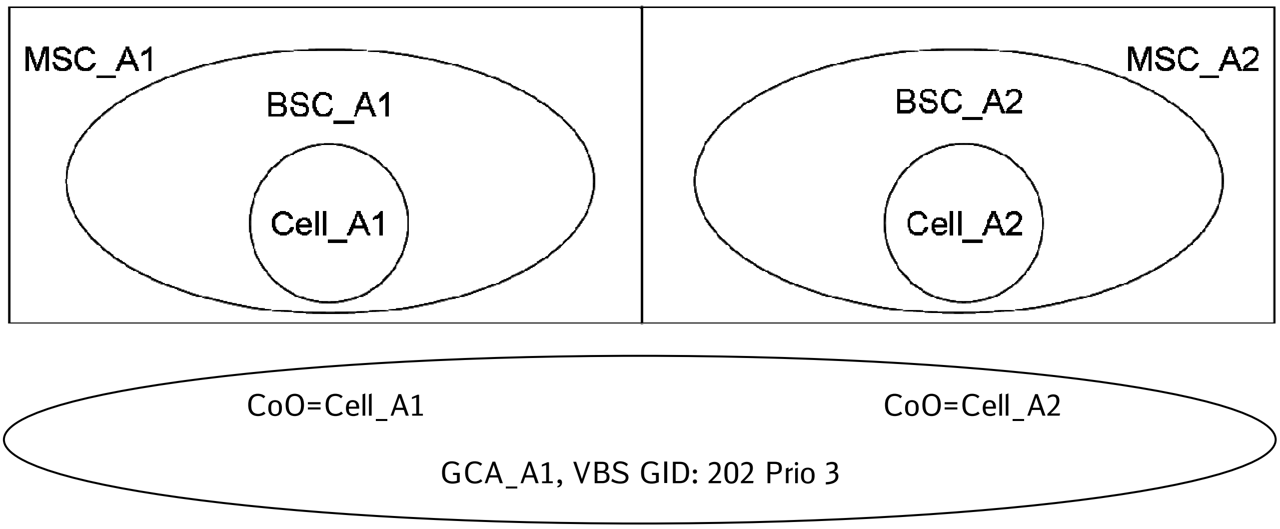
Step 3: VBS call establishment in relay MSC_A1.

Step 4: VBS call establishment in anchor MSC_A2.

Steps 3 and 4 only applicable in case MSC_A1 and MSC_A2 are from different vendors.

Test configuration for step 1

Network A



A-MSC_A1	**R-MSC_A2**
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VBS GID: 202)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VBS GID: 202)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)

c) Test procedure

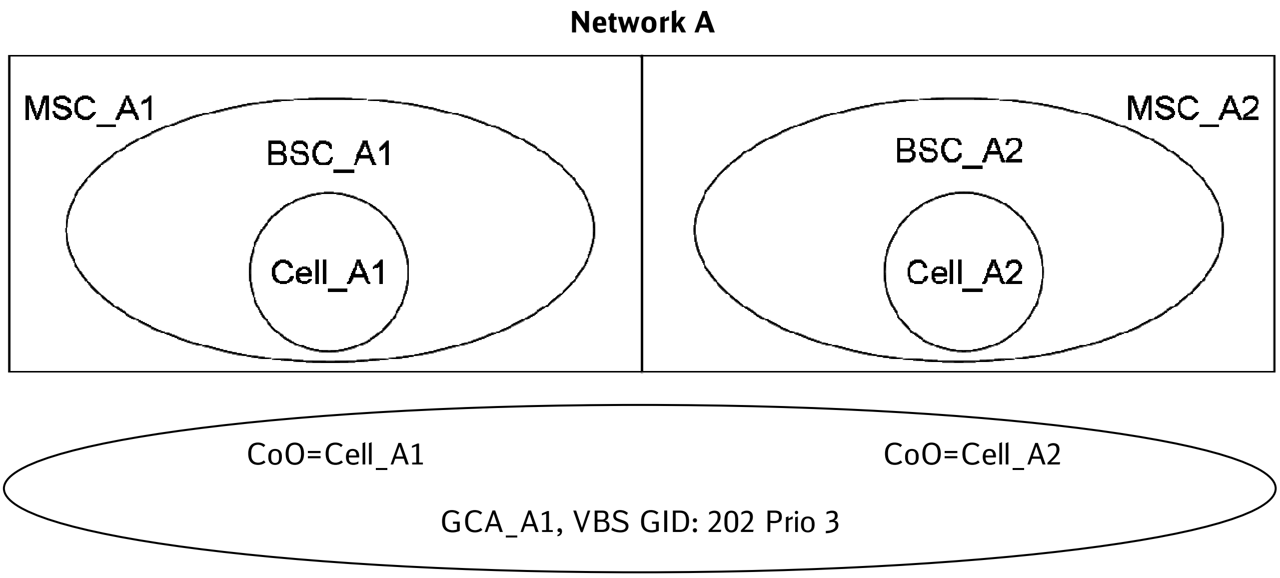
Step 1: VBS call establishment in anchor MSC_A1.

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 4 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.

Step	Action	Expected result(s)
2)	MS_A3 establishes a PTP call to MS_A4 with priority 4 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 4 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’. Only 1 TCH is available in cell A2.
4)	MS_A7 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 is notified about the incoming VBS call on the NCH. The DCH (uplink) remains allocated during the whole VBS call. No TCH is available in cell_A2.
5)	MS_A8 automatically accepts the VBS call.	MS_A8 automatically joins the VBS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: ‘Notification Command’ sent from the BSC. MS_A7 has two-way voice path. MS_A8 is only listener.
6)	MS_A7 moves from cell_A1 to cell_A2.	Inter MSC handover successfully performed. One ongoing PTP call in cell_A2 is pre-empted in order to allocate MS_A7. Clear request is sent from BSC to the MSC with cause “pre-emption”. Clear command is sent from MSC to the BSC with cause “pre-emption”.

Step	Action	Expected result(s)
7)	MS_A7 releases the VBS call.	VBS call is released and all resources are correctly de-allocated. MS_A7 performs a normal location update successfully.
8)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

Test configuration for step 2



A-MSC_A1	R-MSC_A2
MS_A1 (no VGCS / VBS subscriber)	MS_A6 (no VGCS / VBS subscriber)
MS_A2 (no VGCS / VBS subscriber)	MS_A7 (VBS GID: 202)
MS_A3 (no VGCS / VBS subscriber)	MS_A8 (VBS GID: 202)
MS_A4 (no VGCS / VBS subscriber)	
MS_A5 (no VGCS / VBS subscriber)	

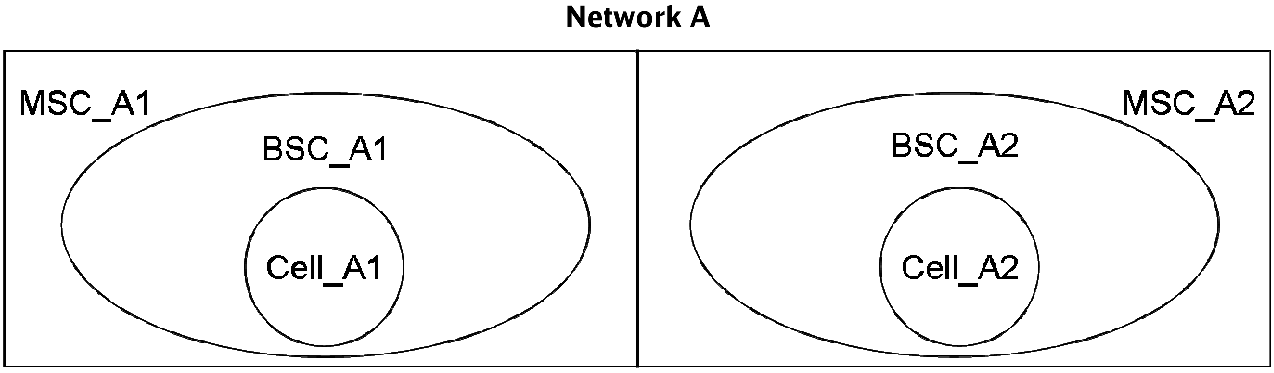
Test procedure

Step 2: VBS call establishment in relay MSC_A2.

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 4 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
2)	MS_A3 establishes a PTP call to MS_A4 with priority 4 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 4 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’. Only 1 TCH is available in cell_A1.
4)	MS_A7 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1. MS_A8 is notified about the incoming VBS call on the NCH. The DCH (uplink) remains allocated during the whole VBS call. No TCH is available in cell_A1.
5)	MS_A8 automatically accepts the VBS call.	MS_A8 automatically joins the VBS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: ‘Notification Command’ sent from the BSC. MS_A7 has two-way voice path. MS_B8 is only listener.

Step	Action	Expected result(s)
6)	MS_A7 moves from cell_A2 to cell_A1.	Inter MSC handover successfully performed. One ongoing PTP call in cell_A1 is pre-empted in order to allocate MS_A7. Clear request is sent from BSC to the MSC with cause “pre-emption”. Clear command is sent from MSC to the BSC with cause “pre-emption”.
7)	MS_A7 releases the VBS call.	VBS call is released and all resources are correctly de-allocated. MS_A7 performs a normal location update successfully.
8)	Release all PTP calls in cell_A1.	PTP calls are successfully released and all resources are correctly de-allocated.

Test configuration for step 3



CoO=Cell_A1 CoO=Cell_A2

GCA_A1, VBS GID: 202 Prio 3

R-MSC_A1	**A-MSC_A2**
MS_A6 (no VGCS / VBS subscriber)	MS_A1 (no VGCS / VBS subscriber)
MS_A7 (VBS GID: 202)	MS_A2 (no VGCS / VBS subscriber)
MS_A8 (VBS GID: 202)	MS_A3 (no VGCS / VBS subscriber)
	MS_A4 (no VGCS / VBS subscriber)
	MS_A5 (no VGCS / VBS subscriber)

Test procedure

Step 3: VBS call establishment in relay MSC_A1.

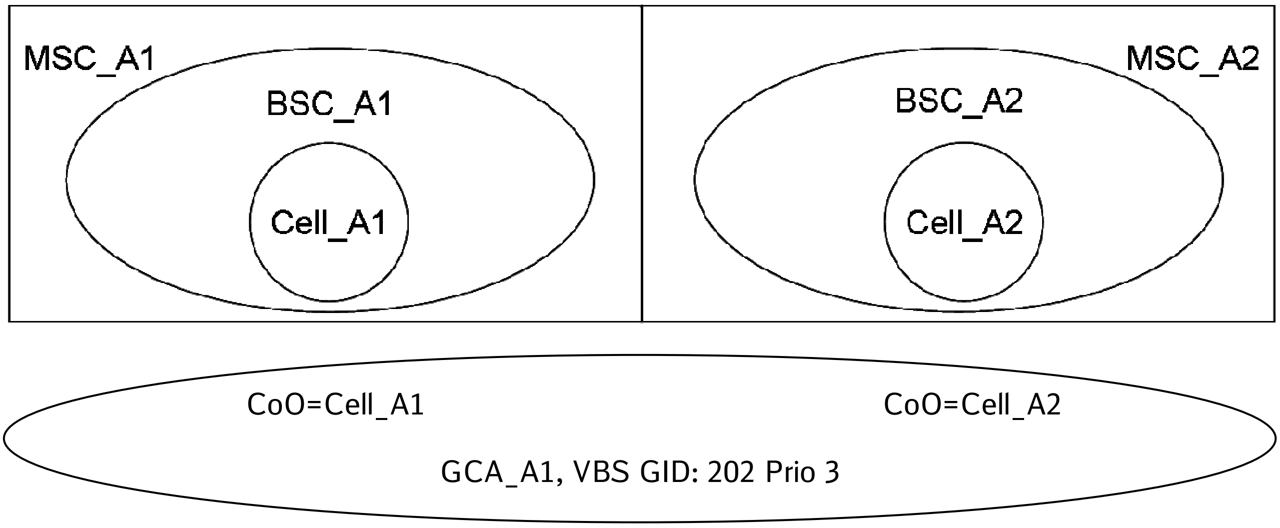
Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 4 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.

Step	Action	Expected result(s)
2)	MS_A3 establishes a PTP call to MS_A4 with priority 4 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 4 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: ‘CM Service request’, ‘Call Proceeding’ and ‘Setup’. Only 1 TCH is available in cell A2.
4)	MS_A7 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1. A group call channel (GCCH) is allocated in cell_A2. MS_A8 is notified about the incoming VBS call on the NCH. The DCH (uplink) remains allocated during the whole VBS call. No TCH is available in cell_A2.
5)	MS_A8 automatically accepts the VBS call.	MS_A8 automatically joins the VBS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: ‘Notification Command’ sent from the BSC. MS_A7 has two-way voice path. MS_A8 is only listener.
6)	MS_A7 moves from cell_A1 to cell_A2.	Inter MSC handover successfully performed. One ongoing PTP call in cell_A2 is pre-empted in order to allocate MS_A7. Clear request is sent from BSC to the MSC with cause “pre-emption”. Clear command is sent from MSC to the BSC with cause “pre-emption”.

Step	Action	Expected result(s)
7)	MS_A7 releases the VBS call.	VBS call is released and all resources are correctly de-allocated. MS_A7 performs a normal location update successfully.
8)	Release all PTP calls in cell_A2.	PTP calls are successfully released and all resources are correctly de-allocated.

Test configuration for step 4

Network A



R-MSC_A1	**A-MSC_A2**
MS_A1 (no VGCS / VBS subscriber)	MS_A6 (no VGCS / VBS subscriber)
MS_A2 (no VGCS / VBS subscriber)	MS_A7 (VBS GID: 202)
MS_A3 (no VGCS / VBS subscriber)	MS_A8 (VBS GID: 202)
MS_A4 (no VGCS / VBS subscriber)	
MS_A5 (no VGCS / VBS subscriber)	

Test procedure

Step 4: VBS call establishment in anchor MSC_A2.

Step	Action	Expected result(s)
1)	MS_A1 establishes a PTP call to MS_A2 with priority 4 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A1 and MS_A2. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
2)	MS_A3 establishes a PTP call to MS_A4 with priority 4 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A3 and MS_A4. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'.
3)	MS_A5 establishes a PTP call to MS_A6 with priority 4 by dialling *75<Priority>#<MSISDN>.	The call is established correctly, there is a two-way voice path between MS_A5 and MS_A6. The priority is transmitted correctly through the network. The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup'. Only 1 TCH is available in cell_A1.
4)	MS_A7 originates a VBS call.	VBS call is correctly established. A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2. A group call channel (GCCH) is allocated in cell_A1. MS_A8 is notified about the incoming VBS call on the NCH. The DCH (uplink) remains allocated during the whole VBS call. No TCH is available in cell_A1.
5)	MS_A8 automatically accepts the VBS call.	MS_A8 automatically joins the VBS call in group receive mode. The priority is transmitted correctly through the network. The priority is seen on message: 'Notification Command' sent from the BSC. MS_A7 has two-way voice path. MS_B8 is only listener.

Step	Action	Expected result(s)
6)	MS_A7 moves from cell_A2 to cell_A1.	Inter MSC handover successfully performed. One ongoing PTP call in cell_A1 is pre-empted in order to allocate MS_A7. Clear request is sent from BSC to the MSC with cause “pre-emption”. Clear command is sent from MSC to the BSC with cause “pre-emption”.
7)	MS_A7 releases the VBS call.	VBS call is released and all resources are correctly de-allocated. MS_A7 performs a normal location update successfully.
8)	Release all PTP calls in cell_A1.	PTP calls are successfully released and all resources are correctly de-allocated.

d) Success criteria

An ongoing point to point voice call in the destination cell is pre-empted by an incoming inter MSC handover of the originator of an ongoing VBS call with a higher priority.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.76 Inter BSC handover of a point to point voice call with eMLPP pre-emption at A-IF

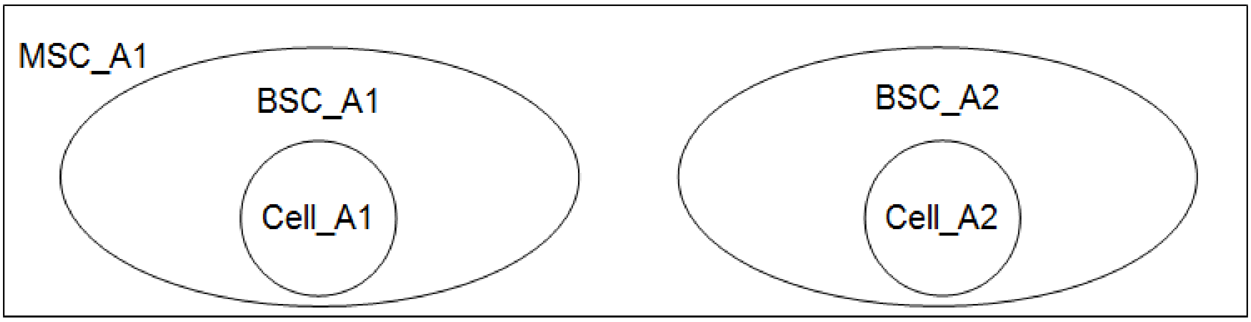
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 10.2.1	2.4.1	

a) Purpose

Verify that a PtP call can be pre-empted at A-IF by another PtP during a inter BSC-HO.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1	MS_A2
MS_A3	
MS_A4	
There is <u>only 1 TS available</u> at A-IF to BSC_A2	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2 No IDLE TS's at A-IF to BSC_A2
2	MS_A3 calls MS_A4 with prio 3	MS_A3 connected with MS_A4
3	MS_A3 moves to Cell_A2	**The connection MS_A1 to MS_A2 is pre-empted at A-IF to BSC_A2** MS_A3 still connected with MS_A4
4	MS_A3 releases the PtP call	All participants are IDLE
5	Unlock the TS's to BSC_A2	All resources are IDLE

d) Success criteria

A PtP call can be pre-empted at A-IF by another PtP during a inter BSC-HO.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.77 Inter BSC handover of a circuit switched data call with pre-emption with eMLPP pre-emption at A-IF

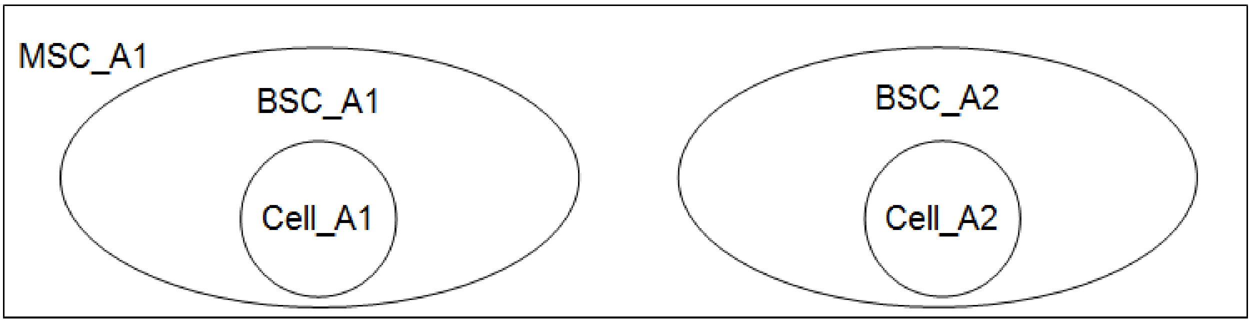
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 10.2.1	2.4.1	

a) Purpose

Verify that a PtP call can be pre-empted at A-IF by a data call during a inter BSC-HO.

b) Test configuration / initial conditions

Network A



Cell_A1	**Cell_A2**
MS_A1	MS_A2
MS_A3	
MS_A4	
There is <u>only 1 TS available</u> at A-IF to BSC_A2	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2 No IDLE TS's at A-IF to BSC_A2
2	MS_A3 originates a data call to MS_A4 with prio 3	MS_A3 connected with MS_A4
3	MS_A3 moves to Cell_A2	**The connection MS_A1 to MS_A2 is pre-empted at A-IF to BSC_A2** MS_A3 still connected with MS_A4
4	MS_A3 releases the data call	All participants are IDLE
5	Unlock the TS's to BSC_A2	All resources are IDLE

d) Success criteria

A PtP call can be pre-empted at A-IF by a data call with higher priority during a inter BSC-HO.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.78 Inter BSC handover of a railway emergency call originator with eMLPP pre-emption at A-IF

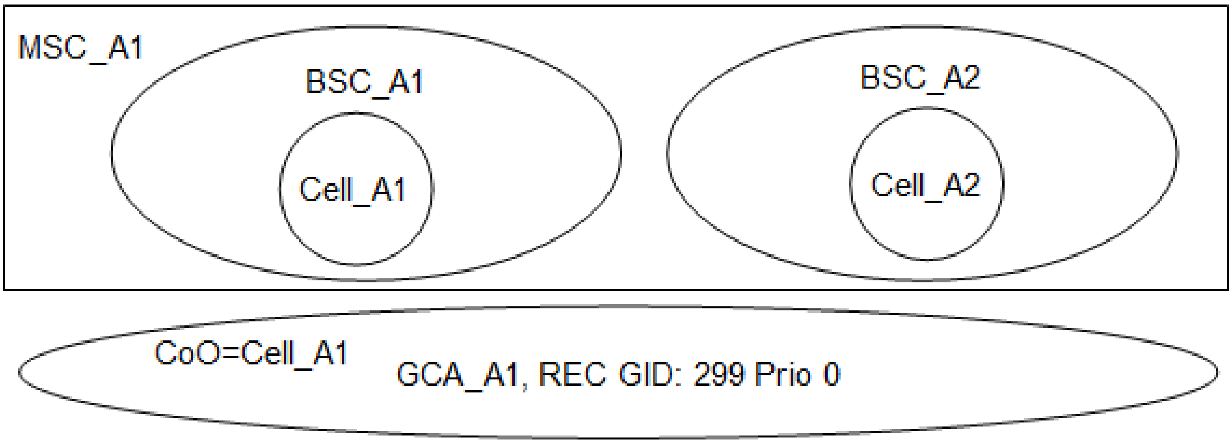
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 10.2.1	2.4.1	

a) Purpose

Verify that a PtP call can be pre-empted at A-IF by the DCH of a REC during a inter BSC-HO

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1 (no VGCS / VBS subscriber!)	MS_A2 (no VGCS / VBS subscriber)
MS_A3 (REC GID: 299)	MS_A4 (REC GID: 299)
MS_A5 (REC GID: 299)	
There are only 2 TS's available at A-IF to BSC_A2	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2
2	MS_A3 originates the REC and keeps the DCH	MS_A4 and MS_A5 receive the REC
3	MS_A3 moves to Cell_A2	**The connection MS_A1 to MS_A2 is pre-empted at A-IF to BSC_A2**
4	MS_A3 releases the DCH	MS_A5 can take the uplink and speak to MS_A3 and MS_A4.
5	MS_A3 releases the REC	All participants are IDLE
6	Unlock the TS's to BSC_A2	All resources are IDLE

d) Success criteria

A PtP call can be pre-empted at A-IF by the DCH of a REC during a inter BSC-HO.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.79 Inter BSC handover of a VGCS dedicated channel with eMLPP pre-emption at A-IF

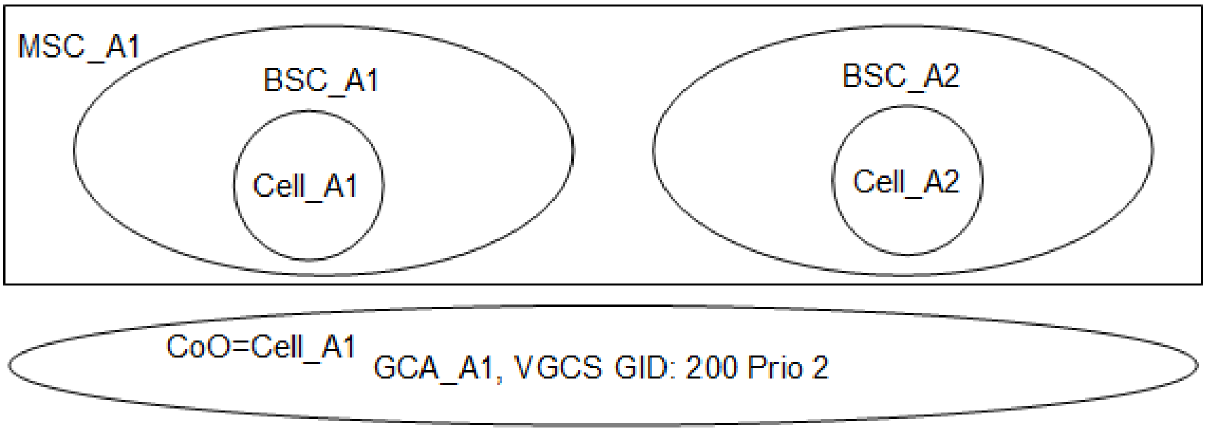
Reference to	EIRENE FRS V7	EIRENE SRS V15	Other
	2.4.1 2.4.5 10.2.1	2.4.1	

a) Purpose

Verify that a PtP call can be pre-empted at A-IF by the DCH of a VGCS during a inter BSC-HO.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1	MS_A2
MS_A3 (VGCS GID: 200)	MS_A4 (VGCS GID: 200)
MS_A5 (VGCS GID: 200)	
There are <u>only 2 TS's available</u> at A-IF to BSC_A2	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2
2	MS_A3 originates the 200 VGCS and keep the DCH	MS_A4 and MS_A5 receive the VGCS call
3	MS_A3 moves to Cell_A2	**The connection MS_A1 to MS_A2 is pre-empted at A-IF to BSC_A2**
4	MS_A3 releases the DCH	MS_A5 can take the uplink and speak to MS_A3 and MS_A4.
5	MS_A3 releases the VGCS call	All participants are IDLE
6	Unlock the TS's to BSC_A2	All resources are IDLE

d) Success criteria

A PtP call can be pre-empted at A-IF by the DCH of a VGCS during a inter BSC-HO.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

5.10.80 Inter BSC handover of a VBS originator with eMLPP pre-emption at A-IF

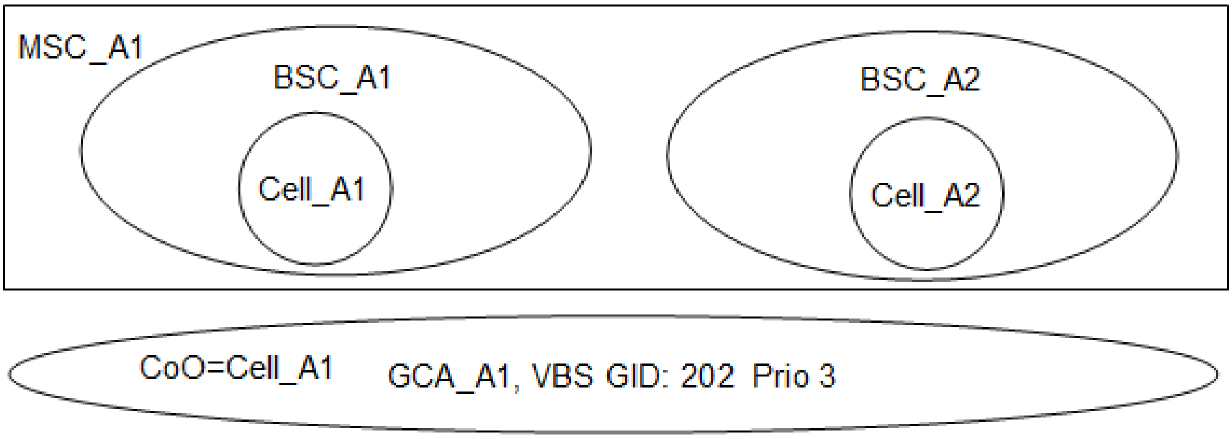
Reference to	EIRENE FRS V7	EIRENE SRS V15	other
	2.4.1 2.4.5 10.2.1	2.4.1	

a) Purpose

Verify that a PtP call can be pre-empted at A-IF by the DCH of a VBS during a inter BSC-HO.

b) Test configuration / initial conditions

Network A



Cell_A1	Cell_A2
MS_A1	MS_A2
MS_A3 (VBS GID: 202)	MS_A4 (VBS GID: 202)
MS_A5 (VBS GID: 202)	
There are <u>only 2 TS's available</u> at A-IF to BSC_A2	

c) Test procedure

Step	Action	Expected result(s)
1	MS_A1 calls MS_A2 with prio 4	MS_A1 connected with MS_A2
2	MS_A3 originates the 202 VBS	MS_A4 and MS_A5 receive the VBS call
3	MS_A3 moves to Cell_A2	**The connection MS_A1 to MS_A2 is pre-empted at A-IF to BSC_A2**
4	MS_A3 releases the VBS call	All participants are IDLE
5	Unlock the TS's to BSC_A2	All resources are IDLE

d) Success criteria

A PtP call can be pre-empted at A-IF by the DCH of a VBS with higher priority during a inter BSC-HO.

e) Test result

Specific test configuration	
Specific test conditions	
Remarks	
Attachments (log / trace file)	
Test result	**Passed / failed / test not performed**
Signature	

6 Annex

6.1 Annex - "IOT test case overview"

The involved Notifies Bodies reviewed the IOT test case overview and confirmed completeness regarding to the mandatory requirements of the EIRENE specifications E-FRS V7 and E-SRS V15 as well as with respect to the TSI and the relevant ETSI specifications.

Note: The indicated cross references in the IOT test case table between E-FRS V7 / E-SRS V15 and the test cases are given in such way that every mandatory requirement is covered by at least one test case.

6.1.1 Overview of the IOT test cases

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
1	Basic and Supplementary Services					
1.1	Successful Location Update after MS Power On (non-roaming case)	No	Yes	No		
1.2	Successful Location Update after change of Location Area (non-roaming case)	No	Yes	Yes		
1.3	Unsuccessful Location Update (HLR ID on the SIM card is unknown) (non-roaming case)	No	Yes	No		
1.4	Unsuccessful Location Update (due to PLMN not allowed) (non-roaming case)	No	Yes	No		
1.5	Successful Location Cancellation (non-roaming case)	No	Yes	No		
1.6	Successful IMSI Detach by MS Power Off (non-roaming case)	No	Yes	No		
1.7	MTM to detached mobile subscriber (non-roaming case)	No	Yes	No	2.2.1 2.2.3 2.2.4	2.2.1
1.8	MTM, mobile subscribers are in different Location areas (non-roaming case)	No	Yes	Yes	2.2.1 2.2.2 2.2.3 2.2.4 3.2.3	2.2.1 9.7.1 9.7.2 9.7.3 10.7.1i 10.7.3
1.9	MTM, radio link failure on A-side, A and B subscriber are in different cell (non-roaming case)	No	Yes	No	2.2.1 2.2.3 2.2.4	2.2.1
1.10	Supplementary Service Call Hold (non-roaming case)	No	Yes	No	2.4.1 2.4.13 2.4.14	2.4.1
1.11	Supplementary Service Call Waiting (non-roaming case)	No	Yes	No	2.4.1 2.4.15	2.4.1
1.12	Supplementary Service CLIP – MTM with Call Forwarding Unconditional (non-roaming case)	No	Yes	No	2.4.1 2.4.2 2.4.12	2.4.1

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
1.13	Supplementary Service COLP (non-roaming case)	No	Yes	No		2.4.1
1.14	Supplementary Service MPTY (incl. Multivendor MPTY) (non-roaming case)	No	Yes	No	2.2.1 2.2.17 2.2.18	2.4.1 2.5.1
1.15	Notification of Call Forwarding (non-roaming case)	No	Yes	No	2.4.1 2.4.12	2.4.1
1.16	Establishment of several data calls (Bearer and Tele Services) with different eMLPP priotities(non-roaming case)	No	Yes	No	2.3.1 2.3.6 2.3.8 2.3.13 2.4.1 2.4.5 9.2.1.2 10.2.1 10.2.2	10.2.1 2.3.1
1.17	Establishment of several PTP calls with different priorities (non-roaming case)	No	Yes	No	2.4.1 2.4.5 10.2.1 10.2.2	10.2.1
1.18	Call to busy Mobile – CFBusy to other mobile subscriber (non-roaming case)	No	Yes	No	2.4.1 2.4.12	2.4.1
1.19	MOC when terminator rejects call (non-roaming case)	No	Yes	No		
1.20	Unsuccessful MOC due to unallocated number (non-roaming case)	No	Yes	No		
1.21	MTC – Paging Time Out (non-roaming case)	No	Yes	No		9.7.4 (MT call)
1.22	Unsuccessful MTC, subscriber not in VLR (non-roaming case)	No	Yes	No		
1.23	Successful Location Update after MS Power On (roaming case)	Yes	No	No		
1.24	Successful Location Update after change of Location Area (roaming case)	Yes	No	No		
1.25	Unsuccessful Location Update (HLR ID on the SIM card is unknown) (roaming case)	Yes	No	No		
1.26	Unsuccessful Location Update (due to PLMN not allowed) (roaming case)	Yes	No	No		
1.27	Successful Location Cancellation (roaming case)	Yes	No	No		

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
1.28	Successful IMSI Detach by MS Power Off (roaming case)	Yes	No	No		
1.29	MTM to detached mobile subscriber (roaming case)	Yes	No	No	2.2.1 2.2.3 2.2.4	2.2.1
1.30	MTM, mobile subscribers are in different Location areas (roaming case)	Yes	No	No	2.2.1 2.2.3 2.2.4	2.2.1 10.7.1i 10.7.3
1.31	MTM, radio link failure on A-side, A and B subscriber are in different cell (roaming case)	Yes	No	No	2.2.1 2.2.3 2.2.4	2.2.1
1.32	Supplementary Service Call Hold (roaming case)	Yes	No	No	2.4.1 2.4.13 2.4.14	2.4.1
1.33	Supplementary Service Call Waiting (roaming case)	Yes	No	No	2.4.1 2.4.15	2.4.1
1.34	Supplementary Service CLIP – MTM with Call Forwarding Unconditional (roaming case)	Yes	No	No	2.4.1 2.4.2 2.4.12	2.4.1
1.35	Supplementary Service COLP(roaming case)	Yes	No	No		2.4.1
1.36	Supplementary Service MPTY (incl. Multivendor MPTY) (roaming case)	Yes	No	No	2.2.1 2.2.17 2.2.18	2.4.1 2.5.1
1.37	Notification of Call Forwarding (roaming case)	Yes	No	No	2.4.1 2.4.2 2.4.12	2.4.1
1.38	Establishment of several data calls with different eMLPP priotities (roaming case)	Yes	No	No	2.3.1 2.3.6 2.3.8 2.3.13 2.4.1 2.4.5 10.2.1 10.2.2	10.2.1 2.3.1

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
1.39	Establishment of several PTP calls with different priorities (roaming case)	Yes	No	No	2.4.1 2.4.5 10.2.1 10.2.2	10.2.1
1.40	Call to busy Mobile – CFBusy to other mobile subscriber (roaming case)	Yes	No	No	2.4.1 2.4.12	2.4.1
1.41	MOC when terminator rejects call (roaming case)	Yes	No	No		
1.42	Unsuccessful MOC due to unallocated number (roaming case)	Yes	No	No		
1.43	MTC – Paging Time Out (roaming case)	Yes	No	No		
1.44	Unsuccessful MTC, subscriber not in VLR (roaming case)	Yes	No	No		
1.45	Closed User Group (non-roaming case)	No	Yes	No	2.4.1 2.4.8 2.4.9 10.4	2.4.1 10.4.2 11.3.2 11.3.8i 11.5.1
1.46	Closed User Group (roaming case)	Yes	No	No	2.4.1 2.4.8 2.4.9 10.4	2.4.1 10.4.2 11.3.2 11.3.8i 11.5.1
1.47	Call barring (roaming case)	Yes	No	No	2.4.1 2.4.17	2.4.1 9.10.2
1.48	Public Emergency Call – With SIM (non-roaming case)	No	Yes	No	2.2.1 2.2.5 9.3.2	2.2.1
1.49	Public Emergency Call – Without SIM (non-roaming case)	No	Yes	No	2.2.1 2.2.5 9.3.2	2.2.1
1.50	Public Emergency Call – with TMSI and IMSI unknown in VLR (non-roaming case)	No	Yes	No	2.2.1 2.2.5 9.3.2	2.2.1
1.51	Public Emergency Call – With SIM (roaming case)	Yes	No	No	2.2.1 2.2.5 9.3.2	2.2.1

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
1.52	Public Emergency Call – Without SIM (roaming case)	Yes	No	No	2.2.1 2.2.5 9.3.2	2.2.1
1.53	Public Emergency Call – with TMSI and IMSI unknown in VLR (roaming case)	Yes	No	No	2.2.1 2.2.5 9.3.2	2.2.1
2	Functional Addressing					
2.1	Registration of a FN (non-roaming case)	No	Yes	No	2.5.1 11.2.1.1 11.3.2.1 11.3.2.3	2.4.1 2.5.1 11.3.2 11.3.5 11.3.7
2.2	Register 3 function numbers to one user (non-roaming case)	No	Yes	No	11.2.1.4	2.4.1 2.5.1
2.3	Register 3 function numbers to one user (roaming case)	Yes	No	No	11.2.1.4	2.4.1 2.5.1
2.4	Registration of a unknown FN fails (non-roaming case)	No	Yes	No	11.3.2.4	2.4.1 2.5.1 11.3.8 11.3.9
2.5	Deregistration of a FN (non-roaming case)	No	Yes	No	2.5.1 11.3.3.1 11.3.3.3 11.3.3.5	2.4.1 2.5.1 11.3.2 11.3.5 11.3.7 11.3.10 11.3.12
2.6	Deregistration of a FN fails (non-roaming case)	No	Yes	No	11.3.3.1	2.4.1 2.5.1 11.3.10 11.3.12
2.7	Forced Deregistration of a FN (non-roaming case)	No	Yes	No	11.3.3.4	2.4.1 2.5.1 11.3.7 11.3.8i
2.8	Forced Deregistration of a FN fails (non-roaming case)	No	Yes	No	11.3.3.4	2.4.1 2.5.1 11.3.7 11.3.8i

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
2.9	Class of registration (CoR) check (non-roaming case)	No	Yes	No		2.4.1 2.5.1 11.3.6
2.10	Registration of a FN (roaming case)	Yes	No	No	11.2.1.1 11.2.1.7 11.2.1.8 11.3.2.1 11.3.2.3 11.3.4	2.4.1 2.5.1 11.3.2 11.3.7 11.3.14 11.3.17 11.6
2.11	Registration of a unknown FN fails (roaming case)	Yes	No	No	11.3.2.4	2.4.1 2.5.1 11.3.8 11.3.9
2.12	Check of the storage of CT2 Number and its destination in the current EIRENE network.	Yes	No	No		9.2.3
2.13	Check of the storage of CT3 Number and the according destination in the home EIRENE network.	Yes	No	No		9.2.5
2.14	Check of the storage of CT4 Number and its destination in the home EIRENE network.	Yes	No	No		9.2.6
2.15	Check of the storage of CT6 and CT7 Numbers and their destina-tions in the home EIRENE network.	No	Yes	No		9.2.8
2.16	Registration failures --> outcome code 61 [remote party already registered] (non-roaming case)	No	Yes	No	9.2.2.2 9.2.3.2 11.2.1.5 11.2.2.1 11.3.2.5	2.4.1 2.5.1 9.2.1 11.3.8 11.3.9
2.17	Registration failures --> outcome code 61 [remote party already registered] (roaming case)	Yes	No	No	9.2.2.2 9.2.3.2 11.2.1.5 11.2.2.1 11.3.2.5	2.4.1 2.5.1 9.2.1 11.3.8 11.3.9

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
2.18	Deregistration of a FN (roaming case)	Yes	No	No	11.2.1.7 11.2.1.8 11.3.3.1 11.3.3.3 11.3.3.5	2.4.1 2.5.1 11.3.2 11.3.7 11.3.10 11.3.12 11.3.14 11.3.17 11.6
2.19	Deregistration of a FN fails (roaming case)	Yes	No	No	11.2.1.7 11.2.1.8 11.3.3.1	2.4.1 2.5.1 11.3.10 11.3.12
2.20	Forced Deregistration of a FN (roaming case)	Yes	No	No	11.3.3.4	2.4.1 2.5.1 11.3.8i 11.3.17 11.6
2.21	Forced Deregistration of a FN fails due to a missing supervisor CoR (roaming case)	Yes	No	No	11.3.3.4	2.4.1 2.5.1 11.3.8i
2.22	Class of registration (CoR) check (roaming case)	Yes	No	No		2.4.1 2.5.1 11.3.6
2.23	FFN-Recovery	Yes	No	No	11.3.2.6	11.4.1

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
2.24	FA Call - Successful Call (national call)	No	Yes	No	3.2.3 9.2.1.1 9.2.4.1 9.2.4.2 9.2.4.3 9.2.4.4 2.4.3 11.2.1.10 11.2.2.2 11.2.3.1 11.2.3.2 11.2.3.3 11.2.3.4 11.2.3.5	2.4.1 2.5.1 9.2.2 9.2.4 9.2.7 9.4.1 9.5.2 9.5.3 9.5.4 9.6.2 9.A2 9.A3 11.2.3 11.5.1 11.5.2 11.5.4 11.5.5
2.25	FA Call – Call is not completed (national call)	No	Yes	No		
2.26	FA Call - Successful Call (international call)	Yes	No	No	9.2.1.1 2.4.3 11.2.1.10 11.2.3.1 11.2.3.2 11.2.3.3 11.2.3.4 11.2.3.5	2.4.1 2.5.1 9.4.1 9.5.2 9.6.2 9.6.3 9.6.4 9.10.1 9.10.1ii 11.5.1 11.5.2 11.5.4 11.5.5
2.27	FA Call – Call is not completed (international call)	Yes	No	No		
3	Access Matrix and Access to External Networks					

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
3.1	National call: AM allows call	No	Yes	No	10.6.1 10.6.2	11.8.1
3.2	National call: AM denies call	No	Yes	No	10.6.1 10.6.2	11.8.1
3.3	International call: AM allows call	Yes	No	No	10.6.1 10.6.2	9.3.4 9.10.1 9.10.1ii 11.8.1
3.4	International call: AM denies call	Yes	No	No	10.6.1 10.6.2	11.8.1
3.5	Calling party outside the EIRENE network (non-roaming case)	No	Yes	No	2.4.17 9.5.1 11.2.1.10	9.2.9 11.8.1
3.6	Calling party outside the EIRENE network (roaming case)	Yes	No	No	2.4.17 9.5.1 11.2.1.10	9.2.9 11.8.1
3.7	Access to other GSM-R networks: Break out codes (non-roaming case)	Yes	No	No		9.4.2 9.10.1 9.10.1i 9.10.1ii 9.10.1iii
3.8	Access to other GSM-R networks: Break out codes (roaming case)	Yes	No	No		9.4.2 9.10.1 9.10.1i 9.10.1ii 9.10.1iii
3.9	Access to public networks (non-roaming case)	No	Yes	No		9.10.3
3.10	Acces to public networks (roaming case)	Yes	No	No		9.10.3
3.11	Access to private networks: Break out codes (non-roaming case)	No	Yes	No		9.10.1v
3.12	Access to private networks: Break out codes (roaming case)	Yes	No	No		9.10.1v
4	Location Depending Addressing					

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
4.1	LDA call (non-roaming case)	No	Yes	No	2.5.1 3.2.3 9.3.2 11.4	2.5.1 9.4.1 9.8.1 9.8.2 9.8.3 9.8.4 11.7.1 11.7.2
4.2	LDA call fails (non-roaming case)	No	Yes	No	2.5.1 11.4	2.5.1 11.7.1 11.7.2
4.3	LDA call (roaming case)	Yes	No	No	2.5.1 9.3.2 11.4	2.5.1 9.4.1 9.8.1 9.8.2 9.8.3 9.8.4 11.7.1 11.7.2
4.4	LDA call fails (roaming case)	Yes	No	No	2.5.1 11.4	2.5.1 11.7.1 11.7.2
5	MLPP					
5.1	ptp call pre-emption at the E-IF between two networks by a REC	Yes	No	No	2.4.1 2.4.6 2.4.7 10.2.3	2.4.1 10.2.1
5.2	ptp call pre-emption at the E-IF between two networks by an other ptp call	Yes	No	No	2.4.6 2.4.7 10.2.3	
5.3	Link to a controller of a VGCS call is preempted at the E-IF be-tween two networks by a REC	Yes	No	No	2.4.6 2.4.7 10.2.3	
5.4	Link to the originator as first talker of a VGCS call is preempted at the E-IF between two networks by a REC	Yes	No	No	2.4.6 2.4.7 10.2.3	

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
5.5	Link between A-MSC and R-MSC of VGCS call is preempted at the E-IF between two networks by a REC	Yes	No	No	2.4.6 2.4.7 10.2.3	
5.6	Link to a controller of a VGCS call is preempted at the E-IF between two networks by a ptp call	Yes	No	No	2.2.2 2.4.6 2.4.7 10.2.3	
5.7	Link to the originator as first talker of a VGCS call is preempted at the E-IF between two networks by a ptp call	Yes	No	No	2.4.6 2.4.7 10.2.3	
5.8	Link between A-MSC and R-MSC of VGCS call is preempted at the E-IF between two networks by a ptp call	Yes	No	No	2.4.6 2.4.7 10.2.3	
5.9	Inter MSC handover of a point to point voice call with MLPP pre-emption at E-IF	Yes	Yes	No	2.4.1	
5.10	Inter MSC handover of a circuit switched data call with MLPP pre-emption at E-IF	Yes	Yes	No	2.4.1	
5.11	Inter MSC handover of a railway emergency call originator with pre-emption at E-IF	Yes	Yes	No	2.4.1	
5.12	Inter MSC handover of a VGCS dedicated channel with MLPP pre-emption at E-IF	Yes	Yes	No	2.4.1	
5.13	Inter MSC handover of a VBS originator channel with MLPP pre-emption at E-IF	Yes	Yes	No	2.4.1	
6	REC				2.5.1	
6.1	REC call setup by a service subscriber (non-roaming case)	No	Yes	No	9.3.2 13.1.6 13.2.2.2 13.2.3.1 13.2.3.3 13.2.4.1	2.5.1 13.2.2 13.3.3
6.2	REC call setup by a controller	No	Yes	No	9.3.2 13.2.3.1 13.2.3.3 13.2.4.1	2.5.1 9.5.4 13.2.2 13.3.1 13.3.3

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
6.3	REC notification and joining (non-roaming case)	No	Yes	No	13.1.6 9.3.2 13.2.2.2 13.2.3.1 13.2.3.3	2.5.1 9.5.4 13.2.2 13.3.1 13.3.3 13.4.1 13.4.2
6.4	REC acknowledgement (non-roaming case)	No	Yes	No	13.4.5 13.4.6	2.5.1 13.5.3 13.5.5 13.5.7 13.5.9 13.5.10
6.5	REC call setup by a service subscriber (roaming case)	Yes	No	No	9.3.2 13.1.6 13.2.2.2 13.2.3.1 13.2.3.3 13.2.4.1	2.5.1 13.2.2 13.3.3
6.6	REC notification and joining (roaming case)	Yes	No	No	13.1.6 9.3.2 13.2.2.2 13.2.3.1 13.2.3.3	2.5.1 13.2.2 13.2.3 13.3.1 13.3.3 13.4.1 13.4.2
6.7	REC acknowledgement (roaming case)	Yes	No	No	13.4.5 13.4.6	2.5.1 13.5.3 13.5.5 13.5.7 13.5.9 13.5.10
6.8	C-OTDI check	No	Yes	No	2.2.1 13.3.2	2.2.1 2.5.1 13.4.6 13.4.7

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
6.9	LE idle mode (non-roaming case)	No	Yes	No	13.2.2.7	2.5.1
6.10	LE dedicated mode (non-roaming case)	No	Yes	No	13.2.2.7	2.5.1
6.11	LE group receive mode (non-roaming case)	No	Yes	No	13.2.2.7	2.5.1
6.12	LE group transmit mode (non-roaming case)	No	Yes	No	13.2.2.7	2.5.1
6.13	LE group mode, dedicated channel (non-roaming case)	No	Yes	No	13.2.2.7	2.5.1
6.14	LE idle mode (roaming case)	Yes	No	No	13.2.2.7	2.5.1
6.15	LE dedicated mode (roaming case)	Yes	No	No	13.2.2.7	2.5.1
6.16	LE group receive mode (roaming case)	Yes	No	No	13.2.2.7	2.5.1
6.17	LE group transmit mode (roaming case)	Yes	No	No	13.2.2.7	2.5.1
6.18	LE group mode, dedicated channel (roaming case)	Yes	No	No	13.2.2.7	2.5.1
6.19	VGCS call is taken down due to expiry of ‘No activity’ timer.	No	Yes	No	13.2.4.1	
6.20	REC first talker notification (MS dedicated mode, incoming ptp call, non-roaming case)	No	Yes	No	2.2.1 5.2.2.43	5.5.19 5.5.20 5.5.21 14.3.3
6.21	REC first talker notification (MS dedicated mode, incoming REC call), non-roaming case)	No	Yes	No	2.2.1 5.2.2.47	5.5.19 5.5.20 5.5.21
6.22	REC first talker notification (MS dedicated mode, incoming VBS call, non-roaming case)	No	Yes	No	2.2.1 5.2.2.47	5.5.19 5.5.20 5.5.21
6.23	REC first talker notification (MS dedicated mode, incoming ptp call, roaming)	Yes	No	No	2.2.1 5.2.2.43	5.5.19 5.5.20 5.5.21 14.3.3
6.24	REC first talker notification (MS dedicated mode, incoming REC call, roaming case)	Yes	No	No	2.2.1 5.2.2.47	5.5.19 5.5.20 5.5.21
6.25	REC first talker notification (MS dedicated mode, incoming VBS call, roaming case)	Yes	No	No	2.2.1 5.2.2.47	5.5.19 5.5.20 5.5.21

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
6.26	REC first talker notification (MS dedicated mode, incoming second REC), non-roaming case)	No	Yes	No	2.2.1 5.2.2.47 13.3.1	5.5.19 5.5.20 5.5.21
6.27	REC first talker notification (MS dedicated mode, incoming second REC, roaming case)	Yes	No	No	2.2.1 5.2.2.47 13.3.1	5.5.19 5.5.20 5.5.21
6.28	Shunting emergency call (non-roaming case)	No	Yes	No	13.1.7 13.1.8 13.2.4.1	2.5.1 9.5.4 13.2.2 13.3.1 13.3.3
6.29	Shunting emergency call (roaming case)	Yes	No	No	13.1.7 13.1.8 13.2.4.1	2.5.1 9.5.4 13.2.2 13.3.1 13.3.3
7	eMLPP				2.4.1 2.4.5 10.2.1	2.4.1
7.1	MS in VBS call as listener, pre-emption on MS by higher prio PtP call.	No	Yes	No	2.4.6 2.4.7 3.2.3 10.2.2 10.2.3	
7.2	MS in VGCS call on DCH, pre-emption on Um IF by higher prio PtP call	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.3	MS in VGCS call having the UL of the GCH, pre-emption on A IF by higher prio PtP call	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
7.4	MS in PEC, pre-emption on A IF by higher prio PtP call	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	9.8.5
7.5	MS in PtP call, pre-emption on MS by higher prio VBS call	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.6	MS in VBS call as originator, pre-emption on A IF by higher prio VBS call	No	Yes	No	2.2.9 2.4.6 2.4.7 10.2.2 10.2.3	
7.7	MS in VBS call as listener, pre-emption on Um IF by higher prio VBS call.	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.8	MS in VGCS call on DCH, pre-emption on MS by higher prio VBS call	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.9	MS in VGCS call having the UL of the GCH, pre-emption on Um IF by higher prio VBS call.	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.10	MS in data call, pre-emption on A IF by higher prio VBS call	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.11	MS in PEC, pre-emption on Um IF by a REC	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
7.12	MS in PtP call, pre-emption on A IF by higher prio PtP call.	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.13	MS in PtP call, pre-emption on MS by higher prio VGCS call (REC)	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.14	MS in VBS call as originator, pre-emption on Um IF by higher prio VGCS call (REC)	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.15	MS in VBS call as listener, pre-emption on A IF by higher prio VGCS call (REC)	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.16	MS in VGCS call having the UL of the GCH, pre-emption on MS by higher prio VGCS call (REC)	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.17	MS in VGCS call as listener, pre-emption on A IF by higher prio VGCS call (REC)	No	Yes	Yes	2.2.14 2.4.6 2.4.7 10.2.2 10.2.3	
7.18	MS in data call, pre-emption on Um IF by higher prio VGCS call (REC)	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.19	MS in PtP call, pre-emption on Um IF by higher prio data call (4.8 kbit/s, transparent)	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
7.20	MS in VBS call as originator, pre-emption on Um IF by higher prio data call (9.6 kbit/s, transparent)	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.21	MS in VGCS call on DCH, pre-emption on A IF by higher prio data call (9.6 kbit/s, transparent)	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.22	MS in VGCS as listener, pre-emption on Um IF by higher prio data call (4.8 kbit/s, transparent)	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.23	MS in VBS call as originator, pre-emption on A IF by higher prio data call (2.4 kbit/s, transparent)	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.24	MS in VBS call as originator, pre-emption on A IF by lower prio PtP call does not take place.	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.25	MS in VBS call as listener, pre-emption on Um IF by lower prio PtP call does not take place.	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.26	MS in VGCS call as listener, pre-emption on Um IF by lower prio PtP call does not take place	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.27	MS in data call, pre-emption on A IF by lower prio PtP call does not take place.	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
7.28	MS in VGCS call , pre-emption on Um IF by lower prio VBS call does not take place.	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.29	MS in VGCS call as listener, pre-emption on A IF by lower prio VBS call does not take place.	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.30	MS in VGCS call on DCH, pre-emption on A IF by lower prio VGCS call does not take place.	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.31	MS in VGCS call having the UL on the GCH, pre-emption on Um IF by lower prio VGCS all does not take place.	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.32	MS in PEC, pre-emption on Um IF by lower prio VGCS call does not take place	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	9.8.5
7.33	MS in VBS call as originator, pre-emption on Um IF by lower prio data call does not take place	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.34	MS in VBS call as listener, pre-emption on A IF by lower prio data call does not take place.	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.35	MS in VGCS call having the UL of the GCH, pre-emption on A IF by lower prio data call does not take place.	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
7.36	MS in data call, pre-emption on Um IF by lower prio data call does not take place	No	Yes	No	2.4.6 2.4.7 10.2.2 10.2.3	
7.37	MS in PEC, pre-emption on A IF by lower prio data call does not take place.	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	9.8.5
7.38	Pre-emption of VBS A IF resources on A and B BSS simultane-ously	No	No	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.39	Pre-emption of VGCS A IF resources on A and B BSS simultane-ously	No	No	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.40	Pre-emption of VBS Um IF resources on A and B BSS simultane-ously	No	No	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.41	Pre-emption of VGCS Um IF resources on A and B BSS simulta-neously	No	No	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.42	VGCS ongoing in GCA covering both BSS, pre-emption of the B VGCS resources on Um. VGCS on A BSS is still up.	No	No	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.43	VGCS ongoing in GCA covering both BSS, pre-emption of the A VGCS resources on Um. VGCS on B BSS is still up.	No	No	Yes	2.4.6 2.4.7 10.2.2 10.2.3	

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
7.44	eMLPP priority is preserved during CFU (Call Forwarding Unconditionally)	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.45	eMLPP priority is preserved during CFB (Call Forwarding Busy)	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.46	Multi-Party: M6PORT: with different Prio	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.47	Preemption on A-IF when pre-empted party has no subscription to eMLPP (assignment of default eMLPP priority)	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.48	Preemption on Um-IF when pre-empted party has no subscription to eMLPP (assignment of default eMLPP priority)	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.49	3TS available on A IF, 1 TS in use by prio 3 GCH, 1 TS in use by prio 4 GCH. Make prio 3 VBS and verify that the prio4 GCH is pre-empted	No	Yes	Yes	2.4.6 2.4.7 10.2.2 10.2.3	
7.50	Check of maximum authorized eMLPP level (non-roaming case)	No	Yes	No	2.4.1	2.4.1
7.51	Check of maximum authorized eMLPP level (roaming case)	Yes	No	No	2.4.1	2.4.1
8	VGCS				9.2.5.1	2.2.1

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
8.1	SS originates VGCS call	No	Yes	No	2.2.1 2.2.12 2.2.15 2.2.16 3.2.3 3.5.2 3.5.3 11.2.3.2	9.2.10 9.2.11 9.9.3 9.9.5
8.2	Serv. Subs. Originates a VGCS (p3) call.	No	Yes	No	2.2.1	2.2.1
8.3	Controller originates a VGCS (p2) –call and takes it down with the kill Sequence	No	Yes	No	2.2.1 3.5.2 3.5.3	2.2.1 3.7.2 9.9.2
8.4	SS originates VGCS call, leaves, rejoins and ends it.	No	Yes	No		
8.5	SS is notified when entering into VGCS broadcast area with ongo-ing VGCS call	No	Yes	No	3.5.7	
8.6	Controller joins ongoing VGCS call	No	Yes	No		
8.7	Originator of VGCS call releases DCH	No	Yes	Yes		
8.8	Originator of VGCS call takes Uplink	No	Yes	Yes		
8.9	Joiner of VGCS call takes Uplink	No	Yes	Yes		
8.10	Un-mute and Mute sequence for originating Controller	No	Yes	No		3.7.2 3.8.1 3.8.2 3.8.4 3.8.5
8.11	Un-mute and Mute sequence for joining Controller	No	Yes	No		3.7.2 3.8.1 3.8.2 3.8.4 3.8.5
8.12	Parallel group calls are possible in the same cell.	No	Yes	No		

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
8.13	Parallel VBS/VGCS calls with same GID are possible (same BSS and different BSS)	No	Yes	Yes	2.2.1 2.2.7 3.5.2 3.5.3	2.2.1
8.14	MSC receives VBS/VGCS Queuing Indication followed by Assign-ment Result from non COO	No	Yes	No	1.4.1.1	
8.15	MSC receives VBS/VGCS Queuing Indication followed by Assign-ment Result from COO	No	Yes	No	1.4.1.1	
8.16	MSC receives VBS/VGCS Queuing Indication followed by Assign-ment Failure from non COO	No	Yes	No		
8.17	Origination of VGCS call from non subscribed MS fails	No	Yes	No	2.2.1	2.2.1
8.18	Origination by a controller fails	No	Yes	No		
8.19	Killing of VGCS call by a controller fails	No	Yes	No		
8.20	Uplink release when DCH is allocated in case of SS contact lost	No	Yes	No		
8.21	Uplink release when DCH is allocated in case of Equipment failure (TRX)	No	Yes	No		
8.22	Uplink Release when DCH is allocated in case of Equipment failure (PCM)	No	Yes	Yes		
8.23	Uplink release when GCH Uplink is allocated in case of SS contact lost	No	Yes	No		
8.24	Uplink release when GCH Uplink is allocated in case of Equipment failure (TRX)	No	Yes	No		
8.25	Uplink release when GCH Uplink is allocated in case of Equipment failure (PCM)	No	Yes	Yes		
8.26	Uplink Request is rejected due to Uplink already allocated	No	Yes	No	5.2.2.51 5.2.2.53 5.2.2.54 6.2.2.10 6.2.2.12 6.2.2.13 7.2.2.18 7.2.2.20 7.2.2.21	

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
8.27	2 Controllers initiate VGCS with the same GID but different GCAs	No	Yes	No	3.5.2 3.5.3	
8.28	VGCS call taken down during setup by SS	No	Yes	No		
8.29	VGCS call taken down during setup by a controller	No	Yes	No		
8.30	More than 1 Uplink Request at the same time (same BSS and different BSS)	No	Yes	Yes	2.2.16 5.2.2.51 5.2.2.53 5.2.2.54 6.2.2.10 6.2.2.12 6.2.2.13 7.2.2.18 7.2.2.20 7.2.2.21	
8.31	2 SS originate VGCS call at same time (same BSS and different BSS)	No	Yes	Yes		
8.32	2 controllers originate VGCS call at the same time	No	Yes	Yes		
8.33	VGCS originator leaves GCA	No	Yes	No		
8.34	VGCS talker leaves GCA	No	Yes	No		
8.35	Service Subscriber initiated VGCS from Relay MSC in PLMN A, call to A-MSC Controller	Yes	No	No	9.4.2	9.5.4 9.9.4
8.36	Controller originates a VGCS call from Relay MSC	Yes	No	No		9.5.4
8.37	SS initiated VGCS call from Relay MSC. Controller in A-MSC area can re-connect to on-going VGCS call	Yes	No	No	2.2.1	
8.38	VGCS first talker notification (MS dedicated mode, incoming ptp call, non-roaming case)	No	Yes	No	2.2.1 5.2.2.43	5.5.19 5.5.20 5.5.21 14.3.3
8.39	VGCS first talker notification (MS dedicated mode, incoming VGCS call), non-roaming case)	No	Yes	No	2.2.1 5.2.2.47	5.5.19 5.5.20 5.5.21

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
8.40	VGCS first talker notification (MS dedicated mode, incoming VBS call, non-roaming case)	No	Yes	No	2.2.1 5.2.2.47	5.5.19 5.5.20 5.5.21
8.41	VGCS first talker notification (MS dedicated mode, incoming ptp call, roaming)	Yes	No	No	2.2.1 5.2.2.43	5.5.19 5.5.20 5.5.21 14.3.3
8.42	VGCS first talker notification (MS dedicated mode, incoming VGCS call, roaming case)	Yes	No	No	2.2.1 5.2.2.47	5.5.19 5.5.20 5.5.21
8.43	VGCS first talker notification (MS dedicated mode, incoming VBS call, non-roaming case)	Yes	No	No	2.2.1 5.2.2.47	5.5.19 5.5.20 5.5.21
8.44	VGCS first talker notification (MS dedicated mode, incoming REC), non-roaming case)	No	Yes	No	2.2.1 5.2.2.47 13.3.1	5.5.19 5.5.20 5.5.21
8.45	VGCS first talker notification (MS dedicated mode, incoming REC, roaming case)	Yes	No	No	2.2.1 5.2.2.47 13.3.1	5.5.19 5.5.20 5.5.21
8.46	Multiple VGCS membership (non-roaming case)	No	Yes	No	2.2.14	
8.47	Multiple VGCS membership (roaming case)	Yes	No	No	2.2.14	
8.48	VGCS call established in CoO when non CoO is locked	No	Yes	No		
9	VBS					2.2.1 without TCs 9.47 and 9.48
9.1	SS originates VBS call	No	Yes	No	2.2.1 2.2.7 2.2.11 3.2.3 3.5.2 3.5.3 11.2.3.2	9.2.11
9.2	Modification of broadcast area.	No	Yes	No	2.2.10	

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
9.3	SS originates a VBS (prio4) call.	No	Yes	No		
9.4	Controller originates a VBS (prio3) –call.	No	Yes	No	3.5.2 3.5.3	9.2.11 9.5.4
9.5	Controller originates a VBS (prio4) –call.	No	Yes	No	3.5.2 3.5.3	
9.6	Controller joins ongoing VBS call	No	Yes	No		
9.7	SS enters into VBS broadcast area with ongoing VBS call and is notified of it, SS joins the VBS call	No	Yes	No		
9.8	Parallel VBS (different GID) calls are possible in the same cell.	No	Yes	No		
9.9	Parallel VBS calls with the same GID are possible (same BSS, different BSS)	No	Yes	Yes		
9.10	2 controllers initiate VBS with the same GID but different GCAs	No	Yes	No	3.5.2 3.5.3	
9.11	MSC receives VBS/VGCS Queuing Indication followed by Assignment Result from non COO during SS originated VBS call	No	Yes	No		
9.12	MSC receives VBS/VGCS Queuing Indication followed by Assignment Result from COO during SS originated VBS call	No	Yes	No		
9.13	MSC receives VBS/VGCS Queuing Indication followed by Assignment Failure from non COO during SS originated VBS call	No	Yes	No		
9.14	MSC receives VBS/VGCS Queuing Indication followed by Assignment Failure from COO during SS originated VBS call	No	Yes	No		
9.15	Contact loss for VBS originator	No	Yes	No		
9.16	Equipment failure (TRX) for VBS originator	No	Yes	No		
9.17	Equipment failure (PCM) for VBS originator	No	Yes	No		
9.18	VBS call established in CoO when non CoO is locked	No	Yes	No		
9.19	Origination of VBS call from non subscribed MS fails	No	Yes	No		
9.20	Origination by controller fails	No	Yes	No		
9.21	Killing of VBS call by controller fails	No	Yes	No		
9.22	VBS call taken down during setup by SS	No	Yes	No		
9.23	VBS call taken down during setup by Controller	No	Yes	No		

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
9.24	2 SS originate VBS call at same time (same BSS and different BSS)	No	Yes	Yes		
9.25	2 controllers originate VBS call at the same time (same BSS and different BSS)	No	Yes	Yes		
9.26	Service Subscriber initiated VBS from Relay MSC. Call to A-MSC controller	Yes	No	No		
9.27	Controller originates a VBS call from Relay MSC	Yes	No	No		
9.28	VBS originator notification (MS dedicated mode, incoming ptp call, non-roaming case)	No	Yes	No	2.2.1 5.2.2.43	5.5.19 5.5.20 5.5.21
9.29	VBS originator notification (MS dedicated mode, incoming VGCS call), non-roaming case)	No	Yes	No	2.2.1 5.2.2.47	5.5.19 5.5.20 5.5.21
9.30	VBS originator notification (MS dedicated mode, incoming VBS call, non-roaming case)	No	Yes	No	2.2.1 5.2.2.47	5.5.19 5.5.20 5.5.21
9.31	VBS originator notification (MS dedicated mode, incoming ptp call, roaming)	Yes	No	No	2.2.1 5.2.2.43	5.5.19 5.5.20 5.5.21
9.32	VBS originator notification (MS dedicated mode, incoming VGCS call, roaming case)	Yes	No	No	2.2.1 5.2.2.47	5.5.19 5.5.20 5.5.21
9.33	VBS originator notification (MS dedicated mode, incoming VBS call, non-roaming case)	Yes	No	No	2.2.1 5.2.2.47	5.5.19 5.5.20 5.5.21
9.34	VBS originator notification (MS dedicated mode, incoming REC), non-roaming case)	No	Yes	No	2.2.1 5.2.2.47 13.3.1	5.5.19 5.5.20 5.5.21
9.35	VBS originator notification (MS dedicated mode, incoming REC, roaming case)	Yes	No	No	2.2.1 5.2.2.47 13.3.1	5.5.19 5.5.20 5.5.21
9.36	Multiple VGCS membership (non-roaming case)	No	Yes	No	2.2.9	
9.37	Multiple VGCS membership (roaming case)	Yes	No	No	2.2.9	
10	Cell reselection & handover					

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
10.1	Intra BTS cell reselection in idle mode	No	Yes	No		
10.2	Intra BTS cell reselection of a VBS listener	No	Yes	No		
10.3	Intra BTS cell reselection of a VGCS listener	No	Yes	No		
10.4	Intra BTS cell reselection of a REC listener	No	Yes	No		
10.5	Inter BTS cell reselection in idle mode	No	Yes	No		
10.6	Inter BTS cell reselection of a VBS listener	No	Yes	No		
10.7	Inter BTS cell reselection of a VGCS listener	No	Yes	No		
10.8	Inter BTS cell reselection of a REC listener	No	Yes	No		
10.9	Inter BSC cell reselection in idle mode	No	Yes	Yes		
10.10	Inter BSC cell reselection of a VBS listener	No	Yes	Yes		
10.11	Inter BSC cell reselection of a VGCS listener	No	Yes	Yes		
10.12	Inter BSC cell reselection of a REC listener	No	Yes	Yes		
10.13	Inter MSC cell reselection of a VBS listener	Yes	Yes	No		
10.14	Inter MSC cell reselection of a VGCS listener	Yes	Yes	No		
10.15	Intra BTS handover of a point to point voice call	No	Yes	No		
10.16	Intra BTS handover of a circuit switched data call	No	Yes	No		2.3.1
10.17	Intra BTS handover of a railway emergency call originator	No	Yes	No		
10.18	Intra BTS handover of a VGCS call uplink	No	Yes	No		
10.19	Intra BTS handover of a VGCS dedicated channel	No	Yes	No		
10.20	Intra BTS handover of a VBS originator	No	Yes	No		
10.21	Inter BTS handover of a point to point voice call	No	Yes	No		
10.22	Inter BTS handover of a circuit switched data call	No	Yes	No		2.3.1
10.23	Inter BTS handover of a railway emergency call originator	No	Yes	No		
10.24	Inter BTS handover of a VGCS call uplink	No	Yes	No		
10.25	Inter BTS handover of a VGCS dedicated channel	No	Yes	No		
10.26	Inter BTS handover of a VBS originator	No	Yes	No		
10.27	Inter BSC handover of a point to point voice call	No	Yes	Yes		

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
10.28	Inter BSC handover of a circuit switched data call	No	Yes	Yes		2.3.1
10.29	Inter BSC handover of a railway emergency call originator	No	Yes	Yes		
10.30	Inter BSC handover of a VGCS call uplink	No	Yes	Yes		
10.31	Inter BSC handover of a VGCS dedicated channel	No	Yes	Yes		
10.32	Inter BSC handover of a VBS originator	No	Yes	Yes		
10.33	Inter MSC handover of a point to point voice call	Yes	Yes	No		
10.34	Inter MSC handover of a circuit switched data call	Yes	Yes	No		2.3.1
10.35	Inter MSC handover of a railway emergency call originator	Yes	Yes	No		
10.36	Inter MSC handover of a VGCS call uplink	Yes	Yes	No		
10.37	Inter MSC handover of a VGCS dedicated channel	Yes	Yes	No		
10.38	Inter MSC handover of a VBS originator channel	Yes	Yes	No		
10.39	Intra BTS handover failure of a point to point voice call (pre-emption Um-IF not possible)	No	Yes	No		
10.40	Intra BTS handover failure of a circuit switched data call (pre-emption Um-IF not possible)	No	Yes	No		2.3.1
10.41	Intra BTS handover failure of a railway emergency call originator (DCH) (pre-emption Um-IF not possible)	No	Yes	No		
10.42	Intra BTS handover failure of a VGCS dedicated channel (pre-emption Um-IF not possible)	No	Yes	No		
10.43	Intra BTS handover failure of a VBS originator (pre-emption Um-IF not possible)	No	Yes	No		
10.44	Inter BTS handover failure of a point to point voice call (pre-emption Um-IF not possible)	No	Yes	No		
10.45	Inter BTS handover failure of a circuit switched data call (pre-emption Um-IF not possible)	No	Yes	No		2.3.1
10.46	Inter BTS handover failure of a railway emergency call originator (DCH) (pre-emption Um-IF not possible)	No	Yes	No		
10.47	Inter BTS handover failure of a VGCS dedicated channel (pre-emption Um-IF not possible)	No	Yes	No		
10.48	Inter BTS handover failure of a VBS originator (pre-emption Um-IF not possible)	No	Yes	No		

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
10.49	Inter BSC handover failure of a point to point voice call (pre-emption Um-IF not possible)	No	Yes	Yes		
10.50	Inter BSC handover failure of a circuit switched data call (pre-emption Um-IF not possible)	No	Yes	Yes		2.3.1
10.51	Inter BSC handover failure of a railway emergency call originator (DCH) (pre-emption Um-IF not possible)	No	Yes	Yes		
10.52	Inter BSC handover failure of a VGCS dedicated channel (pre-emption Um-IF not possible)	No	Yes	Yes		
10.53	Inter BSC handover failure of a VBS originator (pre-emption Um-IF not possible)	No	Yes	Yes		
10.54	Inter MSC handover failure of a point to point voice call (pre-emption Um-IF not possible)	Yes	Yes	No		
10.55	Inter MSC handover failure of a circuit switched data call (pre-emption Um-IF not possible)	Yes	Yes	No		2.3.1
10.56	Inter MSC handover failure of a railway emergency call originator (DCH) (pre-emption Um-IF not possible)	Yes	Yes	No		
10.57	Inter MSC handover failure of a VGCS dedicated channel (pre-emption Um-IF not possible)	Yes	Yes	No		
10.58	Inter MSC handover failure of a VBS originator (pre-emption Um-IF not possible)	Yes	Yes	No		
10.59	Point to Point call performing intra BTS handover followed by a inter BTS and a inter BSC handover	No	Yes	Yes		
10.60	Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by a intra BTS handover of a point to point voice call	No	Yes	No		
10.61	Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by a intra BTS handover of a circuit switched data call	No	Yes	No		2.3.1
10.62	Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by a intra BTS handover of a railway emergency call originator (DCH)	No	Yes	No		
10.63	Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by a intra BTS handover of a VGCS dedicated channel	No	Yes	No		
10.64	Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by a intra BTS handover of a VBS originator	No	Yes	No		

TC Index	Test case	Scenario I	Scenario II	Scenario III	FRS V7	SRS V15
10.65	Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by a inter BTS handover of a point to point voice call	No	Yes	No		
10.66	Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by a inter BTS handover of a circuit switched data call	No	Yes	No		2.3.1
10.67	Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by a inter BTS handover of a railway emergency call originator (DCH)	No	Yes	No		
10.68	Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by a inter BTS handover of a VGCS dedicated channel	No	Yes	No		
10.69	Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by a inter BTS handover of a VBS originator	No	Yes	No		
10.70	Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by a inter BSC handover of a point to point voice call	No	Yes	Yes		
10.71	Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by a inter BSC handover of a circuit switched data call	No	Yes	Yes		2.3.1
10.72	Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by a inter BSC handover of a railway emergency call originator (DCH)	No	Yes	Yes		
10.73	Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by a inter BSC handover of a VGCS dedicated channel	No	Yes	Yes		
10.74	Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by a inter BSC handover of a VBS originator	No	Yes	Yes		
10.75	Ongoing point to point voice call in the destination cell pre-empted (Um-IF) by a inter MSC handover of a VBS originator	Yes	Yes	No		
10.76	Inter BSC handover of a point to point voice call with eMLPP pre-emption at A-IF	No	Yes	Yes	2.4.1	2.4.1
10.77	Inter BSC handover of a circuit switched data call with pre-emption with eMLPP pre-emption at A-IF	No	Yes	Yes	2.4.1	2.4.1
10.78	Inter BSC handover of a railway emergency call originator with eMLPP pre-emption at A-IF	No	Yes	Yes	2.4.1	2.4.1
10.79	Inter BSC handover of a VGCS dedicated channel with eMLPP pre-emption at A-IF	No	Yes	Yes	2.4.1	2.4.1
10.80	Inter BSC handover of a VBS originator with eMLPP pre-emption at A-IF	No	Yes	Yes	2.4.1	2.4.1

Table 6.1: Overview of the IOT test cases

6.1.2 Cross reference of EIRENE FRS V7 mandatory requirements to the IOT test cases

Chapter	Subject	Linked test case							
1	Introduction								
1.1	General								
1.2	Scope								
1.3	Applicability								
1.4	System overview	8.14 (1.4.1.1)	8.15 (1.4.1.1)						
1.5	Structure of the specification								
2	Network requirements								
2.1	Introduction								
2.1.1	The network services necessary to meet the range of UIC requirements are detailed below. These services are to be considered as a minimum set for implementation within each UIC standard network. Railways may implement additional network services as desired. (I)								
2,2	Voice services								
2.2.1	This section describes the generic voice telephony services which are to be supported by the EIRENE network: (M)								
	point-to-point voice calls;	1.7	1.8	1.9	1.29	1.30	1.31		
	public emergency voice calls;	1.49	1.50	1.51	1.45	1.52	1.53	1.48	
	broadcast voice calls;	9.1	8.13						
	group voice calls	8.1	8.17	8.2	8.3	8.20	6.8 6.20-6.27	8.13 8.38-8.45	9.28-9.33 9.34-9.35
	multi-party voice calls.	1.14	1.45	1.17	1.36				
2.2.2	All voice call services shall be able to operate between any combination of fixed and mobile equipment users. (M)	5.6	1,8	various other TCs					
	Point-to-point voice calls								

Chapter	Subject	Linked test case						
2.2.3	The system shall support point-to-point voice calls between any two call parties. (M)	1.7	1.8	1.9	1.29	1.30	1.31	
2.2.4	Such point-to-point calls shall allow both parties to talk simultaneously. (M)	1.7	1,8	1.9	1.29	1.30	1.31	
	Public emergency voice calls							
2.2.5	The system shall allow a user to make public emergency point-to-point voice calls. (M)	1.49	1.50	1.51	1.45	1.52	1.53	1.48
2.2.6	Such emergency calls include ‘112’ calls and may not be used for railway emergencies. (I)							
	Broadcast voice calls							
2.2.7	The system shall support broadcast voice calls. (M)	9.1	8.13					
2.2.8	Broadcast voice calls provide one-way voice communications from a single user to multiple users in a predefined local area, all of whom are members of the same call group. (I)							
2.2.9	The composition of call groups shall be able to be modified within the network. A single user shall be able to be a member of one or more call groups. (M)	9.36	9.37	7.6				
2.2.10	The local area over which broadcast calls shall be implemented shall be able to be modified within the network. (M)	9.2						
2.2.11	It shall only be possible for the user who initiated the call to talk, other users can only listen. (M)	9.1						
	Group voice calls							
2.2.12	The system shall support group voice calls. (M)	8.1						
2.2.13	Group voice calls provide voice communications between a number of users in a pre-defined local area, all of whom are members of the same call group. (I)							
2.2.14	The composition of call groups shall be able to be modified within the network. A single user shall be able to be a member of one or more call groups. (M)	8.46	8.47	7.17				
2.2.15	The local area over which group calls are implemented shall be able to be modified within the network. (M)	8.1						

Chapter	Subject	Linked test case	
2.2.16	It is acceptable that only one mobile user involved in the group call may talk at any time. In this case:		
	It shall be possible for controllers to speak at any time during the call. (M)	8.1	8.30-8.34
	A mechanism shall be provided by the system to arbitrate between those users wishing to speak within the group call. (M)	8.33	
	Multi-party voice calls		
2.2.17	The system shall support multi-party voice communications between up to six different parties. (M)	1.14	1.36
2.2.18	Any of the parties involved in a multi-party voice call shall be able to talk simultaneously. (M)	1.14	1.36
2,3	Data services		
2.3.1	The EIRENE network will provide data services to support the following data applications:		
	text messages; (O)		
	general data applications; (M)	1.16	1.38
	automatic fax; (O)		
	train control applications. (O)		
	Text messages		
2.3.2	The network should support the transmission of point-to-point and point-to-multipoint text messages from the ground to mobile users. (O)		
2.3.3	The network should support the receipt of mobile-originated text messages by the ground. (O)		
2.3.4	If the text message facility is implemented, it shall not interfere with the ability of users to make or receive high priority voice or data calls. (M)		
	General data applications		
2.3.5	Support is required for a range of data communications between the ground and mobile users. Such applications may include: (I)		

Chapter	Subject	Linked test case
	timetable information;	
	maintenance and diagnostic applications;	
	e-mail;	
	remote database access.	
2.3.6	The network shall support point-to-point data communications. (M)	1.16 1.38
2.3.7	Deleted.	
2.3.8	The network shall support data rates of at least 2.4 kbit/s. (M)	1.16 1.38
2.3.9	Higher data rates will be required by some data applications in order to provide the necessary performance and acceptable transmission times. (I)	
2.3.10	The priority scheme for calls described in section 10.2 is also valid for data applications. (I)	
	Automatic fax	
2.3.11	The network should support fax transmissions between the ground and mobile users. (O)	
2.3.12	Where fax functionality is provided, it shall be possible to interrupt the fax to make or receive a high priority voice or data call. (M)	
	Train control applications	
2.3.13	Where ERTMS/ETCS level 2 or 3 is implemented, the network shall be capable of supporting data communications for that train control system. (M)	1.16 1.38
2.3.14	The communications requirements for ERTMS/ETCS are included in the document 'Summary of ERTMS Communications Requirements'6. (I)	
2.3.15	Communications for train control may be characterised as low data rate per train; however, in some areas there will be a high density of trains requiring simultaneous communications. (I)	
2.3.16	The priority scheme for calls described in section 10.2 is also valid for train control applications. (I)	

Chapter	Subject	Linked test case							
2,4	Call related services								
2.4.1	The EIRENE network will support the following call related services:								
	display of identity of called/calling user; (M)	1.12	1.34						
	restriction of display of called/calling user; (O)								
	priority and pre-emption; (M)	1.16	1.17	1.38	1.39	7.1-7.51	5.1	5.9-5.13	10.76-10.80
	closed user group; (M)	1.46	1.47	1.45					
	call forwarding; (M)	1.12	1.15	1.43	1.37	1.18	1.40		
	call hold; (M)	1.10	1.32						
	call waiting; (M)	1.11	1.33						
	charging information; (O)								
	call barring. (M)	1.59	1.47						
	Display of identity								
2.4.2	It shall be possible for the equipment to display the identity of the called or calling party in the form of a standard telephone number. (M)	1.12	1.34	1.37					
2.4.3	It shall be possible to display the identity of the called or calling party as a textual description of their function. (M)	2.24	2.26						
	Restriction of display of identity								
2.4.4	It should be possible for the network to prevent the identity of certain users from being displayed on the mobile, either when being called, calling or both. (O)								
	Priority and pre-emption								
2.4.5	The network shall provide a mechanism whereby calls may be assigned one of a number of different priority levels. (M)	1.16	1.17	1.38	1.39	7			
2.4.6	This mechanism shall allow calls with a higher assigned priority to override (pre-empt) existing calls of a lower priority. (M)	5	7.1-7.49						

Chapter	Subject	Linked test case			
2.4.7	Pre-empted calls will be discontinued and the new call of a higher priority shall be connected instead. (M)	5	7.1 - 7.49		
	Closed user group				
2.4.8	The group of users who may access the facilities of the EIRENE network shall be limited. (M)	1.46	1.47	1.45	
2.4.9	Any user who is not within the list of allowed EIRENE users shall not be able to gain access to any of the functions and services provided by the network. (M)	1.46	1.47	1.45	
	Call forwarding				
2.4.10	It shall be possible for an incoming call or data message for one user to be forwarded to another user using functionality provided by the network. (M)	1.15	1.18	1.43	1.46
2.4.11	In the case of voice calls, it shall be possible for the user who is attempting to forward a call to converse with the intended recipient prior to forwarding. (M)	1.15	1.18	1.43	1.46
2.4.12	There are a number of sub-classes of call forwarding to be supported by the network:				
	automatically forward the incoming call without any user interaction (unconditional); (M)	1.12	1.34		
	automatically forward the incoming call without user interaction if the user is busy in an existing call (busy); (M)	1.15	1.37	1.18	1.40
	automatically forward the incoming call if there is no reply from the intended recipient (no reply); (O)				
	automatically forward the incoming call if the intended recipient cannot be contacted via the network (not reachable). (O)				
	Call hold				
2.4.13	The network shall allow the user to temporarily exit from an existing call by putting the call on hold. (M)	1.10	1.32		
2.4.14	It shall be possible for the user to re-join the call which is on hold at any time. (M)	1.10	1.32		
	Call waiting				

Chapter	Subject	Linked test case
2.4.15	The network shall provide the ability to inform a user, who is involved in an existing call, of attempts by other users to contact them. (M)	1.11 1.33
	Charging information	
2.4.16	Where network services are chargeable, it should be possible for the network to provide information about call rates and on-going call charges. (O)	
	Call barring	
2.4.17	It shall be possible, using network management or maintenance facilities, to prevent individual users from: (M) – making calls to: – another network (fixed or mobile) (eg can only call on home network); – certain types of numbers within or external to the network (eg cannot call teleshopping numbers); – certain pre-defined telephone numbers (eg cannot call drivers and on-train users); – receiving calls from: – all other networks (fixed or mobile); – certain other networks (fixed or mobile); – certain types of numbers within or external to the network; – certain pre-defined telephone numbers.	1.59 1.47 3.5 3.6
2.5	Railway specific services	
2.5.1	The EIRENE network shall also provide support for the following railway specific services:	
	functional addressing including registration/deregistration (see section 11); (M)	2.1, 2.5
	location dependent addressing (see section 11); (M)	4.1 - 4.4
	shunting mode (see section 14); (M)	Absent. It is irrelevant to the network infrastructure, unnecessary to test
	Railway emergency calls (see section 13). (M)	6
3	Network Configuration	

Chapter	Subject	Linked test case
3,1	Introduction	
3.1.1	This section describes the requirements for the EIRENE network and the performance levels which are to be achieved. The aim is to provide interoperability between networks and a consistent level of service. (I)	
3.1.2	It may be necessary to supplement this Functional Requirements Specification with special requirements for supporting the train control application. Further information on the communications requirements to support ERTMS can be found in the 'Summary of ERTMS Communication Requirements' document 6. (I)	
3,2	Coverage and performance	
3.2.1	For network planning, the coverage level is defined in terms of time and area where the minimum signal criteria are achieved. (I)	
3.2.2	The level of coverage should be at least 95% of the time over 95% of the designated coverage area for a radio installed in a vehicle with an external antenna. (O)	
3.2.3	The network shall support all EIRENE-compliant mobiles. (M)	1,8 2.24 4.1 7.1 8.1 9.1
3.2.4	The land-based part of the system shall provide communications for mobiles when stationary and when travelling at speeds up to the maximum allowable line speed or 500 km/h, whichever is the lower. (M)	Not applicable
3,3	Network interconnection	
3.3.1	(Network selection requirements for mobiles have been moved to sections 5, 6 and 7)	
3.3.2	Deleted.	
3.3.3	Network interconnection is subject to a bilateral agreement between network operators. The interconnection between the networks must, as a minimum, be compliant with applicable open specifications. (I)	

Chapter	Subject	Linked test case
3.3.4	During the process of moving from one GSM-R network to another, the system must minimise the inconvenience to the user. (I)	
3,4	Call set-up time requirement	Part of a new part (sub part)
3.4.1	Call set-up time requirements are dependent mainly upon priority (see section 10.2). (I)	
3.4.2i	The requirements for end-to-end call set-up performance are indicated in table 3-1. (I)	
	Call type Call set-up time	
	Railway emergency calls <2s*	Part of a new part (sub part)
	Group calls between drivers in the same area <5s	Part of a new part (sub part)
	All operational mobile-to-fixed calls not covered by the above <5s	
	All operational fixed-to-mobile calls not covered by the above <7s	
	All operational mobile-to-mobile calls not covered by the above <10s	
	All low priority calls <10s	
3.4.2	The required call set-up times shall be achieved in 95% of cases. (M)	Part of a new part (sub part)
3.4.3	Call set-up times for 99% of cases shall not be more than 1.5 times the required call set-up time. (M)	QoS is outside the IOTs
3.4.4	Set-up times shall include the time required for any translation of functional numbers internal to the EIRENE network. (M)	Part of a new part (sub part)
3,5	Broadcast and group call areas	
3.5.1	Where fixed network users are involved in a group or broadcast call, fixed network users will be pre-defined and will not change during the course of the call. (I)	

Chapter	Subject	Linked test case							
3.5.2	The group or broadcast call area used will have the effect of determining which mobiles can participate in the call (ie those currently within the area defined). It shall be possible to determine the area over which the call takes place by one, or a combination, of the following: (M)	8.1	8.3	8.27	9.1	9.10	9.4	9.5	8.13
	The location of the call initiator (if mobile-originated);								
	The identity of the group being called (eg all users, all trains, etc);								
	A prefix to the group identity specifying the call area (if fixed network-initiated).								
3.5.3	Any group or broadcast calls initiated in a given location shall be broadcast over an associated area based on the location of the call originator, and also to any fixed network numbers associated with the originating location. (M)	8.1	8.3	8.30	9.1	9.10	9.4	9.7	8.13
3.5.4	The definition of each broadcast or group call area should take into account factors such as the speed of trains on the line (stopping distance) and the operational control areas. (O)								
3.5.5	It is acceptable that mobiles which move out of the call area during the call shall be dropped from the call. (I)								
3.5.6	Mobiles configured for reception of railway emergency calls entering into a call area where a railway emergency call is ongoing shall automatically join this call. (M)	Terminal feature							
3.5.7	Cab Radios configured for reception of a call to all drivers in the same area entering an area where a call to all drivers in the same area is ongoing shall automatically join this call unless involved in a higher priority call or involved in a call of the same priority.(M)	8.5	Open issue (see 3.5.8)						
3.5.8	Requirement 3.5.7 needs further technical specification changes before field implementation can be achieved. (I)								
4	Mobile equipment core specification	Outside the IOTs							

Chapter	Subject	Linked test case
4,1	Introduction	
4.1.1	All EIRENE mobiles are specified with a common level of basic services, facilities and features. This section of the specification gives details of these core require-ments, while sections 5, 6 and 7 detail requirements specific to each of the radio types.	
4.1.1i	Where there are mandatory requirements for human-machine interface attributes that are not defined in this specification, the decision for the way of presentation is a national issue. In any case, these national solutions must not conflict with those of the CENELEC Standard, in particular for the actions required from the drivers of trains passing the borders.	
4.1.2	Three distinct mobile radio types are required, based on the type of role they will perform and the environ-ment in which they will operate, as follows: (I) a) Cab radio – for use by the driver of a train and/or by other on-train systems, eg ERTMS/ETCS; b) General purpose radio – for general use by railway personnel; c) Operational radio – for use by railway personnel in-volved in train operations such as shunting and track-side maintenance.	
4.1.3	It shall be possible to operate all mobiles in the fre-quency bands around 900 MHz, allocated for use by the railways, and in the public GSM networks.	
4.1.4	Mobile equipment shall function correctly when travel-ling at speeds from 0 km/h to 500 km/h.	
4,2	Services and facilities	
4.2.1	The following voice telephony services, identified in section 2, are to be supported for each type of mobile radio:	
	Cab radio	
	Point-to-point voice calls	

Chapter	Subject	Linked test case
	Public emergency voice calls	
	Broadcast voice calls	
	Group voice calls	
	Multi-party voice calls	
	General purpose radio	
	Point-to-point voice calls	
	Public emergency voice calls	
	Broadcast voice calls	
	Group voice calls	
	Multi-party voice calls	
	Operational radio	
	Point-to-point voice calls	
	Public emergency voice calls	
	Broadcast voice calls	
	Group voice calls	
	Multi-party voice calls	
4.2.2	The following data applications, identified in section 2, are to be supported for each type of mobile radio:	
	Cab radio	
	Text message service	
	General data applications	
	Automatic fax	
	Train control applications	
	General purpose radio	
	Text message service	
	General data applications	
	Automatic fax	
	Train control applications	

Chapter	Subject	Linked test case
	Operational radio	
	Text message service	
	General data applications	
	Automatic fax	
	Train control applications	
4.2.3	The following call related services are to be supported for each type of mobile radio:	
	Cab radio	
	Display of calling user identity	
	Display of called user identity	
	Restriction of display of user identity	
	EIRENE closed user group	
	Call forwarding:	
	- unconditional M - if user busy O - if no reply O - if not reachable O	
	Call hold	
	Call waiting	
	Display of call charging information	
	Call barring	
	Auto answer service	
	Call supervisory information	
	General purpose radio	
	Display of calling user identity	
	Display of called user identity	
	Restriction of display of user identity	
	EIRENE closed user group	
	Call forwarding:	

Chapter	Subject	Linked test case
	- unconditional O - if user busy O - if no reply O - if not reachable O	
	Call hold	
	Call waiting	
	Display of call charging information	
	Call barring	
	Auto answer service	
	Call supervisory information	
	Operational radio	
	Display of calling user identity	
	Display of called user identity	
	Restriction of display of user identity	
	EIRENE closed user group	
	Call forwarding:	
	- unconditional O - if user busy O - if no reply O - if not reachable O	
	Call hold	
	Call waiting	
	Display of call charging information	
	Call barring	
	Auto answer service	
	Call supervisory information	
4.2.4	The following EIRENE features are to be supported for each type of mobile radio:	
	Cab radio	
	Functional addressing (section 11)	

Chapter	Subject	Linked test case
	Location dependent addressing (section 11)	
	Direct mode (section 15)	
	Shunting mode (section 14)	
	Multiple driver communications within the same train (section 5)	
	Railway emergency calls(section 13)	
	General purpose radio	
	Functional addressing (section 11)	
	Location dependent addressing (section 11)	
	Direct mode (section 15)	
	Shunting mode (section 14)	
	Multiple driver communications within the same train (section 5)	
	Railway emergency calls(section 13)	
	Operational radio	
	Functional addressing (section 11)	
	Location dependent addressing (section 11)	
	Direct mode (section 15)	
	Shunting mode (section 14)	
	Multiple driver communications within the same train (section 5)	
	Railway emergency calls(section 13)	
4,3	Environmental and physical requirements	
5	Cab radio	Outside the IOTs
5,1	Introduction	

Chapter	Subject	Linked test case
5.1.1	This section identifies the functional requirements for the EIRENE Cab radio. It covers the functionality provided by the Cab radio, driver MMI and support to other on-train systems. (I)	
5.1.2	Moreover, a driver may be provided with a handheld portable to allow communications whilst the driver is outside the train. (O)	
5,2	Functional requirements	
5.2.1	Summary	
5.2.1.1	In this subsection, the functions to be provided by the Cab radio are described. (I)	
5.2.1.2	The following functions will be provided:	
	Driver call-related functions:	
	– call controller: (M) – primary controller; – secondary controller; – power supply controller;	
	– call other drivers in the area; (M)	
	– send Railway emergency call; (M)	
	– confirm receipt of Railway emergency call; (M)	
	– communicate with other drivers on same train; (M)	
	– call train staff; (M)	
	– call other authorised users; (M)	
	– receive incoming voice calls; (M)	
	– terminate calls; (M)	
	– receive text messages; (M)	
	– enter/leave shunting mode; (M)	
	– enter/leave direct mode; (O)	
	– monitor calls to other on-train users/devices; (M)	
	– forward calls/cancel call forwarding to/from driver handheld; (O)	

Chapter	Subject	Linked test case
	Other driver-related functions:	
	– powering up radio; (M)	
	– switch radio MMI on and off; (M)	
	– select language; (M)	
	– adjust loudspeaker volume; (M)	
	– select mobile radio network; (M)	
	– register and deregister train number; (M)	
	– register and deregister on-train users; (O)	
	– register and deregister stock number; (M)	
	– store/retrieve numbers and their details; (M)	
	– invoke supplementary services; (M)	
	– invoke tests; (M)	
	Other Cab radio functions:	
	– automatic connection of incoming calls to appropriate on-train users or devices(conductor, public address system, data systems, etc); (M)	
	– automatic establishment of outgoing calls initiated by on-train users or devices; (M)	
	– automatic handling of calls of varying priorities; (M)	
	– send to the controller(s) a signal on activation of driver safety device; (M)	
	– transmit Railway emergency call event indication to ‘ train-borne recorder’; (M)	
	– run-time diagnostics. (O)	
5.2.2	Driver call related functions	
5.2.2i	Once a call has been established the connected parties shall be able to communicate. (M)	
5.2.2ii	Picking up the handset shall transfer the communication to the handset and reduce the loudspeaker volume to its minimum level. (M)	

Chapter	Subject	Linked test case
5.2.2iii	Replacing the handset either: (M) – cancels the call; or – transfers the call to the loudspeaker at the initial vol ume.	
5.2.2iv	A Push-To-Talk function shall be provided for use dur-ing group calls. (M)	
5.2.2v	The use of Push-To-Talk for all types of communica-tions is acceptable if needed for ergonomic reasons or to avoid the noise of the cab being transmitted to the other party. (I)	
	Call controller	
5.2.2.1	It shall be possible for the driver to initiate a call to any of the following types of controller with a minimum of driver action being re-quired (eg a single keystroke): (M) – primary controller; – secondary controller; – power supply controller.	
5.2.2.2	If the radio system cannot give a unique identity for a given type of controller, the identity could be obtained using external systems as defined in 11.4.7. (I)	
5.2.2.3	Once an appropriate destination has been obtained, the radio shall attempt to establish a call to this destination. The functional identity shall be displayed to the controller. (M)	
5.2.2.3i	The functional identity includes the following:	
	– the train number, if available; (M)	
	– the engine number, if no train number is available; (M)	
	– the coach number of the leading cab, if neither a train number nor an enginenumber is available. (O)	

Chapter	Subject	Linked test case
5.2.2.4	An audible and visual indication shall be provided to the driver that the call is proceeding. (M)	
5.2.2.5	When the call is connected to the controller, an audible and visual indication is to be provided to the driver. The call shall be connected to the loudspeaker at the pre-set value. (M)	
5.2.2.6	The functional identity of the connected party, if avail-able, shall be displayed to the driver. (M)	
5.2.2.7	If the functional identity of the connected party contains an alphanumeric description, this shall also be displayed. (M)	
5.2.2.8	If the system is not able to connect the call, an audible and visual indication shall be provided to the driver that the call was not received by the controller. This shall also indicate if the called party was busy or if the net-work could not connect the call. (M)	
	Call other drivers in the area (on other trains)	
5.2.2.9	It shall be possible for a driver to initiate and participate in group voice calls between drivers in a pre-defined geographical area. (M)	
5.2.2.10	A driver shall be able to initiate the establishment of a call to other drivers with a minimum of action (eg a sin-gle keystroke). (M)	
5.2.2.11	The group identity shall be displayed on the Cab radios of the participating drivers.(M)	
5.2.2.12	An audible and visual indication shall be provided to the driver that the call isproceeding. (M)	
5.2.2.13	Once connected, the driver shall be able to communi-cate with other driver(s) by using the Push-To-Talk but-ton on the handset. An indication shall be provided to the driveras a reminder of the need to use the Push-To-Talk button on the handset if he wants to talk. (M)	
5.2.2.14	The call shall be connected to the loudspeaker until the driver picks up the handset.(M)	

Chapter	Subject	Linked test case
5.2.2.15	The call shall continue until terminated by the calling driver, an authorised controller or the network. (M)	
5.2.2.16	If the train moves out of the group call area whilst the call is in progress, an audibleand visual indication of the loss of call shall be provided to the driver. (M)	
5.2.2.17	If the system is not able to connect the call, an audible and visual indication shall beprovided to the driver. (M)	
	Send Railway emergency call	
5.2.2.18	It shall be possible for a driver to initiate Railway emer-gency calls (see section 13). (M)	
5.2.2.19	If a train-borne recorder is connected to the Cab radio, details of the activation,termination and any failures of the emergency function shall be sent to the train-borne recorder as each event occurs. (M)	
5.2.2.20	A continuous visual and short audible indication (from 0 to 20 seconds, for trials: 5 seconds) that the emergency function has been activated shall be provided in the cab.(Note that when the handset is off-hook, the audible indication shall be sounded from the loudspeaker at a low volume, but shall not be sounded from the hand-set.) (M)	
5.2.2.21	Once the Railway emergency call is connected and the audible indication is finished, an indication shall be pro-vided to the driver as a reminder of the need to use the Push-To-Talk button on the handset if he wants to speak. (M)	
5.2.2.22	The call shall be connected to the loudspeaker until the driver picks up the handset.(M)	
5.2.2.23	If the train moves out of the call area whilst the call is in progress, it will leave the call and an audible and visual indication of the loss of call shall be provided to the driver.(M)	
5.2.2.24	Once the call is terminated, the continuous visual alarm indication in the cab shall cease. (M)	

Chapter	Subject	Linked test case
5.2.2.25	If the system is not able to connect the call, an audible and visual indication shall be provided to the driver. (M)	
	Communicate with other drivers on same train	
5.2.2.26	Many trains employ multiple active traction vehicles. Where these vehicles are not connected by on-train wire connections, it shall be possible for the lead driver toestablish a permanent radio connection between each of the active cabs. (M)	
5.2.2.27	The call will be established from the active cab of the lead traction vehicle. (I)	
5.2.2.28	Whilst on-going, a ‘multi-drivers’ indication shall be dis-played permanently at all Cab radios. (M)	
	The lead driver shall be notified if a member of the group has placed the call on hold, although this shall not affect communications between the remaining members of the group. (M)	
5.2.2.30	At any time during the call, the lead driver shall be able to remove a member of the group. (M)	
5.2.2.31	The lead driver shall be able to terminate the entire call. (M)	
5.2.2.32	If a driver is disconnected from the multi-driver call, a clear indication shall be given.(M)	
5.2.2.33	The setting up and closing down of a multi-driver call shall be simplified using automation or guidance through the steps required. (M)	
5.2.2.34	In each cab, the call shall be connected to the loud-speaker whilst the handset is onhook.(M)	
5.2.2.35	If any part of the call fails, an audible and visual indica-tion shall be provided in the appropriate cab. (M)	
5.2.2.36	If the call fails in the lead traction vehicle, the lead driver will be responsible for reestablishing the call. If the call fails to any other cab, the driver in that cab will call the lead cab and request re-establishment of the call. (I)	

Chapter	Subject	Linked test case						
5.2.2.37	For calls between a controller and the lead cab, it shall be possible to add the controller to the multi-driver call. Either the lead driver calls the controller or the controller calls the lead driver. In the latter case, the controller is automatically added into the multidriver call. Functional identity of the controller shall be displayed in the leading cab.(M)							
	Call train staff							
5.2.2.38	It shall be possible for the driver to contact members of on-board train staff using apoint-to-point voice call. (M)							
5.2.2.39	Upon activation of this function, the Cab radio shall provide the driver with a list of'generic' staff, eg: (M) – chief conductor; – conductor 1; – conductor 2; – catering staff 1.							
5.2.2.40	The driver shall then be prompted to select the train staff with which he wishes to communicate. (M)							
5.2.2.41	On many trains, staff may be connected by intercom or internal telephone rather than by radio. It is required that, in these cases, the Cab radio shall be integrated with internal communication systems such that the ap-propriate means of connection (wire or radio) will be determined automatically. (M)							
	Call other authorised users							
5.2.2.42	The Cab radio shall be capable of being used as a standard telephone, such that the driver is able to call any valid number subject to pre-defined call restrictions. The call may be initiated by: (M) – selection from a pre-defined list (up to 99 entries); – direct dialling a subscriber number; – calling a functional number.							
5.2.2.43	An audible and visual indication of an incoming call shall be provided. (M)	6.20	6.23	8.38	8.41	6.20	9.28	9.31

Chapter	Subject	Linked test case
5.2.2.44	The functional identity (which may contain an alphanumeric description) of the calling party, when available, shall be displayed. (M)	
5.2.2.45	Point-to-point calls that are not automatically answered (see table 10-1) shall only be answered once the driver accepts the call. (M)	
5.2.2.46	Once the driver has accepted the standard point-to-point call, it shall be connected appropriately, eg if the driver has accepted the call by lifting the handset, then the call shall be routed to the handset. (M)	
	Receive incoming group or broadcast voice call	
5.2.2.47	An audible and visual indication of the incoming call shall be provided when a Cab radio receives a group or broadcast call. (M)	6.21 6.22 6.24-6.27 8.39-8.40 8.42-8.45 9.29-9.30 9.32-9.45
5.2.2.48	The group identity of the voice group call (VBS or VGCS) shall be displayed. (M)	
5.2.2.49	Group or broadcast calls shall automatically be connected to the loudspeaker if the handset is not in use, or to the handset if the handset is off hook. (M)	
5.2.2.50	The driver shall be informed if a broadcast call is ongoing by a visual indication displayed on the MMI. (M)	
5.2.2.50i	It is not possible for the driver to speak as part of the call when receiving a broadcast call. (I)	
5.2.2.51	If the call is a group call, the driver shall be required to request permission before being able to speak as part of the call by lifting the handset and pushing the Push-To-Talk (PTT) button. (M)	8.26 8.30-8.34
5.2.2.52	During a group call, a visual indication shall be displayed on the driver's MMI to remind the driver of the need to use the PTT button. (M)	
5.2.2.53	The driver can not speak in a group call until permission is granted by the network after pushing the PTT button. (I)	8.26 8.30-8.34

Chapter	Subject	Linked test case
5.2.2.54	In a group call, an audible and visual indication of whether the request to talk was successful shall be provided. The driver shall then be able to speak as part of the call whilst the PTT button is pressed. (M)	8.26 8.30-8.34
5.2.2.55	If the train moves out of the group or broadcast call area whilst the call is in progress, an audible and visual indication of the loss of call shall be provided to the driver. (M)	
	Receive incoming Railway emergency call	
5.2.2.56	Reception of this call proceeds as for a standard group or broadcast call, except that a distinctive audible and visual indication shall be provided in the cab. (M)	
5.2.2.57	If a train-borne recorder is connected to the Cab radio, details of an incoming Railway emergency call shall be transmitted to the train-borne recorder for recording, see section 5.8. (M)	
	Confirm receipt of Railway emergency call	
5.2.2.58	An automatic confirmation shall be generated by the Cab radio at the end of the Railway emergency call as detailed in section 13. (M)	
5.2.2.59	Automatic confirmation of receipt of Railway emergency calls will be used to provide a means of determining which trains have received a Railway emergency call (see section 13). (I)	
	Terminate calls	
5.2.2.60	The Cab radio shall provide a means for the driver to terminate calls which he is authorised to terminate (ie all calls except Railway emergency calls not initiated by the driver and shunting group calls). (M)	
5.2.2.61	For group or broadcast calls, a means to leave the call without terminating the call shall be provided. (M)	
	Receive text messages	
5.2.2.62	The Cab radio system shall be able to receive incoming text messages (see section 12 for details). (M)	

Chapter	Subject	Linked test case
	Enter/leave shunting mode	
5.2.2.63	The Cab radio shall support a ‘shunting mode’ of operation that provides a link assurance tone to reassure users of the integrity of the communication link (see section 14). (M)	
5.2.2.64	A means to enter and leave shunting mode shall be provided. (M)	
5.2.2.65	The functionality to enter and leave shunting mode shall not be available when there are on-going calls involving the Cab radio. (M)	
5.2.2.66	The link assurance tone shall be provided via the loudspeaker. (M)	
5.2.2.67	If the Cab radio is equipped with an additional security device, this audible indication may be muted for the driver’s convenience. In this case, the security device alerts the driver if the link has failed or if it is cancelled. (I)	
	Enter/leave direct mode	
5.2.2.68	It should be possible for the Cab radio to be used without the network service (if itshould fail or if there is no authorised network coverage), such that local open channel communications are still possible. This mode of operation is termed ‘direct mode’ (see section 15). (O)	
5.2.2.69	If direct mode is implemented, a means to enter and leave direct mode shall be provided. (M)	
5.2.2.70	If the radio is in direct mode and the normal network service returns, the user shall be provided with an audible and visual indication. (M)	
	Monitor calls to other on-train users/devices using the Cab radio	
5.2.2.71	Not all communications using the Cab radio will involve the driver. Where these calls involve the Cab radio, the driver shall be provided with an indication that the Cab radio is busy. (M)	

Chapter	Subject	Linked test case
5.2.2.72	For voice calls using the Cab radio not involving the driver as a called or calling party, the driver shall have the possibility to listen to the audio output of the communication.(M)	
5.2.2.73	For voice communications, if the driver picks up the handset, the radio shall allow him to join the communication. (M)	
5.2.2.74	The driver shall be able to terminate communications (voice or data) by selecting another call. (M)	
	Forward calls to driver handheld	
5.2.2.75	Where the Cab radio is required by a national railway to support a handheld portable, the Cab radio shall: (M) – provide a clear indication as to whether the handheld portable is activated or not; – provide an interface to allow the handheld portable to be recharged when not inuse; – forward calls automatically to the handheld portable when the handheld portable is activated; – cancel any call forwarding to the handheld portable when it is deactivated; – allow the driver to override the call forwarding to the handheld portable.	
5.2.3	Other driver-related functions	
	Powering up radio	
5.2.3.1	Powering up the Cab radio will initiate the following:	
	– automatic self-testing; (M)	
	– automatic selection of the pre-set loudspeaker volume; (M)	
	– registration with other on-train systems, such as ERTMS/ETCS; (M)	
	– all failures of self-tests should be recorded in the train-borne recorder; (O)	

Chapter	Subject	Linked test case
	– connection of the Cab radio to an authorised mobile network. This shall be the network to which the mobile was last registered (where available); (M)	
	– if connection is successful, the name of the network shall be displayed on the MMI and an audible indica tion of successful connection shall be given; (M)	
	– if connection is not successful, an audible and visual indication shall be provided.(M)	
	– if connection is not successful, the manual network selection procedure may be initiated by the driver (see 5.2.3.23). (I)	
5.2.3.2	At the point of successful connection, the Cab radio will be able to receive all calls made using the Cab radio's telephone number, engine number or appropriate group call numbers (including Railway emergency calls). (I)	
5.2.3.3	Powering down the Cab radio shall cause the discon-nection of the Cab radio from the mobile network. (M)	
5.2.3.4	When switched off, the radio shall retain any numbers which are stored at the time the radio is switched off. (M)	
	Switch radio MMI on/off	
5.2.3.5	The MMI on/off control shall be designed to prevent accidental activation/ deactivation. (M)	
5.2.3.6	Switching the MMI on shall cause the following: (M) – self test of MMI (eg transitory lighting of the display and of all the controls and indicator lights of the MMI); – determination of the status of the Cab radio, providing a display of radio status on the MMI.	

Chapter	Subject	Linked test case
5.2.3.7	When the MMI is switched on, the configuration shall be determined by the time elapsed since the MMI was last switched off: (M) – less than t minutes – the MMI shall power up with the same configuration – as when it was last powered down; – greater than t minutes – the MMI shall power up with default settings.	
5.2.3.8	The time t should be able to be varied between 0 and 240 minutes, as a maintenance function, allowing the radio to power up in a consistent state following minor operational procedures or power interruptions. (O)	
5.2.3.9	Switch off shall be “soft” so that the Cab radio completes the following housekeeping functions before actually switching off: (M) – controlled termination of a current call; – deregister train number (where applicable); – store required data; – confirmation of Railway emergency calls (see section 13).	
5.2.3.10	As far as possible, the above procedure should also apply on power failure. (O)	
5.2.3.11	When switched off, the following functions (if available) shall still be provided: (M) – public address; – call Chief Conductor; – intercom.	
	Select language	
5.2.3.12	It shall be possible to present radio related prompts and information in a number of different languages. (M)	
5.2.3.13	By default, prompts and information shall be displayed in the language selected by the train owner (as stored within the system). (M)	

Chapter	Subject	Linked test case
5.2.3.14	It shall be possible for the user to display a list of available languages and select the language in which radio related prompts and information are displayed both at turn on and during a journey (eg where a change of drivers may occur). (M)	
5.2.3.15	The languages to be supported will be a matter for each national railway to decide. (I)	
5.2.3.16	The radio shall support at least ten different languages. (M)	
	Adjust loudspeaker volume	
5.2.3.17	By default, the loudspeaker volume shall be set to a pre-determined level suitable for the operating environment (as stored within the system). (M)	
	It shall be possible for the driver to increase and decrease the loudspeaker volume within the adjustment range selected. (M)	
	When the handset is picked up, the loudspeaker shall continue to operate, but at a reduced volume level. (M)	
	Manual network selection	
5.2.3.23	Using a simple MMI action, it shall be possible for the driver to view a prioritised list of all authorised mobile radio networks (see section 10.5). (M)	
5.2.3.23i	When presented with this list, it shall be possible for the driver (using simple MMI actions) to select the required mobile radio network manually, whereupon the Cab radio shall attempt to attach to this selected network. (M)	
5.2.3.24	The manual network selection function shall not be available when there are on-going voice calls involving the Cab radio. (M)	
5.2.3.25	A visual confirmation of the new network identity shall be given to the driver when a manually initiated network change has been completed successfully. (M)	
5.2.3.25i	Manual network selection is suitable for crossing international borders. (I)	

Chapter	Subject	Linked test case
	Directed network selection	
5.2.3.25ii	The Cab radio should be capable of selecting the mobile radio network as directed by input from an external device (eg a balise). (O)	
5.2.3.25iii	If directed network selection is implemented and voice calls are ongoing at the time when the external device attempts to trigger a network change, an audible and visual indication shall be given to the driver and network change shall be deferred until the call is terminated or until coverage of the current network is lost. (M)	
5.2.3.25iv	If directed network selection is implemented, input from the external device(s) shall initiate the network change regardless of the identity of the current network and how it was selected. (M)	
5.2.3.25v	Directed network selection is suitable for crossing international borders. (I)	
	Automatic network selection	
5.2.3.25vi	The Cab radio should be capable of selecting the mobile radio network automatically from a list of suitable networks (see section 10.5). (O)	
5.2.3.25vii	If automatic network selection is implemented, it shall be possible for the driver to activate and deactivate automatic network selection. (M)	
5.2.3.25viii	Automatic network selection shall not be used for international border crossing. (M)	
5.2.3.25ix	Automatic network selection is not suitable for use in areas where there is a risk that the Cab radio will change to a foreign network unpredictably. (I)	
5.2.3.25x	If directed network selection and/or automatic network selection are implemented, the driver shall be informed by means of an audible and visual indication of the new network identity whenever a network change takes place without user intervention. (M)	
	Register and deregister train number	

Chapter	Subject	Linked test case
5.2.3.26	It shall be possible for the driver to register and deregister a train number in the following ways:	
	1) enter train number; (M)	
	2) initiate automated request (applicable only for leading driver). (O)	
5.2.3.27	Where the driver is required to enter the train number information, the information entered shall be shown on the display and require confirmation by the driver before further actions are possible. (M)	
5.2.3.28	If an automated request is initiated (option 2), the driver shall be able to accept or reject the train number returned by the network. (M)	
5.2.3.28i	Where ERTMS/ETCS and radio systems are available and the driver is required to enter the train number as part of the initialisation procedure, this task shall be carried out only once on the ERTMS/ETCS system and the entered number transmitted to the radio system. (M)	
5.2.3.28ii	Data entry may be from either system depending on the operating procedures agreed between the train operator and the railway infrastructure operator. (I)	
5.2.3.29	The driver shall be warned (by audible and visual indications) if a train with the same train number is already registered on the same network. (M)	
5.2.3.30	A means to override the currently registered train number shall be provided to the “newly registering” driver. (M)	
5.2.3.31	The driver of the previously registered train shall be informed (by audible and visual indications) that his train number has been overridden by another driver. (M)	
5.2.3.32	Where a change of train number is required during the course of a train's journey, it shall be possible for the driver to initiate the change or override the automatic change. This shall be carried out by entering the train number (option 1 in 5.2.3.26). (M)	

Chapter	Subject	Linked test case
5.2.3.33	Non leading drivers shall be able to indicate to the system their location in the train during the registration procedure (2nd driver, 3rd driver etc). (M)	
	Register and deregister on-train users (on-train functions)	
5.2.3.34	The driver's functional number shall be automatically registered/deregistered when the train number is registered/deregistered. (M)	
5.2.3.35	The functional number of other on-train users who may be addressed through the Cab radio via the on-train bus shall be registered/deregistered automatically at the same time as the registration/deregistration of the driver's functional number. (M)	
5.2.3.36	Where an on-train bus is connected to the Cab radio, deregistration of functional numbers can be performed on an individual basis and also by the train driver, by one action for all users (including the driver), at the end of the journey when the train number is no longer associated with the train. (O)	
	Register and deregister stock number (engine/coach number)	
5.2.3.37	There shall be a fixed relationship between the telephone numbers of radios installed in the locomotive/coach and the stock number, which shall remain even if the radio is changed. (M)	
5.2.3.38	It shall be possible to register and deregister a stock number in one or both of the following ways: (M) – automatically using information from on-board sys tems; – automatically via a fixed interface between the loco motive/coach and the radio.	
	Store/retrieve numbers and their details	
	The Cab radio shall have a reconfigurable list of stored numbers that may be used to perform abbreviated dialling to named user identities. (M)	

Chapter	Subject	Linked test case
	It shall be possible for the driver to find and display stored numbers and their information. (M)	
	It should be possible for the driver to store and over-write numbers and their details in the Cab radio. (O)	
	Invoke supplementary services	
5.2.3.42	General MMI functions are required to support the following call functions:	
	– forward call to the driver handportable; (O)	
	– put a call on hold; (M)	
	– display incoming call details whilst in an on-going call; (M)	
	– temporarily exit an existing call to answer another incoming call; (M)	
	– multi-driver call service. (M)	
5.2.3.43	The actions required from the driver will be as simple as possible. (I)	
	Invoke tests	
5.2.3.44	It shall be possible to initiate tests of the radio to provide the driver with a reasonable level of certainty that the radio and MMI are working. (M)	
5.2.3.45	Such tests shall not prevent calls. (M)	
5.2.3.46	The result of the tests shall be displayed in a similar format to the self-test when MMI is powered on. (M)	
5.2.4	Other Cab radio functions	
	Handle incoming/outgoing calls to/from appropriate on-train users or devices	
5.2.4.1	The Cab radio system may be required to be able to handle incoming and outgoing calls not only to and from the driver, but also to and from other on-train users and devices (conductor, public address system, data systems, etc) via appropriate interfaces and ports. (I)	
5.2.4.2	For data applications, calls shall be possible even if the driver MMI is switched off. (M)	

Chapter	Subject	Linked test case
5.2.4.3	The Cab radio may need to conserve battery power when the radio is powered up but the MMI is switched off. (I)	
	Handling of call priorities	
5.2.4.4	The Cab radio may be required to set up calls from a number of different sources. Therefore, the radio shall provide a priority function for calls from different sources in order to handle contention for the radio. (M)	
5.2.4.5	In order to meet other call priorities, established calls shall be able to be either put on hold or cleared down (pre-empted). (M)	
5.2.4.6	The Cab radio shall be capable of handling contention between calls of differing priorities. (M)	
5.2.4.7	An outgoing call request of higher priority than an established call shall take precedence over the established call. (M)	
5.2.4.8	Where pre-emption occurs, an advisory indication may be provided to the pre-empted parties. (O)	
5.2.4.9	Priority call handling facilities shall be provided such that the performance requirements defined in sections 3.4 and 10.2 can be met. (M)	
	Run-time diagnostics	
5.2.4.10	Upon the request of the driver, the Cab radio should be able to perform a suite of runtime diagnostic tests on all physical interfaces. (O)	
5.2.4.11	If run-time diagnostics are implemented, failure of an interface shall be reported to the driver via the display. (M)	
5.2.4.12	If run-time diagnostics are implemented, all failures should be available to be recorded in a train-borne recorder. (O)	
5.2.4.13	If run-time diagnostics are implemented, diagnostic tests shall not interfere with normal operation of the Cab radio. (M)	

Chapter	Subject	Linked test case
5.2.4.14	Railways will require facilities to support the use of automatic test equipment with mobile radios. (I)	
5,3	Environmental and physical requirements	
5,4	Driver man-machine interface	
5.4.1	The driver man-machine interface shall comprise the following components: (M) – display; – control panel; – loudspeaker; – handset with Push-To-Talk button.	
5.4.2	Radio equipment installed in a driver’s Cab shall not obstruct the driver’s vision or otherwise hinder the safe driving of the train. (M)	
5.4.2i	The design of the equipment shall make it possible to install it within a cab complying with the requirements of UIC fiche 651 concerning the layout of cab equipment5. (M)	
5.4.3	All call related functions shall be possible with the handset on or off the hook. (M)	
5.4.4	Note: there is no requirement for hands free operation. (I)	
5.4.5	The driver shall be able to adjust the brightness of buttons, indicator lights and displays according to the ambient lighting in the cab. (M)	
5.4.6	The driver shall be able to adjust the contrast of the display. (M)	
5.4.7	The emergency call button shall be red and shall be protected against accidental use. (M)	
5.4.8	Any displays shall be clearly readable from a normal driver’s position, assuming a normal reading distance. (M)	
5.4.9	Displayed characters shall have a minimum height of 5mm. (M)	

Chapter	Subject	Linked test case
5.4.10	The following colours shall only be used where mandated in 5.4.11: (M) – red; – green.	
5.4.11	The standard set of audible and visual indications specified in the CENELEC Standard for the Driver-Machine Interface for ERTMS shall be implemented in the Cab radio system. (M)	
5.4.12	Deleted.	
5.4.13	Some Cab radios may need to be operated by staff wearing gloves and controls may need to be suitable for use in a wide range of conditions, eg splash proof and suitable for viewing in direct sunlight and in darkness. (O)	
5.4.14	Where there is a risk that stored numbers or other set-up details may be accidentally changed, facilities should be provided on the Cab radio in order to prevent this happening. (O)	
5.4.15	Cab radios shall provide a means of preventing tampering. (M)	
	Service availability	
5.4.16	If contact with the mobile radio network is lost, then the Cab radio shall give an audible and visual indication. (M)	
5,7	Driver safety device interface	
5.7.1	A driver safety device (DSD) interface should be provided in traction units that are equipped with a DSD in order to support the transmission of a DSD alarm. (O)	
5.7.1i	If such an interface is implemented, it shall be capable of being connected to a device complying with UIC fiche 6413 concerning automatic vigilance devices used in international traffic. (M)	
5.7.2	The activation of the driver safety device shall automatically trigger the Cab radio to send a data message. (M)	

Chapter	Subject	Linked test case
5.7.3	The DSD alarm call/message shall provide the following information:	
	– train number; (M)	
	– engine number; (M)	
	– location information. (O)	
5.7.4	DSD alarm information shall be transmitted to the primary controller. (M)	
5.7.5	Additional information may also be provided if available from external systems. (O)	
5,8	Train-borne recorder	
5.8.1	The Cab radio shall be able to provide the following information to a train-borne recorder or other equipment via a standardised interface:	
	– activation of Cab radio emergency call button; (M)	
	– receipt of incoming Railway emergency call; (M)	
	– termination of outgoing or incoming Railway emer gency call; (M)	
	– radio faults; (O)	
	– driver safety device alarm message transmission; (M)	
	– details of confirmation of Railway emergency call. (M)	
5,9	Control/command interfaces	
5.9.1	On-train mobiles shall provide a standardised interface to ERTMS/ETCS. (M)	
5.9.2	In addition, individual railways may have requirements to interface to national control/command systems. (I)	
5.10	Other interfaces	
5.10.1	Other interfaces may be provided in the Cab radio system. (O)	
6	General purpose radio	Outside the IOTs
6,1	Introduction	

Chapter	Subject	Linked test case
6.1.1	This section identifies the functional requirements for General purpose radio. It covers the functionality to be provided by the General purpose radio and the man-machine interface (MMI) is also defined. (I)	
6,2	Functional requirements	
6.2.1	Summary	
6.2.1.1	In this section, the functions to be provided by the General purpose radio are described. (I)	
6.2.1.2	The following functions will be provided:	
	Call related functions	
	– send Railway emergency calls; (O)	
	– receive Railway emergency calls; (O)	
	– receive incoming calls; (M)	
	– group and broadcast calls; (M)	
	– terminate calls; (M)	
	Other functions	
	– switch radio on and off; (M)	
	– select language; (M)	
	– select mobile radio network; (M)	
	– adjust loudspeaker volume; (M)	
	– register and deregister functional numbers; (M)	
	– store/retrieve numbers and their details; (M)	
	– computer interface. (O)	
6.2.2	Call related functions	
	Call authorised users	
6.2.2.1	The General purpose radio shall be capable of use as a standard telephone, such that the user is able to call any valid number subject to call restrictions enforced by the network. (M)	
	Send Railway emergency call	

Chapter	Subject	Linked test case
6.2.2.2	The facility for a given General purpose radio to send a Railway emergency call (see section 13) shall be determined as a management function. (M)	
6.2.2.3	A special MMI action shall be required for a General purpose radio user to send a Railway emergency call. (M)	
6.2.2.4	It shall not be possible for any General purpose radio user to send a Railway emergency call by dialling a short code or telephone number. (M)	
	Receive incoming point to point voice call	
6.2.2.5	An audible and visual indication of an incoming call shall be provided. (M)	
6.2.2.6	Where available, the functional identity of the calling party shall be displayed. (M)	
	Receive incoming group or broadcast voice call	
6.2.2.7	A short audible and visual indication of the incoming call shall be provided. (M)	
6.2.2.8	The group identity of the voice group call (VBS or VGCS) shall be displayed. (M)	
6.2.2.9	If the call is a broadcast call, the user shall be informed that he cannot speak as part of the broadcast call. (M)	
6.2.2.10	If the call is a group call, the user has to request permission to speak during the call by using the Push-To-Talk (PTT) function. (M)	8.26 8.30-8.34
6.2.2.11	In a group call, a visual indication shall be provided to remind the user of the need to use the PTT function. (M)	
6.2.2.12	The user may not speak in a group call until permission is granted by the network after using the PTT function. (I)	8.26 8.30-8.34
6.2.2.13	In a group call, an audible and visual indication of whether the request was successful shall be provided. The user may then talk whilst the PTT function is used. (M)	8.26 8.30-8.34

Chapter	Subject	Linked test case
6.2.2.14	If the user moves out of the group or broadcast call area whilst the call is in progress, an audible and visual indication of the loss of call shall be provided to the user. (M)	
	Receive incoming Railway emergency call	
6.2.2.15	Reception of this call (if implemented) shall proceed as for a standard group or broadcast call except that a distinctive audible and visual indication shall be provided. (M)	
	Terminate calls	
6.2.2.16	The radio shall provide a means for the user to terminate calls which he is authorised to terminate (ie all calls except broadcast or group calls not initiated by the user). (M)	
6.2.3	Other functions	
	Switch radio on and off	
6.2.3.1	The radio shall have an on/off switch. Switching the radio 'on' shall initiate the following: (M) – transitory lighting of any display, controls or indicator lights; – automatic self-testing; – if the self-test fails a visible and audible indication shall be provided; – connection to a mobile network (see section 3.3); – if connection is successful, the name of the network shall be displayed and an audible confirmation of successful connection shall be given; – if connection is not successful, an audible and visual indication shall be provided.	
6.2.3.2	At this point, the radio will be able to receive all calls initiated using the telephone number or appropriate group call number. (I)	

Chapter	Subject	Linked test case
6.2.3.3	Switching the radio off shall cause the following: (M) – termination of all calls under the control of (ie initiated by) the radio; – disconnection of the radio from the network; – clearing the display and inhibition of functions.	
6.2.3.4	When switched off, the radio shall retain any settings and numbers which are stored at the time the radio is switched off. (M)	
	Select language	
6.2.3.5	Prompts and messages shall be capable of being displayed in at least 10 languages (each railway will choose which languages will be implemented). (M)	
6.2.3.6	The user shall be able to select his preferred language for the display; this setting shall be retained by the radio. (M)	
6.2.3.7	When the radio is first powered on, the language that appears on the display shall be the default one set by the national railway. (M)	
	Select mobile radio network	
6.2.3.8	Where more than one mobile radio network is available for use by a mobile, the selection of the network to use shall be automatic (see section 10.5). (M)	
6.2.3.9	When the mobile changes network automatically, a visual and audible indication shall be given. (M)	
6.2.3.9i	It shall be possible for a user to override the automatic network selection manually. This function shall not be available during calls. (M)	
	Register and deregister functional number	
6.2.3.10	It shall be possible to register and deregister a functional number in the following way: – Initiated by the user and transmitted to the ground: – user enters functional number which is transmitted to the network. (M)	
6.2.3.11	Where a change of functional number is required, it shall be possible for the user to initiate the change. (M)	

Chapter	Subject	Linked test case
	Store/retrieve numbers and their details	
6.2.3.12	It shall be possible for the user to find and display stored numbers and their information. (M)	
6.2.3.13	It shall be possible for the user to store and/or overwrite numbers and their details in the radio. (M)	
	Computer interface	
6.2.3.14	A standard data interface should be provided to allow a computer to be connected to the radio. (O)	
6.3	Environmental and physical requirements	
6,4	Man-machine interface	
6.4.1	General	
6.4.1.1	The General purpose radio should comprise the man-machine interface which includes the following components: (O) – display; – control panel; – loudspeaker; – microphone.	
6.4.1.2	The MMI should be suitable for use both by day and night. (O)	
6.4.2	Controls	
6.4.2.1	The on/off control should be designed to prevent accidental activation/deactivation.(O)	
6.4.2.2	Facilities should be provided to adjust the loudspeaker volume. (O)	
6.4.2.3	A Push-To-Talk function shall be provided. The Push-To-Talk function does not need to be a dedicated button. (M)	
6.4.2.4	Four buttons should be provided for designated stored numbers. These buttons need not be dedicated buttons. (This facility is required to allow calls to specified users to be initiated quickly.) (O)	

Chapter	Subject	Linked test case
6.4.2.5	Stored numbers and other set-up details should be protected against accidental alteration. (O)	
6.4.2.6	If the ability to initiate Railway emergency calls is implemented in the radio, accidental initiation of a Railway emergency call shall be prevented. (M)	
6.4.3	Indications	
6.4.3.1	A visual and audible indication shall be given when the remaining capacity of the battery is such as to enable only 10 minutes of full duplex call time. (M)	
6.4.3.2	A network service availability indication shall be provided to the user. (M)	
6.4.3.3	A visual indication shall be provided to the user if the network service is no longer available. (M)	
6.4.3.4	An audible indication should be provided to the user if the network service is no longer available. (O)	
7	Operational radio	Outside the IOTs
7,1	Introduction	
7,2	Operational radio functions	
7.2.1	Summary	
7.2.1.1	In this section, the functions to be provided by the Operational radio are described. (I)	
7.2.1.2	The following functions will be provided:	
	Call related functions	
	– call authorised users; (M)	
	– call controller; (M)	
	– send Railway emergency calls; (M)	
	– receive Railway emergency calls; (M)	
	– receive incoming calls; (M)	
	– group and broadcast calls; (M)	
	– terminate calls; (M)	
	– shunting mode communications; (O)	

Chapter	Subject	Linked test case
	– enter/leave direct mode; (O)	
	Other functions	
	– switch radio on/off; (M)	
	– select language; (M)	
	– select mobile radio network; (M)	
	– adjust loudspeaker volume; (M)	
	– register and deregister functional number; (M)	
	– store/retrieve numbers and their details; (M)	
	– computer interface. (O)	
7.2.2	Call related functions	
	Call authorised users	
7.2.2.1	The Operational radio shall be capable of use as a standard telephone, such that the user is able to call any valid number subject to call restrictions enforced by the network. (M)	
	Call controllers	
7.2.2.2	It shall be possible for the user of an Operational radio to establish a call with each of the following types of controller (who are not permanently included in a shunt-ing group) with a minimum number of actions being required:	
	– primary controller; (M)	
	– secondary controller; (M)	
	– power supply controller. (O)	

Chapter	Subject	Linked test case
7.2.2.3	For some users, particularly for shunting team leaders, up to twenty valid numbers may be stored for one controller type. In these cases, the identities of the controllers corresponding to these valid numbers shall be displayed with an audible and visual prompt for one to be selected. The number of the controller selected shall then be used to establish the call. If no selection is made by the user within 10 seconds the radio shall abandon the call attempt. (O)	
7.2.2.4	Once an appropriate number has been obtained, the radio shall attempt to establish a call to this number with railway operation priority. (M)	
7.2.2.5	An audible and visual indication shall be provided to the user that the call is proceeding. (M)	
7.2.2.6	When the call is connected to the controller, an audible and visual indication shall be provided to the user. (M)	
7.2.2.7	The functional identity of the connected party, if available, shall be displayed to the user. (M)	
7.2.2.8	Where available, an alphanumeric description of the identity of the connected party shall be displayed. (M)	
7.2.2.9	If the system is not able to connect the call, an audible and visual indication shall be provided to the user. (M)	
	Send Railway emergency call	
7.2.2.10	The Railway emergency call shall be able to be initiated using a single red button (see section 13). (M)	
7.2.2.11	It should be possible, as a maintenance function, to enable/disable the emergency call function. (O)	
7.2.2.12	If the emergency call function is disabled, a visual indication and short audible indication shall be given when:	
	– the radio is switched on; (M)	
	– the emergency button is pushed (in this case nothing else will happen). (M)	
	Receive incoming point to point voice call	
7.2.2.13	An audible and visual indication of an incoming call shall be provided. (M)	

Chapter	Subject	Linked test case	
7.2.2.14	Where available, the functional identity of the calling party shall be displayed. (M)		
	Receive incoming group or broadcast voice call		
7.2.2.15	A short audible and visual indication of the incoming call shall be provided. (M)		
7.2.2.16	The group identity of the voice group call (VBS or VGCS) shall be displayed. (M)		
7.2.2.17	If the call is a broadcast call, the user shall be informed that he cannot speak as part of the broadcast call. (M)		
7.2.2.18	If the call is a group call, the user has to request permission to speak during the call by using the Push-To-Talk (PTT) function. (M)	8.26	8.30-8.34
7.2.2.19	In a group call, a visual indication shall be provided to remind the user of the need to use the PTT function. (M)		
7.2.2.20	The user may not speak in a group call until permission is granted by the network after using the PTT function. (I)	8.26	8.30-8.34
7.2.2.21	In a group call, an audible and visual indication of whether the request was successful shall be provided. The user may then talk whilst the PTT function is used. (M)	8.26	8.30-8.34
7.2.2.22	If the user moves out of the group or broadcast call area whilst the call is in progress, an audible and visual indication of the loss of call shall be provided to the user. (M)		
	Receive incoming Railway emergency call		
7.2.2.23	Reception of this call shall proceed as for a standard group or broadcast call except that a distinctive audible and visual indication shall be provided. (M)		
	Terminate calls		
7.2.2.24	The radio shall provide a means for the user to terminate calls which he is authorised to terminate (ie all calls except broadcast or group calls not initiated by the user). (M)		

Chapter	Subject	Linked test case
	Shunting mode communications	
7.2.2.25	The Operational radio should provide facilities to support shunting mode as described in section 14. (O)	
7.2.2.26	If shunting mode is implemented, a means to enter and leave shunting mode shall be provided. (M)	
7.2.2.27	If shunting mode is implemented, the functionality to enter or leave shunting mode shall not be available whilst there are on-going calls involving the Operational radio. (M)	
7.2.2.28	If shunting mode is implemented, the link assurance tone shall be provided via the loudspeaker. (M)	
	Direct mode	
7.2.2.29	A means to enter/leave the direct mode of operation should be provided (see section 15). (O)	
7.2.3	Other functions	
	Switch radio on and off	
7.2.3.1	The radio shall have an on/off switch. Switching the radio 'on' shall initiate the following: (M) – transitory lighting of any display, controls or indicator lights; – automatic self-testing; – if the self-test fails a visible and audible indication shall be provided; – connection to a mobile network (see section 3.3); – if connection is successful, the name of the network shall be displayed and an audible confirmation of successful connection shall be given; – if connection is not successful, an audible and visual indication shall be provided.	
7.2.3.2	At this point the radio should be able to receive all calls initiated using the telephone number or appropriate group call number. (I)	

Chapter	Subject	Linked test case
7.2.3.3	Switching the radio off shall cause the following: (M) – termination of all calls under the control of (ie initiated by) the radio; – disconnection of the radio from the network; – clearing the display and inhibition of functions.	
7.2.3.4	When switched off, the radio shall retain any settings and numbers which are stored at the time the radio is switched off. (M)	
	Select language	
7.2.3.5	Prompts and messages shall be capable of being displayed in at least 10 languages (each railway will choose which languages will be implemented). (M)	
	The user shall be able to select his preferred language for the display; this setting shall be retained by the radio. (M)	
	When the radio is first powered on, the language that appears on the display shall be the default one set by the national railway. (M)	
	Select mobile radio network	
7.2.3.8	Where more than one mobile radio network is available for use by a mobile, the selection of the network to use shall be automatic (see section 10.5). (M)	
7.2.3.9	When the mobile changes network automatically, a visual and audible indication shall be given. (M)	
7.2.3.9i	It shall be possible for a user to override the automatic network selection manually. This function shall not be available during calls. (M)	
	Register and deregister functional number	
7.2.3.10	It shall be possible to register and deregister a functional number in the following way: – Initiated by the user and transmitted to the ground: – user enters functional number which is transmitted to the network. (M)	
7.2.3.11	Where a change of functional number is required, it shall be possible for the user to initiate the change. (M)	

Chapter	Subject	Linked test case
	Store/retrieve numbers and their details	
7.2.3.12	It shall be possible for the user to find and display stored numbers and their information. (M)	
7.2.3.13	It shall be possible for the user to store and/or overwrite numbers and their details in the radio. (M)	
	Computer interface	
7.2.3.14	A standard data interface should be provided to allow a computer to be connected to the radio. (O)	
7,3	Environmental and physical requirements	
7,4	Operational radio man-machine interface	
7.4.1	Introduction	
7.4.1.1	The Operational radio MMI shall comprise the following components: (O) – display; – control panel; – loudspeaker; – microphone.	
7.4.1.2	The MMI should be suitable for use both by day and night. (O)	
7.4.2	Display	
7.4.2.1	The display shall be capable of displaying at least 6 lines, each of 20 characters. (M)	
7.4.3	Controls	
7.4.3.1	Four buttons should be provided for designated stored numbers. (This facility is required for calls to local controllers, etc.) (O)	
7.4.3.2	The emergency button shall be designed to avoid accidental use. (M)	
7.4.3.3	If shunting mode is implemented, the link assurance button shall be designed to avoid accidental use. (M)	
7.4.3.4	A dedicated Push-To-Talk button shall be provided. (M)	
7.4.4	Indications	

Chapter	Subject	Linked test case
7.4.4.1	A visual and audible indication shall be given when the remaining capacity of the battery is such as to enable only 10 minutes of full duplex call time. (M)	
7.4.4.2	A visual indication shall be provided to the user if the network service is no longer available. (M)	
7.4.4.3	An audible indication should be provided to the user if the network service is no longer available. (O)	
8	Controller equipment specifications	Outside the IOTs
8,1	General	
8,2	Primary controller's MMI	
8.2.1	The primary controller's MMI should provide the following functionality: (O) – Queue all incoming calls or call requests. – Display the queue to the controller, showing the func tional identity and priority of callers. High priority calls should be identified and presented at the top of the queue. – Allow the controller to select any of the incoming calls currently queued by the system. – Allow the controller to establish a call of Railway emergency, public emergency or railway operation priority to any mobile by selection from the display. – Allow the controller to establish, close, enter and lea ve group calls (at Railway emergency, public emer gency or railway operation priority). – Allow sending and receiving of text messages.	
8.2.2	For post incident analysis, the controller equipment should provide the possibility to record all operational speech and data calls. (O)	
8.2.3	It should be possible for calls to be answered automatically according to incoming call priority as defined in section 10.2. (O)	
8,3	Other controllers' MMIs	

Chapter	Subject	Linked test case
8.3.1	The functionality required by other types of controllers is essentially the same as for primary controllers, but the control area will differ and the call set-up subsystem may be integrated into their own function management system. (I)	
8.3.2	At the detailed level, different controllers may have specific addressing needs, eg catering controllers will need to call specific vehicles in a train. (I)	
8.4	Controller terminal interface	
8.4.1	The communications architecture will be dictated by local circumstances. The definition of this interface is beyond the scope of EIRENE. (I)	
8,5	Environmental specification	
8.5.1	The controller equipment must be designed to function correctly in a railway operating environment, such as control centres and signal boxes. (I)	
9	Numbering plan	
9,1	General	
9.1.1	International standardisation of numbering plans is needed to ensure interworking between networks. Furthermore, standardised allocation of numbers to subscribers will facilitate schemes for identification, barring, etc. (I)	
9.1.2	This section addresses the following: (I)	
	numbering plan requirements;	
	standardised telephone numbers;	
	group numbers;	
	calls from external networks to the EIRENE network.	
9,2	Numbering plan requirements	
9.2.1	General	
9.2.1.1	The EIRENE system shall enable users to originate and receive calls by functional number. (M)	2.24 2.26

Chapter	Subject	Linked test case
9.2.1.2	Each mobile shall be identified by a unique telephone number. (M)	Configuaration aspects are tested implicitely by various test cases, e.g. 1.16
9.2.2	Use of running number	
9.2.2.1	The use of running numbers to address trains shall not result in any ambiguities. (I)	
9.2.2.2	Every on-train function shall be identified by a unique standard number. (M)	2.16 2.17
9.2.3	Use of engine/coach number	
9.2.3.1	The use of engine/coach numbers to address trains shall not result in any ambiguities. (I)	
9.2.3.2	Every on-engine/coach function shall be identified by a unique standard number. (M)	2.16 2.17
9.2.4	Use of shunting team, maintenance team or controller number	
9.2.4.1	Every shunting team number shall be based on an association of: (M)	2.24
	service area identifier;	
	shunting team identifier.	
9.2.4.2	Every maintenance team number shall be based on an association of: (M)	2.24
	service area identifier;	
	type of maintenance team (speciality code);	
	maintenance team identifier.	
9.2.4.3	Every controller number shall be based on an association of: (M)	2.24
	controller location;	
	controller identifier.	
9.2.4.4	The numbering for other teams shall be treated in the same way as maintenance teams in 9.2.4.2. (M)	Configuaration issue. It's not tested directly by the IOTs, see e.g. 2.24
9.2.5	Use of group calls	
9.2.5.1	Group call service areas shall be freely configurable within the operational responsibility of each railway network. (M)	Configuaration aspects are tested implicitely by various test cases, see 8

Chapter	Subject	Linked test case
9.2.6	Use of alphanumerical numbers	
9.2.6.1	In some countries, train numbers are alphanumeric. Support for such numbers is not required for interoperability. (I)	
9.3	Telephone numbers	
9.3.1	Telephone numbers can be defined on a national basis, but codes for certain functions shall be used on an international basis in order to allow interoperability. (M)	Tested by various national international calls, e.g. 4.1 and 4.3
9.3.2	For certain functions, standardised telephone numbers shall be implemented. These functions are: (M)	
	Route call to most appropriate ERTMS/ETCS RBC;	4
	Railway emergency call;	6.1 6.2 6.3 6.5 6.6
	Route call to primary controller;	4.1 4.3
	Route call to secondary controller;	4.1 4.3
	Route call to power supply controller;	4.1 4.3
	Public emergency call.	1.49 1.50 1.51 1.45 1.52 1.53 1.48
9,4	Group numbers	
9.4.1	To provide interoperability between the fixed railway networks within the EIRENE network, standardisation of UIC group numbering will be required. (I)	
9.4.2	In network boundary areas, the pre-defined local area shall be allocated on a bilateral basis. (M)	8.35
9,5	Calls from external networks to the EIRENE network	
9.5.1	Authorised users within the EIRENE network shall be able to receive calls from calling parties outside the EIRENE network. (M)	3.5 3.6
10	Subscriber management	
10,1	Introduction	
10,2	Allocation of priorities	

Chapter	Subject	Linked test case					
10.2.1	10.2.1 A number of levels of priority shall be required in order to offer different grades of service to different users and calls. Five levels of priority shall be defined: (M) – Railway emergency; – control-command (safety); – public emergency and group calls between drivers in the same area; – railway operation; – railway information.	1.16	1.17	1.38	1.39	7.1-7.68	
10.2.2	In order to provide interoperability, priorities shall be allocated consistently across all EIRENE networks, as shown in the following table. (M) [Table 10-1: Allocation of priorities]	1.16	1.17	1.38	1.39	5	7.1 - 7.49
10.2.3	The lowest priority ongoing call shall be pre-empted before that of a higher priority. (M)	5	7.1 - 7.49				
10.2.4	In the case where an EIRENE mobile attempts to make a Railway emergency call over a public network, the ability to pre-empt lower priority calls (particularly public emergency calls) may be inhibited, unless a special agreement is in place. (I)						
10.3	Call restriction						
	10.3.1 Various types of call restriction may be employed by the railways as an additional security measure. Such facilities may be particularly important if public network access to the radio system is provided (eg to prevent members of the public calling drivers and drivers calling members of the public). (O)						
	10.3.2Any implementation of such call restrictions shall not affect international interoperability. (M)						
10.4	Group membership	1.45					
10.4.1	A mobile may be a member of a number of groups. It shall be possible to ‘activate’ or ‘deactivate’ the mobile’s subscription to these groups. (M)						

Chapter	Subject	Linked test case
10.4.2	Activating a group on the mobile shall allow a user to receive a call from that group. (M)	
10.4.3	Deactivating a group on the mobile shall prevent a user receiving calls from that group. (M)	
10.4.4	In order to provide interoperability, Cab radios will be members of a number of standard groups:	
	- Railway emergency call; (M)	
	- 'all train drivers'; (M)	
	- shunting team; (M)	
	- trackside worker. (O)	
10.4.5	All mobiles with Railway emergency group call sub-scription(s) shall be prevented from deactivating the emergency group(s) whilst operational. (M)	
10.5	Network selection list	Terminal's feature
10.5.1	Authorised networks shall be listed (or automatically selected if automatic selection has been enabled) in the following order: (M) – home EIRENE network; – 'foreign' EIRENE networks; – public networks.	
10.5.2	Where EIRENE facilities are not available within the currently selected network, the user shall be given a visible indication. (M)	
10,6	10.6 Access matrix	
10.6.1	The access matrix defines which subscribers are able to contact which other subscribers within the EIRENE network. (M)	3.1 3.2 3.3 3.4

Chapter	Subject	Linked test case			
10.6.2	"Yes" indicates that the network shall allow a call from the stated initiating party to the stated receiving party. "Yes*" indicates that the call shall be allowed at least for users on the same train. "Open" indicates that permissions for calls of this type are to be assigned by the implementing railway according to their specific communication requirements. Shaded cells on the access matrix mean that this call is outside the scope of the EIRENE specifications. The access matrix is shown in table 10-2. (M)	3.1	3.2	3.3	3.4
10.6.3	If required, a railway may make additional restrictions to the access matrix.				
11	Functional numbering and location dependent addressing				
11,1	General				
11,2	Functional addressing				
11.2.1	Principles				
11.2.1.1	An addressing scheme shall be provided which permits users to be identified by numbers corresponding to their functional roles rather than by numbers tied to the terminal equipment that they are using. (M)	2.1			
11.2.1.2	The primary usage of functional addressing will be for controllers to establish communications with train drivers by making use of the train number. The train number will vary between journeys although EIRENE equipment in the cab is unlikely to change. (I)				
11.2.1.3	Other uses of functional addressing will include identifying on-train functions and other users performing particular roles such as shunting team leaders, maintenance team members, etc. (I)				
11.2.1.4	It shall be possible to assign up to a minimum of 3 functional numbers to an EIRENE user at any one time. (M)	2.2	2.3		
11.2.1.5	Only one EIRENE user shall be assigned to a given functional number at any one time. (M)	2.16	2.17		

Chapter	Subject	Linked test case
11.2.1.6	Deleted.	
11.2.1.7	A user shall be able to set up a functional number on one network, and cancel the number from another network. (M)	2.10 2.18 2.19
11.2.1.8	The functional number shall remain valid as a user roams from one network to another. (M)	2.10 2.18 2.19
11.2.1.9	The functional addressing scheme shall be independent of specific configurations of mobile and terminal equipment. For example, the functional number of a conductor on board a particular train shall be the same irrespective of whether the conductor accesses the network through the Cab radio or has a separate dedicated EIRENE mobile. (M)	Terminal issue
11.2.1.10	It shall be possible to call EIRENE users by functional numbers from a wide range of terminals (EIRENE and non-EIRENE). Examples include EIRENE mobiles, controller terminals, railway fixed network telephones and public telephones. (All such calls will be subject to any access restrictions - see section 10.3.) (M)	2.24 2.26 3.5 3.6
11.2.1.11	The functional addressing scheme should permit calls to be routed from a controller to an international train within the control area without reference to any EIRENE system other than that providing service to the international train. (O)	
11.2.2	Format of functional numbers	
11.2.2.1	Functional numbers must be unique within the domain of operation. Since the number must be independent of networks, each number must be unique across all networks (including implementation of EIRENE facilities on public networks). (M)	2.16 2.17
11.2.2.2	The functional number shall consist of numeric characters only. (M)	Configuaration aspects are tested implicitely by various test cases, e.g. 2.24

Chapter	Subject	Linked test case
11.2.2.3	If alphanumeric numbers are applied by a national railway, the railway will be responsible for the translation to unique numeric functional numbers compatible with the EIRENE specification. (I)	
11.2.3	Presentation of functional identity	
11.2.3.1	The functional identity of the called user shall be presented to the user initiating a call and the functional identity of the initiator shall be presented to the user receiving a call. (M)	2.24 2.26
11.2.3.2	For broadcast and group voice communications, the functional identity provided shall be that of the broadcast or group identity. (M)	8.1 9.1
11.2.3.3	If the user initiating the call has more than one functional identity, the user shall be able to select, prior to call establishment, which functional identity is presented to the receiving user. (M)	MS-issue
11.2.3.4	In the case of Cab radio, when a train number is assigned as a functional identity, this shall take priority over other Cab radio functional identities, and shall be the functional identity for the Cab radio to be displayed to other users. (M)	MS-issue
11.2.3.5	The functional identity shall be presented to the user in a form which can be readily understood (eg 'driver of train abcd' rather than 'abcd01' or 'xyz shunting team 3' rather than 'xyz03'). (M)	MS-issue
11,3	Functional addressing registration procedures principles	
11.3.1	Three procedures can be identified for managing the relationship between the functional number and the telephone number by the mobile user as defined below. (I)	
11.3.2	Registration	
11.3.2.1	The functional addressing scheme shall be supported by a straightforward procedure for registration of functional numbers. This procedure shall be carried out by the user on commencement of the functional role. (M)	2.1 2.10

Chapter	Subject	Linked test case			
11.3.2.2	The functional number registration facility shall be supported by all EIRENE user equipment. (M)	Terminal issue			
11.3.2.2i	It should be possible for the system to prevent certain types of users from registering functional numbers that they are not authorised to use, for example: (O) – train number; – driver of train; – shunting team leader.				
11.3.2.3	It shall be possible to register up to ten functional numbers to items of equipment physically connected to the Cab radio within 30 seconds. (M)	2.1	2.1		
11.3.2.4	The registration procedure shall provide a means to prevent mis-allocation of functional numbers during registration. (M)	2.4	2.11		
11.3.2.5	Duplicate functional numbers (eg two trains with the same train number) shall be prevented. (M)	2.16	2.17		
11.3.2.6	The system shall provide a means to recover consistent data sets following a system failure during which functional addressing facilities are lost. During this recovery period, the system shall not permit the use of unverified functional numbers. (M)	2.23			
11.3.3	Deregistration				
11.3.3.1	The functional addressing scheme shall be supported by a straightforward procedure for deregistration of functional numbers. This procedure shall be carried out by the user at the end of the functional role. (M)	2.4	2.6	2.18	2.19
11.3.3.2	The functional number deregistration facility shall be supported by all EIRENE user equipment. (M)	Terminal issue			
11.3.3.3	It shall be possible to deregister up to ten functional numbers to items of equipment physically connected to the Cab radio within 30 seconds. (M)	2.4	2.18		

Chapter	Subject	Linked test case			
11.3.3.4	In addition, a given set of users shall also be allowed to: (M) – deregister a functional number which is no longer valid but which has not been deregistered by the user; – deregister, by overriding, another user of the same type (eg a driver can deregister a train number that another driver has forgotten to de-register); – deregister, with one action, all functional numbers associated with the same mobile (eg the driver deregisters all functions at the end of the journey).	2.7	2.8	2.20	2.21
11.3.3.5	An EIRENE mobile shall remove the displayed functional number and provide an indication to the user that deregistration has taken place. (M)	2.4	2.18		
11.3.4	Re-registration	2.1			
11.3.4.1	To allow roaming between EIRENE networks, the system shall support a procedure for the re-registration of functional numbers after selection of a new network. (M)	2.15			
11.3.4.2	This procedure shall be carried out without manual intervention. (M)	MS-issue			
11.3.4.3	After automatic re-registration is performed, the new registration details shall be displayed to the user. (M)	2.15			
11,4	Location dependent addressing				
11.4.1	Location dependent addressing shall be provided to route calls for a given function to a destination number that is dependent upon the user's location. (M)	4.1	4.2	4.3	4.4
11.4.2	The functions to which calls shall be routed based upon the location of the mobile shall include: (M) – Primary controller; – Secondary controller; – Power supply controller; – Train management centre (eg RBC, CTS).	4.1	4.2	4.3	4.4

Chapter	Subject	Linked test case			
11.4.3	The correspondence between the locations and the destination of the call shall be easily re-configurable to support dynamic changes in controller area boundaries (eg controller area boundaries will change from peak to off-peak periods during the working day or over longer periods, areas may change to match changes in railway organisation or traffic demand). (M)	4.1	4.2	4.3	4.4
11.4.4	When operating with location dependent addressing, no manual action shall be required to update the system when a mobile moves between locations. (M)	4.1	4.2	4.3	4.4
11.4.5	The location dependent addressing scheme shall be available to all mobiles. (M)	4.1	4.2	4.3	4.4
11.4.6	As a minimum, the location information used by the EIRENE system shall be derived from that available from the network itself (eg current cell or base station serving the mobile). (M)	4.1	4.2	4.3	4.4
11.4.7	Where greater accuracy for location dependent addressing is required, additional location information may be provided by systems external to EIRENE. Sources of such information may include: (O) a) ground-based signalling systems; b) on-train systems (eg ERTMS/ETCS equipment, balise readers, GPS etc).				
12	Text messaging				
12,1	Introduction				
12.1.1	12.1.1 There is no requirement for an internationally standardised pre-defined messaging application. However, it is anticipated that individual national railways may have a requirement for pre-defined messages, in which case the application will be specified as part of individual national procurements.				
12.2	Definition of the service				
12.2.1	It should be possible to transfer text messages between ground and mobile(s) through the EIRENE system. (O)				

Chapter	Subject	Linked test case
12.2.2	In order to ensure interoperability, the service is optional for the ground and mandatory for the Cab radio. (M)	
12.2.3	If a message is safety related, the safety mechanisms will be included at the application level and do not concern the EIRENE system. (I)	
12.3	Performance	
12.3.1	The maximum length of a message segment shall be 96 characters. A message can include several segments. (M)	
12.3.2	The transfer time for each message segment should be less then 30 seconds for 95% of messages. (O)	
12.3.3	The text message facility shall not interfere with the ability of users to use the radio. (M)	
12.4	Interface	
12.4.1	A standard data interface between the mobile and the application module shall be provided. (M)	
13	Railway emergency calls	
13,1	Introduction	
13.1.1	This section covers the use of the EIRENE radio system for Railway emergency calls. This section also describes the facility for confirmation of such emergency calls and storage of confirmation for post-incident analysis. (I)	
13.1.2	This section describes the handling of high priority voice calls for railway operational emergencies and does not cover public emergency calls (ie handling of ‘112’ calls). (I)	
13.1.3	There are two types of Railway emergency call: (I) – Train emergency call; – Shunting emergency call.	

Chapter	Subject	Linked test case					
13.1.4	The type of call initiated shall be determined automatically, based upon the mode of operation of the radio. (M)	Terminal feature					
13.1.5	If the mobile is in shunting mode, the emergency call button shall initiate a shunting emergency call, otherwise the call shall be a Train emergency call. (M)	Terminal feature					
	Train emergency call						
13.1.6	The Train emergency call shall be sent to all drivers and controller(s) within an area, which is pre-defined to meet operational requirements. The predefined areas for emergency calls shall include, where necessary, parts of one or more network(s). (M)	6.1	6.5	6.3	6.6		
13.1.6i	The appropriate ERTMS/ETCS RBC should be informed when a Train emergency call is initiated. (O)						
	Shunting emergency call						
13.1.7	The Shunting emergency call shall be sent to all users involved in shunting operations in the shunting area. (M)	6.19	6.20			6.28	6.29
13.1.8	The Shunting emergency call shall automatically take priority over the link assurance signal. (M)	6.19	6.20			6.28	6.29
13,2	Management of Railway emergency calls						
13.2.1	Summary						
13.2.1.1	A Railway emergency call may be defined in three distinct phases. These are: (I) – Stage 1: Warning; – Stage 2: Information; – Stage 3: Terminate Railway emergency call.						
13.2.2	Stage 1: Warning						
13.2.2.1	A Railway emergency call shall be able to be initiated by using a simple MMI action (eg a single MMI action for the Cab and Operational radios). (M)	Terminal feature					
13.2.2.2	A connection of Railway emergency priority (see section 10.2) shall be established to a pre-determined set of receiving mobiles and controller(s). (M)	6.1	6.5	6.3	6.6		

Chapter	Subject	Linked test case				
13.2.2.3	If the system is not able to connect the call, the system shall automatically keep trying to connect the call for 30 seconds. (M)	Terminal's feature				
13.2.2.3i	During this period the user shall be provided with an audible and visual indication that the system is trying to connect the call. (M)	Terminal's feature				
13.2.2.3ii	After the 30 second period, if the connection was unsuccessful, the system shall provide another audible and visual indication that it was unable to connect the call. (M)	Terminal's feature				
13.2.2.4	An audible indication of 5 seconds (to be confirmed by trials) shall be provided to originating and receiving users that the emergency function has been activated. (M)	Terminal's feature				
13.2.2.5	Different indications at the originating and receiving terminal may be provided. (O)	Terminal's feature				
13.2.2.6	A continuous visual indication that the emergency function has been activated shall be provided at the originating and all receiving terminals. (M)	Terminal's feature				
13.2.2.7	In the event that a train enters the affected area after the warning stage is complete, the same audible and visual indications shall be provided. (M)	6.9-6.18				
13.2.3	Stage 2: Information					
13.2.3.1	A speech connection shall be established immediately following the warning tone, to allow the originator of the emergency call, to give information concerning the nature of the emergency. (M)	6.1	6.5	6.2	6.3	6.6
13.2.3.1i	Speech should be possible to allow a controller receiving the warning tone to give information. (O)					
13.2.3.2	Additionally, speech should be possible to allow other mobile users receiving the warning tone to give information. (O)					
13.2.3.3	The information shall be received by the same set of users who received the warning tone. (M)	6.1	6.5	6.2	6.3	6.6
13.2.4	Stage 3: Terminate Railway emergency call					

Chapter	Subject	Linked test case							
13.2.4.1	A Railway emergency call may only be terminated by: (M) – the originator of the call; – a controller participating in the call; – the network following a (nationally determined) period of no speech.	6.1	6.5	6.19	6.20	6.19	6.2	6.28	6.29
13.2.4.2	If the radio moves out of the area whilst the emergency call is in progress, an audible and visual indication of the loss of the call shall be provided to the user. (M)	Terminal's feature							
13.3	Receipt of Railway emergency calls								
13.3.1	Authorised EIRENE mobiles shall be able to receive a Railway emergency call at any time while the mobile is powered up. (M)	Termi-nal's feature	6.26	6.27	8.44	8.45	9.34	9.35	
13.3.2	For Railway emergency calls initiated by a mobile, the controller's display will indicate:	6.8							
	– location; (O)								
	– the functional identity of the originating mobile, which includes the following:								
	– the train number, if available; (M)	6.8							
	– the engine number, if no train number is available; M)	6.8							
	– the coach number of the leading cab, if neither a train number nor an engine number is available. (O)								
13.4	Confirmation of Railway emergency calls								
13.4.1	For post-incident analysis, it is important that the origi-nation and reception of Railway emergency calls by mobiles is confirmed by a message sent to a ground-based central location (and also recorded in the on-train recording device). (I)								
13.4.2	The confirmation shall be generated automatically with-out input from the user. (M)	Terminal's feature							
13.4.3	The confirmation message shall commence at the end of the call or if the radio moves out of the call area. (M)	Terminal's feature							

Chapter	Subject	Linked test case
13.4.4	If the radio loses contact with the network, the mechanism shall commence as soon as possible on regaining communications, for up to a maximum of 5 minutes without achieving contact. (M	Terminal's feature
13.4.5	For Railway emergency calls initiated by a mobile, the automatic confirmation message of the initiating mobile shall contain: (M) – the time at call establishment; – the time at clear down; – the functional number of the call originator; – the train number and engine number of the call originator, if a train.	6.4 6.7
13.4.6	For Railway emergency calls received by a mobile, the automatic confirmation message of the receiving mobile shall contain: (M) – the time at which the call was first received; – the time at which the call was lost (or terminated); – the group identity of the sender; – the functional number of the recipient; – the train number and engine number of the recipient, if a train.	6.4 6.7
13.4.7	The confirmation message shall be received at the central location with a 99% probability of success within 5 minutes of call termination. (M)	Performance test
13.4.8	The performance of the confirmation procedure shall not be dependent upon the current use of the mobile and shall not overload the network. (M)	Performance test, terminal's feature
14	Shunting mode	Terminal's feature
14,1	Introduction	
14.1.1	Shunting mode is the term used to describe the application that will regulate and control user access to facilities and features in the mobile while it is being used for shunting communications. (I)	

Chapter	Subject	Linked test case
14.1.2	There is a requirement to regulate the membership of shunting groups to prevent uncontrolled membership. (I)	
14.1.3	During specific shunting operations where the driver is not able to see the way ahead and where he is therefore relying on information from another shunting member, a link assurance signal is needed to provide reassurance during “silent periods” that the radio link is still established. This signal is also employed to provide reassurance that this other shunting member is not incapacitated. (I)	
14,2	Functional requirements	
14.2.1	The shunting call shall be a group call and shall have ‘Railway operation’ priority (see section 10.2). (M)	
14.2.2	Throughout the duration of the shunting group call, it shall be possible for any member of the shunting group to speak to all other members of the group, using the PTT function (as described in sections 5.2.2.53, 6.2.2.12 and 7.2.2.20), except during transmission of the link assurance signal. (M)	
14.2.2i	During the transmission of the link assurance signal, only the originator of the link assurance signal shall be able to speak to all other members using the PTT function. (M)	
14.2.3	The shunting communication shall be protected from unintentional and unauthorised access. (M)	
14.2.4	It shall be possible for all mobile members of the shunting group (except the driver) to transmit a link assurance signal. (M)	
14.2.5	Within the shunting group, it shall be possible for only one member of the group to transmit the link assurance signal at any time. (M)	
14.2.6	Operational radios used for shunting shall enable the link assurance signal to be activated and de-activated by the shunting group member. (M)	

Chapter	Subject	Linked test case
14.2.7	The link assurance signal should be used to reassure the driver of the integrity of the member at the head of the shunting movement. (O)	
14.2.8	Operational radios used for shunting shall be able to be switched between the following two operating modes by a maintenance function: (M) – Mode 1: the member is required to continuously press the link assurance signal button in order to transmit the link assurance signal; – Mode 2: the member is required to switch on the link assurance signal and then periodically press a button in order to transmit the link assurance signal (failure to do so shall result in the deactivation of the link as surance signal after a predefined period has elapsed).	
14.2.9	The link assurance signal shall be used to provide an audible indication to all group members. For the driver, this indicates that the radio link is operational. (M)	
14.2.10	Deleted.	
14.2.11	It shall be possible for any member of the shunting group (including a driver) to transmit a shunting emergency call to all shunting groups in the area. (M)	
14.2.12	It shall be possible for all shunting drivers and shunting group members to receive a shunting emergency call from any equipment capable of taking part in shunting communications. The shunting emergency call shall cause the audible link assurance signal to be interrupted. (M)	
14.2.13	It should be possible for the system to record: (O)	
	shunting group composition at a given instant;	
	the source and time a shunting emergency call was transmitted;	
	the recipients of a shunting emergency call.	

Chapter	Subject	Linked test case
14.2.14	If a user, other than the shunting leader, attempts to make another call whilst being an active member of a shunting group, the attempt shall be ignored. (M)	
14.2.15	If the radio is used by the team leader for a shunting group call (ie initiated the shunting group call), switching the radio off shall result in the termination of the shunting group call. (M)	
14,3	Group membership	
14.3.1	A shunting group shall be able to consist of the following mobile members: (M) – the shunting leader; – the shunting driver, who may remain fixed (ie in a shunting area) or may change one or more times during a working period (ie passenger or freight sta tions); – up to three shunting team members.	
14.3.2	In addition to the above shunting group members:	
-	a controller shall be able to be associated permanently or temporarily with the shunting group; (M)	
-	a shunting manager or other person capable of taking part in a shunting communication should be able to be temporarily associated with the shunting group. (O)	
14.3.3	It shall only be possible for the shunting leader to communicate with a person external to the ongoing shunting communication. This may be initiated by either the shunting leader or the external user. In the latter case, in order to avoid disturbing a shunting movement, the shunting leader should be informed by a visual and audible indication. The shunting leader can then choose the moment when he takes or rejects the call. (M)	8.55 8.58
14.3.4	The shunting leader shall then be able to allow the external user to join the shunting communication. (M)	

Chapter	Subject	Linked test case
14.3.5	National railways will be responsible for limiting the availability of equipment that is capable of taking part in shunting communications to persons that are author-ised to engage in such communications. (I)	
14,4	Link assurance signal	
14.4.1	The link assurance signal is a means to provide end-to-end confirmation between users that a voice communi-cation link remains intact. This facility is required princi-pally for the safe conduct of pushing manoeuvres to assure continuing availability of the radio channel while a shunting worker is guiding a train driver. (I)	
14.4.2	The link assurance signal shall consist of an intermittent audio tone (between 800 and 850Hz). The tone shall be of one second duration, followed by an interval of two seconds. (M)	
14.4.3	In order to fulfil the requirements of some railways, it should be possible to provide an alternative means of link assurance indication. (O)	
14.4.4	This means will consist of an additional safety device (external to the radio system) interposed between the Cab radio and the loudspeaker with the purpose of mut-ing the continuous link assurance signal for the driver’s convenience. In this case, the safety device will alert the driver only if the link assurance signal has failed or if it is cancelled. (I)	
	Operational radios used for shunting shall be able to be switched between the following two operating modes by a maintenance function: (M) – Mode A: the link assurance signal shall be inter rupted, but not cancelled, when the initiator of the link assurance signal presses the PTT to speak. – Mode B: the link assurance signal shall not be inter rupted when the initiator of the link assurance signal presses the PTT to speak.	

Chapter	Subject	Linked test case
14.4.5	The link assurance signal shall be deactivated upon receipt of a shunting emergency call. (M)	
14.4.6	All members of the shunting group, other than the initiator of the link assurance signal, shall be unable to speak during the transmission of the link assurance signal. However, they shall be able to initiate a shunting emergency call at any time. (M)	
14,5	Constraints	
14.5.1	Operating flexibility:	
-	it shall be possible to modify a shunting group's composition during a working period. The process for acceptance (or rejection) of new members, and for admission and removal of temporary members, shall be simple. (M)	
14.5.2	Management flexibility:	
-	in a given area, a radio set shall be capable of operation in any of the shunting groups in use in that area, subject to any user access restrictions. (M)	
15	Direct mode	
15,1	Introduction	
15,2	Functional requirements	
15.2.1	Implementation of direct mode is optional. Where the facility is provided, the following requirements are mandatory. (O)	
15.2.2	Principal requirements are: (M – see above) – a range of up to at least 2000m in open terrain between a direct mode transmitter and receiver; – a voice only capability that supports the use of the link assurance signal; – 'open channel' mode of operation such that all users employing direct mode receive transmissions when in range of the transmitting user; – it is sufficient that the user may talk or listen only, but not both. The ability to talk shall be achieved through	

Chapter	Subject	Linked test case
	use of the Push-To-Talk function; – a minimum of one channel is to be available for use of direct mode facilities; – if more than one channel is provided, there must be a function allowing the user to manually select the channel; – where equipment provides both normal and direct mode capability, the user shall be able to switch be tween the two modes in a straightforward manner (but not by accident); – the user may only select direct mode when the nor mal mobile telephony services are not available; – controls shall be simple to use, eg: – direct mode on/off switch; – Push-To-Talk function; – channel selection; – volume control; – battery life for handportables operating in direct mode shall be a minimum of 8 hours based on the following cycle: – 20% transmit; – 20% receive; – 60% stand-by; – when direct mode is used as a fall-back, an audible and visual indication shall be provided of normal mo bile telephony services returning. – battery warning for handportables;	

Table 6.2: Cross reference of EIRENE FRS V7 mandatory requirements to the IOT test cases

6.1.3 Cross reference of EIRENE SRS V15 mandatory requirements to the IOT test cases

Section	Subject	Linked test case
1	Introduction	
1,1	General	
1,2	Scope	
1,3	Applicability	
1,4	System overview	
1.4.1	Extent of specification	
1.4.1.1	The system is based on the ETSI GSM standard. To meet additional functionality and performance require-ments, this standard is to be supplemented by:	
	the following GSM services:	
	voice broadcast service;	
	voice group call service;	
	enhanced multi-level precedence and pre-emption;	
	General Packet Radio Service (GPRS);	
	railway specific applications:	
	exchange of number and location information between train and ground to support	
	functional and location dependent addressing;	
	emergency calls;	
	shunting mode;	
	multiple driver communications;	
	direct mode facility for set-to-set operation;	
	railway specific features, network parameters and stan-dards:	
	link assurance signal;	
	calling and connected line presentation of functional identities;	

Section	Subject	Linked test case
	cab radio, man-machine and other interfaces;	
	environmental specifications;	
	controller position functional specifications;	
	system configuration (numbering plans, priority levels, subscriber details, closed user groups, etc).	
1.4.1.2	The scope of the specification is shown in figure 1-2, showing the hierarchy of the GSM, and railway features to be implemented.	
1.4.1.3	A list of ETSI and 3GPP specifications is provided in the normative references section of this document.	
1.4.1.4	Compliance to the list of normative documents is mandatory for all of the GSM services necessary to provide the functionality specified in the [EIRENE FRS].	
1.4.1.5	Later releases of these specifications may be used, providing that the system is backwards-compatible with the versions listed.	
1.4.2	Outline architecture	
1.4.2.1	The system is based on the GSM architecture which is summarised in figure 1-3.	
1.4.2.2	The system comprises the following elements:	
	Base station sub-systems (BSSs) of base station controllers (BSCs) controlling base transceiver stations (BTSs) each containing a number of transceivers (TRXs).	
	Network sub-systems (NSSs) interfacing to the BSS via the GSM 'A' interface. The NSS contains mobile services switching centres (MSCs) with primary responsibility for call control. The MSC is supported by a visitor location register (VLR) containing temporary details of subscribers active within the MSC area, a group call register (GCR) containing attributes of voice group and broadcast call configurations for the related MSC area and home location registers (HLRs) holding subscriber details on a permanent basis.	

Section	Subject	Linked test case
	The network also comprises General Packet Radio Service (GPRS) infrastructure elements supporting the respective packet radio services. The serving GPRS support node (SGSN) is a location register function storing subscription information and location information for each subscriber registered in that node. It interfaces to the BSS via the Gb interface and to the MSC/VLR via the Gs interface and to the HLR via the Gr interface. The gateway GPRS support node (GGSN) is a location register function storing subscription information and routeing information (needed to tunnel packet data traffic destined for a GPRS MS to the SGSN where the MS is registered) for each subscriber for which the GGSN has at least one PDP context active. It interfaces to the SGSN via the Gn interface, to the HLR via the Gx interface, to external packet data networks via the Gi interface and to other GSM/GPRS networks via the Gp interface.	
	Mobile equipment (ME) interfacing to the BSS via the air (Um) interface.	
	Subscriber Identity Modules (SIMs) containing information specific to single subscribers. A standardised interface links mobile equipment to SIM cards. A SIM and ME combined are termed a mobile station (MS).	
	Operation and Maintenance Centre (OMC) for managing the network.	
	Billing Centre.	
1.4.2.3	Signalling within the NSS and between NSSs is carried out according to signalling system number 7, SS7, making specific use of the mobile application part (MAP) of that standard.	
1.4.2.4	Railway networks may implement a short message service centre to be interfaced to the GSM network in order to support railway specific messaging applications.	

Section	Subject	Linked test case
1.4.2.5	A railway GSM network is also likely to have external interfaces to:	
	private railway fixed networks;	
	public operator networks;	
	controller equipment;	
	specialised railway systems (eg train control systems).	
1.4.2.6	EIRENE will provide the radio bearer for ERTMS/ETCS. The EURORADIO layers are responsible for ensuring the overall safety of the transmission link between train-borne and trackside ERTMS/ETCS applications.	
1.4.2.7	In addition to a GSM capability, a direct mode capability may be provided for railway mobiles for set-to-set operation.	
1.4.2.8	Standardised interface protocols are to be provided to allow applications external to EIRENE to access EIRENE bearer services.	
	Applications may include:	
	public address;	
	intercom;	
	driver safety device;	
	train borne recorder.	
1.4.3	Railway specific services and facilities	
1.4.3.1	To meet the specific railway requirements, a number of additional features are required some of which have been incorporated in the GSM Standard. The main aspects are summarised in the following paragraphs.	
1.4.3.2	Frequency: Equipment is to be capable of operation in the following frequency bands:	
	Band Frequencies (MHz)	
	Railway GSM (R-GSM) 876-915/921-960	

Section	Subject	Linked test case
	Note: the R-GSM band includes the Public GSM (P-GSM) and Extended GSM (E-GSM) bands.	
1.4.3.3	Voice broadcast and group call facilities: All mobiles are to support these services as defined in the relevant GSM specifications. The services will mainly be used to:	
	broadcast messages from controllers to certain groups of trains in a controller area;	
	broadcast messages from trains or shunting team members to controllers or other mobiles in a defined area;	
	conduct group calls between train drivers and controllers over pre-defined areas;	
	conduct group calls between trackside workers, shunting team members, station staff and similar groups, typically over local areas.	
1.4.3.4	Enhanced multi-level precedence and pre-emption: This GSM specification is to be implemented in order to achieve the high performance requirements necessary for emergency group calls. It is also necessary to meet different grades of service requirements for different types of communications traffic on the system (eg safety (eg train control system), operational and administrative communications).	
1.4.3.5	Functional numbering: Many railway staff need to be addressed by functional rather than personal numbers. The functional numbers may change on a regular basis. The principal example is that of train drivers, who need to be addressed by train numbers which change with each journey. To overcome this difficulty a translation facility will be provided to allow calls to functional numbers to be forwarded to the most appropriate personal number at that time. Thus calls made to a train number are forwarded by the network to the appropriate driver or locomotive for that train at that time.	

Section	Subject	Linked test case
1.4.3.6	A follow-me service will be implemented in the EIRENE network using the GSM Unstructured Supplementary Service Data (USSD) facility to allow users to establish and terminate the forwarding of calls from a functional number to their personal number.	
1.4.3.7	Location dependent addressing: Train drivers need to be able to contact controllers and other staff at the push of a single button. As the train moves through different areas, controllers are liable to change. As a consequence it is necessary to provide a means of addressing calls from a train to certain functions based on the location of the train.	
1.4.3.8	The only source of location information available within the GSM network is the cell that the train is in. However, there are a number of external sources from which more accurate location information may be derived:	
	on-train location systems;	
	trackside balises;	
	information from ground based systems.	
1.4.3.9	Within EIRENE, the primary means of determining the location of a train for the purpose of location dependent addressing will be based on the cell dependent routing. This may be supplemented with additional information from external systems to provide a greater degree of accuracy.	
1.4.3.10	Direct mode: Railway mobiles may support a direct communications mode whereby a mobile can communicate with all other railway mobiles in a local area without the use of GSM infrastructure. Such a mode is required for use where:	
	no GSM infrastructure is provided;	
	GSM infrastructure equipment has failed.	
1,5	Structure of the specification	

Section	Subject	Linked test case
1.5.1	The specification is divided into the following separate sections:	
1.5.2	Section 2 lists the services and facilities which are to be supported by GSM-R networks. Section 3 provides requirements and recommendations concerning the configuration, planning and implementation of networks.	
1.5.3	Sections 4, 5, 6, and 7 are concerned with mobile equipment. Section 4 provides specifications applicable to all GSM-R mobiles. Sections 5, 6, and 7 detail the additional requirements for Cab radio, General purpose radio, and Operational radio equipment respectively. Note that for the handheld version of the General purpose radio, commercial standards apply.	
1.5.4	Section 8 covers controller equipment. Section 9 is concerned with a numbering plan for the variety of functional numbers which are required. Section 10 details the handling of other information, such as priority, closed user groups and encryption algorithms, which must be applied consistently in all networks.	
1.5.5	Section 11 specifies functional and location dependent addressing. Section 12 refers to the possible use of predefined text messages (not required for interoperability).	
1.5.6	Sections 13 to 15 describe the implementation of emergency calls, shunting mode and direct mode.	
1.5.7	References for all sections are included in appendix A.	
2	Network requirements	
2.1	Introduction	
2.1.1	The network services necessary to meet the range of UIC requirements are detailed below. These services are to be considered as a minimum set for implementation within each GSM-R standard network. Railways may implement additional network services as desired. (I)	

Section	Subject	Linked test case
2,2	GSM teleservices	
2.2.1	The GSM teleservices [EN 301 515, Index [24]] to be supported are indicated in table 2-1.	
	11 Telephony M 12 Emergency calls M 91 Voice Group Call Service (VGCS) M 92 Voice Broadcast Service (VBS) M	1.7 1.8, 1.9, 1.30, various 1.29 1.31 other 1.48-1.51 1.52-1.53 TCs 8.1-8.50 8.25 8.3 8.52 8.54 8.20 6.8 8.17 9.1-9.46 9.48-9.50 8.15
2.3	GSM bearer services	
2.3.1	The GSM bearer services [EN 301 515, Index [23]] to be supported are listed in table 2-2.	1.38
	24. Asynchronous 2.4 kbps NT M 25. Asynchronous 4.8 kbps NT M 26. Asynchronous 9.6 kbps NT M	1.16 1.47 10.16 10.22 10.28 10.34 10.40 10.45, 10.55, 10.61, 10.66, 10.71
2.3.2	Note: The Adaptive Multi-Rate (AMR) CODEC is not suitable for voice group calls or for voice broadcast calls. (I)	
2.4	GSM supplementary services	
2.4.1	The GSM supplementary services [EN 301 515, Index [9]] to be supported are listed in table 2-3. The applicability of these supplementary services to GSM basic services will be as indicated in [GSM 02.81-02.89 and EN 301 515, Index [28]]. (I)	

Section	Subject	Linked test case	
	CLIP M CoLP M CFU M CFB M CW M HOLD M MPTY M CUG M BOIC-exHC M BIC-Roam M USSD M Sub-addressing M eMLPP M UUS1 M	1.12 1.13 1.15 1.18 1.11 1.10 1.14 1.46 1.47 1.47 2.1-2.24 2.26 2.24 2.26 5.1 2.24 2.26	1.34 1.35 1.37 1.40 1.33 1.32 1.36 1.45 10.76 - 10.80
2.5	Railway specific services		
2.5.1	The railway specific services to be supported are listed in table 2-4.		
	Functional addressing M Locoation dependent addressing M Shunting mode M Multiple driver communications M Emergency calls M	2.1-2.11, 2.16- 2.22, 2.24, 2.26 4.1-4.4 1.14 6.1-6.18, 6.28-6.29	 1.36 various other TCs
2.6	Alerting duration		

Section	Subject	Linked test case
2.6.1	The call waiting service (CW) permits a party A to be notified of an incoming call from party C whilst the traffic channel is not available for the incoming call and party A is engaged in an active call with party B. However call waiting does not operate during the prior set up of the call between the parties A and B (including alerting if used). Therefore the alerting duration has to be as short as possible in order to minimize the risk for the party A of missing notification of an incoming call from party C with a higher eMLPP priority. Taking into account technical and operational aspects, it is recommended to set the relevant timer(s) in the network in such a way that the maximum alerting duration is limited to 60s. (I)	
3	Network configuration	
3,1	Introduction	
3,2	Coverage	Not applicable for lab test
3.2.1	For network planning, the coverage level is defined as the field strength at the antenna on the roof of a train (nominally a height of 4m above the track). An isotropic antenna with a gain of 0dBi is assumed. This criterion will be met with a certain probability in the coverage area. (The target coverage power level is dependent on the statistical fluctuations caused by the actual propagation conditions.) (I)	
3.2.2	The following minimum values shall apply: (M) - – coverage probability of 95% based on a coverage level of 38.5 dBµV/m (-98 dBm) for voice and non-safety critical data; – coverage probability of 95% based on a coverage level of 41.5 dBµV/m (-95 dBm) on lines with ETCS levels 2/3 for speeds lower than or equal to 220km/h.	

Section	Subject	Linked test case
3.2.3	The following minimum values are recommended: (I) – coverage probability of 95% based on a coverage level of 44.5 dBµV/m (-92 dBm) on lines with ETCS levels 2/3 for speeds above 280km/h; – coverage probability of 95% based on a coverage level between 41.5 dBµV/m and 44.5 dBµV/m (-95 dBm and –92 dBm) on lines with ETCS levels 2/3 for speeds above 220km/h and lower than or equal to 280km/h.	
3.2.4	The EIRENE mobile installation shall be designed to operate in a network meeting the criteria in 3.2.2 and 3.2.3. (M)	
3,3	Handover and cell selection	
3.3.1	The handover success rate should be at least 99.5% over train routes under design load conditions (as given in [EN 301 515, Index [30]]). (O)	
3.3.2	To avoid the necessity for large cell overlaps to accommodate high speed train operations, optimisation of the handover process for such trains is considered necessary. Suitable algorithms will be tested and refined as necessary during the trials process. (I)	
3.3.2	To avoid the necessity for large cell overlaps to accommodate high speed train operations, optimisation of the handover process for such trains is considered necessary. Suitable algorithms will be tested and refined as necessary during the trials process. (I)	
3.3.3	The proposed events for measurement of the start and stop of the handover execution at the mobile are: (I) – receipt of ‘handover command’; – receipt of ‘UA’ after ‘physical info’ on new channel.	

Section	Subject	Linked test case
3.3.4	There is a quality of service requirement for handover executions (eg a break of 10s would clearly be unacceptable to the user). 300ms represents our current best estimate of the QoS figure, although this will need to be confirmed through user trials. (I)	
3.3.5	An additional option is available to reduce the handover break period, namely the use of the synchronous handover capability to reduce the break period to about 150ms. Synchronous handover requires the BTS transmissions in different cells to be synchronised by the system. Each authority can decide whether it wishes to use synchronised BTSs. (I)	
3,4	Call setup time requirement	Not applicable for lab test
3.4.1	Call setup time requirement is dependent upon the eMLPP priority of a call [EN 301 515, Index [27]]. The required priority level for each call type is given in section 10.2. (I)	
3.4.2	Call setup times as defined in the EIRENE FRS shall be achieved with authentication and ciphering procedures enabled. (M)	
3.4.3	In order to achieve these times the passage of the call through any networks external to GSM (eg from the GSM MSC to a controller linked by an ISDN connection) must take less than 250ms. (I)	
3.4.4	Achievement of fast call setup times requires information in the setup message to be compressed. A maximum of 12 digits may be sent as mobile originator-to-dispatcher information. (I)	Part of a new part (sub part)
3,5	Frequency band and channel arrangements	No functionality related
3.5.1	The network shall operate in a sub-band, or combination of sub-bands, of the R-GSM band as defined in [EN 301 515, Index [35]]. (M)	

Section	Subject	Linked test case		
3.5.2	The UIC frequency band for GSM-R is defined in [CEPT 25-09]: (I) – 876 – 880 MHz (mobile station transmit); paired with – 921 – 925 MHz (base station transmit).			
3.5.3	The carrier frequency is designated by the absolute radio frequency channel number (ARFCN), and is defined in [EN 301 515, Index [35]]. For carriers in the UIC frequency band the following convention shall be used, where Fl(n) is the frequency value of the carrier ARFCN n in the lower band, and Fu(n) the corresponding frequency value in the upper band: (M) – Fl(n) = 890 + 0.2*(n-1024) 955 ≤ n ≤ 973 – Fu(n) = Fl(n) + 45 Frequencies are in MHz.			
3,6	DTMF tones and signals			
3.6.1	The minimum duration of a DTMF tone and the length of pause between tones generated by the network (DTMF sender) and needed for the DTMF digit recognition in the network (DTMF receiver) are specified in [3G TS 23.014, Support of Dual Tone MultiFrequency (DTMF) signalling]. (I)			
3,7	Termination of VGCS/VBS calls			
3.7.1	An entitled controller may terminate a VGCS/VBS call based on DTMF signalling [EN 301 515, Index [4] & [5]]. (I)			
3.7.2	The network shall terminate the ongoing VGCS/VBS call if it receives the 3-digit sequence “***” transmitted via DTMF signals. (M)	8.3	8.10	8.12
3.7.3	In order to minimise the discomfort caused by the DTMF tone added in the voice channel, the duration of the tone generated by the fixed line dispatcher shall be 70ms ±5ms, and there shall be a minimum gap of 65ms between each tone. (M)	Terminal's feature		
3,8	Muting and unmuting for VGCS calls			

Section	Subject	Linked test case
3.8.1	The muting and unmuting for VGCS shall be in line with [EN 301 515, Index [4]]. (M)	8.10 8.10
3.8.2	The network shall send the SET-PARAMETER message with the attribute “D-ATT = T”1 [EN 301 515, Index [6]] to the mobile station of the talking subscriber if it receives the 3- digit sequence “###” transmitted via DTMF or the group call SETUP message2 from a controller terminal. However, receiving the 3-digit sequence “###” or the group call SETUP message related to an additional controller while any other controller is talking shall not result in sending another SET-PARAMETER message with the attribute “DATT = T”. (M)	8.10 8.10
3.8.3	When the network has detected the 3-digit DTMF sequence “###” transmitted via DTMF from a controller terminal and if the controller was not previously talking it should indicate its recognition by playing a single DTMF grant tone “#” of duration of 100ms ± 5ms to be sent to that controller terminal only. (O)	
3.8.4	The network shall send the SET-PARAMETER message with the attribute “D-ATT = F”3 [EN 301 515, Index [6]] to the mobile of the talking subscriber only if it has received the 3-digit sequence “#**” transmitted via DTMF from all the talking controllers4.(M)	8.10 8.10
3.8.5	The duration of each tone (see 3.8.2 and 3.8.4) added in the voice channel, shall be 70ms ± 5ms, and there shall be a minimum gap of 65ms between each tone. (M)	8.10 8.10
4	Mobile equipment core specification	Outside the IOTs
4,1	Introduction	
4.1.1	To ensure interoperability, all EIRENE mobiles are specified with a common level of basic services, facilities and features. This section of the specification gives details of these core requirements, while sections 5-7 detail requirements specific to each of the radio types.	

Section	Subject	Linked test case
4.1.2	The logical architecture of an EIRENE mobile station (EIRENE MS) is shown in figure 4-1. The architecture consists of the following elements:	
	a) GSM Mobile Termination (GSM-MT): comprising GSM mobile equipment and SIM;	
	b) Direct Mode Mobile Termination (DM-MT): for direct mode communications;	
	c) EIRENE applications: standardised features outside GSM: dependent on radio type;	
	d) Man Machine Interface (MMI): dependent on radio type.	
4.1.3	The logical architecture comprises a number of inter-faces between the different EIRENE-MS elements. These are:	
	1) GSM-MT air interface: mandatory for interoperability and conformant to GSM specifications;	
	2) DM-MT air interface: Direct Mode is optional. How-ever, where implemented, the requirements concerning this interface are mandatory for interoperability;	
	3) GSM-MT - EIRENE Applications interface: specified to allow an option for separate procurement of GSM-MT and EIRENE Application equipment for the Cab radio (see [MORANE FFFIS MTI]);	
	4) DM-MT - EIRENE Applications interface: specified to allow an option for separate procurement of DM-MT and EIRENE Application equipment for the Cab radio;	
	5) EIRENE Applications - MMI interface: not specified.	
4.1.4	This specification defines three distinct mobile radio types according to the type of role they will perform and the environment they will operate in, as follows:	
	a) Cab radio - for use by the driver of a train and by ERTMS/ETCS;	
	b) General purpose radio - for general use by railway personnel;	

Section	Subject	Linked test case
	c) Operational radio - for use by railway personnel involved in train operations such as shunting and track-side maintenance.	
	Note: It is possible that the General purpose and Operational radios may have a number of physical implementations to meet railway requirements (eg handheld and vehicle mounted).	
4.1.5	All SIM cards used in EIRENE mobiles shall comply with the requirements of the MORANE FFFIS for GSM-R SIM Cards [MORANE SIM].	
4,2	Radio interface aspects	
4.2.1	All mobiles shall be capable of operation in the following frequency bands: Railway GSM (R-GSM) 876-915/921-960 MHz	
	Band Frequencies (MHz)	
	Railway GSM (R-GSM) 876-915/921-960	
	Note: the R-GSM band includes the Public GSM (P-GSM) and Extended GSM (E-GSM) bands.	
4.2.2	The mobile radio antenna installation on vehicles shall be designed so as to ensure that mobiles operate correctly in networks which conform to the design criteria defined in section 3.	
4.2.3	Mobile radios shall be of the following power classes:	
	Radio type Power class Power (W)	
	Cab radio 2 8	
	General purpose radio 4* 2*	
	Operational radio 4* 2*	
	Vehicle-based versions of the General purpose and Operational radios may be used to provide 8W mobile radios.	

Section	Subject	Linked test case
4,3	Services and facilities	
4.3.1	The following GSM teleservices, identified in section 2, are to be supported for each type of mobile radio:	
	11 Telephony	
	12 Emergency calls	
	21 Short message MT/PP	
	22 Short message MO/PP	
	23 Short message cell broadcast	
	61 Alternate speech and fax group 3	
	62 Automatic fax group 3	
	91 Voice Group Call Service (VGCS)	
	92 Voice Broadcast Service (VBS)	
4.3.2	The following bearer services, identified in section 2, are to be supported for each type of mobile radio	
	20. Asynchronous General Bearer Service	
	21. Asynchronous 300 bps T	
	21. Asynchronous 300 bps NT	
	22. Asynchronous 1.2 kbps T	
	22. Asynchronous 1.2 kbps NT	
	23. Asynchronous 1200/75 bps T	
	23. Asynchronous 1200/75 bps NT	
	24. Asynchronous 2.4 kbps T	
	24. Asynchronous 2.4 kbps NT	
	25. Asynchronous 4.8 kbps T	
	25. Asynchronous 4.8 kbps NT	
	26. Asynchronous 9.6 kbps T	
	26. Asynchronous 9.6 kbps NT	
	30. Synchronous General Bearer Service	
	31. Synchronous 1.2 kbps T	

Section	Subject	Linked test case
	31. Synchronous 1.2 kbps NT	
	32. Synchronous 2.4 kbps T	
	32. Synchronous 2.4 kbps NT	
	33. Synchronous 4.8 kbps T	
	33. Synchronous 4.8 kbps NT	
	34. Synchronous 9.6 kbps T	
	34. Synchronous 9.6 kbps NT	
	40. General PAD Access Bearer Service	
	41. PAD access 300 bps T	
	41. PAD access 300 bps NT	
	42. PAD access 1.2 kbps T	
	42. PAD access 1.2 kbps NT	
	43. PAD access 1200/75 bps T	
	43. PAD access 1200/75 bps NT	
	44. PAD access 2.4 kbps T	
	44. PAD access 2.4 kbps NT	
	45. PAD access 4.8 kbps T	
	45. PAD access 4.8 kbps NT	
	46. PAD access 9.6 kbps T	
	46. PAD access 9.6 kbps NT	
	61. Alternate speech/data	
	70. GPRS	
	81. Speech followed by data	
4.3.3	The following supplementary services, identified in section 2, are to be supported for each type of mobile radio.	
	Calling Line Identification Presentation (CLIP)	
	Calling Line Identification Restriction (CLIR)	
	Connected Line Identification Presentation(CoLP)	

Section	Subject	Linked test case
	Connected Line Identification Restriction (CoLR)	
	Call Forwarding Unconditional (CFU)	
	Call Forwarding on Mobile Subscriber Busy(CFB)	
	Call Forwarding on No Reply (CFNRy)	
	Call forwarding on Mobile Subscriber Not Reachable (CFNRc)	
	Call waiting (CW)	
	Call hold (HOLD)	
	Multi Party Service (MPTY)	
	Closed User Group (CUG)	
	Advice of Charge (Information) (AoCI)	
	Advice of Charge (Charging) (AoCC)	
	Barring of All Outgoing Calls (BAOC)	
	Barring of Outgoing International Calls (BOIC)	
	BOIC except those to Home PLMN Country (BOIC-exHC)	
	Barring of All Incoming Calls (BAIC)	
	Barring of Incoming Calls when Roaming Outside the Home PLMN Country (BIC-Roam)	
	Unstructured Supplementary Service Data (USSD)	
	Sub-addressing*	
	Enhanced Multi-Level Precedence and Pre-emption (eMLPP)	
	Explicit Call Transfer (ECT)	
	Completion of Calls to Busy Subscribers (CCBS)	
	User-to-User Signalling 1 (UUS1)	
4.3.4	The following EIRENE features are to be supported for each type of mobile radio	
	Functional addressing (section 11)	
	Direct mode (section 15)	

Section	Subject	Linked test case
	Shunting mode (section 14)	
	Multiple driver communications(section 5)	
	Railway emergency calls(section 13)	
4.3.5	If a Railway emergency call set up from an EIRENE radio is unsuccessful, the radio shall automatically re-attempt the call setup until the call setup is successful, a retry timer expires (duration 30 seconds, as specified in the [EIRENE FRS]) or the user abandons the call.	
	Note: For this, the higher layers of an EIRENE radio shall automatically repeat setup requests to the layer 3 GCC or BCC entity as soon as an indication is given from the layer 3 GCC or BCC entity on an abort of the establishment procedure without the service being explicitly rejected by the network. No change of the related layer 3 procedures of GSM is intended.	
4,4	Core MMI requirements	
4.4.1	A service availability indication shall be provided to radio users, as defined in [EN 301 515, Index [26]].	
4.4.2	The user shall be prevented from entering direct mode if the GSM service is available.	
4.4.3	If the attempt to establish a Railway emergency call is not successful after 2 seconds, an indication shall be provided to the user of the status of the establishment request procedure.	
4,5	Core environmental requirements	
4.5.1	This subsection defines the core environmental and physical requirements for all EIRENE mobile equipment. The requirements provided in this section are augmented by those provided in later sections for each individual radio type, with each radio type being specified by the superset of the core plus specific requirements.	

Section	Subject	Linked test case
4.5.2	All EIRENE mobile equipment shall comply with all environmental, EMC and physical specifications defined in the GSM standard, especially with reference to [GSM 05.90 and EN 301 515, Index [2] & [35]].	
4.5.3	All EIRENE mobile equipment shall conform to [EN 60950] (Safety of Information Technology Equipment), including Electrical Business Equipment, 1993, plus amendments A1 and A2.	
4.5.4	The categories of requirements defined in each section describing mobile equipment are as follows: climatic conditions (temperature, humidity, solar radiation, altitude, etc); physical conditions (flammability, contamination, physical protection, etc); mechanical conditions (shock and vibration); electrical conditions (power supply variation, battery life, overloading, etc); EMC (both emissions and immunity); tests required to validate compliance with EIRENE specification.	
4.5.5	Any environmental and physical requirements stated may be superseded by national requirements provided the national standards provide a higher level of environmental and physical protection. Stricter national standards shall not prevent the use of other EIRENE mobiles in that country.	
4.5.6	Many of the railway specific standards referenced are Pre-standards (eg [prEN 50155, ENV 50121, prEN 50125]) and should be re-examined for their applicability to the EIRENE system if any modifications are made to these standards in the future.	
4.5.7	All design, manufacturing, testing and installation of EIRENE mobile radio equipment shall comply with the quality procedures defined in [ISO 9001].	

Section	Subject	Linked test case
4.5.8	EIRENE mobile equipment shall be capable of operating over a standard range of temperatures from -20℃ to +55℃	
4.5.9	EIRENE mobile equipment shall be capable of being stored (ie without being operational) at temperatures down to -40℃ without any permanent damage.	
4.5.10	The equipment shall be capable of coping with temperature variations of up to +/-1℃/minute	
4.5.11	EIRENE mobile equipment shall be capable of operating between altitudes of -100m and 1800m, referenced to sea level.	
4.5.12	The equipment shall be able to cope with relative humidities of 100% for short periods, although the yearly average is expected to be 75%. The equipment shall also cope with 95% humidity for 30 days in the year.	
4.5.13	Operationally caused infrequent and slight moisture condensation shall not lead to any malfunction or failure.	
4.5.14	All equipment shall not degrade photochemically when exposed to solar radiation of up to 1200 W/㎡.	
4.5.15	In normal operation of a mobile radio unit, it shall be expected that a combination of the above environmental conditions will be experienced.	
4.5.16	All EIRENE mobile equipment shall be protected against shock and vibration in compliance with standards defined in [prEN 50125] using tests defined in [prEN 50155].	
4.5.17	All handheld mobile equipment shall be capable of withstanding the following shocks: non-repetitive shocks of up to 3g for up to 100ms under normal conditions; free fall from 0.5m.	
4.5.18	EIRENE mobile equipment shall be capable of being subjected to both sinusoidal and random vibration.	

Section	Subject	Linked test case
4.5.19	Handheld mobile equipment shall be capable of with-standing the following levels of continuous sinusoidal vibration: frequency range: 5-200 Hz; peak-to-peak amplitude: 7.5 mm; peak acceleration: 1.5g.	
4.5.20	The random vibrations to be withstood by mobile equipment shall be 0.25g in all three axes of freedom.	
4.5.21	For determining battery requirements, the trans-mit/receive duty cycles used shall be as shown in table 4-7 for each call type.	
4.5.22	Battery requirements shall be provided without the use of discontinuous reception or transmission (DTX/DRX).	
4.5.23	Battery requirements shall be met based on full power during transmission and assuming hourly periodic loca-tion updating.	
4.5.24	All railway and generic EMC standards define a maxi-mum level of radiated EMC for a range of frequencies. However, the nature of radio equipment implies a cer-tain level of EM emission in the transmission band.	
4.5.25	Guidelines concerning the effects of GSM emissions on hearing aids, pace makers and other sensitive electrical equipment are provided in [GSM 05.90].	
4.5.26	All EIRENE mobile equipment shall be immune to ex-ternal EMC as defined in [ENV 50121 part 4].	
	NOTE: EIRENE mobile equipment cannot comply with the emission requirements defined in this standard ex-cept outside the GSM transmission band.	
4.5.27	The transmission of EM radiation from all EIRENE mo-bile equipment shall comply with the radio frequency transmission masks defined in [EN 301 515, Index [35]] for the range of GSM frequencies defined in section 1 of this document.	

Section	Subject	Linked test case
4.5.28	Where the emission levels defined by [EN 301 515, Index [35]] exceed those stated in [ENV 50121 part 4], the GSM specification shall take precedence.	
4.5.29	Mobile equipment shall comply with the generic standard for EMC in the industrial environment as defined in [ENV 50081 part 2], except for emissions at GSM frequencies as noted above.	
4.5.30	The emission and immunity standards for the general railway environment and ancillary services as defined in [ENV 50121 parts 1, 2, 3-1, 3-2 and 5] shall be considered.	
4.5.31	EIRENE mobiles will generate EM emissions in the GSM frequency band. It is the responsibility of national railways operating EIRENE networks to ensure that EIRENE equipment does not interfere with the normal operation of any on-train or ground based systems.	
4.5.32	In particular, EIRENE equipment could interfere with: signalling relays and contacts; speedometers; public address; power transformers; track circuits; axle counters; train describers; other radio equipment; radar speed measurement equipment; switched mode power supplies; telecommunications circuits; electronic locking systems.	
4.5.33	The environmental and physical tolerance of the EIRENE mobile radio units shall be tested at a facility in accordance with [EN 45001].	
4.5.34	All EMC emission and immunity tests shall be performed in accordance with guidelines defined in the [EN 61000-4] series and in [EN 50140].	

Section	Subject	Linked test case
4.5.35	Environmental testing procedures shall follow guide-lines defined in [IEC 68 part 1].	
4.5.36	Specific environmental test procedures to be followed for EIRENE mobile equipment shall include the follow-ing tests as defined in the [IEC 68] series: A Cold; B Dry heat; D Damp heat (cyclic); E Impact; F Vibration; G Acceleration; K Corrosive atmospheres; M Air pressure; N Change of temperature; P Fire hazard.	
5	Cab radio	Outside the IOTs
5,1	Introduction	
5.1.1	This section identifies the system requirements for the EIRENE Cab radio. It defines how the functionality is to be provided by the Cab radio system and the man-machine interface.	
5,2	System components	
5.2.1	Figure 5-1 shows the logical architecture of an EIRENE Cab radio. The architecture comprises the following elements: GSM Mobile Termination (GSM-MT): comprising GSM mobile equipment and SIM; Direct Mode Mobile Ter-mination (DM-MT): for direct mode communications; EIRENE Cab radio applications: standardised features outside GSM; Man Machine Interface (MMI).	
5.2.2	The architecture comprises a number of interfaces be-tween the different EIRENE-MS elements. These are:	
	1) GSM-MT air interface: mandatory for interoperability and conformant to GSM specifications.	

Section	Subject	Linked test case
	2) DM-MT air interface: Direct Mode is optional. However, where implemented, the requirements concerning this interface are mandatory for interoperability.	
	3) GSM-MT - EIRENE Applications interface: specified to allow the option for separate procurement of GSM-MT and EIRENE Application equipment for the Cab radio. The Morane FFFIS [MORANE FFFIS MTI] specifies two types of interface based on V.24 and TDMA, both supporting [EN 301 515, Index [19]].	
	[Note: this interface is not required where a Cab radio is implemented as an integrated unit.]	
	4) DM-MT - EIRENE Applications interface: specified to allow the option for separate procurement of DM-MT and EIRENE Application equipment for Cab radio.	
	5) Interfaces may be provided to a Train Interface Unit and an ERTMS data interface. More requirements are given on these interfaces, where implemented, in sub-sections 5.10 and 5.15.	
5,3	Driver call-related functions	
5.3.1	Upon an appropriate MMI action, the radio shall initiate a call to the appropriate controller with 'Railway operation' priority (see section 10.2)	
5.3.2	The calling driver's functional number shall be passed to the network using UUS1.	
5.3.3	On receipt of a 'Call other drivers in area' request, the radio shall initiate a group call using the 'all trains' group identification (see section 9) with eMLPP priority level 2 (see section 10.2).	
5.3.4	The calling driver's functional number shall be passed to the network using UUS1.	
5.3.5	Activation of the 'Railway emergency call' function shall cuse the radio to initiate a Railway emergency call as defined in section 13.	
5.3.6	The calling driver's functional number shall be passed to the network using UUS1.	

Section	Subject	Linked test case
5.3.7	Many trains employ multiple active traction vehicles. Where these vehicles are not connected by on-train wiring, it shall be possible for a permanent radio connection to be established between each of the active cabs.	
5.3.8	Where there is more than one active cab, the radio connection shall be provided using the GSM Multi-Party service.	
5,1	Introduction	
5.1.1	This section identifies the system requirements for the EIRENE Cab radio. It defines how the functionality is to be provided by the Cab radio system and the man-machine interface. (I)	
5,2	System components	
5,3	Driver call-related functions	
	call controller	
5.3.1	Upon an appropriate MMI action, the radio shall initiate a call to the appropriate controller with 'Railway operation' priority (see section 10.2). (M)	
5.3.2	The calling driver's functional number shall be passed to the network using UUS1. (M)	
	Call other drivers in the area	
5.3.3	On receipt of a 'Call other drivers in area' request, the radio shall initiate a group call using the 'all trains' group identification (see section 9) with eMLPP priority level 2 (see section 10.2). (M)	
5.3.4	The calling driver's functional number shall be passed to the network using UUS1. (M)	
	Send Railway emergency call	

Section	Subject	Linked test case
5.3.5	Activation of the ‘Railway emergency call’ function shall cause the radio to initiate a Railway emergency call as defined in section 13. (M)	
5.3.6	The calling driver’s functional number shall be passed to the network using UUS1. (M)	
	Communicate with other drivers on same train	
5.3.7	Many trains employ multiple active traction vehicles. Where these vehicles are not connected by on-train wiring, it shall be possible for a permanent radio connection to be established between each of the active cabs. (I)	
5.3.8	Where there is more than one active cab, the radio connection shall be provided using the GSM Multi-Party service. (M)	
5.3.9	The call will be established from the active cab of the lead traction vehicle. Each of the other cabs on the train will be contacted using its functional number (registered by the other drivers prior to the establishment of the call). The procedure for setting up a multi-party call is outlined in figure 5-2. The multi-party call shall have 'Railwayoperation' priority (see section 10.2) and wilst on-going a 'multi-drivers' indicationshall be displayed permanently at all Cab radios.	
5.3.10	Upon activation of the function 'Call tain staff', the radio shall determine the appropriate functional number based on the staff member selected and the train number (see section 9). A GSM point-to-point voice call at 'Railway operation' priority(see section 10.2) shall then be initiated.	
5.3.11	The Cab radio shall be capable of being used as a standard GSM telephone, such that the driver is able to call any valid number subject to closed user group, call barring or other restrictions.	

Section	Subject	Linked test case
5.3.12	The Cab radio shall be able to receive, display and store incoming short (SMS) text messages (see section 12).	
5.3.13	The Cab radio shall support shunting mode communi-cations as defined in section 14.	
5.3.14	The Cab radio should support direct mode communica-tions as defined in section 15.	
5,4	MMI functions	
5.4.1	When switched on, the radio shall initiate automatic self-testing using the GSM IMSI attach procedure (in-cluding the automatic selection of the default loud-speaker volume - see table 5-1)	
5.4.2	Upon switch on, the Cab radio shall be registered with a mobile network (see section 10.5).	
5.4.3	If registration is not successful an audible and visual indication shall be provided.	
5.4.4	Upon registration, the mobile shall be accessible by calling the MSISDN or the Engine or Coach number with which it is associated. This shall require the home network database to maintain this correlation.	
5.4.5	The following table provides details of the three volume adjustment ranges to be provided.	
	Table 5-1: Volume adjustment levels	
5.4.6	The numbers 1 to 5 give the five levels of adjustment possible for each volume range setting. The default setting is the pre-defined level automatically selected when the MMI is switched on.	
5.4.7	Upon activation of the registration function, a USSD message (see section 11) shall be sent by the Cab radio.	
5.4.8	Upon activation of the deregistration function, a USSD message (see section 11) shall be sent by the Cab radio.	

Section	Subject	Linked test case
5.4.9	Upon detection (automatically or based on a list stored in the Cab radio) of the additional on-train functions for equipment physically connected to the Cab radio, a USSD message (see section 11) shall be sent by the Cab radio after activation of the registration or deregistration function.	
5.4.10	This procedure shall take place at the installation of the Cab radio. It shall be initiated by an external device or by a member of a maintenance team.	
5.4.11	On-train functions for equipment physically connected to the Cab radio shall be registered or deregistered automatically based on a USSD message (see section 11) sent by the Cab radio.	
5,5	Handling of calls	
5.5.1	The sequence of actions required for a mobile originated call to another user shall be as follows: Initiating a call: System is provided with the necessary information to set up call (eg number, bearer type, priority); Indication: Provide an audible and visual indication; Call arbitration: Management of call requests on the basis of call priority; Conversation: Where the parties involved in the call can communicate; Call termination: Where one of the parties involved in the call terminates the call.	

Section	Subject	Linked test case
5.5.2	The sequence of actions for a mobile terminated call to a driver shall be as follows: Call arbitration: Management of call requests on the basis of call priority; Indication: Provide an audible and visual indication of incoming call; Answering the call: Acceptance of incoming call by user (not required for auto answer); Indication: Provide an audible and visual indication; Conversation: Where the parties involved in the call can communicate; Call termination: Where one of the parties involved in the call terminates the call.	
5.5.3	The Cab radio system shall provide a means for the driver to terminate established calls which he is authorised to terminate.	
5.5.4	It shall be possible to initiate outgoing voice calls in one of four ways depending on the intended recipient(s) of the call: Emergency access: Capable of rapid activation in an emergency with a minimum of action being required by the driver (ie single red button); Priority access: Requiring the minimum of driver actions to initiate a call (eg a single key stroke); Stored number: Through the selection of a stored number or name (eg menu type access); Dial access: Facility for the driver to enter or select telephone or functional numbers manually.	
5.5.5	Emergency access shall be provided to initiate the following call:	
	Table 5-2: Call types requiring MMI emergency access	
5.5.6	Priority access shall be provided to initiate the following:	
	Table 5-3: Call types requiring MMI priority access	

Section	Subject	Linked test case
5.5.7	On activation of the "call other drivers on the same train" function, the MMI shall provide additional guidance to the user in the establishment and management of a Multi-Party call.	
5.5.8	(*) When there are several controllers of the same type associated with a cell, and no external means of selecting the appropriate one, the choice may be given by the system to the driver, or a VGCS call may be established to all of the relevant controllers after initiating the 'Call controller' function.	
5.5.9	The driver shall be able to initiate a call by selecting a name/number from stored number information in the radio.	
5.5.10	Facilities shall be provided to support a list of stored names/numbers of up to a minimum of 100 entries.	
5.5.11	Stored number access shall be provided to initiate the following calls:	
	Table 5-4: Call types requiring MMI stored number access	
5.5.12	Unless otherwise indicated at time of entry, calls from the stored numbers list shall be initiated as voice calls.	
5.5.13	By default, calls will have a priority of railway information calls (eMLPP priority designation 4). It shall be possible to store a priority in association with a stored number.	
5.5.14	The driver shall be able to initiate a call by dialling any valid telephone number or functional number.	
5.5.15	Dial access shall be provided to initiate the following calls:	
	Table 5-5: Call types requiring MMI dial access	
5.5.16	Abbreviated dialling facilities shall be supported.	
5.5.17	Dialled calls from the MMI shall be point-to-point voice calls unless otherwise entered from the MMI at the time of initiation.	

Section	Subject	Linked test case
5.5.18	By default, dialled calls shall have a priority of railway information calls (eMLPP priority designation 4).	
5.5.19	It shall be possible to receive and manage the following incoming calls: emergency calls; group calls; broadcast calls; point-to-point calls; multi-party calls	8.41-8.46 8.47-8.48 8.38-8.45 9.28-9.35 6.20-6.27
5.5.20	The Cab radio shall arbitrate between calls when:	
	an incoming call is received whilst the Cab radio is in an on-going call;	8.41-8.46 8.47-8.48 8.38-8.45 9.28-9.35 6.20-6.27
	a Cab radio user attempts to initiate a call whilst the Cab radio is in an on-going call.	
5.5.21	The Cab radio shall apply the arbitration rules outlined in Table 5A-1 in Appendix 5A.	8.41-8.46 8.47-8.48 8.38-8.45 9.28-9.35 6.20-6.27
5.5.22	Once a call has been established the connected parties shall be able to communicate.	
5.5.23	Replacing the handset shall result in the outcomes listed in Tables 5A-2 and 5A-3.	
5.5.24	Calls shall be able to be terminated by either party subject to the requirements shown in tables 5A-2 and 5A-3.	
5.5.25	Table 5A-2 in Appendix 5A shows the effect of replacing the handset or initiating the 'Call clear' procedure for the different types of outgoing calls	
5.5.26	Table 5A-3 in Appendix 5A shows the effect of putting down the handset or initiating the 'Call clear' procedure for the fferent types of incoming calls.	
5,6	Other Cab radio functions	
5.6.1	Incoming calls to the Cab radio shall be routed to the correct on-train user or device using information contained in the sub-addressing field.	

Section	Subject	Linked test case
5.6.1i	Using the GSM "Manual" network selection procedure, the Cab radio application shall allow the driver to access a prioritised list of authorised networks (to be displayed as stated in section 10.5) and shall allow the driver to select a desired network from this list. This function shall not be available if there is an ongoing voice call involving the Cab radio.	
5.6.2	As a train approaches the limits of the coverage of the PLMN it is registered with, it will be necessary for it to register with the next PLMN providing coverage.	
5.6.3	A means of directed network selection should be provided to ensure that the MS registers with the required network.	
5.6.4	If directed network selection is implemented, the directed network selection procedure shall be initiated by an external trigger mechanism, which instructs the Cab radio application to select the required network unless a voice call is ongoing.	
5.6.4i	If directed network selection is implemented and voice calls are ongoing at the time when the external device attempts to trigger a network change, an audible and visual indication shall be given to the driver and network change shall be deferred until the call is terminated or until coverage of the current network is lost.	
5.6.5	If directed network selection is implemented, the Cab radio application shall use the GSM 'Manual' network selection procure (through the AT interface [EN 301 515, Index[19]]) to instruct the MT to register with the required network.	
5.6.5i	The Cab radio should be capable of selecting the most appropriate mobile radio network automatically using the selection criteria stated in section 10.5.	
5.6.5ii	If automatic network selection is implemented, the driver shall be capable of deactivating and/or re-activating this function using simple MMI actions.	

Section	Subject	Linked test case
5.6.5iii	Whilst automatic network selection is enabled, the MMI shall display an indication.	
5.6.6	In idle mode, if the GSM Service Indicator (see [EN 301 515, Index [26]]) is lost, the mobile shall give an audible and visual indication.	
5,7	Environmental and physical	
5.7.1	Train-mounted equipment including the Cab radio terminal equipment, MMI and antenna shall comply with all specifications in section 4 and all of those defined in this section, with those defined in this section taking priority.	
5.7.2	Two types of mobile radio equipment will be mounted in rolling stock: in-cab equipment and external equipment. Each type of equipment has slightly different requirements placed upon it in terms of EMC and climate. ([UIC 651] is a useful reference concerning the layout of cab equipment.)	
5.7.3	The Cab radio shall be capable of operating within a temperature range of -20!aC to +70!aC.	
5.7.4	The aerial and any other equipment mounted external to the train shall be capable of withstanding extremes of temperature from -40℃ to +70℃	
5.7.5	The aerial and any other equipment mounted external to the train shall function correctly during rapid temperature fluctuations of up to 3℃/second	
5.7.6	Any equipment mounted external to the train cab shall withstand the following additional physical conditions: in-tunnel pressure pulses of 6 kPa (peak to peak) for up to 3 seconds; pressure gradients of up to 100 kPa/s.	
5.7.7	Measures should be taken to reduce the risk of theft of radio equipment. Examples of such measures include physical protection, alarms and access control measures.	

Section	Subject	Linked test case
5.7.8	Ease of maintenance should be taken into account in the design and installation of radio equipment. For example, maintenance access to antennas on vehicles should be provided.	
5.7.9	The 'Subscriber Identity Module' (SIM cardshall be physically integrated with the radio set and shall not be able to be removed except by maintenance staff.	
5.7.10	The Cab radio should be mounted in the train cab in compliance with [prEN 50261].	
5.7.11	Any equipment mounted inside the train cab shall be capable of withstanding the following maximum levels of sinusoidal vibration: frequency range: 5-200 Hz; peak-to-peak amplitude: 7mm; acceleration: 1.5g.	
5.7.12	Any equipment mounted external to the train cab shall withstand the following maximum levels of sinusoidal vibration: frequency range: 5-1000 Hz; peak-to-peak amplitude: 5mm; acceleration: 2.5g.	
5.7.13	The Cab radio shall comply with draft European standard [prEN 50124 part 1] concerning insulation co-ordination with reference to clearances and creepages.	
5.7.14	An emergency power supply should be provided for Cab radios which will enable the driver's radio to continue to operate for a perod of 6 hours in the event of failure of the train's main power supply, based on the following cycle (see section 4.5.21): point-to-point calls 20%; group calls 5%; standby 75%.	

Section	Subject	Linked test case
5.7.15	The Cab radio equipment shall be capable of withstanding the following changes to the main and backup power supplies without interrupting normal operation: voltage fluctuations up to +-15% of nominal supply voltage; 20% over voltage for up to 10s; other transient effects according to [IEC 571 parts 1-3].	
5.7.16	The Cab radio shall withstand the effects of power supply transients as defined in [prEN 50155].	
5.7.17	The driver and other in-cab equipment shall be protected against all electrical hazards arising from EIRENE mobile equipment as defined in [EN 50153].	
5.7.18	Requirements on EMC emissions for the Cab radio are to be more stringent than those defined for other radio types due to close proximity to other train mounted control and protection equipment, and higher transmission power.	
5.7.19	EMC emission from the Cab radio shall comply with [ENV 50121 parts 1, 2, 3-2 and 4].	
5.7.20	Emissions from the train mounted antenna associated with the Cab radio shall be limited to those specified by [EN 301 515, Index [35]].	
5.7.21	Any emissions radiating into the driver's cab and other on-board equipment from the exterior aerial shall meet the requirements defined in [ENV 50121 parts 1, 2, 3-1, 3-2 and 4] to the highest possible degree.	
5.7.22	The Cab radio shall pass electrical tests as defined in [IEC 571 parts 1, 2 and 3].	
5.7.23	Additional guidelines on testing procedures may be taken from [prEN 50129] and [IEC 1508 part 1].	
5,8	Cab radio interfaces to on-train systems	
5.8.1	The following list catalogues the interfaces that should be provided by the Cab Radio to the on-train systems:	
	Train borne recorder;	

Section	Subject	Linked test case
	ERTMS/ETCS interface;	
	Public Address;	
	UIC Intercom;	
	Driver's Safety Device;	
	Other interfaces.	
5.8.2	Where implemented, these interfaces are subject to the requirements stated in the following sections.	
5,9	Train borne recorder	
5.9.1	The Cab radio and the train borne recorder may be connected via the Train Interface Unit (TIU) or may be connected directly by means of a nationally determined interface.	
5.10	ERTMS/ETCS interface	
5.10.1	Some Cab radios will be required to provide communi-cations for ERTMS/ETCS.	
5.10.2	If ERTMS/ETCS communications are required, an inter-face as defined in the FFFIS for EURORADIO [MORANE EURO FFFIS] shall be implemented.	
5,11	Public Address interface	
5.11.1	If implemented, the Public Address interface should comply with the specifications of the UIC Fiche [UIC 568].	
5.12	UIC Intercom	
5.12.1	If implemented, the UIC interface should comply with the specifications of the UIC Fiches[UIC 558, 568].	
5.13	Driver's Safety Device	
5.13.1	The Cab radio and the Driver's Safety Device may be connected via the Train Interface Unit (TIU) or may be connected directly by means of a nationally determined interface.	
5,14	Other interfaces	

Section	Subject	Linked test case
5.14.1	Other interfaces may take the form of additional audio and data inputs and outputs.	
5.14.2	Where other data interfaces are implemented, they should be of the RS422 standard.	
5,15	Train Interface Unit (TIU)	
5.15.1	Where necessary, a Train Interface Unit may be implemented to adapt on-train systems to the standard interfaces provided by the Cab radio.	
5.15.2	The interfaces between the TIU and the on-train systems are outside of the scope of EIRENE standardisation.	
5.15.3	Figure 5-3 shows an example of how the Train Interface Unit may be implemented:	
5A	Handling of calls	
6	General purpose radio	Outside the IOTs
6,1	Introduction	
6.1.1	This section identifies the EIRENE applications which may be used in the General purpose radio and the functionality to be provided by the General purpose radio is detailed. (I)	
6,2	System components	
6.2.1	The logical architecture of the General purpose radio is illustrated in figure 6-1. (I)	
6.2.2	A standard data interface shall be provided to allow a computer to be connected to the radio. (M)	
6.2.3	The General purpose radio shall operate as a standard GSM terminal, supplying mobile services as defined in section 4. (M)	
6,3	General purpose radio functions	
	Switch radio on	
6.3.1	Automatic self-testing of the radio shall use the GSM IMSI attach procedure. (M)	

Section	Subject	Linked test case
6.3.2	Upon switch on, once the radio is connected to a mobile network, it shall be able to receive all calls made using the MSISDN or appropriate group call number. (M)	
	Register and deregister functional number	
6.3.3	It shall be possible to register and deregister a functional number by the user entering his functional number, which is transmitted to the ground along with the subscriber's IMSI, using USSD (see section 11). (M)	
6,4	Environmental and physical	
6,4	Environmental and physical	
6.4.1	The full environmental and physical specification of the General purpose shall be as close as possible to that of a Commercial-Off-The-Shelf (COTS) GSM mobile whilst adhering to the specifications provided in section 4. (M)	
6.4.2		
6.4.3	The General purpose radio shall comply with the core climatic conditions defined in section 4. (M)	
6.4.4		
6.4.2	The General purpose radio shall comply with the core climatic conditions defined in section 4. (M)	
6.4.3	SIM cards should be fixed into the radio to protect against accidental loss. (O)	
	Mechanical conditions	
6.4.4	No specific mechanical requirements need to be placed upon the General purpose radio over and above those defined in section 4. (I)	
	Electrical	
6.4.4	No specific mechanical requirements need to be placed upon the General purpose radio over and above those defined in section 4. (I)	

Section	Subject	Linked test case
6.4.5	General purpose radios shall be equipped with re-chargeable batteries capable of providing a minimum of eight hours operation over the temperature range +18℃ to +25℃ from a single charge, based on the following cycle (see section 4.5.21): (M) – point-to-point calls 20%; – group calls 5%; – standby 75%.	
6.4.6	Changing the battery shall not result in the loss of data stored in the radio. (M)	
6.4.6	Changing the battery shall not result in the loss of data stored in the radio. (M)	
6.4.7	The General purpose radio shall be suitable for use with a car adapter kit. (M)	
6.4.8		
6.4.9	The General purpose radio should comply with [EN 50081] (generic EMC for residential, commercial and light industry). (O)	
6.4.10		
6.4.11	No specific testing procedures need to be used on the General purpose radio over and above those given in section 4. (I)	
6.4.8	The General purpose radio should comply with [EN 50081] (generic EMC for residential, commercial and light industry). (O)	
6.4.9	No specific testing procedures need to be used on the General purpose radio over and above those given in section 4. (I)	
7	Operational radio	Outside the IOTs
7,1	Introduction	
7.1.1	This section identifies the EIRENE applications which may be used in the Operational radio and the function-ality to be provided by the Operational radio is detailed. (I)	

Section	Subject	Linked test case
7,2	System components	
7.2.1	The logical architecture of the Operational radio is illustrated in figure 7-1.(I)	
7,1	Introduction	
7.1.1	This section identifies the EIRENE applications which may be used in the Operational radio and the functionality to be provided by the Operational radio is detailed. (I)	
7,2	System components	
7.2.1	The logical architecture of the Operational radio is illustrated in figure 7-1. (I)	
7.2.2	A standard data interface shall be provided to allow a computer to be connected to the radio. (M)	
7.2.3	The Operational radio shall operate as a standard GSM terminal, supplying mobile services as defined in section 4. (M)	
7,3	Operational radio functions	
	Switch radio on	
7.3.1	Automatic self-testing of the radio shall use the GSM IMSI attach procedure. (M)	
7.3.2	Upon switch on, once the radio is connected to a mobile network, it shall be able to receive all calls made using the MSISDN or appropriate group call number. (M)	
	Register and deregister functional number	
7.3.3	It shall be possible to register and deregister a functional number by the user entering his functional number, which is transmitted to the ground along with the subscriber's IMSI, using USSD (see section 11). (M)	
	Call controller	
7.3.4	Upon receipt of the call establishment request, the radio shall retrieve the stored number for the appropriate controller from the SIM or other storage location. (M)	

Section	Subject	Linked test case
7.3.5	Once an appropriate number has been obtained, the radio shall initiate a call to this number with 'Railway operation' priority (see section 10.2). Any functional number associated with the user shall be passed to the network using UUS1 (see section 11.5). (M)	
	Send/receive Railway emergency call	
7.3.6	Activation of the 'Railway emergency call' function shall cause the radio to initiate a Railway emergency call as defined in section 13. (M)	
	The calling user's functional number, if there is one, shall be passed to the network using UUS1. (M)	
	Enter/leave direct mode	
7.3.8	The Operational radio should support direct mode communications as defined insection 15. (O)	
	Enter/leave shunting mode	
7.3.9	The Operational radio should support shunting mode communications as defined in section 14. (O)	
7,4	Shunting radio requirements	
7.4.1	The requirements for shunting operations are detailed in section 14. (I)	
7,5	Environmental and physical	
7.5.1	The Operational radio shall comply with the basic standards defined for all EIRENE mobile equipment in section 4. In addition, the Operational radio is specified to allow its use in the operating environment experienced on the operational railway (eg shunting and maintenance), with the specifications in this section taking priority over those in section 4 where any discrepancy is identified. (M)	
	Climatic conditions	
7,3	Operational radio functions	

Section	Subject	Linked test case
7.3.1	Automatic self-testing of the radio shall use the GSM IMSI attach procedure. (M)	
7.3.2	Upon switch on, once the radio is connected to a mobile network, it shall be able to receive all calls made using the MSISDN or appropriate group call number. (M)	
7.3.3	It shall be possible to register and deregister a functional number by the user entering his functional number, which is transmitted to the ground along with the subscriber's IMSI, using USSD (see section 11). (M)	
7.3.4	Upon receipt of the call establishment request, the radio shall retrieve the stored number for the appropriate controller from the SIM or other storage location. (M)	
7.3.5	Once an appropriate number has been obtained, the radio shall initiate a call to this number with 'Railway operation' priority (see section 10.2). Any functional number associated with the user shall be passed to the network using UUS1 (see section 11.5). (M)	
7.3.6	Activation of the 'Railway emergency call' function shall cause the radio to initiate a Railway emergency call as defined in section 13. (M)	
7.3.7	The calling user's functional number, if there is one, shall be passed to the network using UUS1. (M)	
7.3.8	The Operational radio should support direct mode communications as defined in section 15. (O)	
7.3.9	The Operational radio should support shunting mode communications as defined in section 14. (O)	
7,4	Shunting radio requirements	
7.4.1	The requirements for shunting operations are detailed in section 14. (I)	
7,5	Environmental and physical	

Section	Subject	Linked test case
7.5.1	The Operational radio shall comply with the basic standards defined for all EIRENE mobile equipment in section 4. In addition, the Operational radio is specified to allow its use in the operating environment experienced on the operational railway (eg shunting and maintenance), with the specifications in this section taking priority over those in section 4 where any discrepancy is identified. (M)	
7.5.2	The Operational radio shall cope with rapid temperature fluctuations of up to 3℃/second. (M)	
7.5.3	The Operational radio shall be capable of withstanding exposure to extreme environmental conditions [IEC 721 part 1]. (M)	
	Physical conditions	
7.5.3	The Operational radio shall be capable of withstanding exposure to extreme environmental conditions [IEC 721 part 1]. (M)	
7.5.4	The Operational radio shall conform to IP 54 [IEC 529/EN 60529] as a minimum. (M)	
7.5.5	SIM cards shall be fixed into the radio such that they can only be removed by the use of a tool. (M)	
7.5.6		
7.5.5	SIM cards shall be fixed into the radio such that they can only be removed by the use of a tool. (M)	
7.5.6	The Operational radio shall be capable of withstanding the following shocks: (M) – semi-sinusoidal shocks of up to 5g for up to 100ms under normal conditions; – shocks of up to 10g for up to 5ms under exceptional conditions; – free fall from 1.0m.	
	Electrical	
7.5.7	The Operational radio user shall be protected against all electrical hazards arising from the mobile equipment as defined in [EN 50153]. (M)	

Section	Subject	Linked test case
7.5.7	The Operational radio user shall be protected against all electrical hazards arising from the mobile equipment as defined in [EN 50153]. (M)	
7.5.8	Operational radios shall be equipped with rechargeable batteries capable of providing a minimum of eight hours operation over the temperature range -10℃ to +55℃ from a single charge, based on the following cycle (see section 4.5.21): (M) – point-to-point calls 20%; – group calls 60%; – standby 20%.	
7.5.9	Changing the battery shall not result in the loss of data stored in the radio. (M)	
7.5.10	The Operational radio shall be suitable for use with a car adapter kit. (M)	
7.5.11		
7.5.12	The Operational radio should comply with [EN 50081 part 2] (generic EMC for the industrial environment). (O)	
7.5.13		
7.5.14	No specific testing procedures need to be used on the Operational radio over and above those given in section 4. (I)	
7.5.15		
7.5.16	Controller equipment specifications	
7.5.17	General	
7.5.18	Termination of VGCS/VBS calls	
7.5.19	An entitled controller may terminate a VGCS/VBS call based on DTMF signalling (I)	
7.5.20	To terminate a VGCS/VBS call by DTMF signalling, the 3-digit sequence "***" shall be used.	

Section	Subject	Linked test case
7.5.21	In order to minimise the discomfort caused by the DTMF tone added in the voice channel, the duration of the tone generated by the fixed line dispatcher shall be 70ms ±5ms, and there shall be a minimum gap of 65ms between each tone.	
7.5.22	Muting and unmuting for VGCS calls	
7.5.23	Muting and unmuting shall be in line with [EN 301 515, Index [4]]	
7.5.24	A group call controller who wishes to start talking (except in the case of an originator, a joiner or a re-joiner speaking for the first time5) shall indicate his wish, for example by pressing the PTT button, whereupon the 3-digit DTMF sequence “###” shall be transferred.	
7.5.25	The terminal of the controller should receive a single DTMF grant tone “#” of duration 100ms ± 5ms sent by the network if it has detected the 3-digit DTMF sequence “###” and if the controller was not previously talking.	
7.5.26	Any group call controller who wishes to stop talking shall indicate his wish, for example by releasing the PTT button, whereupon the 3-digit DTMF sequence “#**” shall be transferred.	
7.5.11	The Operational radio should comply with [EN 50081 part 2] (generic EMC for the industrial environment). (O)	
7.5.12	No specific testing procedures need to be used on the Operational radio over and above those given in section 4. (I)	
8	Controller equipment specifications	Outside the IOTs
8,1	General	
8,2	Termination of VGCS/VBS calls	
8.2.1	An entitled controller may terminate a VGCS/VBS call based on DTMF signalling (I)	

Section	Subject	Linked test case
8.2.2	To terminate a VGCS/VBS call by DTMF signalling, the 3-digit sequence "***" shall be used.	
8.2.3	In order to minimise the discomfort caused by the DTMF tone added in the voice channel, the duration of the tone generated by the fixed line dispatcher shall be 70ms ±5ms, and there shall be a minimum gap of 65ms between each tone.	
8,3	Muting and unmuting for VGCS calls	
8.3.1	Muting and unmuting shall be in line with [EN 301 515, Index [4]]	
8.3.2	A group call controller who wishes to start talking (ex-cept in the case of an originator, a joiner or a re-joiner speaking for the first time5) shall indicate his wish, for example by pressing the PTT but-ton, whereupon the 3-digit DTMF sequence "###" shall be transferred.	
8.3.3	The terminal of the controller should receive a single DTMF grant tone "#" of duration 100ms ± 5ms sent by the network if it has detected the 3-digit DTMF se-quence "###" and if the controller was not previously talking.	
8.3.4	Any group call controller who wishes to stop talking shall indicate his wish, for example by releasing the PTT button, whereupon the 3-digit DTMF sequence "#**" shall be transferred.	
8.3.5	The duration of each tone (see 8.3.2 and 8.3.4) added in the voice channel, shall be 70ms ± 5ms, and there shall be a minimum gap of 65ms between each tone.	
9	Numbering plan	
9,1	General	
9.1.1	International standardisation of the numbering plan is required to ensure interworking between networks. Fur-thermore, standardised allocation of numbers to sub-scribers is likely to facilitate schemes for identification, barring etc. (I)	

Section	Subject	Linked test case
9.1.2	This section addresses the following: (I) – numbering plan requirements; – numbering plan limitations; – types of numbers; – EIRENE numbering plan; – short dialling codes; – group addresses.	
9.1.3	The precise details of the numbering plan to be chosen for particular railways will depend upon the railway network configuration, its interconnection with other railway networks and its interconnection with public telecommunication networks. Equipment design must therefore be such as to give maximum flexibility in numbering arrangements. However, it may be generally assumed that numbers (excluding access prefixes) will not exceed 15 digits in length and will consist entirely of the digits 1 to 9 and 0. (I)	
9.1.4	Characters * and # may be used locally to gain access to special facilities such as short code dialling. However, these arrangements do not form part of the network numbering plan. (I)	
9.1.5	Procedures for handling the relationship between EIRENE Numbers and MSISDN numbers (ie registration, deregistration and re-registration) are specified in section 11. (I)	
9.1.6	Each railway should have appropriate call-barring facilities to prevent unintended access to the GSM-R network by non-authorised users. (O)	
9,2	Numbering plan requirements	
	Use of Train Number	
9.2.1	Within each GSM-R network, each Train Number shall be unique for the period of the journey. (M)	2.16 2.17

Section	Subject	Linked test case
9.2.2	Every On-Train Function shall be identified by a standard code and shall conform to the list of functions given in Appendix 9A of this section. (M)	Configuaration aspects are tested implicitely by various test cases, e.g. 2.24
9.2.3	All Train Function Numbers and their associated MSISDN numbers shall be stored in the same routing database, which is the database of the GSM-R network in which the train is currently operating. (M)	2.12
	Use of Engine Number	
9.2.4	Every On-Engine Function shall be identified by a standard code and shall conform to the list of functions given in Appendix 9A of this section. (M)	Configuaration aspects are tested implicitely by various test cases, e.g. 2.24
9.2.5	The Engine Function Number(s) and associated MSISDN numbers shall at any time be stored as an entry in the routing database of the home GSM-R network6 of the engine. (M)	2.13
	Use of Coach Number	
9.2.6	The Coach Function Number(s) and associated MSISDN number(s) shall at any time be stored as an entry in the routing database of the home GSM-R network of the coach. (M)	2.14
	Use of Shunting Team, Maintenance Team or Train Controller Number	
9.2.7	Every Function shall be identified by a standard code and shall conform to the list of functions given in Appendix 9A of this section. (M)	Configuaration aspects are tested implicitely by various test cases, e.g. 2.24
9.2.8	The functional numbers of the Shunting Team Members, Maintenance Team Members and Train Controller (and any associated MSISDN numbers) shall be stored as entries in the routing database of the home GSM-R network. (M)	2.15
	Use of MSISDN number	

Section	Subject	Linked test case
9.2.9	Implementation of the EIRENE numbering plan shall not prohibit any authorised caller from using the MSISDN number where known, thus enabling mobiles to be assigned to particular personnel where this is appropriate. (M)	3.5 3.6
	Use of group call Service Areas	
9.2.10	Service areas shall be defined within each railway network. (M)	Configuration aspects are tested implicitely by various test cases,.e.g. 8.1
9.2.11	The numbering of Service Areas for group calls and broadcast calls shall be made in accordance with GSM Technical Specifications [EN 301 515, Index [21] & [4]] and [EN 301 515, Index [22] & [5]] respectively. (M)	Configuration aspects are tested implicitely by various test cases, e.g. 8.1 and 9.1 9.4
9,3	Numbering plan limitations	
9.3.1	The EIRENE network can not be considered as a fully private network, as some parts of either the mobile or fixed networks may be provided by public operators. This leads to certain restrictions on the implementation of a numbering plan. These restrictions are given below. (I)	
	Number allocation	
9.3.2	To achieve integration of the EIRENE numbering plan with the national public numbering plan, telephone numbers have to be allocated by the various numbering regulatory bodies on a national basis. If functional numbers are to be used outside the EIRENE network, they will require either a public number allocation or, alternatively, an EIRENE Network Access Number (ENAN) may be used as described in 9.11 (I)	
9.3.3	Each national railway should obtain a public numbering allocation for MSISDN numbers from the relevant regulatory bodies. (O)	
9.3.4	The EIRENE numbering plan shall be standardised to allow interoperability and shall be implemented as a private numbering plan within the GSM-R network. (M)	Covered by international calls, e.g. 3.3

Section	Subject	Linked test case
	Use of alphanumerical numbers	
9.3.5	In some countries Train Numbers are alphanumeric. These numbers do not comply with a numbering plan that can be interpreted by telephone switches and are therefore not supported by the call routing solution given in section 11. (I)	
9.3.6	If alphanumerical numbering is required within a railway network, then these numbers may either be translated at the user terminal into a subscriber number or conveyed between the calling party and a routing data-base using a nationally determined approach. (I)	
9,4	Types of numbers	
9.4.1	Within the GSM-R network, the user shall be able to dial the following types of numbers: (M) – National EIRENE Number (NEN): this number is used to route a call from the calling party to a called party registered within the same GSM-R network; – International EIRENE Number (IEN): this number is used to route a call from the calling party to a called party registered within another GSM-R network; – MSISDN numbers: the number used by a subscriber of a public fixed (or mobile) network for calling a mo bile station of a GSM PLMN; – Short Dialling Code (SDC): this number is used to allow 'speed dialling' functionality.	Covered by national and international calls as well as by LDA calls, e.g. 2.24, 2.26 and 4.1 4.3
9.4.2	In addition, Breakout Codes (BCs) shall be used to allow users within the GSM-R network to access exter-nal numbers. (M)	3.7 3.8
9.4.3	Access from the GSM-R network to external networks shall be as detailed in section 9.10. (M)	11.1 11.2
9,5	Use of National EIRENE Numbers	
9.5.1	National EIRENE Numbers are used to set up calls within a single GSM-R network. (I)	

Section	Subject	Linked test case
9.5.2	Every railway network shall consider a number as a National EIRENE Number (NEN) unless the number is preceded by an International Code, identifying another GSM-R network. (M)	2.24 2.26
	Structure of National EIRENE Number	
9.5.3	The National EIRENE Number shall consist of three distinct parts, as shown in figure 9-1: (M)	2.24
	National EIRENE Numbering Plan	
9.5.4	The contents of the fields of a National EIRENE Number shall be as defined below: (M)	2.24 6.2 6.3 6.28 6.29 8.35 8.36 9.4
9,6	Use of International EIRENE Numbers	
9.6.1	International EIRENE Numbers are used for calls between GSM-R networks. Additional fields are added to the National EIRENE Number as routing indicators. The use of such indicators is discussed in subsection 9.10. (I)	
9.6.2	GSM-R networks shall recognise International EIRENE Numbers starting with the IC of the GSM-R network in which the calling party is currently operating as National EIRENE Numbers. (M)	2.24 2.26
	Structure of International EIRENE Number	
9.6.3	The International EIRENE Number shall consist of three distinct parts, as shown in figure 9-2: (M)	2.26
	International EIRENE Numbering plan	
9.6.4	The fields of an International Functional Number shall be defined as follows: (M)	2.26
9,7	Use of MSISDN numbers	
9.7.1	At least one MSISDN number shall be allocated to each mobile station. (M)	Configuaration aspects are tested implicitely by various test cases, e.g. 1.8
9.7.2	The structure of the MSISDN numbers shall comply with GSM Technical Specification [GSM 03.03]. (M)	Configuaration aspects are tested implicitely by various test cases, e.g. 1.8

Section	Subject	Linked test case
9.7.3	Within each GSM-R network, the following relationships between the MSISDN Subscriber Number and the National EIRENE Number can be identified: – the MSISDN Subscriber Number shall be equal to the National EIRENE Number for Call Type = 8; (M) – the MSISDN number may be equal to the National EIRENE Number for any other Call Type. (O)	1.8 (configuration issue)
9.7.4	It shall be possible for authorised subscribers of fixed and mobile networks to call mobiles using the appropriate MSISDN number. (M)	1.11 1.21
9,8	Use of Short Dialling Codes	
9.8.1	For certain functions, standardised short codes shall be implemented for mobile originated calls. (M)	4.1 4.3
9.8.2	Each short dialling code shall consist of four digits. (M)	4.1 4.3
9.8.3	Short dialling codes shall start with the first digit equal to 1 (ie CT=1). (M)	4.1 4.3
9.8.4	The short dialling codes can be defined on a national basis, but it is essential that certain codes be used on an international basis in order to achieve interoperability. These codes shall be as given in table 9-10. (M)	4.1 4.3
9.8.5	In addition, the network shall support the special short codes as defined in table 9-11. (M)	7.4, 7.32, 7.37
9,9	Use of group addresses	
9.9.1	Standardisation of UIC group addresses is required to provide interoperability between the fixed railway networks within the GSM-R network. (M)	Standardisation issue
9.9.2	The group address consists of a Service Area (5 digits) and a Function Code (3 digits) and has a Call Type 5 (see table 9-1). (M)	8.3
9.9.3	The Service Area shall be defined on a national basis. (M)	Configuaration aspects are tested implicitely by various test cases, e.g. 8.1
9.9.4	In network boundary areas, the Service Area shall be allocated on a bilateral basis. (M)	8.35

Section	Subject	Linked test case
9.9.5	Function Codes shall be defined within the framework given in table 9-8 on an international basis. (M)	8.1
9.1	Access to external networks	
9.10.1	Access to other GSM-R networks shall be possible by using a Breakout Code (BC) as part of the dialled number. (M)	3.7 3.8 3.3 2.26
9.10.1i	Access to other GSM-R networks may be possible by using an Access Code (AC) as part of the dialled number if the NSN (National Significant Number) following the CC (Country Code) is assigned by the national telecommunication regulator to the GSM-R operator. (O)	3.7 3.8
9.10.1ii	The BC for access to other GSM-R networks is defined in table 9-12a, and is followed by the full international EIRENE number of the called party. (M)	3.7 3.8 3.3 2.26
9.10.1iii	The AC for access to other GSM-R networks is defined in table 9-12b, and is followed by the CC + NDC + SN of the other GSM-R network. The number format complies with [ITU-T 164]. (M)	3.7 3.8
9.10.1iv	It is the responsibility of each individual GSM-R operator to acquire a public domain NDC from their national telecommunications regulator. (I)	3.12 3.11
9.10.1v	Access to private networks shall be performed by using a BC, defined in table 9-12c. (M)	3.12 3.11
9.10.2	The GSM-R network shall allow users direct access to public networks, subject to call barring restrictions. (M)	1.47
9.10.3	Where access to public networks is allowed, this shall be performed by using an Access Code (AC), defined in table 9-13, followed by the international or national number of the called subscriber as defined in [ITU-T 164]. (M)	3.9 3.10
9.10.4	Deleted.	
9,11	Calls from external networks to the GSM-R network	

Section	Subject	Linked test case
9.11.1	Access to the GSM-R network should be performed by dialling an EIRENE Network Access Number (ENAN)8, followed by the relevant National or International Functional Number as defined in subsections 9.5 and 9.6 respectively. (O)	
9.11.2	Provision should be made to prevent unauthorised calls to mobiles from outside the GSM-R network. (O)	
9A	Function Codes	
9A.1	Function Codes identify the actual user of a mobile. (I)	
9A.2	The Function Codes used in association with the Train Function Number (CT=2), Engine Function Number (CT=3) and Coach Function Number (CT=4) shall con-form to table 9A-1. (M)	Configuaration aspects are tested implicitely by various test cases, e.g. 2.24
9A.3	The Function Codes used in association with Mainte-nance Services Team Numbers (CT=6) shall conform to table 9A-2. (M)	Configuaration aspects are tested implicitely by various test cases, e.g. 2.24
10	Subscriber management	
10,1	Introduction	
10.1.1	In order to provide a consistent level of service in each railway network and, in particular, to ensure interopera-bility for train drivers and other users roaming between networks, it is important to harmonise subscription de-tails and other information stored in the network. (I)	
10.1.2	For the purposes of defining common subscription pro-files, a number of subscription types might be used, for example: (I) – Cab radio; – on-train radio; – controller; – trackside worker; – general staff; – data systems; – administration/management.	
10,2	Allocation of priorities	

Section	Subject	Linked test case
10.2.1	In order to provide a consistent international service, it is necessary to ensure that priorities are allocated consistently across all railways. The following allocation of UIC priority levels to eMLPP priority codes is mandatory: (M)	1.16 1.17 1.38 1.39 5.1
10.2.2	Levels 0 – 4 are designed to interwork with the ISDN MLPP service. (I)	
10,3	Access classes	
10.3.1	User access classes are defined in GSM so that under critical conditions, part of the user population can be barred from accessing the network in order to avoid congestion. However, such barring can be overridden by a user being a member of one or more of the following special access classes: (I) 11 open to network operator; 12 security services; 13 public utilities; 14 emergency services; 15 network operator staff.	
10.3.2	Access classes should not be used under normal network operating conditions, where the GSM eMLPP may be used to provide a better grade of service to certain users. (O)	
10.3.3	For consistent working on public networks and in international roaming, the use of access classes in a railway network shall comply with the GSM specification. (M)	eMLPP is applied
10.3.4	If special access classes (eg 12 - 14) are assigned within a railway's network to certain high priority users, it ought to be noted that when roaming, this will only have an effect on a national public network, subject to bilateral agreement. (I)	
10,4	Closed user groups	

Section	Subject	Linked test case
10.4.1	Closed User Groups (CUGs) may be employed by railways as an additional security measure. Such facilities may be particularly important if public network access to the radio system is provided (eg to prevent members of the public calling drivers and drivers calling members of the public). (I)	
10.4.2	Any implementation of CUGs must take account of requirements for interoperability. (M)	1.46 1.47 1.45
10,5	Network selection	Terminal's feature
10.5.1	SIM cards shall contain a list of authorised networks so that networks shall be displayed (or automatically selected if automatic network selection has been enabled) in the following order of priority (see [MORANE SIM] for more details): (M) – home EIRENE network; – 'foreign' EIRENE networks; – non-EIRENE networks (with order of priority predetermined by virtue of international subscriptions and roaming agreements).	
10.5.1i	In order to shorten the duration of the network selection procedure, Mobile Stations designed for use in EIRENE networks shall give preference to the GSM frequency band allocated for railway use (see 3.5.2). (M)	
10.5.2	The use of "Over The Air" in conjunction with the SIM Application Toolkit [EN 301 515, Index [36]] to update SIM cards in the home network is recommended (see [MORANE SIM] for more details). (I)	
10,6	Cell broadcast message identifiers	Terminal's feature
10.6.1	Railway mobiles shall be provided with cell broadcast message identifiers in order to accept SMS-CB messages. (M)	
10,7	Encryption and authentication	
10.7.1	Encryption. Licensing of A5/x encryption algorithms is managed by the GSM Association. (I)	

Section	Subject	Linked test case
10.7.1i	In case of encryption, standardised ciphering algorithms shall be used. (M)	1.8 1.30
10.7.2	Deleted.	
10.7.3	Mobiles shall be capable of operation using algorithms for all countries in which they need to roam. (M)	1,8 1.30
10.7.4	Authentication. Each railway is free to implement its own authentication algorithms without any resulting loss in cross-border interoperability. (I)	
11	Functional numbering and location dependent address-ing	
11,1	Introduction	
11.1.1	There is a requirement to be able to address communi-cations to a ‘functional number rather than a more per-manent subscriber number. Such numbers are gener-ally only associated with a user for a limited period of time. (I)	
11.1.2	This is an important issue which will affect interoperabil-ity and the ability to use public network services. There are specific features of individual railways which make it difficult to develop a concise and universally accept-able system within GSM. (I)	
11.1.3	To accommodate the different requirements of the indi-vidual railways, the following approach has been adopted: (I) – all responsibility for handling addressing lies with the network infrastructure and other ground based equip ment, rather than additional functionality in the mobile; – each railway will be responsible for implementing addressing schemes which best meet its needs; – national addressing schemes are to use the interna tionally standardised groundtrainprotocol, based on a single standardised GSM service, for exchanging information between the ground and mobiles.	
11,2	Ground-train addressing	

Section	Subject	Linked test case
11.2.1	The ground-train addressing can be divided into two areas: (I) – functional addressing of mobile users; – location dependent addressing of fixed network users.	
11.2.2	The first is related to passing information to provide an association between a mobile's subscriber number and its functional number. The latter is concerned with ensuring that calls from a mobile terminal (in particular, Cab radios) are routed to the correct destination (ie primary controller, secondary controller), based on the current location of the mobile. (I)	
11.2.3	The numbering plan to be used with functional addressing shall be in accordance with the numbering plan given in section 9. (M)	Configuaration aspects are tested implicitely by various test cases, e.g. 2.24
11,3	Functional numbering	
	General	
11.3.1	Functional numbering provides the mechanism by which a mobile terminal, or an item of equipment connected to a mobile terminal, can be addressed by a numberidentifying the function for which it is being used. (I)	
11.3.2	Mobile access to the functional numbering scheme for registration, deregistration and re-registration shall apply the USSD messages and protocols over the air interface as specified in the GSM Follow-me service. (M)	2.1 2.4 2.10 2.18 1.46 1.47 1.45
11.3.3	The implementation of functional numbering at a network level is left open for national railways subject to the requirements for interconnecting EIRENE networks identified in section 11.6. (I)	
11.3.4	Further information may be obtained from [MORANE SSRS, MORANE FA FFFS, MORANE FA FIS]. (I)	
	Functional number management	

Section	Subject	Linked test case							
11.3.5	For communication over the (Um) air interface, the USSD messages and protocols as specified in the GSM Follow-me service shall be used to manage the following types of functional numbers: (M) – Train number; – Engine number; – Coach number; – Shunting team number; – Maintenance team number.	2.I	2.4						
11.3.6	It shall be possible to limit user access to functional number registration and deregistration facilities based on each of the types of functional number identified in 11.3.5. (M)	2.9	2.22						
11.3.7	Mobile stations shall use the following sequences for the control of the functional number management: (M)	2.1	2.4	2.7	2.8	2.10	2.10	2.18	2.24
11.3.8	The network operator shall implement the required functionality to validate the information exchanged between the mobile and network on registration and deregistration. (M)	2.4	2.11	2.16	2.17				
11.3.8i	Functionality shall be provided by the system for the operator management of Functional Numbers, including the removal of the relationship between Functional Numbers and MSISDN Numbers. (M)	2.7	2.8	2.20	2.21	1.46	1.47	1.45	
11.3.8.ii	The use of the forced de-registration mechanism (without notification) to achieve this requirement is acceptable. (I)								
11.3.8iii	The system shall require manual confirmation prior to the removal of the relationship between Engine Number and MSISDN Number. (M)	System terminal issue.							
	Registration								

Section	Subject	Linked test case
11.3.9	The result of the registration procedure shall be sent back to the mobile. In the event of a failure, an indication of the cause shall be provided. Information on the outcome shall be provided to the mobile according to [EN 301 515, Index [17]] and [EN 301 515, Index [34]]. (M)	2.4 2.11 2.16 2.17
11.3.9i	In the event of a registration procedure failing owing to the functional number already being registered to another mobile, the Cab radio shall be capable of providing the user with the ability to perform automatically the forced de-registration of the previously registered mobile and the registration of this functional number to the user's mobile. This shall result in the following sequence of actions being performed by the user's Cab radio (see 11.3.7 for details of message structure): (M) 1. Send interrogation message (from mobile to network). 2. Receive MSISDN (from network to mobile). 3. Send a forced de-registration message (from mobile to network). 4. Receive the answer (from network to mobile). 5. Send a registration message (from mobile to network). 6. Receive the answer (from network to mobile). 7. Inform the user whether the registration of the functional number to the user's mobile was successful (performed by the mobile).	Terminal issue
11.3.9ii	The functionality described in 11.3.9i should also be available for other types of mobiles. (O)	
11.3.9iii	In the cases described in 11.3.9i and 11.3.9ii, national rules may dictate that, prior to or instead of performing the sequence described in 11.3.9i steps 1-7, the user shall perform a specified action (e.g. call a dispatcher in the case of drivers). (I)	

Section	Subject	Linked test case			
11.3.9iv	The sequence described in 11.3.9i steps 1-7 may be interrupted or may require additional user action such as a confirmation. (I)				
	Deregistration				
11.3.10	Deregistration shall only be performed by the subscription identified by the MSISDN number which is associated with the functional number. (M)	2.4	2.6	2.18	2.19
11.3.11	Deleted.				
11.3.12	The result of the deregistration procedure shall be sent back to the mobile. In the event of a failure, an indication of the cause shall be provided. Information on the outcome shall be provided to the mobile according to [EN 301 515, Index [17]] and [EN 301 515, Index [34]]. (M)	2.4	2.6	2.18	2.19
	Re-registration				
11.3.13	Re-registration consists of a registration procedure followed by a deregistration procedure. (I)				
11.3.14	Re-registration of on-train functional numbers based on the train number shall be performed every time a train leaves one EIRENE network and enters into another EIRENE network. (M)	2.10			
11.3.15	Deregistration of a functional number shall not be carried out until registration of the functional number has been carried out and confirmed as being successful. (M)	MS-issue			
11.3.16	Each railway should define a suitable time-out interval to be applied as part of the deregistration procedure for on-train functional numbers. (O)				
	Functional numbering network interworking				
11.3.17	The exchange of information between EIRENE networks is handled by the GMSCs and shall use the standardised protocol as detailed in section 11.6. (M)	2.10	2.18	2.20	
11,4	Re-establishment of functional number correlation				

Section	Subject	Linked test case				
11.4.1	In the event of losing correlation between functional numbers and MSISDNs, provision for recovery from such a situation shall be made. (M)	2.23				
11.4.2	Each national railway is responsible for implementing a suitable recovery mechanism and ensuring that the use of unverified functional numbers is prevented. (I)					
11.4.3	Deleted.					
11.4.4	Deleted.					
11.4.5	Deleted.					
11,5	Presentation of functional identities					
11.5.1	The called party functional identity shall be presented to the user initiating a call and the calling party functional identity shall be presented to the user receiving a call. (M)	2.24	2.26	1.46	1.47	1.45
11.5.2	The calling party functional number shall be passed to the receiving mobile using the User to User Signalling supplementary service (UUS1) during call setup. (M)	2.24	2.26			
11.5.3	If the calling party functional number is not available or if the calling party is not registered then the CLI of the calling party shall be displayed on the receiving mobile's display. (M)	MS-issue				
11.5.4	The user-to-user information element in the SETUP, ALERT or CONNECT messages, as defined in [EN 301 515, Index [16]], shall be used to transfer the functional number of the calling party to the called party. (M)	2.24	2.26			
11.5.5	The user-to-user information element shall use the following format: (M)	2.24	2.31			
11.5.6	If no valid functional number is available, a fixed length User-to-User Information Element shall be used with the following format: (M)	MS-issue				
11.5.7	Further information may be obtained from [MORANE PFN FFFS, MORANE PFN FIS]. (I)					
11,6	Inter EIRENE network interfacing	2.10	2.20			

Section	Subject	Linked test case			
11.6.1	Interconnection of EIRENE networks is required to allow international call routing. It is not envisaged that any routing database information is exchanged between EIRENE networks. (I)				
11.6.2	The interconnection of EIRENE networks should take place by interconnecting GMSCs.(O)				
11.6.3	The protocol used for routing of calls shall be Signalling System No 7 (SS7) as defined by the ITU-T. The signalling system suite shall include the Mobile Application Part (MAP). (M).	2.15	2.18	2.22	
11.6.4	Call setup between EIRENE networks using international functional numbers shall be based on the combination of the Breakout-Code (BC) and International Code (IC) as specified in section 9. (M).	2.15	2.18	2.22	
11.6.5	The Country Code (CC) followed by the National Significant Number NSN (as specified in ITU-T E.164, Chapter 6.2) shall be used as the Global Title, which forms part of the Signalling Connection Control Part (SCCP) protocol messages and is used for inter-network routing of messages. (M)	2.15	2.18	2.22	
11.7	Location dependent addressing				
	General				
11.7.1	Location dependent addressing may be provided in the following ways: a) cell dependent routing; (M) b) using location information from external sources. (O)	4.1	4.2	4.3	4.4
	Cell dependent routing				
11.7.2	As a minimum, call routing using location dependent addressing shall be based on the use of short codes in conjunction with cell dependent routing. (M)	4.1	4.2	4.3	4.4
11.7.3	Further information on cell dependent routing for location dependent addressing may be obtained from [MORANE SSRS] [MORANE LDA FFFS] [MORANE LDA FIS]. (I)				

Section	Subject	Linked test case
	Location information from external sources	
11.7.4	Location information may be provided by systems external to the radio system, for example ground-based systems such as track circuits. (I)	
11.7.5	If a more accurate way of location determination is used, then position information shall be provided to the radio system which shall be used to associate the short code with the correct called party subscriber number. (M)	
11.7.6	If implemented, the use of location information from train-based systems external to the radio system shall comply with the requirements stated in the enhanced Location Dependent Addressing FRS and IRS [eLDA FRS and eLDA IRS]. (M)	eLDA is optional
11,8	Calls from external networks to the EIRENE network	
11.8.1	Facilities shall be provided to prevent unauthorised calls to mobiles either by functional number or MSISDN number from outside the EIRENE network. (M)	3.1 3.2 3.3 3.4 3.5 3.6
12	Text messaging	
12.1	Introduction	
12.1.1	There is no requirement for an internationally standardised pre-defined messaging application. However, it is anticipated that individual national railways may have a requirement for pre-defined messages, in which case the application will be specified as part of individual national procurements.	
12,2	System requirements	
12.2.1	Where text messaging is implemented in the network, the Short Message Service (SMS) shall be used	
13	Railway emergency calls	
13,1	Introduction	

Section	Subject	Linked test case
13.1.1	This section covers the use of the EIRENE radio system for Railway emergency calls. The section also discusses the facility for confirmation of such emergency calls and the storage of confirmation for post-incident analysis.	
13.1.2	A Railway emergency call is a high priority call for informing drivers, controllers and other concerned personnel of a level of danger requiring all Railway movements in a pre-defined area to stop. Two types of Railway emergency calls are defined: (I) - Train emergency calls (for Railway emergencies whilst not involved in Shunting operations); - Shunting emergency calls (for Railway emergencies whilst involved in Shunting operations).	
13.1.3	This section describes the handling of high priority voice calls for Railway operational emergencies and does not cover public emergency calls (ie handling of ‘112’ calls).	
13,2	Provision of Railway emergency calls	
13.2.1	Railway emergency calls are defined as those calls of ‘Railway emergency’ priority (see section 10) which are routed to a pre-defined user or group of users due to a railway operational emergency	
13.2.2	All Railway emergency calls shall be implemented using GSM VGCS (Specifications [EN 301 515, Index [21] & [4]]). (M)	6.1 6.2 6.3 6.5 6.6 6.28 6.29
13.2.3	It shall be possible to configure Railway emergency group call areas to contain combinations of cells controlled by one or more MSC(s) within one or more network(s). (M)	6.6
13.2.4	Where Railway emergency group call areas are controlled by more than one MSC within one or more network(s), a unique anchor MSC is defined for each group call area.	

Section	Subject	Linked test case					
13.2.5	For international Railway emergency calls, in order to minimise call set-up times, it is recommended that the anchor MSC always directly controls the cell where the Railway emergency call was originated.						
13,3	Initiation of Railway emergency calls						
13.3.1	A Railway emergency call shall be initiated by using the appropriate function code for the required type of Railway emergency call (see Table 9-8). (M)	6.2	6.3	6.6	6.28	6.29	
13.3.2	The call area and list of train controllers for each emergency group call will be fixed in the Group Call Register (GCR) of the anchor MSC.						
13.3.3	The Railway emergency group IDs required for interoperability are defined in section 9.5. The composition of each group is a matter for national implementation, although all areas shall have a group defined for all mandated Group IDs.	6.1	6.2	6.3	6.5	6.28	6.29
13,4	Receipt of Railway emergency calls						
13.4.1	Each mobile shall store a list of emergency Group IDs in the SIM appropriate to its function (the Cab radio will store Group ID 299 and 599 - see table 9-8).	6.3	6.6				
13.4.2	All Railway emergency group IDs required for interoperability and appropriate to the operation of the mobile shall maintain active status whilst the mobile is powered up.	6.3	6.6				
13.4.3	The fixed network user will only receive emergency voice calls if designated a dispatcher or group member in any of the calls defined in the GSM GCR.						
13.4.4	On receipt of a Railway emergency call, the controller's display should indicate the location of the train.						
13.4.5	If the requirement in 13.4.4 is implemented, as a minimum the location information shall be provided by the GSM network (eg current cell or base station serving the mobile).						

Section	Subject	Linked test case
13.4.6	The mechanism for transferring the functional number of the originating mobile to controllers is defined in [EN 301 515, Index [6], Release 4] using the Information Element “Compressed OTDI” in the Immediate Setup 2 message from the originating mobile.	6.8
13.4.7	If the GSM Release 99 capability and the Immediate Setup 2 feature defined in [EN 301 515, Index [6], Release 4] are supported by the network, the network shall set the MSC Release bit in the “Control Channel Description” information element to “1”. Otherwise, the MSC Release bit in the “Control Channel Description” information element shall be set to “0” (zero) [EN 301 515, Index [41]].	6.8
13.5	Confirmation of Railway emergency calls	
13.5.1	For post-incident analysis it is important that the initiation and receipt of Railway emergency calls by mobiles is confirmed by a message sent to a ground-based location (and also registered in the train borne recorder, in cases where a train borne recorder is connected to the Cab radio).	
13.5.2	Not all calls require confirmation. The application must be able to deduce that a confirmation is necessary from the call priority, as all calls of ‘Railway emergency’ priority must be confirmed.	Terminal's feature
13.5.3	Confirmation of Railway emergency calls shall be implemented using the User to User Signalling supplementary service (UUS1).	6.4 6.7
13.5.4	After clear down of the Railway Emergency call, the mobile application shall start the confirmation process by automatically originating a call. In order to avoid network congestion the call set up shall be delayed by a random offset.	Terminal's feature

Section	Subject	Linked test case
13.5.5	Railway Emergency call confirmation messages shall be of eMLPP priority 4 - “Railway information and all other calls” (see section 10.2).	6.4 6.7
13.5.6	The user information contained in the confirmation message shall be: (M) - Cab radio: the engine number or train number (if regis tered); - other mobiles: the user’s functional number (if regis tered).	Terminal's feature
13.5.7	Confirmation messages shall be sent to a confirmation centre using a defined short code (see table 9-10), which shall be associated with the GSM network.	6.4 6.7
13.5.8	In the case of Cab radio, details of the confirmation shall be passed to the train borne recorder if a train borne recorder is connected to the Cab radio.	Terminal's feature
13.5.9	The user-to-user information elements in the following messages, as defined in [EN 301 515, Index [16]], shall be used for the confirmation of high priority calls: (M) – SETUP: transfer of confirmation message to confir mation centre; – RELEASE COMPLETE: acknowledgement of the confirmation message.	6.4 6.7
13.5.10	The SETUP and RELEASE COMPLETE user-to-user information element shall be as specified in the [MORANE UUIE].	6.4 6.7
13.5.10i	Confirmation centres shall be capable of decoding messages in either format A or B.	6.4 6.7
13.5.11	Deleted.	
13.5.12	Deleted.	
14	Shunting mode	Not covered by IOTs
14,1	Introduction	

Section	Subject	Linked test case
14.1.1	The purpose of shunting mode is to provide an effective means of communication to a group of personnel who are involved with a shunting operation.	
14.1.2	The shunting group may comprise a shunting leader, a shunting driver, a controller and up to three additional personnel (the shunting members).	
14.1.3	Further information about shunting mode may be obtained from [MORANE SM FFFIS].	
14,2	System requirements: Operational Radio	
14.2.1	On entering shunting mode, the operational radio shall determine if any shunting group ID is already activated on the SIM.	
14.2.2	If a shunting group ID is activated, the operational radio shall proceed to re-establish the group call.	
14.2.3	If no shunting group ID is activated, the operational radio shall initiate a 'regularshunting mode ON' procedure as detailed in table 14-1	
14.2.4	After the 'regular shunting mode ON' precedure has been completed, the procedures shown in table 14-2 and 14-3 shall be used to register the shunting leader and shunting members to a dedicated group call.	

Section	Subject	Linked test case					
14.2.5	Two possibilities shall be available to the shunting leader when leaving shunting mode: Release group call: the shunting leader and all other shunting members leave the dedicated group call and all members of the group are deregistered. The procedure that shall be used to release the group call is shown in table 14-4. Maintain group call: the shunting leader leaves the dedicated group call momentarily for the purposes of conducting other communications. The leader may then rejoin the group when ready. In the meantime, all other shunting team members remain active within the dedicated group call. The operational radio procedure that shall be used to maintain the group call is shown in table 14-5.						
14.2.6	On leaving shunting mode, the Operational radios of shunting members shall follow the procedure shown in table 14-6.						
14,3	System requirements: Cab radio						
14.3.1	On entering shunting mode, the Cab radio shall determine if any shunting group ID is already activated on the SIM.						
14.3.2	If a shunting group ID is activated, the Cab radio shall proceed to re-establish the group call.						
14.3.3	If no shunting group ID is activated, the Cab radio shall initiate a 'regular shuntingmode ON' procedure as shown in table 14-7.	6.20	6.23	8.38	8.41	6.20	6.23
14.3.4	The Cab radio shall exit shunting mode by means of the "Leave shunting mode" procedure as defined in table 14-8.						
14,4	System requirements: Operational radio and Cab radio						
14.4.1	On entering shunting mode, the terminal shall initially select the common shunting group.						

Section	Subject	Linked test case
14.4.2	The common shunting group provides a point of contact for leaders and team members to set up a dedicated shunting group call for their shunting operation.	
14.4.3	The terminal application shall prevent members of a dedicated shunting team from initiating a new call (unless they are registered as shunting team leader and have left shunting mode using the 'maintain groupcall' function described in 14.2.4)	
14.5	Numbering plan	
14.5.1	The full numbering plan for shunting mode group calls is defined in subsection 9.9.	
14.5.2	Valid group IDs shall be as defined in table 14-9.	
14,6	Control of shunting group membership	
14.6.1	Users shall be prevented from joining a dedicated shunting group by the EIRENE terminal application unless a valid functional number for the group has been successfully registered to the GSM-R network by their terminal.	
14.7	Link assurance signal	
14.7.2	The link assurance tone shall be of the form specified in subsection 14.4.2 of the [EIRENE FRS].	
14.7.3	The mechanism for the generation of the link assurance signal shall be as specified in [MORANE SM FFFIS].	
14.7.5	The mechanism for the deactivation of the link assur-ance signal shall be as specified in [MORANE SM FFFIS].	
15	Direct mode	DM is an option
15.1	Introduction	

Section	Subject	Linked test case
15.1.1	The operational requirement for direct mode is to: (I) 1) provide short range fall-back communications between train drivers and trackside personnel in the event of failure of all railway and/or public GSM services normally available; 2) provide short range communications for railway personnel operating in remote areas where no GSM facilities are available.	
15,2	System requirements	
15.2.1	Implementation of direct mode is optional. However, where implemented, the following requirements shall be mandatory. (I)	
15.2.2	Frequency modulated equipment conforming to [ETS 300 086] shall be used for direct mode. (M)	
15.2.3	Direct mode equipment shall have a maximum transmit power of 1 Watt. (M)	
15.2.4	Direct mode equipment sensitivity shall be at least – 107dBm. (M)	
	Frequency range and mode of operation	
15.2.5	Direct mode equipment shall be capable of operation in the channels defined in table 15-1. (M)	
15.2.6	Direct mode shall operate in simplex mode, a radio link that uses a single frequency for alternate transmission and reception. (M)	
15.2.7	Voice transmission from direct mode equipment shall be possible only when the Push- To-Talk (PTT) button is pressed. (M)	
CTCSS		
15.2.8	Continuous Tone Coded Squelch Systems (CTCSS) shall be implemented on all direct mode equipment. (M)	
15.2.9	The CTCSS tone shall be at a frequency of 203.5 Hz. (M)	

Section	Subject	Linked test case
15.2.10	The CTCSS modulation shall be within the limits defined in table 15-2. (M)	
	Direct mode common access channel	
15.2.11	The purpose of the common access channel is to provide a point of contact and information for all direct mode users. For example, if one direct mode user wished to initiate contact with another user, communication would begin with a request for the desired partner on the access channel. After receiving a reply, both parties may transfer to a free direct mode channel and continue. (I)	
15.2.12	Direct mode channel 1 (876.0125 MHz) shall serve as the common access channel. (M)	
15.2.13	Equipment should default to operation on the common access channel (direct mode channel 1) on entry into direct mode. (O)	
	Direct mode interaction with GSM-R	
15.2.14	Direct mode communications will only be used in the event of normal GSM-R services being unavailable. (I)	
15.2.15	The presence of the GSM-R network shall be indicated to direct mode users. (M)	
15.2.16	All terminals shall ensure that when GSM-R services are available, the user is prevented from entering direct mode. (M)	
15.2.17	In the event of GSM-R causing disruption to ongoing direct mode communications, each railway will define a protocol for re-establishing contact by means of GSM-R. (I)	
	Shunting link assurance signal	
15.2.18	All direct mode equipment shall provide the facility to broadcast an in-band audio shunting link assurance signal as defined in subsection 14.4.2 of the [EIRENE FRS]. (M)	

Table 6.3: Cross reference of EIRENE SRS V15 mandatory requirements to the IOT test cases

6.2 Annex - Configuration of User Equipment for Data Calls

The present section describes the configuration of Mobile Termination (MT) compliant with 3GPP TS 27.007 “AT command set for User Equipment” and the configuration of ISDN Network Termination (equal to Data Circuit Terminating Equipment (DCE)) compliant with ITU-T V.25ter / V.250 "Serial asynchronous automatic dialling and control" and ITU-T V.110 “Support by an ISDN of data terminal equipments with V-series type interfaces” used for test of data calls.

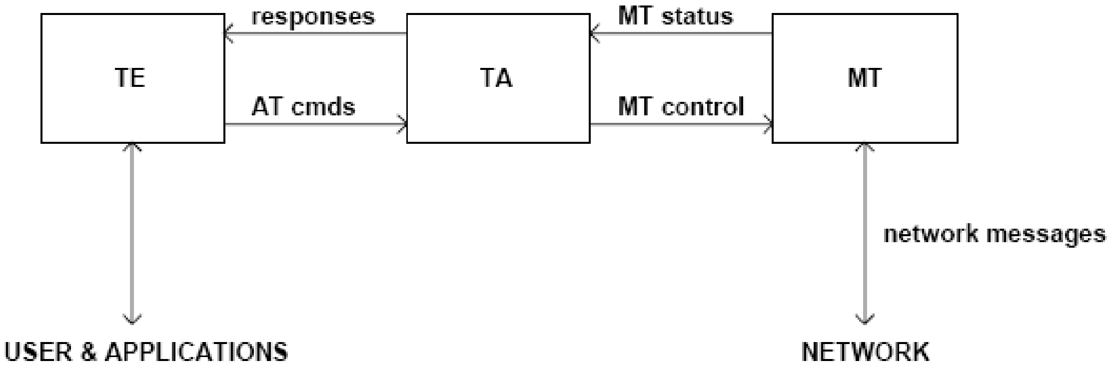


Figure 6.1: Functional blocks *(source: 3GPP TS 27.007)*

According to EIRENE SRS 15.0, chapter 2.3.1 the following mandatory bearer services have to consider for IOT testing:

Service	EIRENE SRS v15
BS 24 Asynchronous 2,4 Kbit/s T for full-rate channel	M
BS 25 Asynchronous 4,8 Kbit/s T for full-rate channel	M
BS 26 Asynchronous 9,6 Kbit/s T for full-rate channel	M

EIRENE SRS V15, chapter 2.3.1 contains a note regarding different transmission standards (ITU-T V-series) to support as an example. For IOT testing the standards ITU-T V22bis and V32 are most the relevant for analogue interworking. ITU-T V.110 is used in case of digital interworking for connections to standard ISDN fixed networks. Other standards mentioned in EIRENE as V.21 (300 bit/s), V.22 (1,2 Kbit/s) and V.23 (1,2 Kbit/s, half-duplex) supporting only non mandatory data rates lower than 2,4 Kbit/s and will not be considered for IOT testing.

a) Configuration of Mobil Termination (MT)

Configuration and control of the Mobile Termination (MT) will be done by using AT-commands specified in TS 27.007.

Any successful command execution will be returned by “OK”, otherwise occurs an error message.

Bearer Service Type

The MT is to configure for the correct bearer service type (data rate, bearer service, connection element) given by the specific data call test case.

To select barer service type use the following commands:

data rate [bps]	digital interworking (UDI / ISDN) - V.110		analogue interworking (3,1 kHz) – V.22bis (2400 bps), V.32 (4800, 9600 bps)	
	Transparent	non transparent	transparent	non transparent
2400	AT+CBST=68,0,0	AT+CBST=68,0,1	AT+CBST=4,0,0	AT+CBST=4,0,1
4800	AT+CBST=70,0,0	AT+CBST=70,0,1	AT+CBST=6,0,0	AT+CBST=6,0,1
9600	AT+CBST=71,0,0	AT+CBST=71,0,1	AT+CBST=7,0,0	AT+CBST=7,0,1

The table above considers only the bearer service “data circuit asynchronous”.

Data rate, bearer service and connection element supported by the Mobile Termination can be verified by “AT+CBST=?”.

“AT+CBST?” returns the current date configuration.

Fixed data TE rate

The link / data rate between Terminal Equipment (including Terminal Application) and Terminal Adapter shall be set equal to the data rate of selected bearer service type. To configure the fixed data TE rate use:

“AT+IPR=<rate>”, <rate>: 2400, 4800, 9600

Call Priority and Call Control

Setup data call without priority (using default priority):

“ATD<dial number>”

Setup date call with call priority:

“ATD*75<prio>#<dial number>”, <prio>: 0, 1, 2, 3, 4

Call can be answered by “ATA” and be terminated by “ATH”.

Note: The commands may vary depends on the specific implementation in the MT.

b) Configuration of ISDN Network Termination Equipment

The configuration of ISDN Network Termination regarding bearer service, line speed, transmission mode (T/NT) depends on the specific implementation of the termination equipment used.

For ISDN Network Termination the following general configuration is recommended:

- ISDN rate adaption:

  V.110

  Supported data rates 2400 Kbit/s, 4800 Kbit/s, 9600 Kbit/s

  Transparent and Non-Transparent date transfer mode

- Analogue modem emulation:

  V.22bis, V.32

  Supported data rates 2400 Kbit/s, 4800 Kbit/s, 9600 Kbit/s

If applicable the line speed between Terminal Equipment (including Terminal Application) and Terminal Adapter should be set equal to the selected bearer service.

Setup of call priority and setup of date call itself have to be done according the specific implementation of the termination equipment, e.g. using the AT-commands.

c) Send and receive test data

Established data connections should be verified by sending and receiving test data in both data transmission directions. Scope is the functional test of date transmission. Performance and Quality of Service (QoS) measurements like data transfer rate, data interference or bit error rate are out of scope. These aspects are covered by separate test specifications (see chapter 4.1).

Basically a terminal application is needed on both parties to send and receive test data.

For test of data connection predefined files containing test data will be transferred bidirectional, this means from A-party to B-party and vice versa.

The test data consists of a subset of a pseudo random bit sequence (PRBS) or a text string (e. g. 1000 characters). In relation to practical test execution a couple of data files with different test data should be used.

Optional the terminal application supports comparison of the transferred test data with the original sent. Otherwise the sent and received test data have to be compared manually.

In test cases dealing with handover scenarios the test data should be sent before and after the handover. Objective is to verify successful connection before as well as after the handover. Data interferences due to the handover are scope of QoS tests.

6.3 Annex – Example for documentation of test configuration

The template below represents an example that can be used to document the specific configuration of the EIRENE network under test, test conditions and the test equipment used.

a) Test Time / Date / Location

Test time / date / location	
Start time / date / location	
Stop Time / date / location	

b) Environment Parameter (Lab, Field)

Parameter	Ambient temperature	Air humidity
Minimum		
Maximum		

c) Network configuration

Network Elements (NE)

Network A

Networks Element	Manufacturer	Number of NE	HW type / HW version	SW version
PABX				
IN				
SMSC				
SCP				
ACK				
NSS				
MSC				
HLR				
VLR				
GCR				

Networks Element	Manufacturer	Number of NE	HW type / HW version	SW version
BSS				
BSC				
TCU				
BTS				
BTS				
BTS				

Network B

Networks Elements	Manufacturer	Number of Networks Elements	HW type / HW version	SW version
PABX				
IN				
SMSC				
SCP				
ACK				
NSS				
MSC				
HLR				
VLR				
GCR				
BSS				
BSC				
TCU				
BTS				
BTS				
BTS				

BSS Configuration

Network A

	BSS connection*	BTS HW configuration**
BSS 1		
BTS		
BTS		
BTS		
BTS		
BSS 2		
BTS21		
BTS22		
BTS23		
BTS24		

* Loop, Chain, Star, Remote Star

** S222, O2 or another HW configuration

Diagram test configuration:

Network B

	BSS connection*	BTS HW configuration**
BSS 1		
BTS		
BTS		
BTS		
BTS		
BSS 2		
BTS21		
BTS22		
BTS23		
BTS24		

* Loop, Chain, Star, Remote Star

** S222, O2 or another HW configuration

Diagram test configuration:

BSS Basic Parameters

Network A

	LAC	BCCH	TCH	CI	BCC	TEI
BSS 1						
BTS						
BTS						
BTS						
BTS						
BSS 2						
BTS						
BTS						
BTS						
BTS						

Network B

	LAC	BCCH	TCH	CI	BCC	TEI
BSS 1						
BTS						
BTS						
BTS						
BTS						
BSS 2						
BTS						
BTS						
BTS						
BTS						

Basic Group Call Parameters

Network A

	LAC	CI	GCA	G-ID	Network A,B*)
BSS 1					
BTS					
BTS					
BTS					
BTS					
BSS 2					
BTS					
BTS					
BTS					
BTS					

* Group Call Area belongs to Network A and / or Network B

Diagram test configuration

Network B

	LAC	CI	GCA	G-ID	Network A,B*
BSS 1					
BTS					
BTS					
BTS					
BTS					
BSS 2					
BTS					
BTS					
BTS					
BTS					

* Group Call Area belongs to Network A and / or Network B

Diagram test configuration

d) Management Systems

Management Systems	Manufacturer	Network A SW version	Network B SW version
OMC-R			
OMC-S			
LMT			

e) EIRENE Mobile Station

EIRENE Mobile Station	Manufacturer	SW version	HW version	Subscriber / SIM- Profile used	certified
Cab Radio 1					
Cab Radio 2					
Cab Radio 3					
Cab Radio 4					
OPH					
OPH					
OPS					
OPS					
GPH					
GPH					
GPH					
GPH					
GPH					
GPH					

f) EIRENE Controller

EIRENE Controller	Manufacturer	SW version	HW version	certified

g) Test equipment

Protocol monitor systems for Abis, A, E and S interface (Lab; Field)

Protocol tester	Manufacturer	Interface	Protocols	Protocol Stacks / SW version
		Abis		
			RR	
			BTSM	
			Lapd	
			Layer 1	
		A		
			CM	
			MM	
			BSSMAP	
			SCCP	
			MTP	
		E		
			ISUP	
			MAP	
			TCAP	
			SCCP	
			MTP	
		S		
			DSS1	

RF measurement equipment

Title	Manufacturer	Type / Name	Date of Calibration
Network Analyzer			
RF Power Meter			
Spectrum Analyzer			

h) Test conditions

The table below can be used to document the individual test conditions (e.g. lab or field environment, static conditions, speed or radio propagation profiles etc.) under the IOT tests have taken place.

Test condition	Value	Effected test cases	remarks

- End of document –