**---------- DRAFT : GSM-R Network Assessment Selected Test Cases --------**

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## *1.1 List of Network Assessment for European Conformity Tests Cases*

The following table presents the Network Assesment for European Conformity Test Plan

Only tests linked to MI (Mandatory for Interoperability) requirements in Eirene SRS 15.3.0 and FRS 7.3.0 are selected

Tests are selected from the DB Systel catalogue tests. As these tests are written in order to be performed in laboratory, some of them need to be simplified for testing in a live network environement:

1. As seen in chapter 5.7 (SIM cards), only one roamer is needed in each network (for interoperability tests between 2 networks),
2. Border Crossing Tests are not required at this stage
3. It is not necessary to tests all priority levels for pre-emption tests,
4. It is not necessary to perform group calls with more than 2 GID (299 for REC and 200 for VGCS standard group call).

**Note:**

The column"Comments" give the details about the suggested tests modifications.

The referenced DB Systel test cases are listed in Annex 1 of this document

# Network Assesement Test Plan

| Tests Cases (catalogue) | | Type of Scenario | | Eirene Reference | | Comments |
|---|---|---|---|---|---|---|
| TC Index | Test title | I | II | SRS 15.3.0 | FRS 7.3.0 | |
| **GSM Tests** | | | | | | |
| 5.1.1 | Successful Location Update after MS Power On (non-roaming case) | X | | | | |
| 5.1.10 | Supplementary Service Call Hold (non-roaming case) | X | | 2.4.1 | 2.4.1<br>2.4.13<br>2.4.14 | |
| 5.1.11 | Supplementary Service Call Waiting (non-roaming case) | X | | 2.4.1 | 2.4.1<br>2.4.15 | |
| 5.1.12 | Supplementary Service CLIP – MTM with Call Forwarding Unconditional (non-roaming case) | X | | 2.4.1 | 2.4.1<br>2.4.2 | |
| 5.1.13 | Supplementary Service COLP (non-roaming case) | X | | 2.4.1 | 2.4.1 | |
| 5.1.14 | Supplementary Service MPTY (incl. Multivendor MPTY) (non-roaming case) | X | | 2.2.1<br>2.4.1<br>2.5.1 | 2.2.1<br>2.2.17<br>2.2.18<br>2.4.1<br>2.5.1 | Test scenario to be performed with only one BSC (i.e. 1 vendor) |
| 5.1.15 | Notification of Call Forwarding (non-roaming case) | X | | 2.4.1 | 2.4.1 | |
| 5.1.17 | Establishment of several PTP calls with different priorities (non-roaming case) | X | | 2.4.1<br>10.2.1 | 2.4.1<br>10.2.1<br>10.2.2<br>10.2.2 | |
| 5.1.18 | Call to busy Mobile – CFBusy to other mobile subscriber (non-roaming case) | X | | 2.4.1 | 2.4.1 | |
| 5.1.19 | MOC when terminator rejects call (non-roaming case) | X | | | | |
| 5.1.23 | Successful Location Update after MS Power On (roaming case) | | X | | | |
| 5.1.32 | Supplementary Service Call Hold (roaming case) | | X | 2.4.1 | 2.4.1<br>2.4.13<br>2.4.14 | |
| 5.1.33 | Supplementary Service Call Waiting (roaming case) | | X | 2.4.1 | 2.4.1<br>2.4.15 | Only 1 roamer in each network.<br>MS_A1, MS_B2, MS_B3 in network B<br>MS_B1, MS_A2, MS_A3 in network A |
| 5.1.34 | Supplementary Service CLIP – MTM with Call Forwarding Unconditional (roaming case) | | X | 2.4.1 | 2.4.1<br>2.4.2 | Only 1 roamer in each network.<br>MS_A1, MS_B2, MS_B3 in network B<br>MS_B1, MS_A2, MS_A3 in network A |

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| TC Index | Test title | I | II | SRS 15.3.0 | FRS 7.3.0 | |
| **GSM Tests** | | | | | | |
| 5.1.35 | Supplementary Service COLP(roaming case) | | X | 2.41 | 2.4.1 | Only 1 roamer in each network.<br>MS_A1, MS_B2 in network B<br>MS_B1, MS_A2 in network A |
| 5.1.36 | Supplementary Service MPTY (incl. Multivendor MPTY) (roaming case) | | X | 2.2.1 | 2.2.1<br>2.2.17<br>2.2.18 | |
| 5.1.37 | Notification of Call Forwarding (roaming case) | | X | 2.4.1 | 2.4.1 M<br>2.4.2<br>2.4.12 | |
| 5.1.40 | Call to busy Mobile – CFBusy to other mobile subscriber (roaming case) | | X | 2.4.1 | 2.4.1 M<br>2.4.12 M | Only 1 roamer in each network.<br>MS_A1, MS_B2, MS_A4 in network A<br>MS_B1, MS_A2, MS_B4 in network B<br>MS_A3 and MS_B3 not used.<br>Steps 2 and step 5 to be deleted. |
| 5.1.41 | MOC when terminator rejects call (roaming case) | | X | | | |
| 5.1.47 | Call barring (roaming case) | | X | 2.4.1 | 2.4.1<br>2.4.17 | Only 2 networks : network 1 and network B<br>Only 1 roamer in each network.<br>MS_B1 and MS_A2 in network A<br>MS_A1 and MS_B2 in network B<br>**Step 1 :**<br>Step 1 to be applied to MS_A1 and MS_A2.<br>Steps 11 to 13 to be deleted.<br>Steps 14 to 17 to be performed using MS_A2 calling MS_B2<br>**Step 2 :**<br>Steps 4 and 5 to be deleted |

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| Tests Cases (catalogue) | | Type of Scenario | | Eirene Reference | | Comments |
|---|---|---|---|---|---|---|
| TC Index | Test title | I | II | SRS 15.3.0 | FRS 7.3.0 | |
| **eMLPP** | | | | | | |
| 5.1.38 | Establishment of several data calls with different eMLPP priotities (roaming case) | | X | | 2.3.13<br>2.4.1<br>2.4.5<br>10.2.1<br>10.2.2 | Only MS to fixed : steps 1 to 7 to be deleted.<br>eMLLP has to be performed only with the priorities used on the network.<br>Choose of Digital interworking and analogue interworking is depending of fixed transmission network. |
| 5.1.39 | Establishment of several PTP calls with different priorities (roaming case) | | X | 2.4.1 | 2.4.1<br>2.4.5<br>10.2.1<br>10.2.2 | eMLLP has to be performed only with the priorities used on the network. |
| 5.5.2 | ptp call pre-emption at the E-IF between two networks by an other ptp call | | X | | 2.4.6<br>2.4.7<br>10.2.3 | Only one roamer<br>Replace MS_A4 by MS_B1 |
| 5.7.19 | MS in PtP call, pre-emption on Um IF by higher prio data call (4.8 kbit/s, transparent) | X | | | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | Only 1 BSC (scenario 1)<br>Data call : only mobile to fixed network<br>Replace MS_A4 by a fixed terminal<br>steps 5 to 7 to be deleted. |
| 5.7.27 | MS in data call, pre-emption on A IF by lower prio PtP call does not take place. | X | | | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | Only 1 BSC (scenario 1)<br>Data call : only mobile to fixed network<br>Step 1 to be modified :<br>*MS_A2 originates a data call ((transparent, 2.4, 4.8 or 9.6 kbit/s) with Prio 1 to a fixed terminal* |
| 5.7.36 | MS in data call, pre-emption on Um IF by lower prio data call does not take place | X | | | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | Only 1 BSC (scenario 1)<br>Data call : only mobile to fixed network with used rates<br>MS_A2 is replaced by a fixed mobile |
| 5.7.44 | eMLPP priority is preserved during CFU (Call Forwarding Unconditionally) | X | | | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | |

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| TC Index | Test title | I | II | SRS 15.3.0 | FRS 7.3.0 | |
| **eMLPP** | | | | | | |
| 5.7.45 | eMLPP priority is preserved during CFB (Call Forwarding Busy) | X | | | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | |
| 5.7.46 | Multi-Party: M6PORT: with different Prio | X | | | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | |
| 5.7.47 | Preemption on A-IF when pre-empted party has no subscription to eMLPP (assignment of default eMLPP priority) | X | | | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | |
| 5.7.48 | Preemption on Um-IF when pre-empted party has no subscription to eMLPP (assignment of default eMLPP priority) | X | | | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | |
| 5.7.50 | Check of maximum authorized eMLPP level (non-roaming case) | X | | 2.4.1 | 2.4.1 | |
| 5.7.51 | Check of maximum authorized eMLPP level (roaming case) | X | | 2.4.1 | 2.4.1 | |

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| Tests Cases (catalogue) | | Type of Scenario | | Eirene Reference | | Comments |
|---|---|---|---|---|---|---|
| TC Index | Test title | I | II | SRS 15.3.0 | FRS 7.3.0 | |
| **Functional Addressing** | | | | | | |
| 5.2.1 | Registration of a FN (non-roaming case) | X | | 2.4.1<br>2.5.1<br>11.3.2<br>11.3.5<br>11.3.9 11.3.9i | 2.5.1<br>11.2.1.1<br>11.3.2.1<br>11.3.2.3<br>2.4.1 | |
| 5.2.2 | Register 3 function numbers to one user (non-roaming case) | X | | 11.3.2 | 11.2.1.4 | |
| 5.2.3 | Register 3 function numbers to one user (roaming case) | | X | 11.3.2<br>11.3.5 | 11.2.1.4 | |
| 5.2.4 | Registration of a unknown FN fails (non-roaming case) | X | | 11.3.2 11.3.9 11.3.9i | 11.3.2.4 | |
| 5.2.5 | Deregistration of a FN (non-roaming case) | X | | 2.5.1<br>11.3.2<br>11.3.10<br>11.3.12 | 2.5.1<br>11.3.3.1<br>11.3.3.3<br>11.3.3.5 | |
| 5.2.6 | Deregistration of a FN fails (non-roaming case) | X | | 11.3.2<br>11.3.10 11.3.12 | 2.4.1 2.5.1<br>11.3.3.1 | |
| 5.2.7 | Forced Deregistration of a FN (non-roaming case) | X | | 11.3.2 | 2.4.1 2.5.1<br>11.3.3.4 | |
| 5.2.8 | Forced Deregistration of a FN fails (non-roaming case) | X | | 11.3.2 | 2.4.1 2.5.1<br>11.3.3.4 | |
| 5.2.10 | Registration of a FN (roaming case) | | X | 11.3.2<br>11.3.5<br>11.3.9<br>11.3.9i | 11.2.1.1<br>11.2.1.7<br>11.2.1.8<br>11.3.2.1<br>11.3.2.3<br>11.3.4 | |
| 5.2.11 | Registration of a unknown FN fails (roaming case) | | X | 11.3.2<br>11.3.9 11.3.9i | 11.3.2.4 | |
| 5.2.17 | Registration failures --> outcome code 61 [remote party already registered] (roaming case) | | X | 11.3.2<br>11.3.9<br>11.3.9i | 9.2.2.2<br>9.2.3.2<br>11.2.1.5<br>11.2.2.1<br>11.3.2.5 | |

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| TC Index | Test title | I | II | SRS 15.3.0 | FRS 7.3.0 | |
| **Functional addressing** | | | | | | |
| 5.2.18 | Deregistration of a FN (roaming case) | | X | 11.3.2<br>11.3.9<br>11.3.9i<br>11.3.10<br>11.3.12 | 11.2.1.7<br>11.2.1.8<br>11.3.3.1<br>11.3.3.3<br>11.3.3.5 | |
| 5.2.19 | Deregistration of a FN fails (roaming case) | | X | 11.3.2<br>11.3.9<br>11.3.9i<br>11.3.10<br>11.3.12 | 11.2.1.7<br>11.2.1.8<br>11.3.3.1 | |
| 5.2.20 | Forced Deregistration of a FN (roaming case) | | X | 11.3.2 | 11.3.3.4 | |
| 5.2.23 | FFN-Recovery | X | | 11.3.2 | 11.3.2.6 | |
| 5.2.24 | FA Call - Successful Call (national call) | X | | | 9.2.1.1<br>9.2.4.1<br>9.2.4.2<br>9.2.4.3<br>9.2.4.4<br>2.4.3<br>11.2.1.10<br>11.2.2.2<br>11.2.3.1<br>11.2.3.1 | |
| 5.2.26 | FA Call - Successful Call (international call) | | X | | 9.2.1.1<br>2.4.3<br>11.2.1.10<br>11.2.3.1 | |

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| Tests Cases (catalogue) | | Type of Scenario | | Eirene Reference | | Comments |
| TC Index | Test title | I | II | SRS 15.3.0 | FRS 7.3.0 | |
| **Access Matrix** | | | | | | |
| 5.3.1 | National call: AM allow s call | X | | 11.3.6 | 10.6.1<br><br>10.6.2 | |
| 5.3.2 | National call: AM denies call | X | | 11.3.6 | 10.6.1<br><br>10.6.2 | |
| 5.3.3 | International call: AM allow s call | | X | 11.3.6 | 10.6.2 | Only one roamer<br>Remove MS_B2 and MS_A1.<br>Functional number registration:<br>Step 1 : MS_A2 = IC_B, FN_8<br>Step 2 : MS_A2 = IC_B, FN_8<br>Step 3 : MS_A2 = IC_B, FN_8<br>Step 4 : MS_B1 = IC_A, FN_1<br>Step 5 : MS_B1 = IC_A, FN_1<br>Step 6 : MS_B1 = IC_A, FN_1 |
| 5.3.4 | International call: AM denies call | | X | 11.3.6 | 10.6.2 | Only one roamer<br>Remove MS_B2 and MS_A2.<br>Functional number registration:<br>Step 1 : MS_A1 = IC_B, FN_7<br>Step 2 : MS_A1 = IC_B, FN_6<br>Step 3 : MS_A1 = IC_B, FN_7<br>Step 4 : MS_B1 = IC_A, FN_7<br>Step 5 : MS_B1 = IC_A, FN_6<br>Step 6 : MS_B1 = IC_A, FN_7 |

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|---|---|---|---|---|---|---|
| Tests Cases (catalogue) | | Type of Scenario | | Eirene Reference | | Comments |
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| **LDA** | | | | | | |
| 5.4.1 | LDA call (non-roaming case) | X | | 11.7.1 | 2.5.1<br>9.3.2<br>11.4 | Only 1 BSC with 2 cells Cell_A1 and Cell_A2 |
| 5.4.2 | LDA call fails (non-roaming case) | X | | 11.7.1 | 2.5.1<br>11.4 | Only 1 BSC with 2 cells Cell_A1 and Cell_A2 |
| 5.4.3 | LDA call (roaming case) | | X | 11.7.1 | 2.5.1<br>9.3.2<br>11.4 | Only 1 BSC with 2 cells Cell_A1 and Cell_A2 |
| 5.4.4 | LDA call fails (roaming case) | | X | 11.7.1 | 2.5.1<br>11.4 | Only 1 BSC with 2 cells Cell_A1 and Cell_A2 |

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| TC Index | Test title | I | II | SRS 15.3.0 | FRS 7.3.0 | |
| **REC** | | | | | | |
| 5.6.1 | REC call setup by a service subscriber (non-roaming case) | X | | 13.2.2<br>13.3.1<br>13.3.3 | 2.5.1<br>9.3.2<br>13.1.6<br>13.2.2.2<br>13.2.3.1<br>13.2.3.3<br>13.2.4.1 | |
| 5.6.2 | REC call setup by a controller | X | | 13.2.2<br>13.3.1<br>13.3.3 | 9.3.2<br>13.2.3.1<br>13.2.3.3<br>13.2.4.1 | |
| 5.6.3 | REC notification and joining (non-roaming case) | X | | 13.2.2<br>13.3.1<br>13.3.3 | 13.1.6<br>9.3.2<br>13.2.2.2<br>13.2.3.1<br>13.2.3.3 | |
| 5.6.4 | REC acknowledgement (non-roaming case) | X | | 13.2.2<br>13.3.1<br>13.3.3 | 13.4.5<br>13.4.6 | |
| 5.6.5 | REC call setup by a service subscriber (roaming case) | | X | 13.2.2<br>13.3.1<br>13.3.3 | 9.3.2<br>13.1.6<br>13.2.2.2<br>13.2.3.1<br>13.2.3.3<br>13.2.4.1 | |
| 5.6.6 | REC notification and joining (roaming case) | | X | 13.2.2<br>13.3.1<br>13.3.3 | 9.3.2<br>13.1.6<br>13.2.2.2 1<br>13.2.3.1<br>13.2.3.3 | Shunting mobiles have to be removed : MS-A2, MS_A5, MS_B2 and MS_B5<br>Only one roamer : MS_B6 and MS_A6 to be removed. |
| 5.6.7 | REC acknowledgement (roaming case) | | X | 13.2.2<br>13.3.1<br>13.3.3 | 13.4.5<br>13.4.6 | |
| 5.6.8 | C-OTDI check | X | | | 2.2.1<br>13.3.2 | |
| 5.6.19 | VGCS call is taken down due to expiry of 'No activity' timer. | X | | | 13.2.4.1 | |

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| **REC** | | | | | | |
| 5.6.20 | REC first talker notification (MS dedicated mode, incoming ptp call, non-roaming case) | X | | | 2.2.1<br>5.2.2.43 | |
| 5.6.21 | REC first talker notification (MS dedicated mode, incoming REC call), non-roaming case) | X | | 13.2.2<br>13.3.1 | 2.2.1<br>5.2.2.47 | Step 10 : test to be performed only with used priority on operational network |
| 5.6.23 | REC first talker notification (MS dedicated mode, incoming ptp call, roaming) | | X | 13.2.2<br>13.3.1 | 2.2.1<br>5.2.2.43 | **All steps :**<br>- Only one roamer : MS_B4 and MS_A4 to be replaced by mobiles in their home PLMN<br>- Step 14 : to be deleted |
| 5.6.24 | REC first talker notification (MS dedicated mode, incoming REC call, roaming case) | | X | 13.2.2<br>13.3.1 | 2.2.1<br>5.2.2.47 | **All steps :**<br>Only one roamer All steps :<br>- Only one roamer : MS_B4 and MS_A4 to be replaced by mobiles in their home PLMN<br>- Step 11 : to be deleted |
| 5.6.26 | REC first talker notification (MS dedicated mode, incoming second REC), non-roaming case) | X | | 13.2.2<br>13.3.1 | 2.2.1<br>5.2.2.47<br>13.3.1 | |
| 5.6.27 | REC first talker notification (MS dedicated mode, incoming second REC, roaming case) | | X | 13.2.2<br>13.3.1 | 2.2.1<br>5.2.2.47<br>13.3.1 | **All steps :**<br>Only one roamer All steps :<br>- Only one roamer : MS_B4 and MS_A4 to be replaced by mobiles in their home PLMN |

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| **VGCS** | | | | | | |
| 5.8.1 | SS originates VGCS call | X | | 4.3.1 | 2.2.1<br>2.2.12<br>2.2.16<br>2.2.16<br>3.5.2<br>3.5.3<br>11.2.3.2 | |
| 5.8.2 | Serv. Subs. Originates a VGCS (p3) call. | X | | 4.3.1 | 2.2.1 | |
| 5.8.3 | Controller originates a VGCS (p2) –call and takes it dow n with the kill Sequence | X | | 4.3.1 | 2.2.1<br>3.5.2<br>3.5.3 | |
| 5.8.4 | SS originates VGCS call, leaves, rejoins and ends it. | X | | 4.3.1 | 2.2.16 | |
| 5.8.6 | Controller joins ongoing VGCS call | X | | 4.3.1 | 2.2.16 | |
| 5.8.7 | Originator of VGCS call releases DCH | X | | 4.3.1 | 2.2.16 | |
| 5.8.8 | Originator of VGCS call takes Uplink | X | | 4.3.1 | 2.2.16 | |
| 5.8.9 | Joiner of VGCS call takes Uplink | X | | 4.3.1 | 2.2.16 | |
| 5.8.10 | Un-mute and Mute sequence for originating Controller | X | | 4.3.1 | 2.2.16 | |
| 5.8.11 | Un-mute and Mute sequence for joining Controller | X | | 4.3.1 | 2.2.16 | |
| 5.8.12 | Parallel group calls are possible in the same cell. | X | | 4.3.1 | 2.2.16 | |
| 5.8.17 | Origination of VGCS call from non subscribed MS fails | X | | 4.3.1 | | |
| 5.8.18 | Origination by a controller fails | X | | 4.3.1 | | |
| 5.8.19 | Killing of VGCS call by a controller fails | X | | 4.3.1 | | |
| 5.8.27 | 2 Controllers initiate VGCS w ith the same GID but different GCAs | X | | 4.3.1 | 3.5.2<br>3.5.3 | |
| 5.8.28 | VGCS call taken dow n during setup by SS | X | | 4.3.1 | 2.2.16 | |
| 5.8.29 | VGCS call taken dow n during setup by a controller | X | | 4.3.1 | 2.2.16 | |
| 5.8.30 | More than 1 Uplink Request at the same time (same BSS and different BSS) | X | | 4.3.1 | 2.2.16<br>5.2.2.51<br>5.2.2.54 | Only 1 BSC |

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| **VGCS** | | | | | | |
| 5.8.31 | 2 SS originate VGCS call at same time (same BSS and different BSS) | X | | 4.3.1 | | Only 1 BSC |
| 5.8.32 | 2 controllers originate VGCS call at the same time | X | | 4.3.1 | | 2 fixed controllers are required |
| 5.8.33 | VGCS originator leaves GCA | X | | 4.3.1 | | |
| 5.8.34 | VGCS talker leaves GCA | X | | 4.3.1 | | |
| 5.8.38 | VGCS first talker notification (MS dedicated mode, incoming ptp call, non-roaming case) | X | | 4.3.1 | 2.2.1<br>5.2.2.43 | Step 8 : To be deleted |
| 5.8.39 | VGCS first talker notification (MS dedicated mode, incoming VGCS call), non-roaming case) | X | | 4.3.1 | 2.2.1<br>5.2.2.47 | Step 9 : To be deleted |
| 5.8.41 | VGCS first talker notification (MS dedicated mode, incoming ptp call, roaming) | | X | 4.3.1 | 2.2.1<br>5.2.2.43 | **All steps :**<br>- Only one roamer : MS_B4 and MS_A4 to be replaced by mobiles in their home PLMN<br>- Step 14 : To be deleted |
| 5.8.42 | VGCS first talker notification (MS dedicated mode, incoming VGCS call, roaming case) | | X | 4.3.1 | 2.2.1<br>5.2.2.47 | **All steps :**<br>- Only one roamer : MS_B4 and MS_A4 to be replaced by mobiles in their home PLMN<br>- Step 10 : To be deleted |
| 5.8.44 | VGCS first talker notification (MS dedicated mode, incoming REC), non-roaming case) | X | | 4.3.1 | | Step 10 : To be deleted |
| 5.8.45 | VGCS first talker notification (MS dedicated mode, incoming REC, roaming case) | | X | 4.3.1 | 2.2.1<br>5.2.2.47<br>13.3.1 | |
| 5.8.46 | Multiple VGCS membership (non-roaming case) | X | | 4.3.1 | 2.2.14 | |
| 5.8.47 | Multiple VGCS membership (roaming case) | | X | 4.3.1 | 2.2.14 | **All steps :**<br>- Only one roamer : MS_B4 and MS_A4 to be replaced by mobiles in their home PLMN |
| 5.8.48 | VGCS call established in CoO when non CoO is locked | X | | 4.3.1 | | |

| Network Assesement Test Plan | | | | | | |
|---|---|---|---|---|---|---|
| Tests Cases (catalogue) | | Type of Scenario | | Eirene Reference | | Comments |
| TC Index | Test title | I | II | SRS 15.3.0 | FRS 7.3.0 | |
| **Interactions between several functions** | | | | | | |
| 5.7.2 | MS in VGCS call on DCH, pre-emption on Um IF by higher prio PtP call | X | | 4.3.1<br>2.4.1 | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | |
| 5.7.3 | MS in VGCS call having the UL of the GCH, pre-emption on A IF by higher prio PtP call | X | | 4.3.1<br>2.4.1 | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | |
| 5.7.12 | MS in PtP call, pre-emption on A IF by higher prio PtP call. | X | | 2.4.1 | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | |
| 5.7.13 | MS in PtP call, pre-emption on MS by higher prio VGCS call (REC) | X | | 4.3.1<br>2.4.1 | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | |
| 5.7.16 | MS in VGCS call having the UL of the GCH, pre-emption on MS by higher prio VGCS call (REC) | X | | 4.3.1<br>2.4.1 | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | |
| 5.7.17 | MS in VGCS call as listener, pre-emption on A IF by higher prio VGCS call (REC) | X | | 4.3.1<br>2.4.1 | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | |
| 5.7.18 | MS in data call, pre-emption on Um IF by higher prio VGCS call (REC) | X | | 4.3.1<br>2.4.1 | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | |
| 5.7.21 | MS in VGCS call on DCH, pre-emption on A IF by higher prio data call (9.6 kbit/s, transparent) | X | | 4.3.1<br>2.4.1 | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | Replace MS_A4 and MS_A5 by fixed data terminals. |

| Network Assesement Test Plan | | | | | | |
|---|---|---|---|---|---|---|
| Tests Cases (catalogue) | | Type of Scenario | | Eirene Reference | | Comments |
| TC Index | Test title | I | II | SRS 15.3.0 | FRS 7.3.0 | |
| **Interactions between several functions** | | | | | | |
| 5.7.22 | MS in VGCS as listener, pre-emption on Um IF by higher prio data call (4.8 kbit/s, transparent) | X | | 4.3.1<br>2.4.1 | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | Replace MS_A4 by a fixed data terminal. |
| 5.7.26 | MS in VGCS call as listener, pre-emption on Um IF by lower prio PtP call does not take place | X | | 4.3.1<br>2.4.1 | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | Replace MS_A3 by a fixed data terminal.<br>Step 3 to be deleted |
| 5.7.30 | MS in VGCS call on DCH, pre-emption on A IF by lower prio VGCS call does not take place. | X | | 4.3.1<br>2.4.1 | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | |
| 5.7.31 | MS in VGCS call having the UL on the GCH, pre-emption on Um IF by lower prio VGCS all does not take place. | X | | 4.3.1<br>2.4.1 | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | |
| 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. | X | | 4.3.1<br>2.4.1 | 2.4.6<br>2.4.7<br>10.2.2<br>10.2.3 | Replace MS_A4 by a fixed data terminal<br>Step 3 and step 5 to be deleted |

## Annex 1: Selected tests cases

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

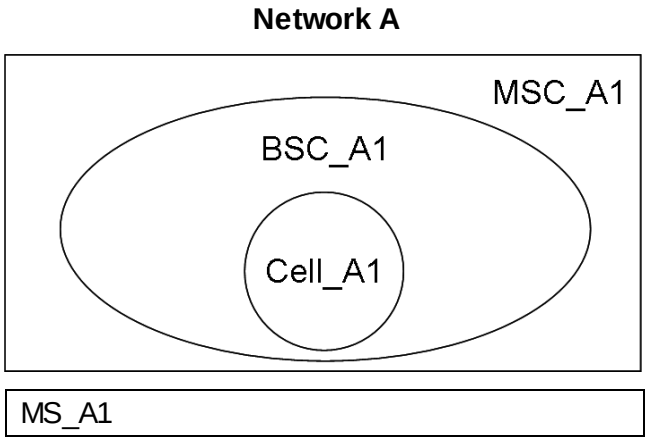
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | | | EN 301515 |

**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.<br>Messages seen: 'Location Updating Request' and 'Location Updating Accept'.<br>'Authentication Request' is transmitted from the MSC to the BSC and from the BSC to the base station.<br>'Authentication Response' is transmitted from the base station to the BSC and from the BSC to the MSC.<br>'Cipher Mode Command' is transmitted from the MSC to the BSC and from the BSC to the base station.<br>'Cipher Mode Complete' is transmitted from the base station to the BSC and from the BSC to the MSC.<br>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.<br>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 | |

### *5.1.10 Supplementary Service Call Hold (non-roaming case)*

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | Other |
|---|---|---|---|
| | 2.4.1<br>2.4.13<br>2.4.14 | 2.4.1 | |

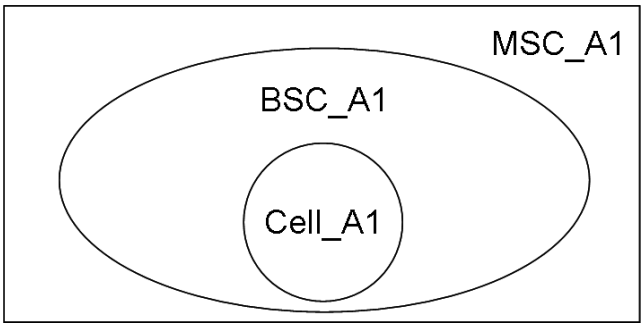
**a) Purpose**

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. |
| 4) | MS_A1 establishes a second PTP call to MS_A3. | MS_A3 is notified of the incoming call from MS_A1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>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<br>2.4.15 | 2.4.1 | |

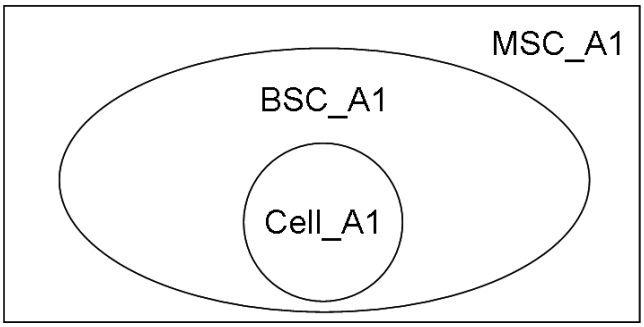
**a) Purpose**

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.<br>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.<br>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<br>2.4.2<br>2.4.12 | 2.4.1 | |

**a) Purpose**

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

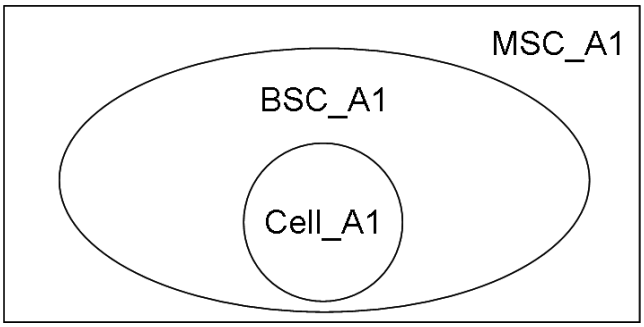
**b) Test configuration / initial conditions**

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**

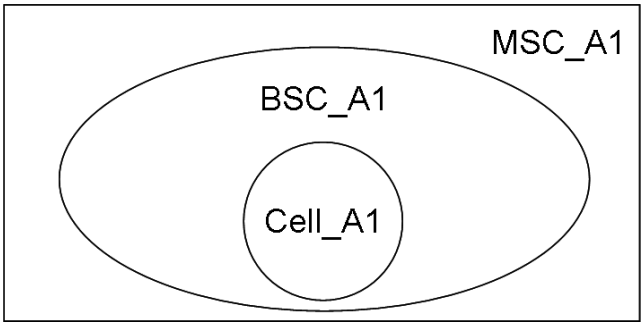
Verify the Supplementary Service Connected Line Identification Presentation (CoLP).

**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<br>2.2.17<br>2.2.18 | 2.4.1<br>2.5.1 | |

**a) Purpose**

Verify the Supplementary Service Multiparty (MPTY).

**b) Test configuration / initial conditions**

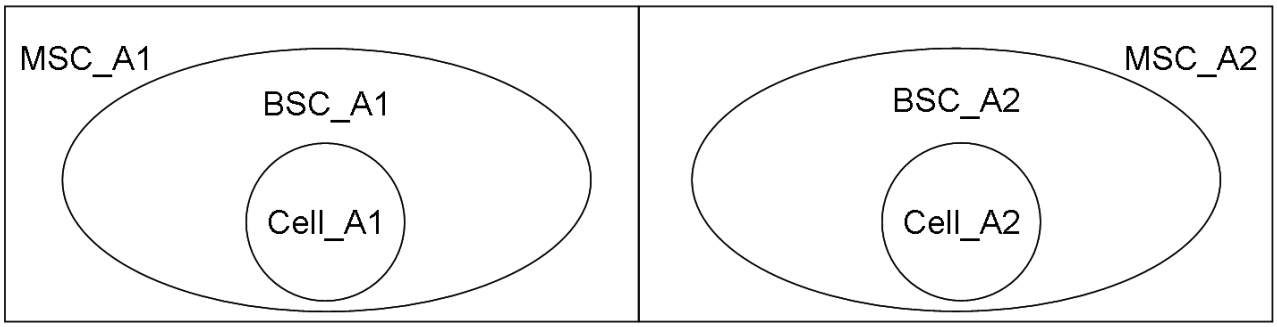
MS_A1 have Supplementary Service Verify Multiparty (MPTY) and Call Hold (HOLD)..

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.<br>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.<br>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.<br>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<br>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 | |

### *5.1.14 Notification of Call Forwarding (non-roaming case)*

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | Other |
|---|---|---|---|
| | 2.4.1<br>2.4.12 | 2.4.1 | |

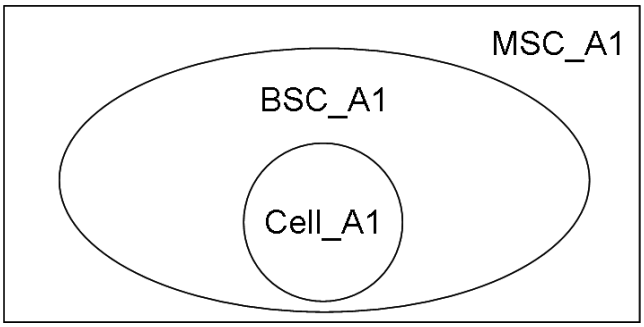
**a) Purpose**

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 |

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

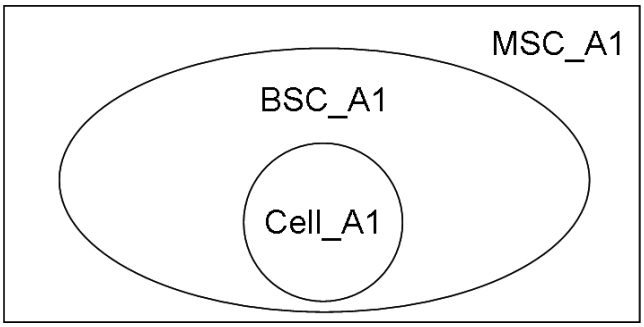
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>10.2.1<br>10.2.2 | 10.2.1 | |

**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.<br>The priority is transmitted correctly through the network.<br>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 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<br>(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<br>2.4.12 | 2.4.1 | |

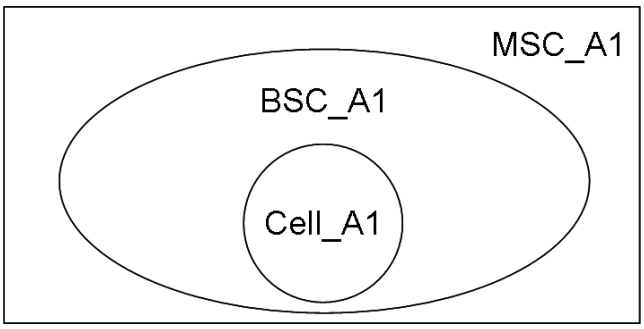
**a) Purpose**

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 |

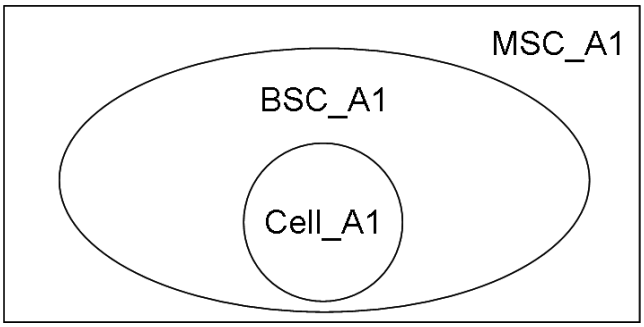
**a) Purpose**

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 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 | |

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

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | | | EN 301515 |

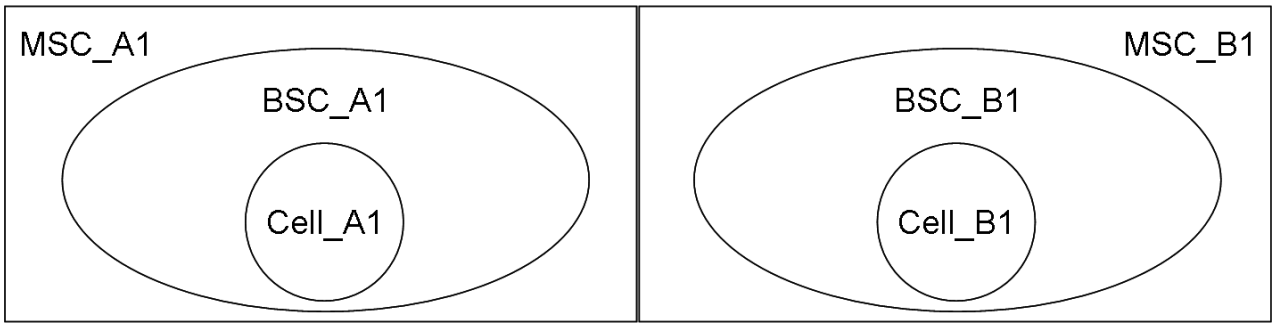
**a) Purpose**

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.<br>Messages seen: “Location Updating Request” and “Location Updating Accept”.<br>‘Authentication Request’ is transmitted from the MSC to the BSC and from the BSC to the base station.<br>‘Authentication Response’ is transmitted from the base station to the BSC and from the BSC to the MSC.<br>‘Cipher Mode Command’ is transmitted from the MSC to the BSC and from the BSC to the base station.<br>‘Cipher Mode Complete’ is transmitted from the base station to the BSC and from the BSC to the MSC.<br>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.<br>MS_B1 has correct subscriber data in the VLR_A1 and is attached to network A. |
| 2) | Switch on MS_A1 in cell_B1. | A normal location update is performed.<br>Messages seen: “Location Updating Request” and “Location Updating Accept”.<br>‘Authentication Request’ is transmitted from the MSC to the BSC and from the BSC to the base station.<br>‘Authentication Response’ is transmitted from the base station to the BSC and from the BSC to the MSC.<br>‘Cipher Mode Command’ is transmitted from the MSC to the BSC and from the BSC to the base station.<br>‘Cipher Mode Complete’ is transmitted from the base station to the BSC and from the BSC to the MSC.<br>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.<br>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 | |

### *5.1.32 Supplementary Service Call Hold (roaming case)*

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.13<br>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.

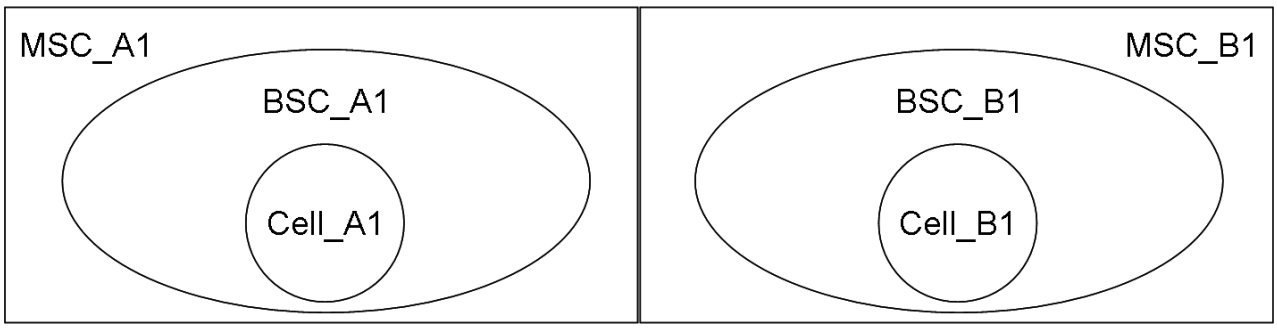
Step 2: MS_B1 in network A calls MS_B2 in network B.

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.<br>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. |
| 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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 7) | MS_B1 closes the call to MS_A1. | Call to MS_A1 is released. All related resources are de-allocated.<br>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. |
| 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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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<br>2.4.15 | 2.4.1 | |

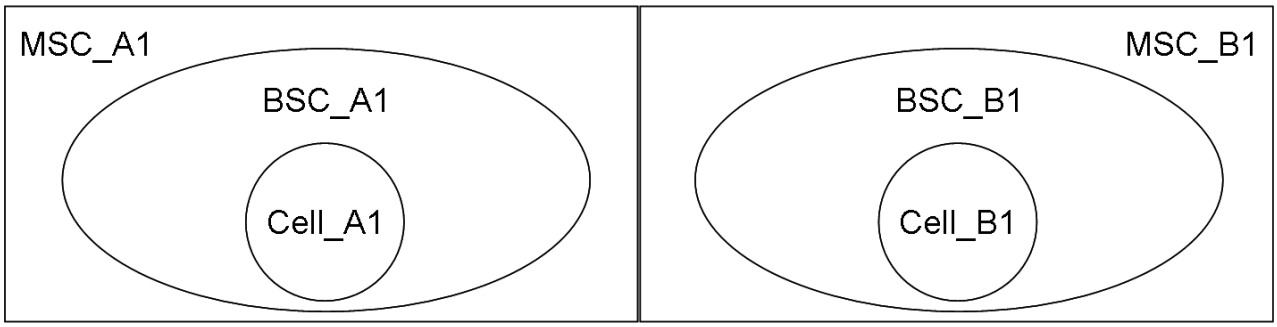
**a) Purpose**

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 de-allocated. |
| 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 de-allocated. |
| 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 de-allocated. |
| 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 de-allocated. |

**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<br>2.4.2<br>2.4.12 | 2.4.1 | |

**a) Purpose**

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

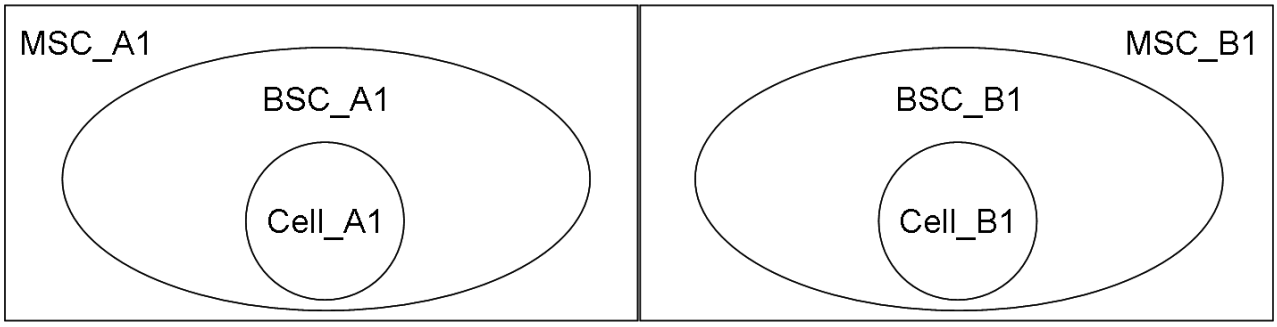
**b) Test configuration / initial conditions**

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).

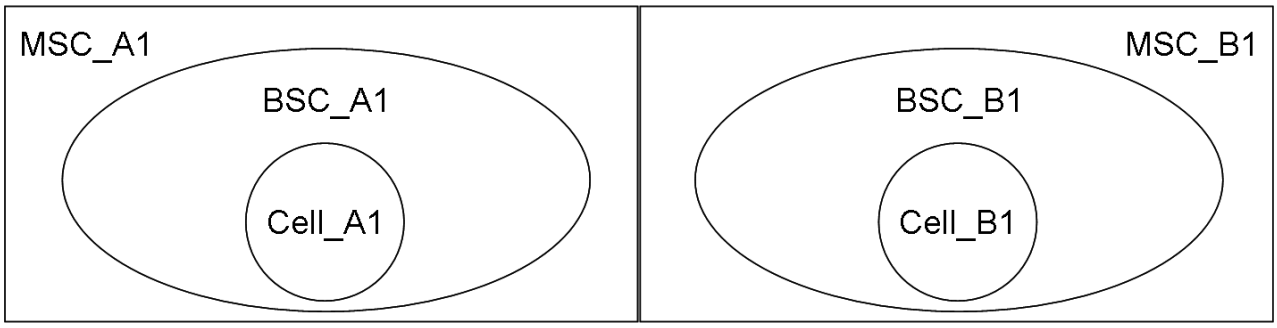
**b) Test configuration / initial conditions**

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<br>2.2.17<br>2.2.18 | 2.4.1<br>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.

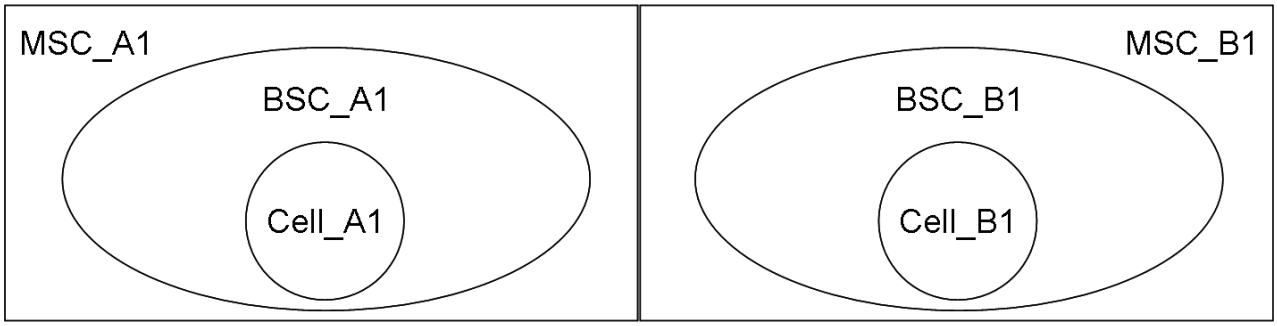
Step 2: MS_B1 starts the MPTY call in network B.

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. |
| 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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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. |
| 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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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<br>2.4.2<br>2.4.12 | 2.4.1 | |

**a) Purpose**

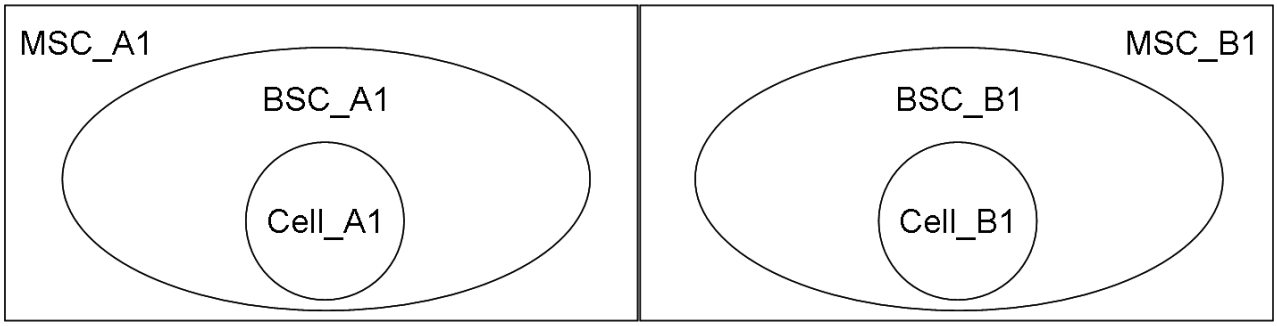
Verify notification of a forwarded call.

**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<br>2.3.6<br>2.3.8<br>2.3.13<br>2.4.1<br>2.4.5<br>10.2.1<br>10.2.2 | 2.3.1<br>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 **Error! Reference source not found.** "**Error! Reference source not found.**".

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.

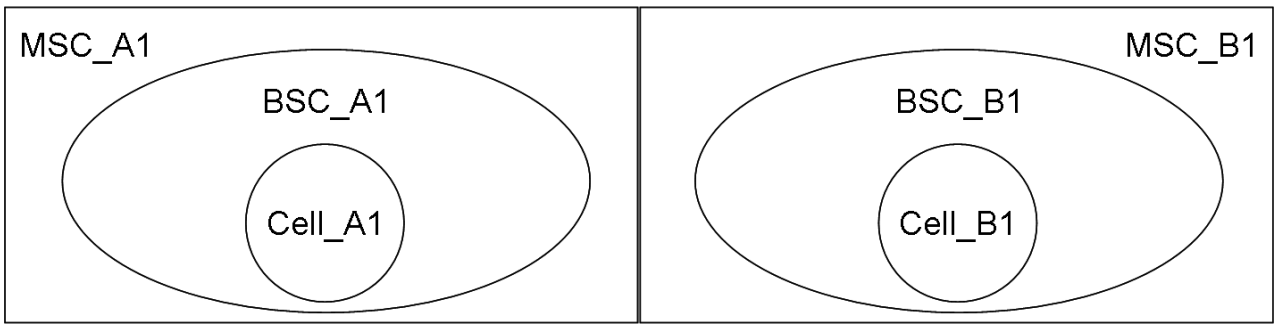
Step 13: Mobile to fixed network data call from MS_A2 in network B to DCE_B1 in network B.

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 **Error! Reference source not found.** "**Error! Reference source not found.**" | MS_A1 and MS_B2 are configured with the correct bearer service. |
| 2) | MS_A1 establishes a data call to MS_B2 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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 **Error! Reference source not found.** "**Error! Reference source not found.**" | MS_A1 and MS_A2 are configured with the correct bearer service. |
| 2) | MS_A1 establishes a data call to MS_A2 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 **Error! Reference source not found.** "**Error! Reference source not found.**" | MS_A1 and MS_B1 are configured with the correct bearer service. |
| 2) | MS_A1 establishes a data call to MS_B1 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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. |
| 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 **Error! Reference source not found.** "**Error! Reference source not found.**" | MS_B1 and MS_A2 are configured with the correct bearer service. |
| 2) | MS_B1 establishes a data call to MS_A2 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 **Error! Reference source not found.** "**Error! Reference source not found.**" | MS_B1 and MS_B2 are configured with the correct bearer service. |

| Step | Action | Expected result(s) |
|---|---|---|
| 2) | MS_B1 establishes a data call to MS_B2 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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. |
| 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 **Error! Reference source not found.** "**Error! Reference source not found.**" | MS_B1 and MS_A1 are configured with the correct bearer service. |
| 2) | MS_B1 establishes a data call to MS_A1 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 **Error! Reference source not found.** "**Error! Reference source not found.**" | DCE_A1 and DCE_B1 are configured with the correct bearer service. |
| 2) | DCE_A1 establishes a data call to DCE_B1 by dialling:<br>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:<br>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 **Error! Reference source not found.** "**Error! Reference source not found.**" | MS_A1 and DCE_A1 are configured with the correct bearer service. |
| 2) | MS_A1 establishes a data call to DCE_A1 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 de-allocated. |
| 7) | DCE_A1 establishes a data call to MS_A1 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 de-allocated. |
| 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 **Error! Reference source not found.** "**Error! Reference source not found.**" | MS_B2 and DCE_A1 are configured with the correct bearer service. |
| 2) | MS_B2 establishes a data call to DCE_A1 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 de-allocated. |
| 7) | DCE_A1 establishes a data call to MS_B2 by dialling:<br>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 de-allocated. |
| 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 **Error! Reference source not found.** "**Error! Reference source not found.**" | MS_A1 and DCE_A1 are configured with the correct bearer service. |
| 2) | MS_B1 establishes a data call to DCE_A1 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 de-allocated. |
| 7) | DCE_A1 establishes a data call to MS_B1 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 de-allocated. |
| 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 **Error! Reference source not found.** "**Error! Reference source not found.**" | MS_A2 and DCE_A1 are configured with the correct bearer service. |
| 2) | MS_A2 establishes a data call to DCE_A1 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 de-allocated. |
| 7) | DCE_A1 establishes a data call to MS_A2 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 de-allocated. |
| 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 **Error! Reference source not found.** "**Error! Reference source not found.**" | MS_B1 and DCE_B1 are configured with the correct bearer service. |
| 2) | MS_B1 establishes a data call to DCE_B1 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 de-allocated. |
| 7) | DCE_B1 establishes a data call to MS_B1 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 de-allocated. |
| 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 **Error! Reference source not found.** "**Error! Reference source not found.**" | MS_A2 and DCE_B1 are configured with the correct bearer service. |
| 2) | MS_A2 establishes a data call to DCE_B1 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 de-allocated. |
| 7) | DCE_B1 establishes a data call to MS_A2 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 de-allocated. |
| 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 **Error! Reference source not found.** "**Error! Reference source not found.**" | MS_A1 and DCE_B1 are configured with the correct bearer service. |
| 2) | MS_A1 establishes a data call to DCE_B1 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 de-allocated. |
| 7) | DCE_B1 establishes a data call to MS_A1 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 de-allocated. |
| 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 **Error! Reference source not found.** "**Error! Reference source not found.**" | MS_B2 and DCE_B1 are configured with the correct bearer service. |
| 2) | MS_B2 establishes a data call to DCE_B1 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 de-allocated. |
| 7) | DCE_B1 establishes a data call to MS_B2 by dialling:<br>ATD *75<Priority>#<MSISDN><br>(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 de-allocated. |
| 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<br>2.4.5<br>10.2.1<br>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:

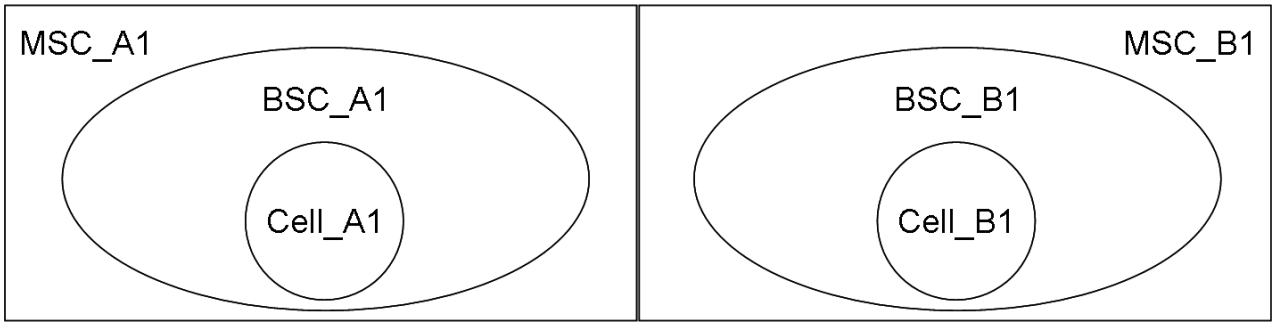
Step 1: MS_A1 in network A calls MS_B1 in network B.

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.<br>The priority is transmitted correctly through the network.<br>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.<br>The priority is transmitted correctly through the network.<br>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.<br>The priority is transmitted correctly through the network.<br>The priority is seen on messages: 'CM Service request', 'Call Proceeding' and 'Setup' sent to MS_A1. |
| 2) | MS_B1 releases the call. | The call is correctly released. All related resources are de-allocated. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>The priority is transmitted correctly through the network.<br>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<br>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.

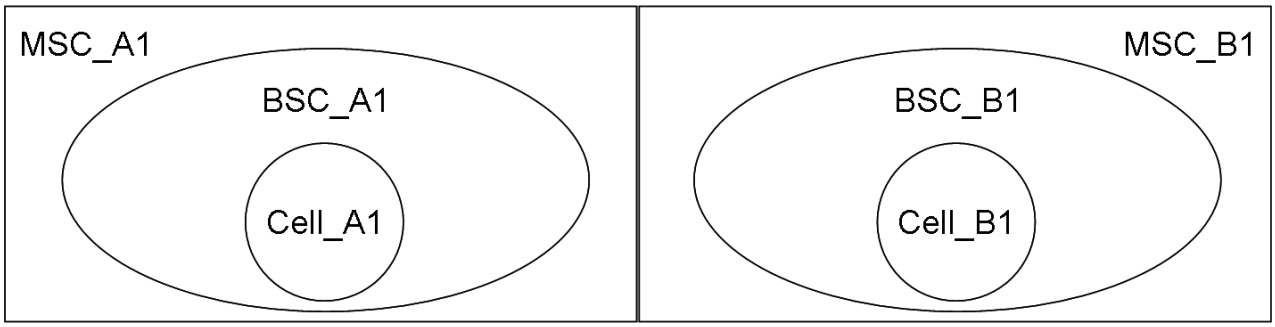
Step 3: MS_A1 in network A activates CFB to MS_B4 in network B.

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. |
| 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. |
| 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 |

| Step | Action | Expected result(s) |
|---|---|---|
| | | 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. 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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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**

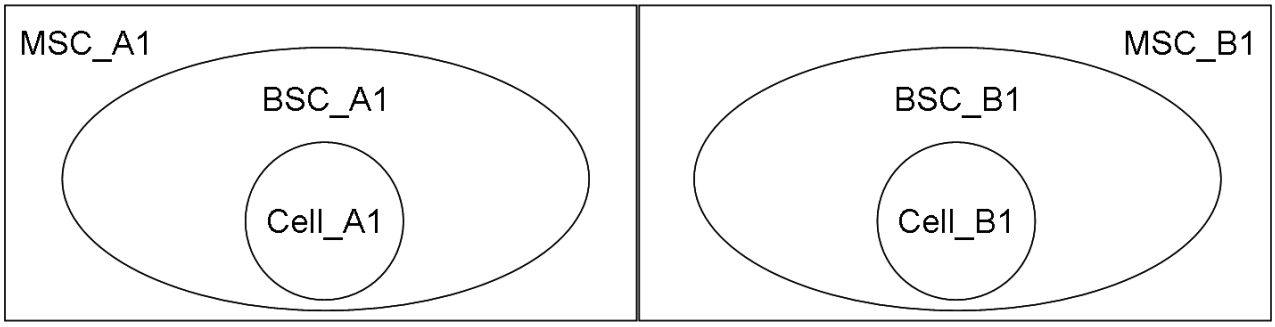
Verify that a MOC is released when the terminator rejects it.

**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 resources 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 | |

### *5.1.47 Call barring (roaming case)*

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.17 | 2.4.1<br>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.

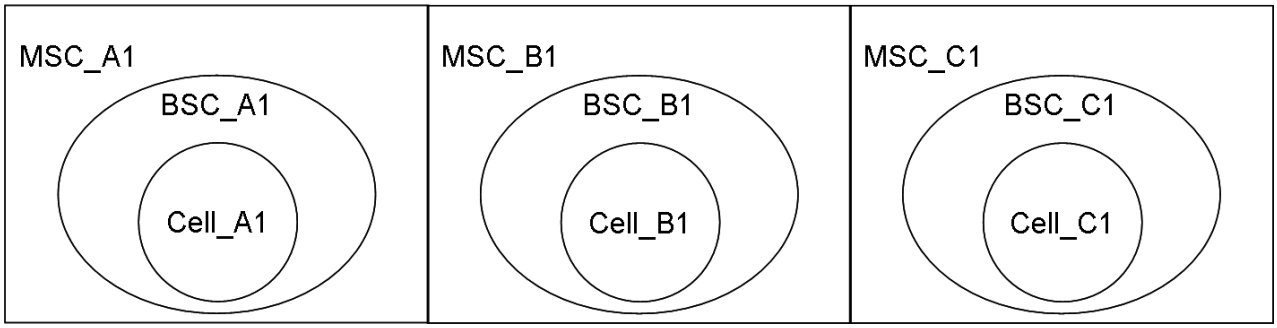
This test case has been divided into the following steps:

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<br>Cancel<br>Status | **330*[code]#<br>##330*[code]#<br>*#330# | **333*[code]#<br>##333*[code]#<br>*#333# | **35*[code]#<br>##35*[code]#<br>*#35# | **331*[code]#<br>##331*[code]#<br>*#331# | **332*[code]#<br>##332*[code]#<br>*#332# | **351*[code]#<br>##351*[code]#<br>*#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 de-allocated. |
| 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 de-allocated. |
| 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 de-allocated. |
| 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 de-allocated. |
| 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. |
| 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 | |

### *5.2.1 Register of a FN (non-roaming case)*

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | Other |
|---|---|---|---|
| | 2.5.1<br>11.2.1.1<br>11.3.2.1<br>11.3.2.3 | 2.4.1<br>2.5.1<br>11.3.2<br>11.3.5<br>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

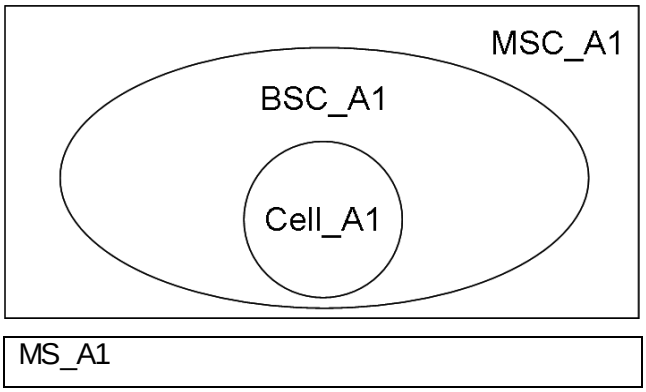
**Test configuration for step 1 and 2**

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.<br>The USSD outcome code "01" which means "Follow Me activated" is displayed on MS A1.<br>Alternatively MS converts the outcome code in an appropriate text message. |
| 2) | Verify the corresponding entry of FFN database. | 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.<br>The USSD outcome code "01" which means "Follow Me activated" is displayed on MS A1.<br>Alternatively MS converts the outcome code in an appropriate text message. |
| 4) | Verify the corresponding entry of FFN database. | 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.<br>When sending the USSD message, start the stop watch simultaneously. | The stop watch runs. |
| 3) | Observe the display of MS_A1.<br>When MS_A1 displays the confirmation of registration (outcome code or text message), stop the stop watch. | MS_A1 displays the confirmation of Registration.<br>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<br>2.5.1 | |

**a) Purpose**

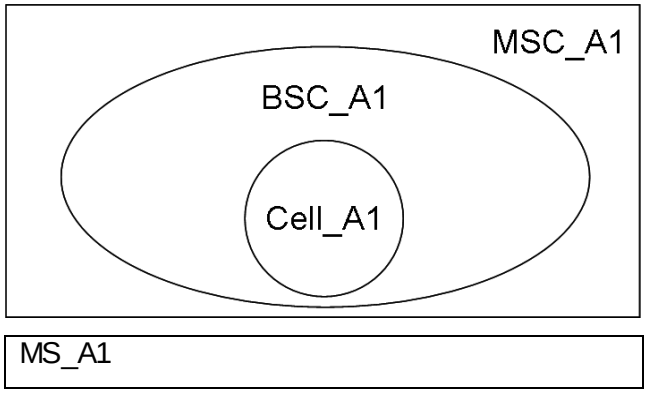
Verify the registration of 3 FN to one and the same user is possible.

**b) Test configuration / initial conditions**

Preprovisioning of FN or Dynamic FN Creation.

All FN to register are unregistered.

**Network A**




**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.<br>Alternatively MS converts the outcome code in an appropriate text message. |
| 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.<br>Alternatively MS converts the outcome code in an appropriate text message. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>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<br>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:

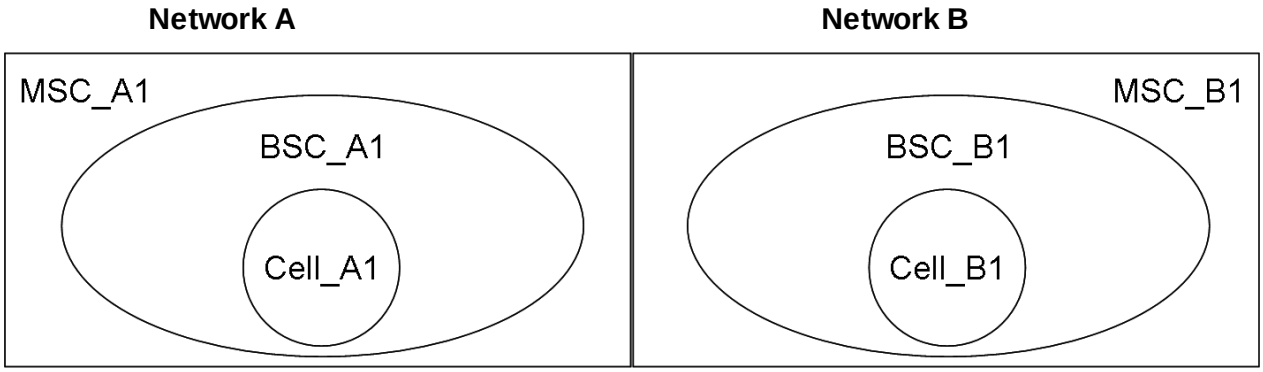
Step 1: Registration of 3 FN to one and the same user in roaming network B.

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.<br><br>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.<br><br>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.<br><br>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.<br><br>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.<br><br>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.<br><br>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<br>2.5.1<br>11.3.8<br>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.<br>The USSD outcome code "41" which means "Unknown Remote Party" is displayed on MS_A1.<br>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<br>11.3.3.1<br>11.3.3.3<br>11.3.3.5 | 2.4.1<br>2.5.1<br>11.3.2<br>11.3.5<br>11.3.7<br>11.3.10<br>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**

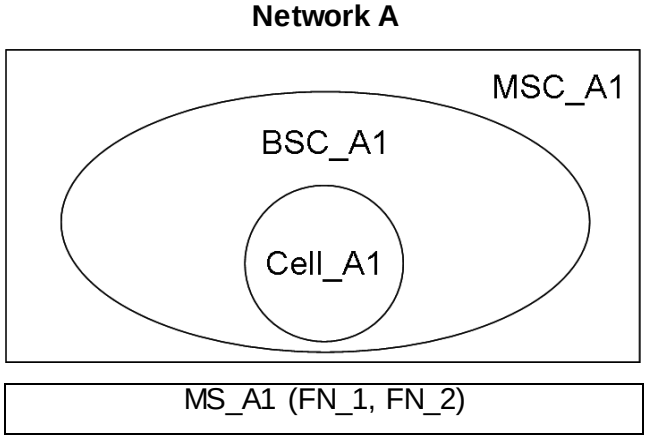
Protocol analyzer is configured to trace A-interface to verify the transmitting USSD string from and to the network on the MAP interface.

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.




**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.<br>The USSD outcome code "02" which means "Follow Me deactivated" is displayed on MS_A1.<br>Alternatively MS converts the outcome code in an appropriate text message.<br>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.<br>The USSD outcome code "02" which means "Follow Me deactivated" is displayed on MS_A1.<br>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.<br>When sending the USSD message, start the stop watch simultaneously. | The stop watch runs. |
| 3) | Observe the display of MS_A1.<br>When MS_A1 displays the confirmation of deregistration (outcome code or text message), stop the stop watch. | MS_A1 displays the confirmation of deregistration.<br>The stop watch stops. |
| 4) | Repeat 2) and 3) until all 10 FN deregistered. | MS_A1 deregistered to 10 FN. |
| 5) | Verify the recorded duration of the stop watch. | The measured time does not exceed 30 seconds. |

| Step | Action | Expected result(s) |
|---|---|---|
| 6) | Verify FFN database. | The mappings between the 10 FN and MS_A1 no more exist or labelled as “deregistered” 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<br>2.5.1<br>11.3.10<br>11.3.12 | |

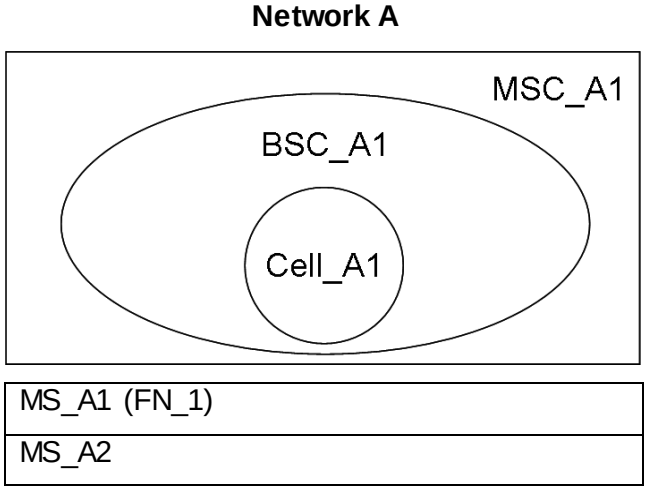
**a) Purpose**

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.




**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.<br>Alternatively MS converts the outcome code in an appropriate text message.<br>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<br>2.5.1<br>11.3.7<br>11.3.8i | |

**a) Purpose**

Verify the forced deregistration of a FN.

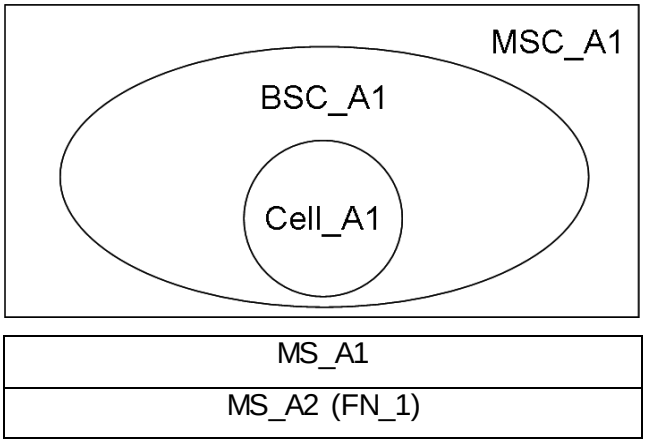
**b) Test configuration / initial conditions**

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**




**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.<br>Alternatively MS converts the outcome code in an appropriate text message. |
| 2) | MS_A1 performs a forced deregistration of the FN to which MS_A2 registered by | The USSD outcome code "02" which means "Follow Me deactivated" is |

| Step | Action | Expected result(s) |
|---|---|---|
| | sending USSD string “##214*<IC_A+FN to forced-deregister>*88*<MSISDN of MS_A2>*#” or by using Terminal Menu. | displayed on MS_A1.<br><br>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.<br>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<br>2.5.1<br>11.3.7<br>11.3.8i | |

**a) Purpose**

Verify the forced deregistration of a FN fails in case of missing supervisor CoR.

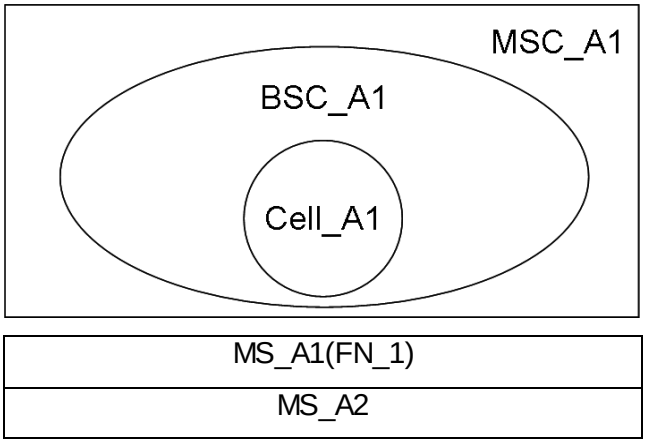
**b) Test configuration / initial conditions**

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**




**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.<br>Alternatively MS converts the outcome code in an appropriate text message. |
| 2) | MS_A2 performs a forced-deregistration by sending USSD string "##214*<IC_A+FN to | The USSD outcome code "22" which means "Unauthorised request" is |

| Step | Action | Expected result(s) |
|---|---|---|
| | forced-deregister>*88*<MSISDN of MS_A1>*#" or by using Terminal Menu. | displayed on MS_A2.<br><br>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.<br>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 | |

### *5.2.10 Registration of a FN (roaming case)*

**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<br>11.2.1.7<br>11.2.1.8<br>11.3.2.1<br>11.3.2.3<br>11.3.4 | 2.4.1<br>2.5.1<br>11.3.2<br>11.3.7<br>11.3.14<br>11.3.17<br>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)

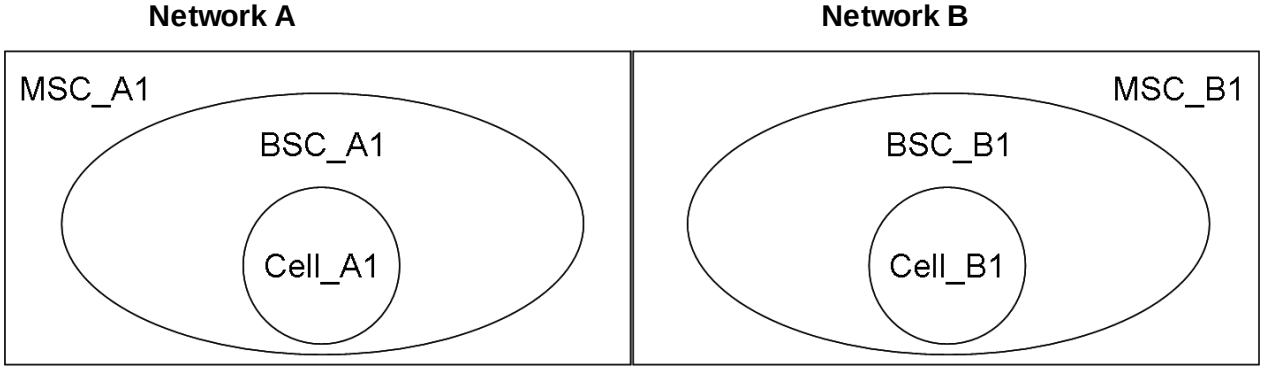
Step 3: Register of 10 FN in Home Network (A), take time measurement and verify FN-validness after Network change (B)

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.<br>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.<br>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.<br>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.<br>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.<br>When sending the USSD message, start the stop watch simultaneously. | The stop watch runs. |
| 2) | Observe the display of MS_A1.<br>When MS_A1 displays the confirmation of registration (outcome code or text message), stop the stop watch. | MS_A1 displays the confirmation of Registration.<br>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.<br>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.<br>When sending the USSD message, start the stop watch simultaneously. | The stop watch runs. |
| 2) | Observe the display of MS_B1.<br>When MS_B1 displays the confirmation of registration (outcome code or text message), stop the stop watch. | MS_B1 displays the confirmation of Registration.<br>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.<br>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 | |

**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.

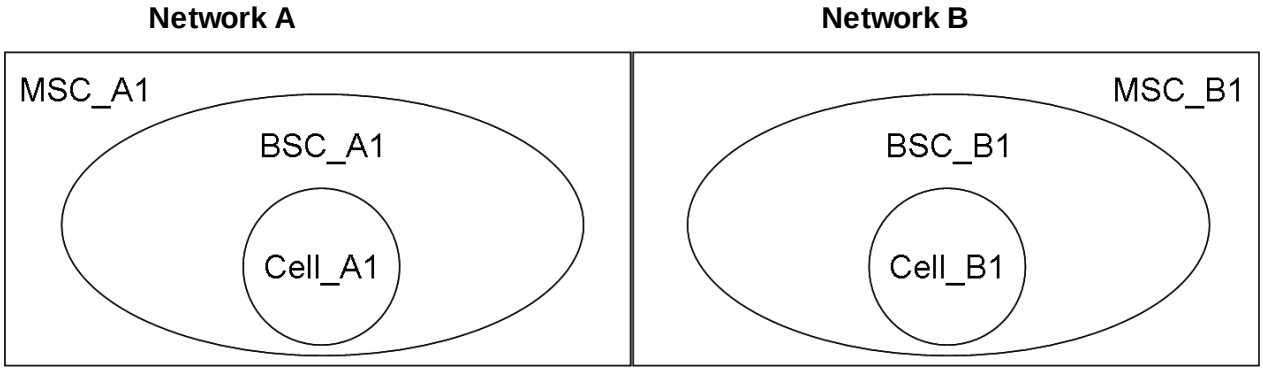
### Test configuration for step 1 and 2

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.<br>Alternatively MS converts the outcome code in an appropriate text message. |
| 2) | Verify the registration. | MS_A1 displays the identity FN_1.<br>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.<br>Alternatively MS converts the outcome code in an appropriate text message. |
| 2) | Verify the registration. | MS_B1 displays the identity FN_8.<br>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<br>2.5.1<br>11.3.8<br>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.

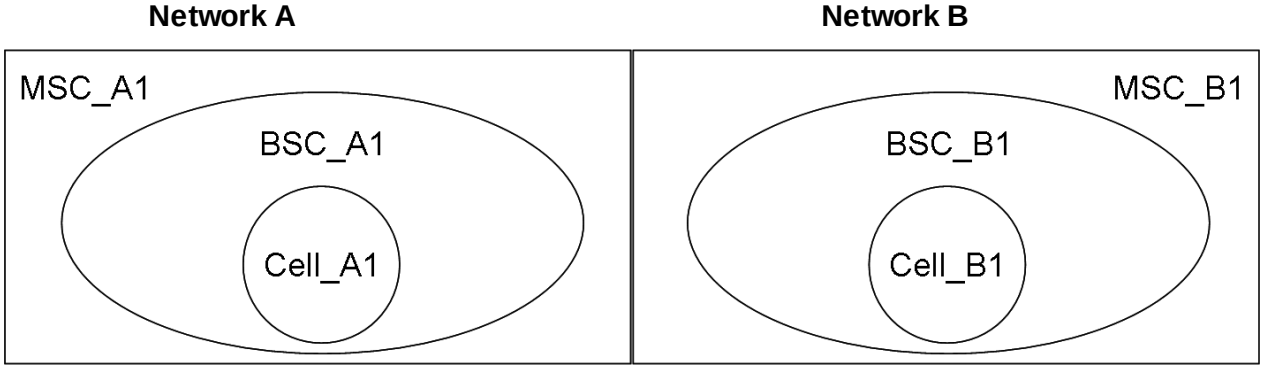
**Test configuration for step 1 and 2**

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.<br>The USSD outcome code "41" which means "Unknown Remote Party" is displayed on MS_A1.<br>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.<br>The USSD outcome code "41" which means "Unknown Remote Party" is displayed on MS_B1.<br>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 | |

### *5.2.17 Registration failures --> outcome code 61 [remote party already registered] (roaming case)*

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 9.2.2.2<br>9.2.3.2<br>11.2.1.5<br>11.2.2.1<br>11.3.2.5 | 2.4.1<br>2.5.1<br>9.2.1<br>11.3.8<br>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**

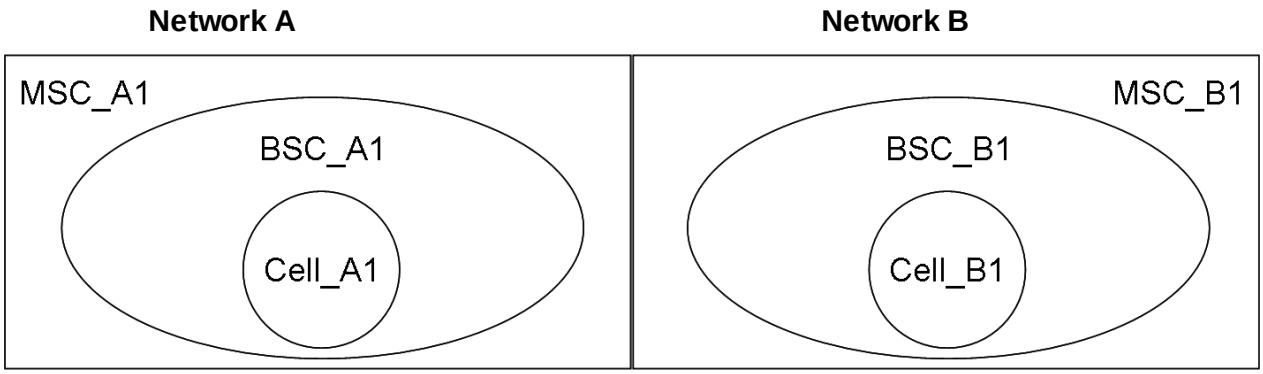
MS_A2 roams in network B.

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.<br>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.<br>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.<br>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.<br>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<br>11.2.1.8<br>11.3.3.1<br>11.3.3.3<br>11.3.3.5 | 2.4.1<br>2.5.1<br>11.3.2<br>11.3.7<br>11.3.10<br>11.3.12<br>11.3.14<br>11.3.17<br>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.

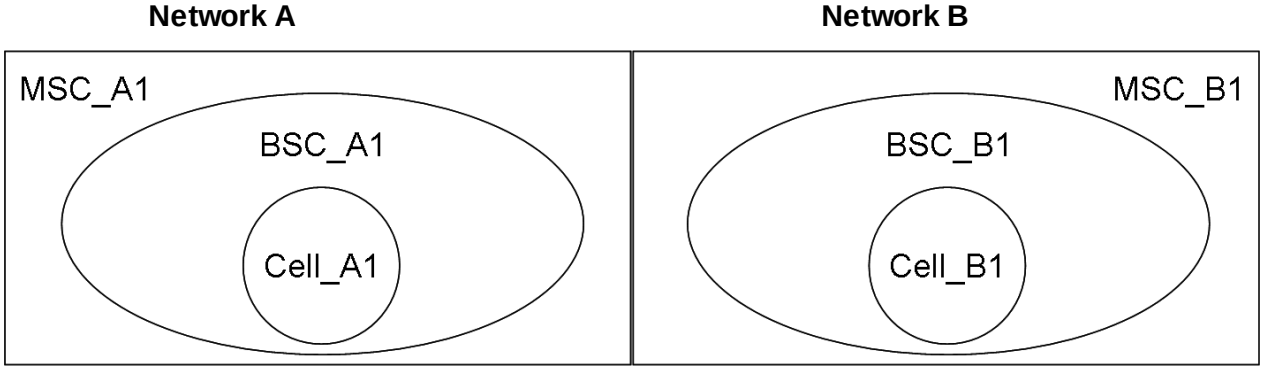
Step 4: Deregistration of 10 FN in roaming network A with taking time measurement.

**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.<br>Alternatively MS converts the outcome code in an appropriate text message. |

**Step 2: Deregistration of a FN in roaming network A.**

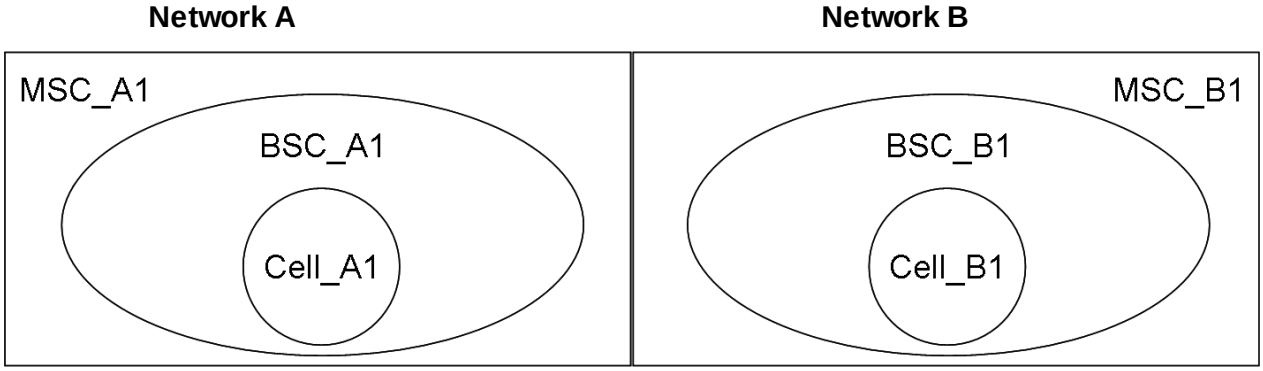
| Step | Action | Expected result(s) |
|---|---|---|
| 1) | MS_B1 deregisters its FN by sending an USSD string “##214*<IC_B+FN_1>***#”. | The USSD outcome code “02” which means “Follow Me deactivated” is displayed on MS_B1.<br>Alternatively MS converts the outcome code in an appropriate text message. |

**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.<br>When sending the USSD message, start the stop watch simultaneously. | The stop watch runs. |
| 2) | Observe the display of MS_A1.<br>When MS_A1 displays the confirmation of deregistration (outcome code or text message), stop the stop watch. | MS_A1 displays the confirmation of Deregistration.<br>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.<br>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.<br>When sending the USSD message, start the stop watch simultaneously. | The stop watch runs. |
| 2) | Observe the display of MS_B1.<br>When MS_B1 displays the confirmation of deregistration (outcome code or text message), stop the stop watch. | MS_B1 displays the confirmation of Deregistration.<br>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.<br>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<br>11.2.1.8<br>11.3.3.1 | 2.4.1<br>2.5.1<br>11.3.10<br>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**

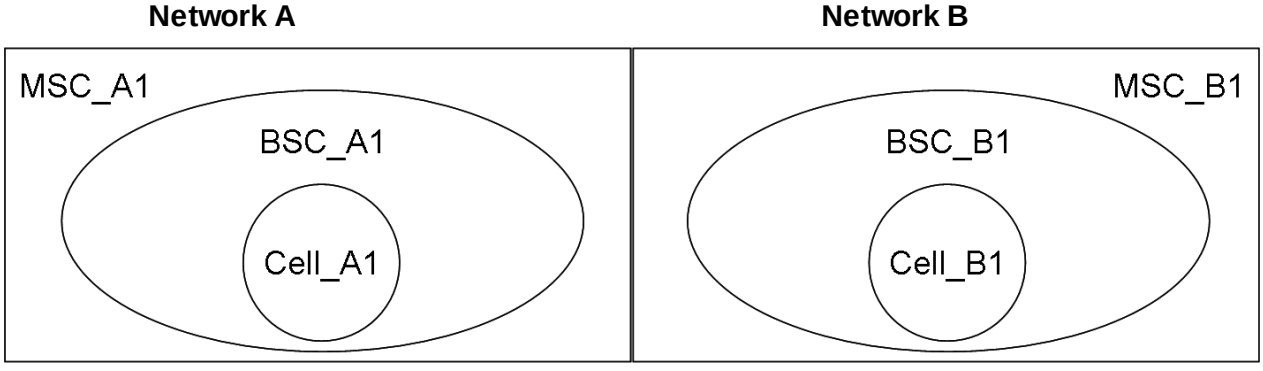
MS_A1 roams in network B and is not registered to IC_A, FN_9.

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.<br>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.<br>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.<br>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.<br>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<br>2.5.1<br>11.3.8i<br>11.3.17<br>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**

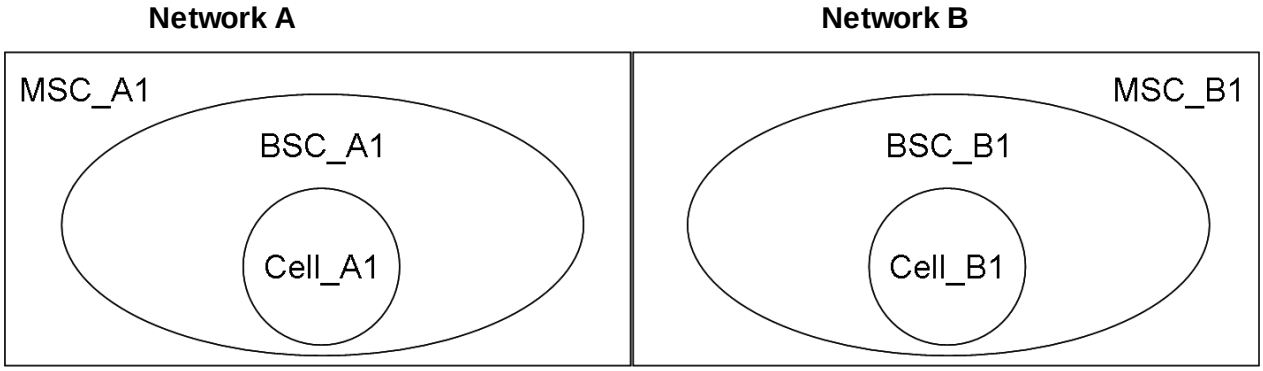
MS_A2 roams in network B.

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.<br>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.<br>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.<br>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.<br>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.<br>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.<br>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 | |

### *5.2.23 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. |
| 5) | Activate database replication feature between the (geo)redundant SCP databases. | The FFN database replication feature between (geo)redundant FFN databases is enabled. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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<br>9.2.1.1<br>9.2.4.1<br>9.2.4.2<br>9.2.4.3<br>9.2.4.4<br>2.4.3<br>11.2.1.10<br>11.2.2.2<br>11.2.3.1 | 2.4.1<br>2.5.1<br>9.2.2<br>9.2.4<br>9.2.7<br>9.4.1<br>9.5.2<br>9.5.3<br>9.5.4<br>9.6.2<br>9.A2<br>9.A3<br>11.2.3<br>11.5.1<br>11.5.2<br>11.5.4<br>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.

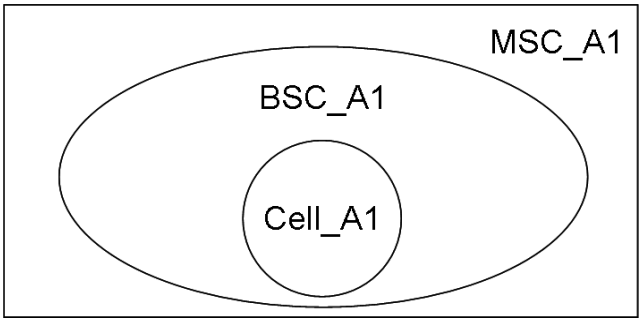
Protocol analyzer is configured to trace A-interface to verify the Setup message.

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.<br>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.<br><br>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.<br>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.<br><br>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.<br>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.<br>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 | |

### *5.2.26 FA Call – Successful Call (international call)*

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 9.2.1.1<br>2.4.3<br>11.2.1.10<br>11.2.3.1 | 2.4.1<br>2.5.1<br>9.4.1<br>9.5.2<br>9.6.2<br>9.6.3<br>9.6.4<br>9.10.1<br>9.10.1ii<br>11.5.1<br>11.5.2<br>11.5.4<br>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.

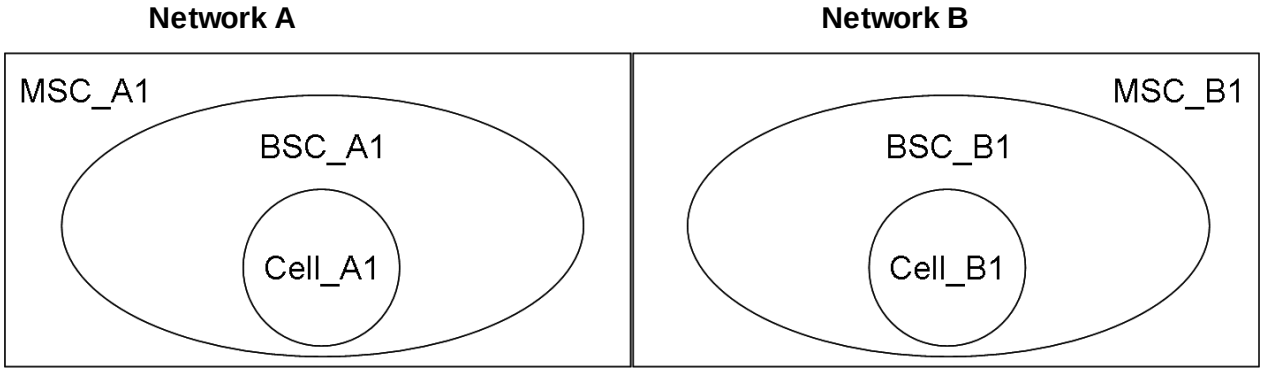
Step 5: international CT7 /FC01 to CT6 /FC5yxx call.

**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.<br><br>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 | |

### *5.3.1 National call: AM allows call*

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | Other |
|---|---|---|---|
| | 10.6.1<br>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.

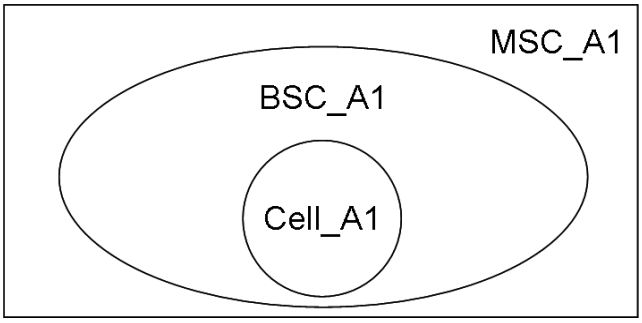
**Test configuration for all steps**

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<br>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**

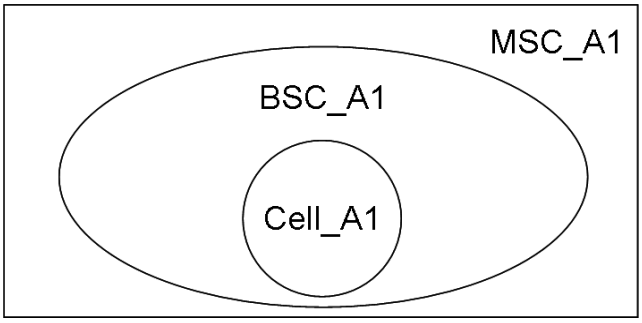
Access Matrix is enabled and configured as defined in the EIRENE FRS V7 and shown above.

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.<br>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.<br>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. |
| 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.<br>Alternatively MS converts the outcome code in an appropriate text message. |
| 2) | CT_A2 calls FN_6. | AM does not allow the call.<br>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.<br>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. |
| 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". |

| Step | Action | Expected result(s) |
|---|---|---|
| 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<br>10.6.2 | 9.3.4<br>9.10.1<br>9.10.1ii<br>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.

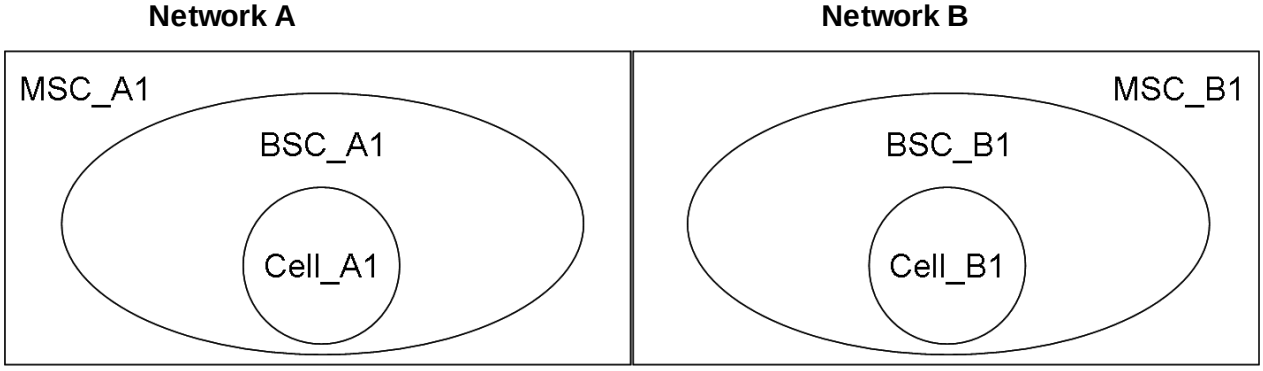
**Test configuration for all steps**

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.




| **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. |
| 3) | MS_A2 accepts the call. | The PTP call between MS_A2 and CT_A2 is successfully established. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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 incoming 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 connected 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 incoming 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 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. |

**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<br>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**

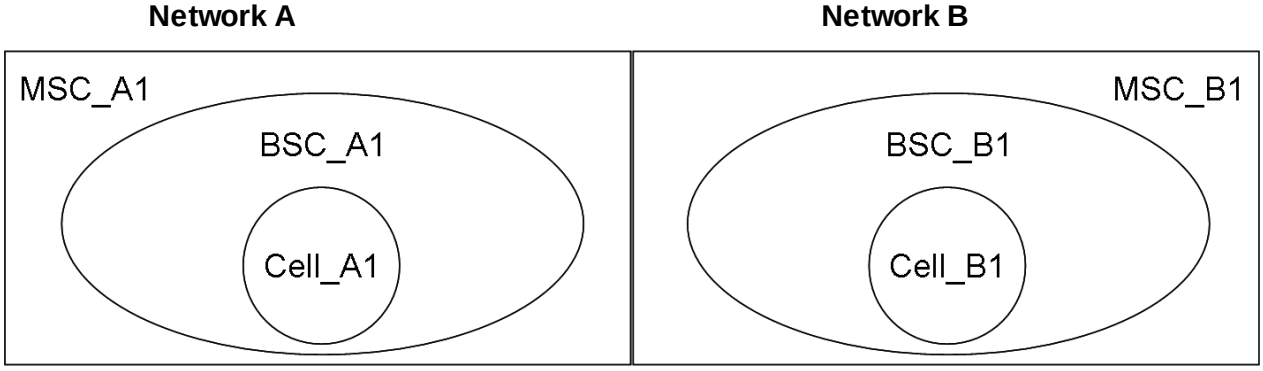
Access Matrix is enabled and configured as defined in the EIRENE FRS V7 and shown above in both networks A and B.

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.<br>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.<br>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.<br>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.<br>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.<br>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.<br>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 | |

### *5.4.1 LDA call (non-roaming case)*

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | Other |
|---|---|---|---|
| | 2.5.1<br>3.2.3<br>9.3.2<br>11.4 | 2.5.1<br>9.4.1<br>9.8.1<br>9.8.2<br>9.8.3<br>9.8.4<br>11.7.1<br>11.7.2 | |

**a) Purpose**

Verify the short code calls are routed to the preconfigured controller.

**b) Test configuration / initial conditions**

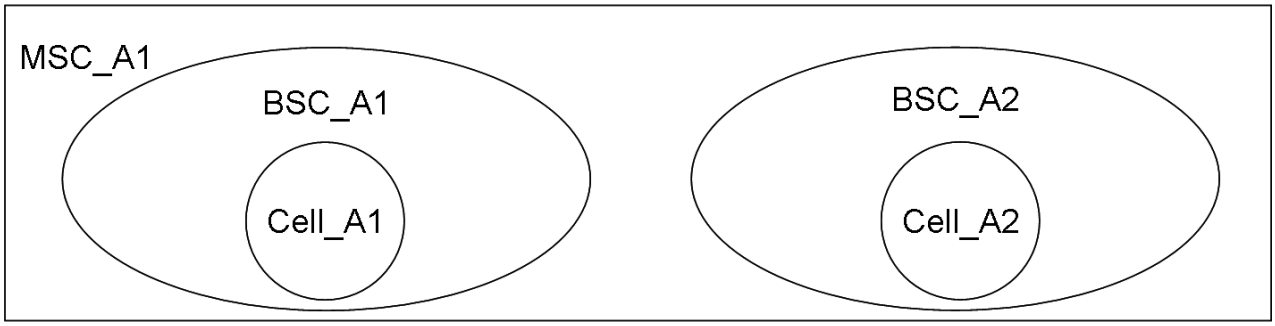
CT_A1, primary controller in charge of cell_A1 is assigned to IC_A, FN_11.

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<br>11.4 | 2.5.1<br>11.7.1<br>11.7.2 | |

**a) Purpose**

Verify LDA calls cannot be routed in case of missing configurations.

**b) Test configuration / initial conditions**

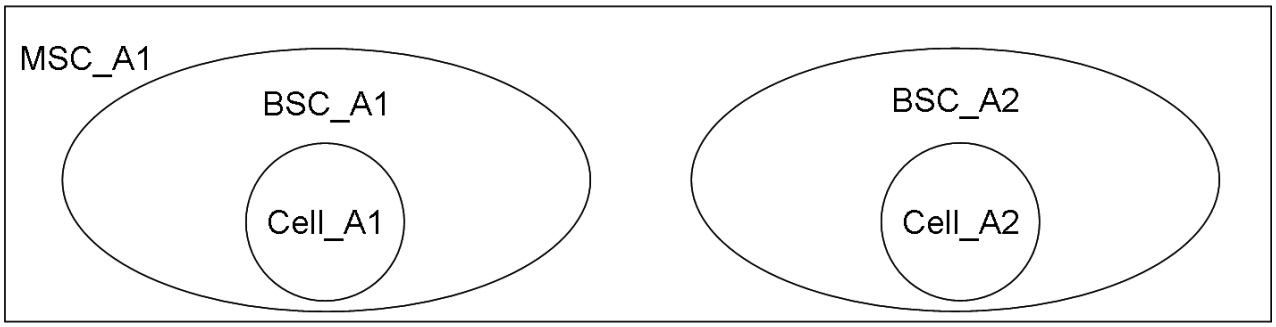
CT_A1, primary controller in charge of cell_A1 is assigned to IC_A, FN_11.

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.<br>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<br>9.3.2<br>11.4 | 2.5.1<br>9.4.1<br>9.8.1<br>9.8.2<br>9.8.3<br>9.8.4<br>11.7.1<br>11.7.2 | |

**a) Purpose**

Verify the short code calls are routed to the preconfigured controller.

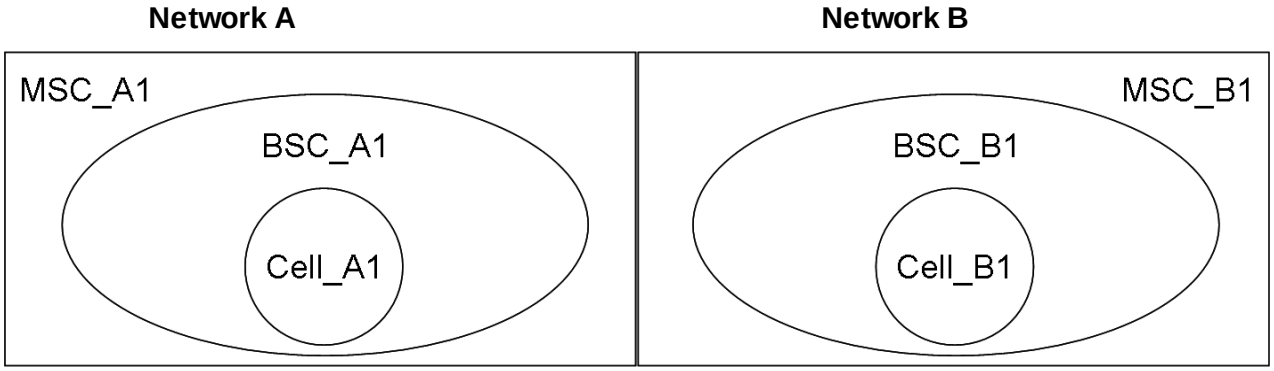
**b) Test configuration / initial conditions**

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.




| 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<br>11.4 | 2.5.1<br>11.7.1<br>11.7.2 | |

**a) Purpose**

Verify LDA calls cannot be routed in case of missing configurations.

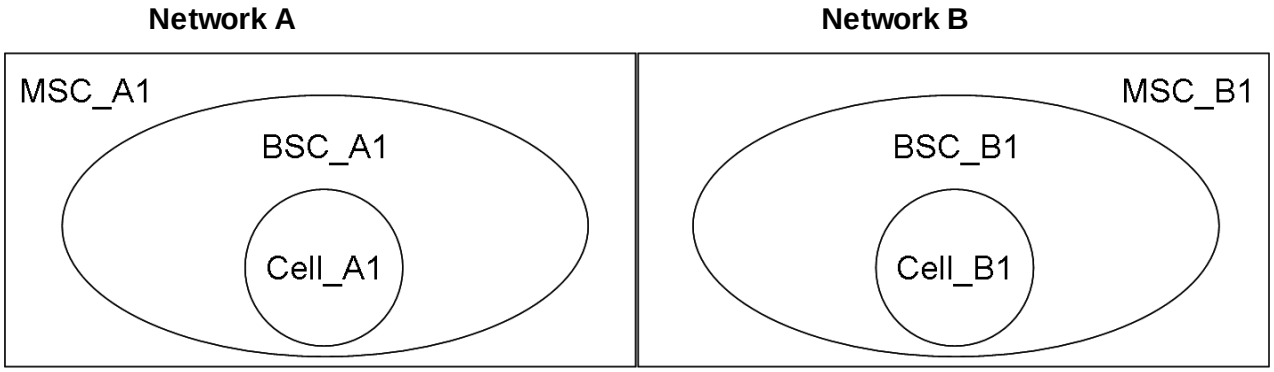
**b) Test configuration / initial conditions**

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.




| 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.<br>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.<br>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 | |

### *5.5.2 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<br>2.4.7<br>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**

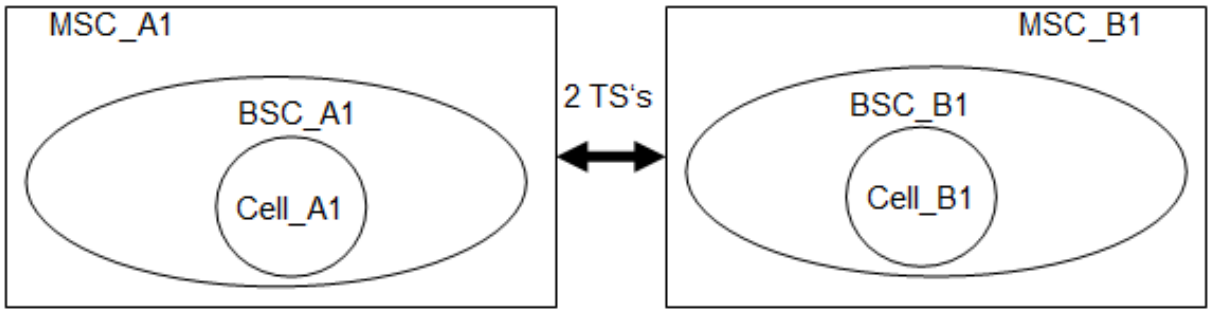
This test case has been divided into the following steps:

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<br>**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<br>**MS_A1 and MS_A2 are disconnected.**<br>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<br>**MS_A1 disconnected with CT_B1**<br>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<br>**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<br>**MS_A1 and MS_A2 are disconnected.**<br>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<br>**MS_A2 disconnected with CT_A1**<br>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 | |

### *5.6.1 REC call setup by a service subscriber (non-roaming case)*

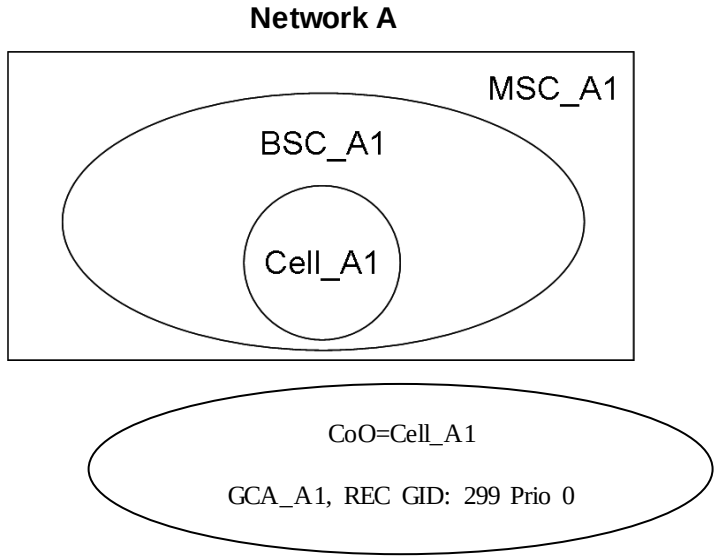
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | Other |
|---|---|---|---|
| | 2.5.1<br>9.3.2<br>13.1.6<br>13.2.2.2<br>13.2.3.1<br>13.2.3.3<br>13.2.4.1 | 2.5.1<br>13.2.2<br>13.3.3 | |

**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.




| |
|---|
| 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). | REC (GID 299) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1.<br>MS_A2 is notified about the incoming REC (GID 299) on the NCH.<br>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).<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1.<br>MS_A2 still able to listen to the announcement of CT_A1.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1.<br>MS_A1 still able to listen to the announcement of CT_A1.<br>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*

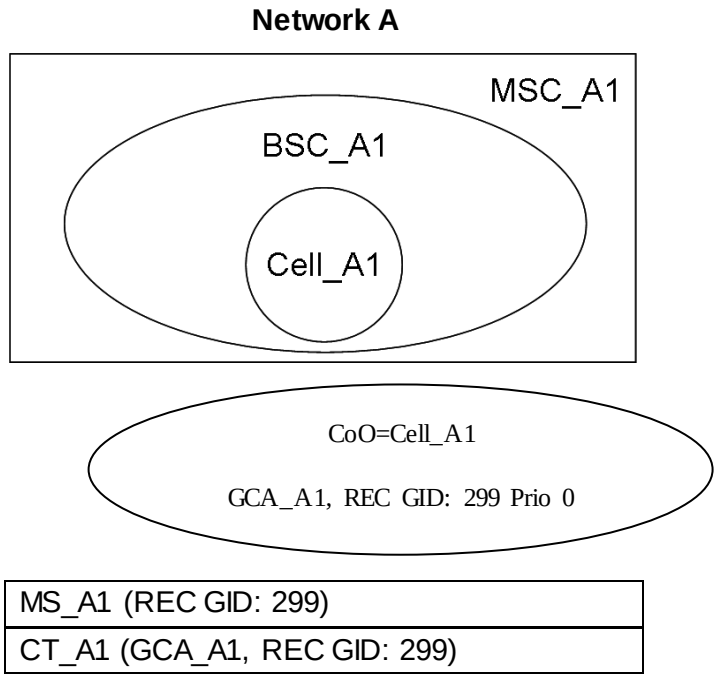
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | Other |
|---|---|---|---|
| | 2.5.1<br>9.3.2<br>13.2.3.1<br>13.2.3.3<br>13.2.4.1 | 2.5.1<br>9.5.4<br>13.2.2<br>13.3.1<br>13.3.3 | |

**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.



**c) Test procedure**

| Step | Action | Expected result(s) |
|---|---|---|
| 1) | CT_A1 originates a REC (GID 299) by dialling.<br>50 + <GCA> + <GID> | REC (GID 299) is correctly established.<br>A group call channel (GCCH) is allocated in Cell_A1. Uplink still free in Cell_A1.<br>MS_A1 is notified about the incoming REC (GID 299) on the NCH.<br>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.<br>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.<br>CT_A1 is able to listen to the announcement of MS_A1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1.<br>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<br>9.3.2<br>13.1.6<br>13.2.2.2<br>13.2.3.1<br>13.2.3.3 | 2.5.1<br>9.5.4<br>13.2.2<br>13.3.1<br>13.3.3<br>13.4.1<br>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.

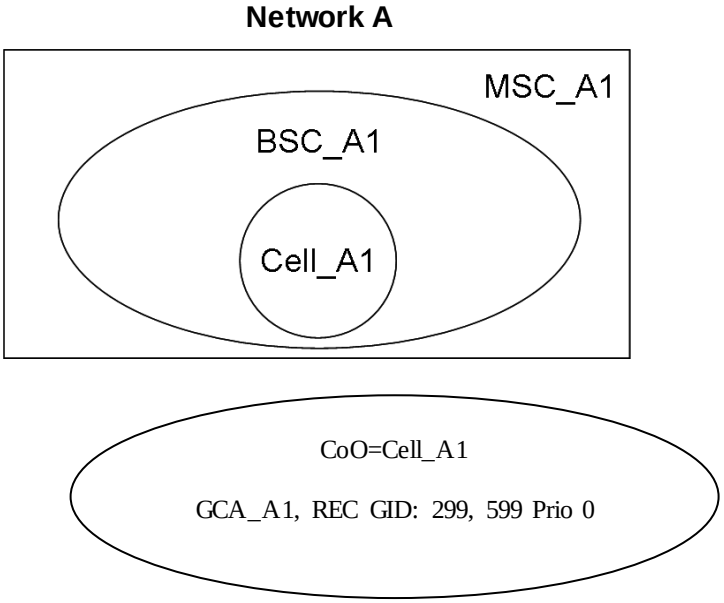
MS_A3 and MS_A4 are shunting mobiles in shunting mode and not registered to a functional number (FN).

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**




| |
|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1.<br>MS_A2 is notified about the incoming REC (GID 299) on the NCH.<br>All other MS will not respond to the NCH notification.<br>CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminal.<br>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).<br>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.<br>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.<br>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.<br>MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1.<br>MS_A2 still able to listen to the announcement of CT_A1.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1.<br>MS_A1 still able to listen to the announcement of CT_A1.<br>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. |

**Step 2: REC (GID 599) call setup by service subscriber MS_A3.**

| Step | Action | Expected result(s) |
|---|---|---|

| Step | Action | Expected result(s) |
|---|---|---|
| 1) | MS_A3 originates a REC (GID 599). | REC (GID 599) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1.<br>MS_A4 is notified about the incoming REC (GID 599) on the NCH.<br>All other MS will not respond to the NCH notification.<br>CT_A2 is notified about the incoming REC (GID 599) and the Group Call Reference is displayed on the CT terminal.<br>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).<br>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.<br>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.<br>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.<br>MS_A4 and CT_A2 are able to listen to the announcement of MS_A3.<br>MS_A3 is not able to listen to the announcement of CT_A2.<br>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.<br>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.<br>MS_A3 is not able to listen to the announcement of CT_A2.<br>MS_A4 still able to listen to the announcement of CT_A2.<br>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.<br>MS_A3 and CT_A2 are able to listen to the announcement of MS_A4.<br>MS_A4 is not able to listen to the announcement of CT_A2.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A2.<br>MS_A3 still able to listen to the announcement of CT_A2.<br>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<br>13.4.5<br>13.4.6 | 2.5.1<br>13.5.3<br>13.5.5<br>13.5.7<br>13.5.9<br>13.5.10 | |

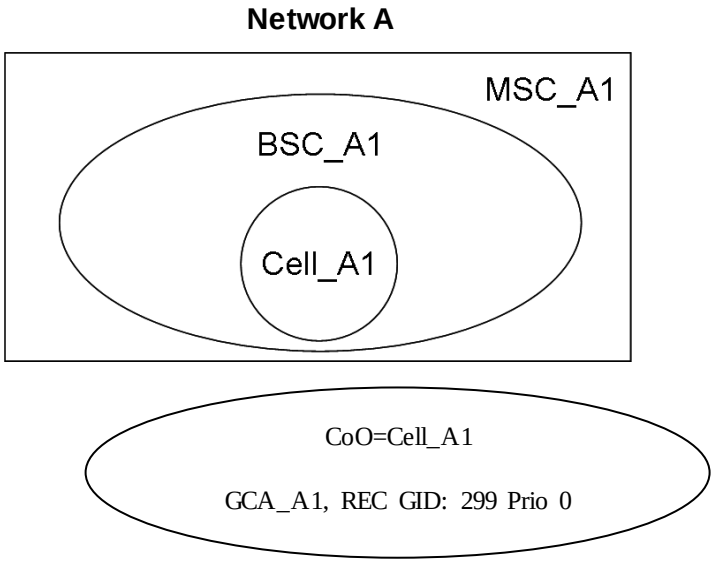
**a) Purpose**

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.




| |
|---|
| 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) |
|---|---|---|

| Step | Action | Expected result(s) |
|---|---|---|
| 1) | MS_A1 originates a REC (GID 299). | REC (GID 299) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1.<br>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).<br>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.<br>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.<br>MS_A1 and CT_A1 are able to listen to the announcement of MS_A2.<br>MS_A2 is not able to listen to the announcement of CT_A1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1.<br>MS_A1 still able to listen to the announcement of CT_A1.<br>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. |
| 10) | MS_A1 releases the REC (GID 299) | REC (GID 299) is released. All related resources are de-allocated. |

| Step | Action | Expected result(s) |
|---|---|---|
| 11) | MS_A1 and MS_A2 are sending acknowledgements to the acknowledgement center. | Acknowledgements successfully send to the acknowledgement center.<br>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<br>9.3.2<br>13.1.6<br>13.2.2.2<br>13.2.3.1<br>13.2.3.3<br>13.2.4.1 | 2.5.1<br>13.2.2<br>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).

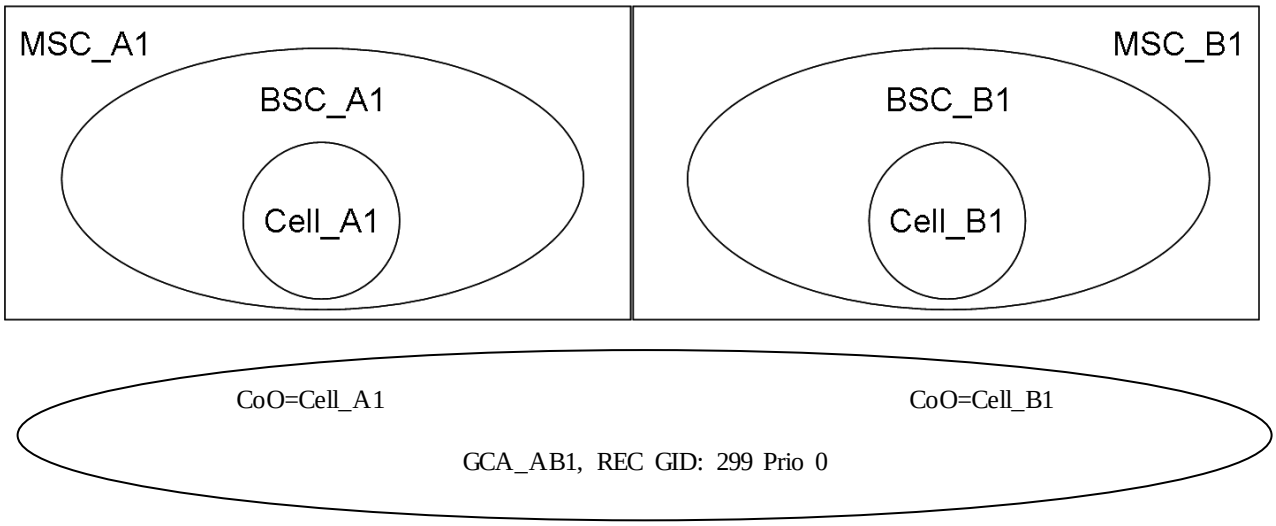
Step 2: REC (GID 299) call setup by service subscriber MS_A2 in network B (MSC_A1 Anchor).

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**

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




| **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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1.<br>A group call channel (GCCH) is allocated in Cell_B1.<br>MS_A1, MS_B1 and MS_A2 are notified about the incoming REC (GID 299) on the NCH.<br>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).<br>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.<br>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.<br>MS_A1, MS_B1 and MS_A2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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_A1 sends set parameter message and MS_B2 mutes its downlink.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2, MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_B1 and MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>CT_A1 and CT_B1 still able to listen to the announcement of MS_A2. |
| 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.<br>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) |
|---|---|---|
| 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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1, MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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).**

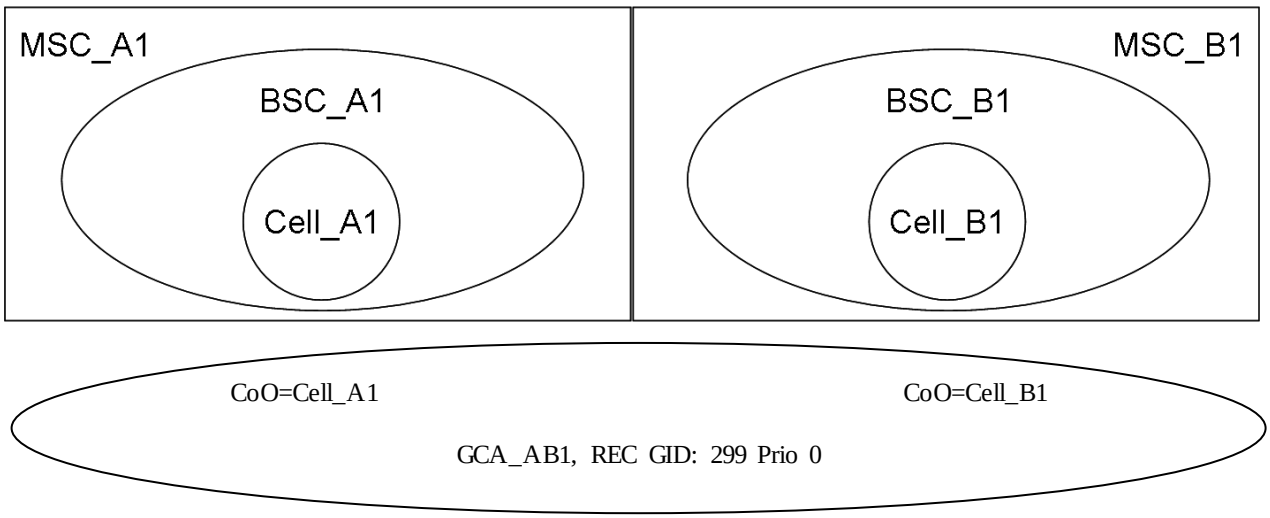
| Step | Action | Expected result(s) |
|---|---|---|
| 1) | MS_A2 originates a REC (GID 299). | REC (GID 299) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1.<br>A group call channel (GCCH) is allocated in Cell_A1.<br>MS_A1, MS_B1 and MS_B2 are notified about the incoming REC (GID 299) on the NCH.<br>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).<br>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.<br>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.<br>MS_A1, MS_B1 and MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1, MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_B1 and MS_A2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1, MS_A2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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. |

**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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1.<br>A group call channel (GCCH) is allocated in Cell_B1.<br>MS_A1, MS_B1 and MS_A2 are notified about the incoming REC (GID 299) on the NCH.<br>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).<br>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.<br>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.<br>MS_A1, MS_B1 and MS_A2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2, MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_B1 and MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1, MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1.<br>A group call channel (GCCH) is allocated in Cell_A1.<br>MS_A1, MS_B1 and MS_B2 are notified about the incoming REC (GID 299) on the NCH.<br>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).<br>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.<br>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.<br>MS_A1, MS_B1 and MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_B1 and MS_A2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_A2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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<br>9.3.2<br>13.1.6<br>13.2.2.2<br>13.2.3.1<br>13.2.3.3 | 2.5.1<br>13.2.2<br>13.2.3<br>13.3.1<br>13.3.3<br>13.4.1<br>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).

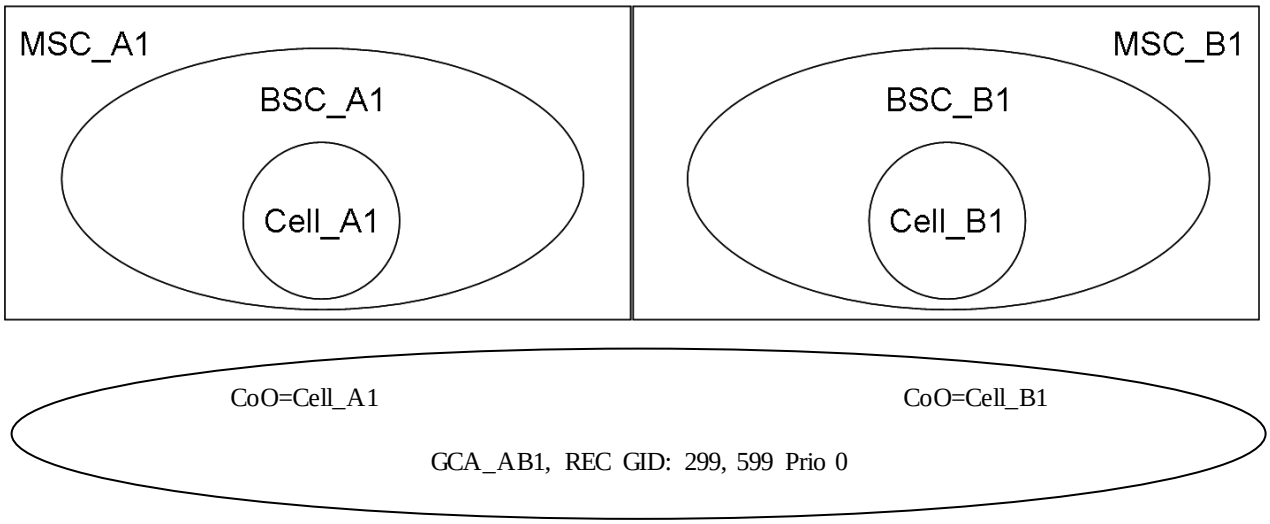
Step 10: REC (GID 299) call setup by service subscriber MS_A4 in network B (MSC_B1 Anchor).

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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1.<br>A group call channel (GCCH) is allocated in Cell_B1.<br>MS_A4, MS_B1 and MS_B4 are notified about the incoming REC (GID 299) on the NCH.<br>All other MS will not respond to the NCH notification.<br>CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.<br>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).<br>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.<br>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. |
| 6) | MS_A1 takes the uplink on GCCH. | MS_A1 has voice path on GCCH.<br>MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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) |
|---|---|---|
| 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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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_B4 by using the mute sequence (dialling #**). | MSC_A1 sends set parameter message and MS_B4 mutes its downlink.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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_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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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_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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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) |
|---|---|---|

| Step | Action | Expected result(s) |
|---|---|---|
| 1) | MS_B4 originates a REC (GID 299). | REC (GID 299) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1.<br>A group call channel (GCCH) is allocated in Cell_B1.<br>MS_A1, MS_A4 and MS_B1 are notified about the incoming REC (GID 299) on the NCH.<br>All other MS will not respond to the NCH notification.<br>CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.<br>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. |
| 3) | CT_A1 and CT_B1 automatically accepting the REC (GID 299). | CT_A1 and CT_B1 automatically joining the REC (GID 299).<br>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.<br>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.<br>MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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) |
|---|---|---|
| 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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>CT_A1 and CT_B1 still able to listen to the announcement of MS_B4. |
| 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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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_A1 sends set parameter message and MS_A1 mutes its downlink.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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_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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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_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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1.<br>A group call channel (GCCH) is allocated in Cell_A1.<br>MS_A1, MS_A4 and MS_B4 are notified about the incoming REC (GID 299) on the NCH.<br>All other MS will not respond to the NCH notification.<br>CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.<br>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).<br>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.<br>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. |
| 6) | MS_B1 takes the uplink on GCCH. | MS_B1 has voice path on GCCH.<br>MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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) |
|---|---|---|
| 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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_B1 mutes its downlink.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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_B4 takes the uplink on GCCH. | MS_B4 has voice path on GCCH.<br>MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 24) | MS_A4 takes the uplink on GCCH. | MS_A4 has voice path on GCCH.<br>MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>CT_A1 and CT_B1 still able to listen to the announcement of MS_A4. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1.<br>A group call channel (GCCH) is allocated in Cell_A1.<br>MS_A1, MS_B1 and MS_B4 are notified about the incoming REC (GID 299) on the NCH.<br>All other MS will not respond to the NCH notification.<br>CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.<br>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. |
| 3) | CT_A1 and CT_B1 automatically accepting the REC (GID 299). | CT_A1 and CT_B1 automatically joining the REC (GID 299).<br>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.<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 6) | MS_A4 takes the uplink on GCCH. | MS_A4 has voice path on GCCH.<br>MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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_A1 sends information about the downlink attached status to MSC_B1. MSC_B1 sends set parameter message and MS_A4 mutes its downlink.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>CT_A1 and CT_B1 still able to listen to the announcement of MS_A4. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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_B4 takes the uplink on GCCH. | MS_B4 has voice path on GCCH.<br>MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 24) | MS_B1 takes the uplink on GCCH. | MS_B1 has voice path on GCCH.<br>MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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_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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>CT_A1 and CT_B1 still able to listen to the announcement of MS_B1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>Group call channels (GCCH) are allocated in Cell_A1 and Cell_B1.<br>MS_A1, MS_A4, MS_B1 and MS_B4 are notified about the incoming REC (GID 299) on the NCH.<br>All other MS will not respond to the NCH notification.<br>CT_B1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.<br>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.<br>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).<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 4) | MS_A1 takes the uplink on GCCH. | MS_A1 has two-way voice path on GCCH.<br>MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 16) | MS_B1 takes the uplink on GCCH. | MS_B1 has two-way voice path on GCCH.<br>MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>CT_A1 and CT_B1 still able to listen to the announcement of MS_B1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>Group call channels (GCCH) are allocated in Cell_A1 and Cell_B1.<br>MS_A1, MS_A4, MS_B1 and MS_B4 are notified about the incoming REC (GID 299) on the NCH.<br>All other MS will not respond to the NCH notification.<br>CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.<br>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.<br>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).<br>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.<br>MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>CT_A1 and CT_B1 still able to listen to the announcement of MS_A1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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. |

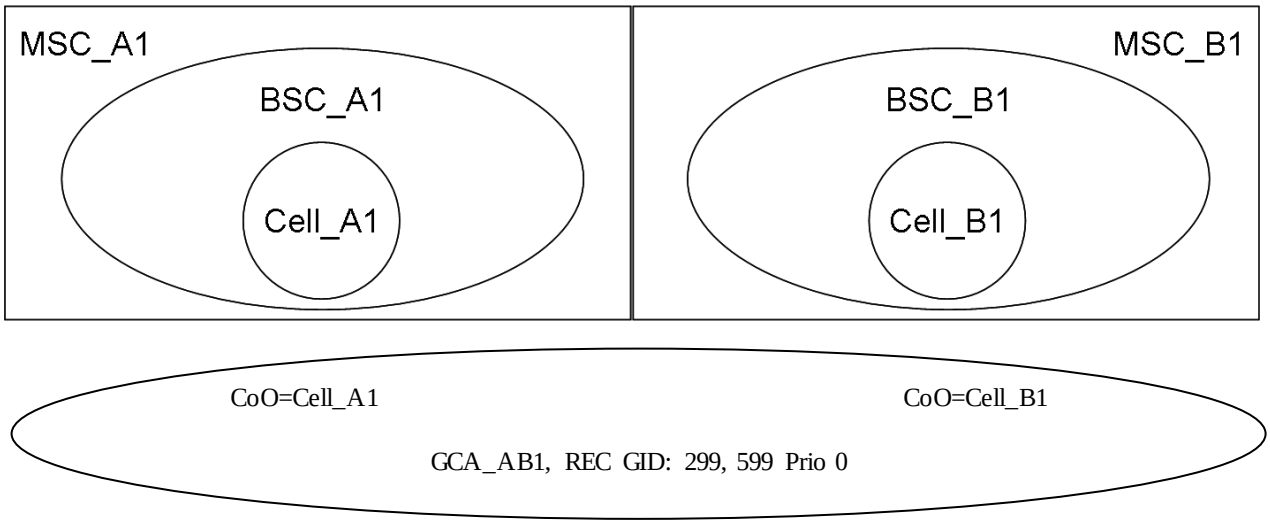
| Step | Action | Expected result(s) |
|---|---|---|
| 16) | MS_B1 takes the uplink on GCCH. | MS_B1 has two-way voice path on GCCH.<br>MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, 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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>CT_A1 and CT_B1 still able to listen to the announcement of MS_B1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1.<br>A group call channel (GCCH) is allocated in Cell_B1.<br>MS_A4, MS_B1 and MS_B4 are notified about the incoming REC (GID 299) on the NCH.<br>All other MS will not respond to the NCH notification.<br>CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.<br>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).<br>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.<br>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. |
| 6) | MS_A1 takes the uplink on GCCH. | MS_A1 has voice path on GCCH.<br>MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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) |
|---|---|---|
| 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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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_B1 sends information about the downlink attached status to MSC_A1. MSC_A1 sends set parameter message and MS_A1 mutes its downlink.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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_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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>CT_A1 and CT_B1 still able to listen to the announcement of MS_B4. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 24) | MS_A4 takes the uplink on GCCH. | MS_A4 has voice path on GCCH.<br>MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1.<br>A group call channel (GCCH) is allocated in Cell_B1.<br>MS_A1, MS_A4 and MS_B1 are notified about the incoming REC (GID 299) on the NCH.<br>All other MS will not respond to the NCH notification.<br>CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.<br>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. |
| 3) | CT_A1 and CT_B1 automatically accepting the REC (GID 299). | CT_A1 and CT_B1 automatically joining the REC (GID 299).<br>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.<br>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.<br>MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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) |
|---|---|---|
| 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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>CT_A1 and CT_B1 still able to listen to the announcement of MS_B4. |
| 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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 12) | MS_A1 takes the uplink on GCCH. | MS_A1 has voice path on GCCH.<br>MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>CT_A1 and CT_B1 still able to listen to the announcement of MS_A1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 24) | MS_A4 takes the uplink on GCCH. | MS_A4 has voice path on GCCH.<br>MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1.<br>A group call channel (GCCH) is allocated in Cell_A1.<br>MS_A1, MS_A4 and MS_B4 are notified about the incoming REC (GID 299) on the NCH.<br>All other MS will not respond to the NCH notification.<br>CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.<br>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).<br>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.<br>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. |
| 6) | MS_B1 takes the uplink on GCCH. | MS_B1 has voice path on GCCH.<br>MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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) |
|---|---|---|
| 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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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_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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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_B4 takes the uplink on GCCH. | MS_B4 has voice path on GCCH.<br>MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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_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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>CT_A1 and CT_B1 still able to listen to the announcement of MS_B4. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1.<br>A group call channel (GCCH) is allocated in Cell_A1.<br>MS_A1, MS_B1 and MS_B4 are notified about the incoming REC (GID 299) on the NCH.<br>All other MS will not respond to the NCH notification.<br>CT_A1 and CT_B1 are notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.<br>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. |
| 3) | CT_A1 and CT_B1 automatically accepting the REC (GID 299). | CT_A1 and CT_B1 automatically joining the REC (GID 299).<br>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.<br>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.<br>MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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) |
|---|---|---|
| 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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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_B1 sends set parameter message and MS_A4 un-mutes its downlink to get two-way voice path on GCCH.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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_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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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_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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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_B1 sends set parameter message and MS_B1 un-mutes its downlink to get two-way voice path on GCCH.<br>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_B1 sends set parameter message and MS_B1 mutes its downlink.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>Group call channels (GCCH) are allocated in Cell_A1 and Cell_B1.<br>MS_A1, MS_A4, MS_B1 and MS_B4 are notified about the incoming REC (GID 299) on the NCH.<br>All other MS will not respond to the NCH notification.<br>CT_B1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.<br>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.<br>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).<br>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.<br>MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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_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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 16) | MS_B1 takes the uplink on GCCH. | MS_B1 has two-way voice path on GCCH.<br>MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>Group call channels (GCCH) are allocated in Cell_A1 and Cell_B1.<br>MS_A1, MS_A4, MS_B1 and MS_B4 are notified about the incoming REC (GID 299) on the NCH.<br>All other MS will not respond to the NCH notification.<br>CT_A1 is notified about the incoming REC (GID 299) and the Group Call Reference is displayed on the CT terminals.<br>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.<br>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_A1 automatically accepts the REC (GID 299). | CT_A1 automatically joins the REC (GID 299).<br>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.<br>MS_A4, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A4, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_A4, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B4.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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_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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 16) | MS_B1 takes the uplink on GCCH. | MS_B1 has two-way voice path on GCCH.<br>MS_A1, MS_A4, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A4 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_B1, MS_B4, CT_A1 and CT_B1 are able to listen to the announcement of MS_A4.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A4 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B4 still able to listen to the announcement of CT_A1 and CT_B1.<br>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<br>13.4.5<br>13.4.6 | 2.5.1<br>13.5.3<br>13.5.5<br>13.5.7<br>13.5.9<br>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).

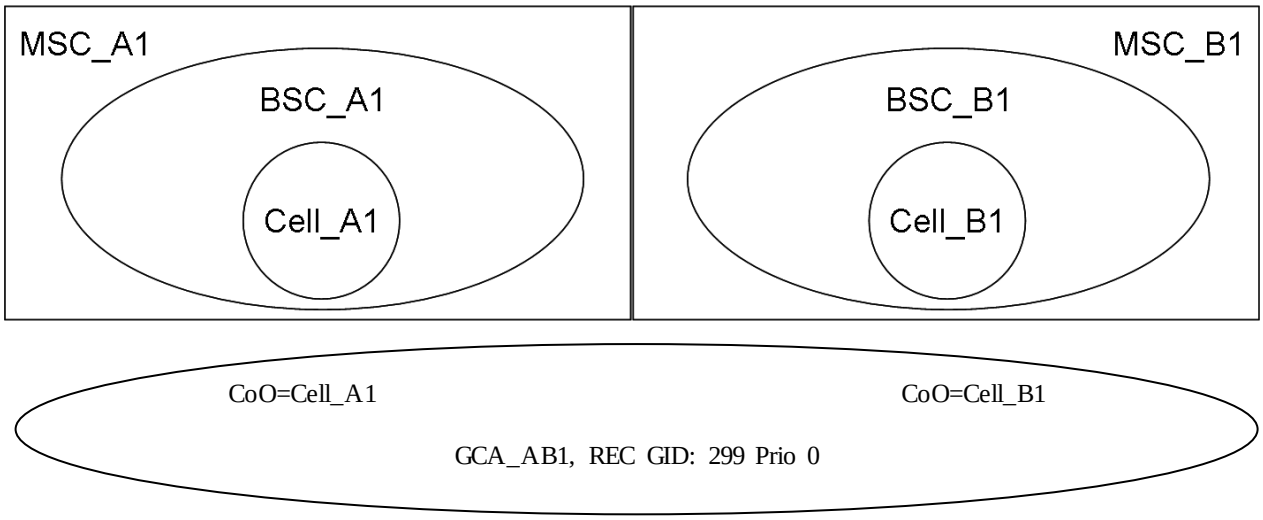
Step 6: REC (GID 299) call setup by service subscriber MS_B2 in network A (MSC_B1 Anchor).

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**

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




| **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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1.<br>A group call channel (GCCH) is allocated in Cell_B1.<br>MS_A2, MS_B1 and MS_B2 are notified about the incoming REC (GID 299) on the NCH.<br>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).<br>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.<br>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.<br>MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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_A1 by using the mute sequence (dialling #**). | MSC_A1 sends set parameter message and MS_A1 mutes its downlink.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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) |
|---|---|---|
| 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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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). |
| 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) |
|---|---|---|

| Step | Action | Expected result(s) |
|---|---|---|
| 1) | MS_B2 originates a REC (GID 299). | REC (GID 299) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1.<br>A group call channel (GCCH) is allocated in Cell_B1.<br>MS_A1, MS_A2 and MS_B1 are notified about the incoming REC (GID 299) on the NCH.<br>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).<br>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.<br>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. |
| 6) | MS_B2 takes the uplink on GCCH. | MS_B2 has voice path on GCCH.<br>MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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) |
|---|---|---|
| 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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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_A1 by using the mute sequence (dialling #**). | MSC_A1 sends set parameter message and MS_A1 mutes its downlink.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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) |
|---|---|---|
| 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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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_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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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). |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1.<br>A group call channel (GCCH) is allocated in Cell_A1.<br>MS_A1, MS_A2 and MS_B2 are notified about the incoming REC (GID 299) on the NCH.<br>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).<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 4) | MS_B1 takes the uplink on DCH. | MS_B1 has voice path on DCH.<br>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.<br>MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 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_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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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_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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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) |
|---|---|---|
| 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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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_B2 takes the uplink on GCCH. | MS_B2 has voice path on GCCH.<br>MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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_A1 sends set parameter message and MS_B2 mutes its downlink.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1.<br>A group call channel (GCCH) is allocated in Cell_A1.<br>MS_A1, MS_B1 and MS_B2 are notified about the incoming REC (GID 299) on the NCH.<br>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).<br>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.<br>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.<br>MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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. |

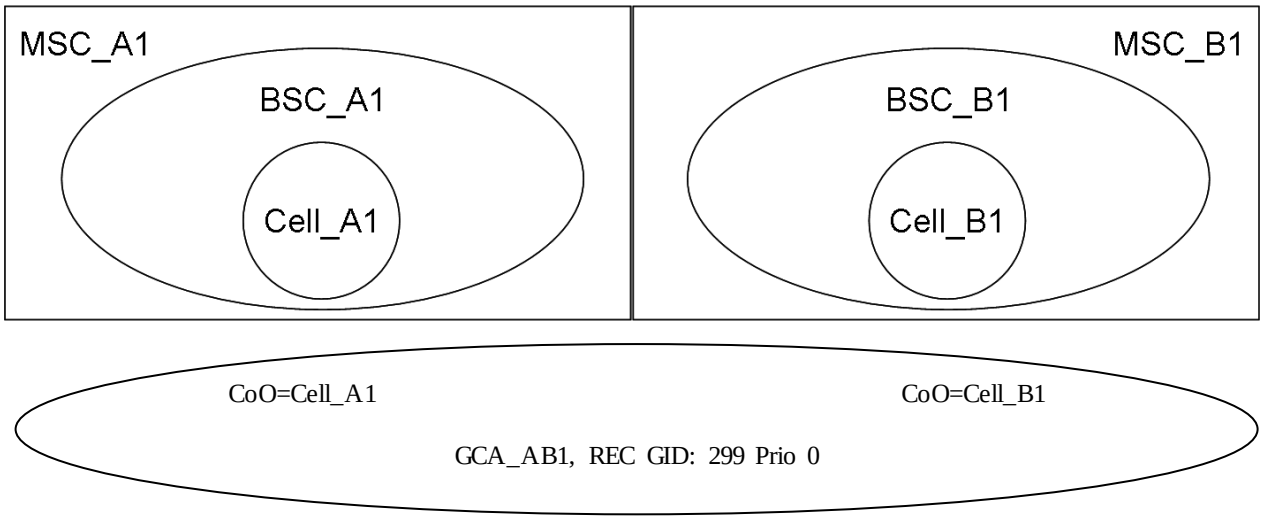
| Step | Action | Expected result(s) |
|---|---|---|
| 18) | MS_B2 takes the uplink on GCCH. | MS_B2 has voice path on GCCH.<br>MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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 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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>CT_A1 and CT_B1 still able to listen to the announcement of MS_B1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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**

**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 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1.<br>A group call channel (GCCH) is allocated in Cell_B1.<br>MS_A2, MS_B1 and MS_B2 are notified about the incoming REC (GID 299) on the NCH.<br>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).<br>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.<br>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.<br>MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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) |
|---|---|---|
| 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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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_B1 sends set parameter message and MS_A2 mutes its downlink.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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). |
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1.<br>A group call channel (GCCH) is allocated in Cell_B1.<br>MS_A1, MS_A2 and MS_B1 are notified about the incoming REC (GID 299) on the NCH.<br>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).<br>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.<br>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. |
| 6) | MS_B2 takes the uplink on GCCH. | MS_B2 has voice path on GCCH.<br>MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 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_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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>CT_A1 and CT_B1 still able to listen to the announcement of MS_A1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 24) | MS_A2 takes the uplink on GCCH. | MS_A2 has voice path on GCCH.<br>MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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. |

| 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). |

**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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1.<br>A group call channel (GCCH) is allocated in Cell_A1.<br>MS_A1, MS_A2 and MS_B2 are notified about the incoming REC (GID 299) on the NCH.<br>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).<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 4) | MS_B1 takes the uplink on DCH. | MS_B1 has voice path on DCH.<br>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.<br>MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 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_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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>CT_A1 and CT_B1 still able to listen to the announcement of MS_B1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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) |
|---|---|---|
| 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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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_B2 takes the uplink on GCCH. | MS_B2 has voice path on GCCH.<br>MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>CT_A1 and CT_B1 still able to listen to the announcement of MS_B2. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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_A2 by using the mute sequence (dialling #**). | MSC_B1 sends set parameter message and MS_A2 mutes its downlink.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_B1.<br>A group call channel (GCCH) is allocated in Cell_A1.<br>MS_A1, MS_B1 and MS_B2 are notified about the incoming REC (GID 299) on the NCH.<br>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).<br>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.<br>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.<br>MS_A1, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A2.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>MS_A2, MS_B1, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A2, MS_B1 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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_B2 takes the uplink on GCCH. | MS_B2 has voice path on GCCH.<br>MS_A1, MS_A2, MS_B1, CT_A1 and CT_B1 are able to listen to the announcement of MS_B2.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 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_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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B2 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B1 still able to listen to the announcement of CT_A1 and CT_B1.<br>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_B1 takes the uplink on GCCH. | MS_B1 has voice path on GCCH.<br>MS_A1, MS_A2, MS_B2, CT_A1 and CT_B1 are able to listen to the announcement of MS_B1.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>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) |
|---|---|---|
| 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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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.<br>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.<br>MS_B1 is not able to listen to the announcement of CT_A1 and CT_B1.<br>MS_A1, MS_A2 and MS_B2 still able to listen to the announcement of CT_A1 and CT_B1.<br>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). |

| 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). |

**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<br>2.5.1<br>13.3.2 | 2.2.1<br>2.5.1<br>13.4.6<br>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).

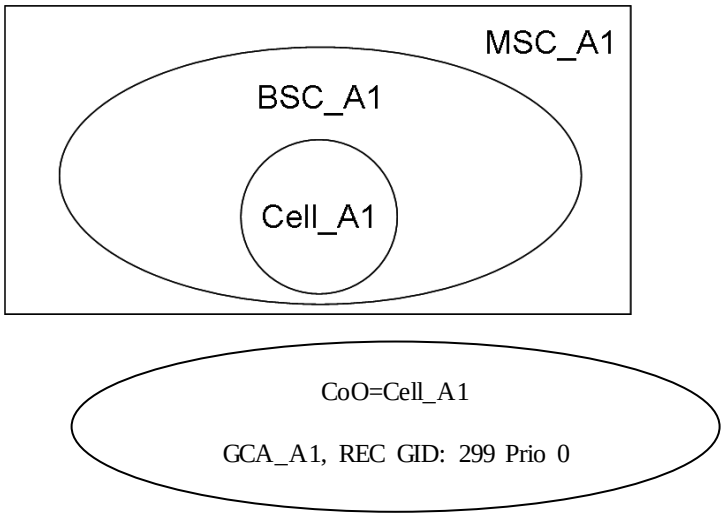
**b) Test configuration / initial conditions**

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) |
|---|---|---|

| Step | Action | Expected result(s) |
|---|---|---|
| 1) | MS_A1 originates a REC (GID 299). | MS_A1 originates the REC (GID 299) using immediate setup.<br>REC (GID 299) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1.<br>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.<br>MS_A2 is notified about the incoming REC (GID 299) on the NCH.<br>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).<br>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.<br>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.<br>MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1.<br>MS_A2 still able to listen to the announcement of CT_A1.<br>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.<br>MS_A1 and CT_A1 are able to listen to the announcement of MS_A2.<br>MS_A2 is not able to listen to the announcement of CT_A1.<br>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.<br>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.<br>MS_A2 is not able to listen to the announcement of CT_A1.<br>MS_A1 still able to listen to the announcement of CT_A1.<br>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 | |

### *5.6.19 REC call is taken down due to expiry of 'No activity' timer.*

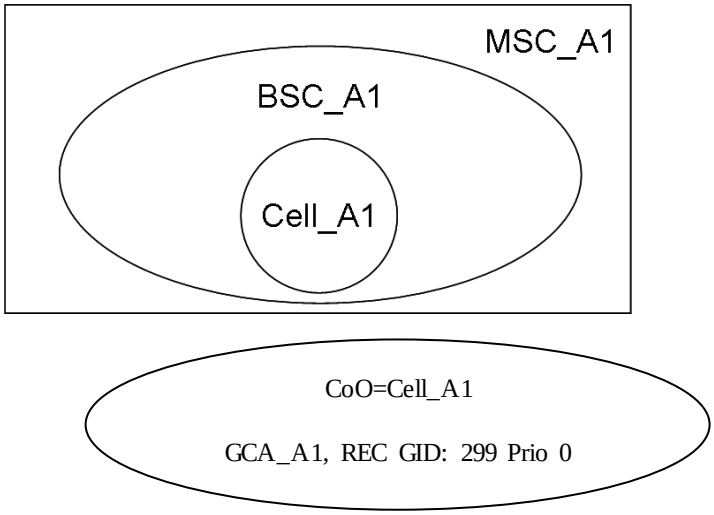
| **Reference to** | **EIRENE FRS V7** | **EIRENE SRS V15** | **other** |
|---|---|---|---|
| | 2.5.1<br>13.2.4.1 | | |

**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**




CoO=Cell_A1

GCA_A1, REC GID: 299 Prio 0

| |
|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in Cell_A1.<br>MS_A2 receives notification of the incoming REC (GID 299) on the NCH.<br>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 | |

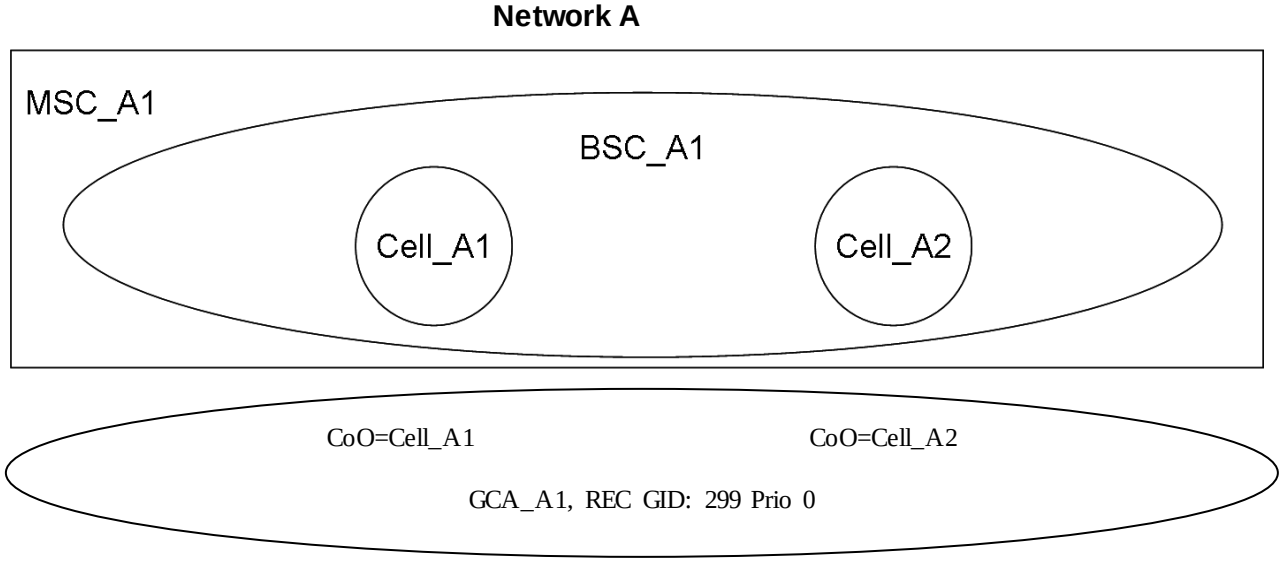
### *5.6.20 REC first talker notification (MS dedicated mode, incoming PTP call, non roaming case)*

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.2.1<br>2.5.1<br>5.2.2.43 | 5.5.19<br>5.5.20<br>5.5.21<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_A2.<br>MS_A2, MS_A3 receives a notification about the incoming REC (GID 299).<br>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)*

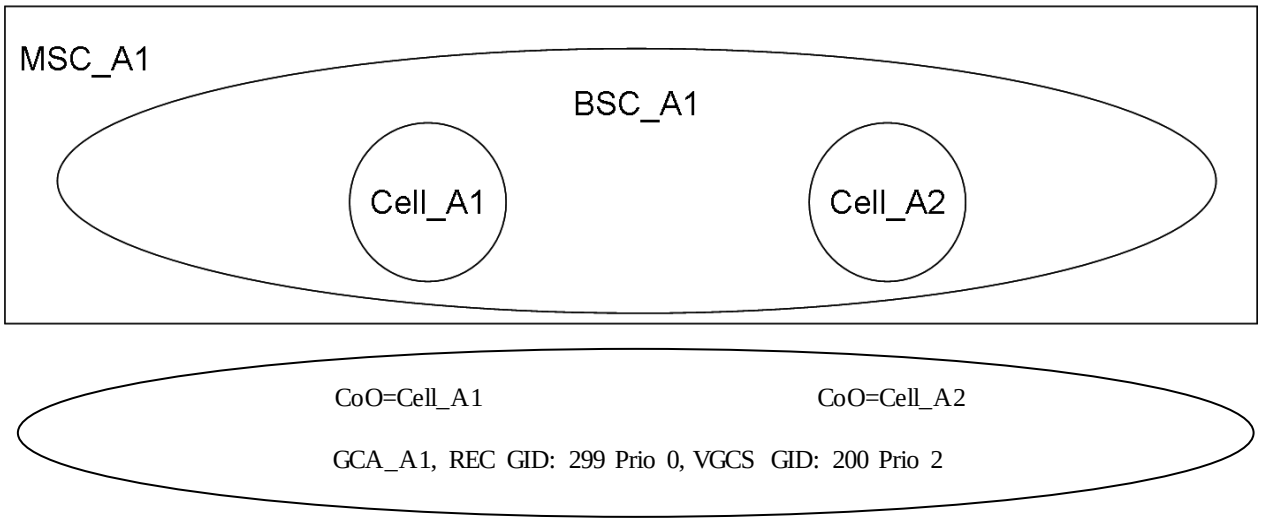
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.2.1<br>2.5.1<br>5.2.2.47 | 5.5.19<br>5.5.20<br>5.5.21 | |

**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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_A2.<br>MS_A2 receives a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2.<br>A group call channel (GCCH) is allocated in cell_A1.<br>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 | |

### *5.6.23 REC first talker notification (MS dedicated mode, incoming PTP call, roaming)*

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.2.1<br>2.5.1<br>5.2.2.43 | 5.5.19<br>5.5.20<br>5.5.21<br>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).

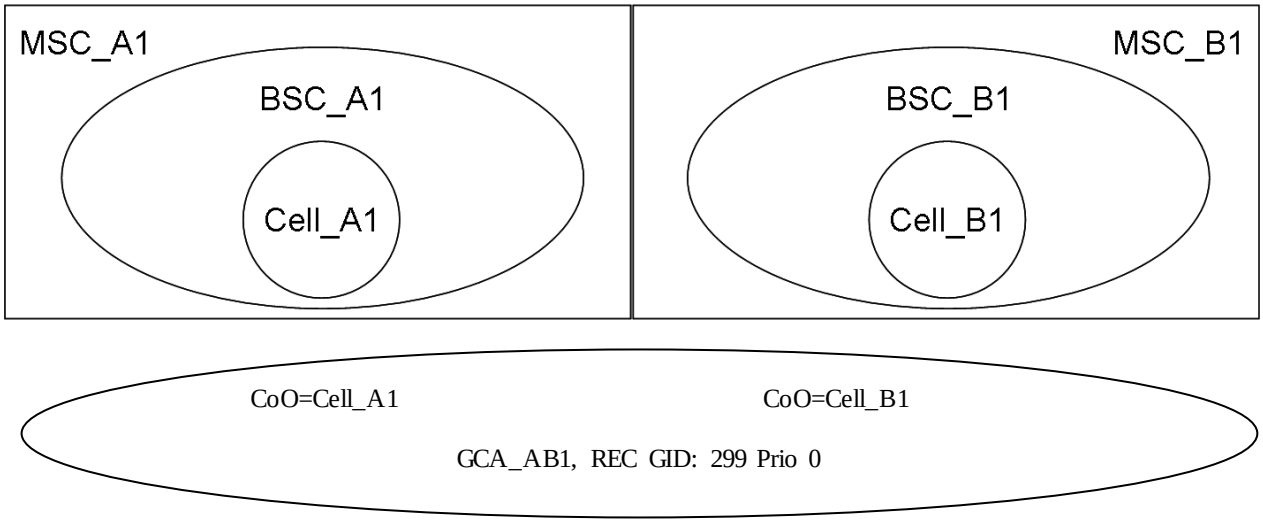
Step 6: MS of network A in HPLMN call MS of network B (REC originator) in VPLMN (MSC_B1 anchor).

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**

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




| **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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A1, MS_B1 and MS_A3 receive a notification about the incoming REC (GID 299).<br>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. |
| 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. |

| 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. | 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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. |
| 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. |

| 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 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. | |

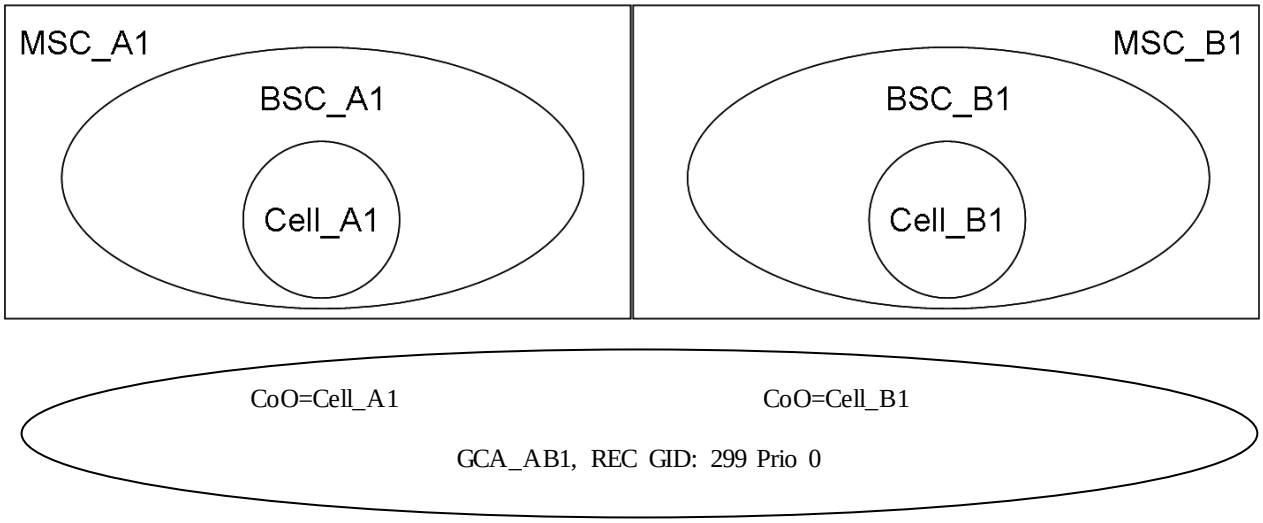
**Step 4: MS of network A in HPLMN call MS of network A (REC originator) in VPLMN (MSC_A1 anchor).**

| Step | Action | Expected result(s) |
|---|---|---|
| 1) | Service subscriber MS_A3 originates REC (GID 299). | REC (GID 299) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_B3 and MS_B1 receive a notification about the incoming REC (GID 299).<br>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. |
| 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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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**

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




| **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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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) |
|---|---|---|

| Step | Action | Expected result(s) |
|---|---|---|
| 1) | Service subscriber MS_B3 originates REC (GID 299). | REC (GID 299) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A1, MS_B1 and MS_A3 receive a notification about the incoming REC (GID 299).<br>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. |
| 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. |

| 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. | 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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. |
| 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. |

| 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 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_B3 and MS_B1 receive a notification about the incoming REC (GID 299).<br>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. |
| 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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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<br>2.5.1<br>5.2.2.47 | 5.5.19<br>5.5.20<br>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).

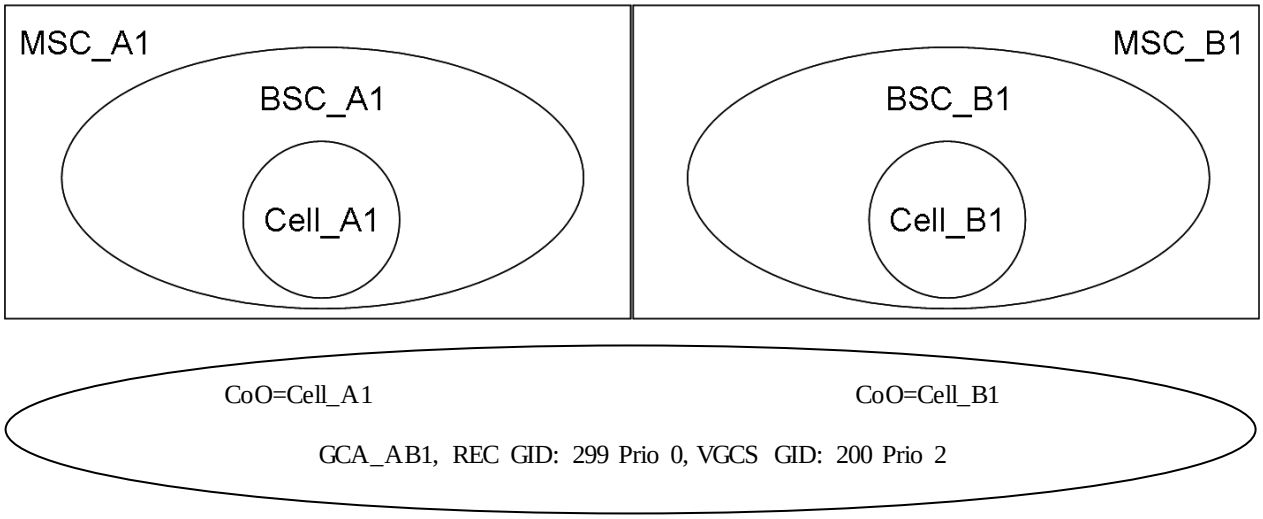
Step 22: MS of network A in HPLMN originates a REC and MS of network B in HPLMN originates a VGCS (MSC_B1 anchor).

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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_A2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A1, MS_A3 and MS_B1 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_A2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_B4 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A1, MS_A3 and MS_B1 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_B4 has two-way voice path.<br>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.<br>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). | |
| 7) | MS_B4 releases the uplink. | The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_B2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_B2 has two-way voice path.<br>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.<br>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). | |
| 7) | MS_B2 releases the uplink. | The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_A4 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_A4 has two-way voice path.<br>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.<br>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). | |
| 7) | MS_A4 releases the uplink. | The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_42 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_B2 has two-way voice path.<br>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.<br>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_B2 releases the uplink. | The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS CALL (GID 200).<br>So long the dedicated channel is not released, MS_B4 has two-way voice path.<br>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.<br>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). | |

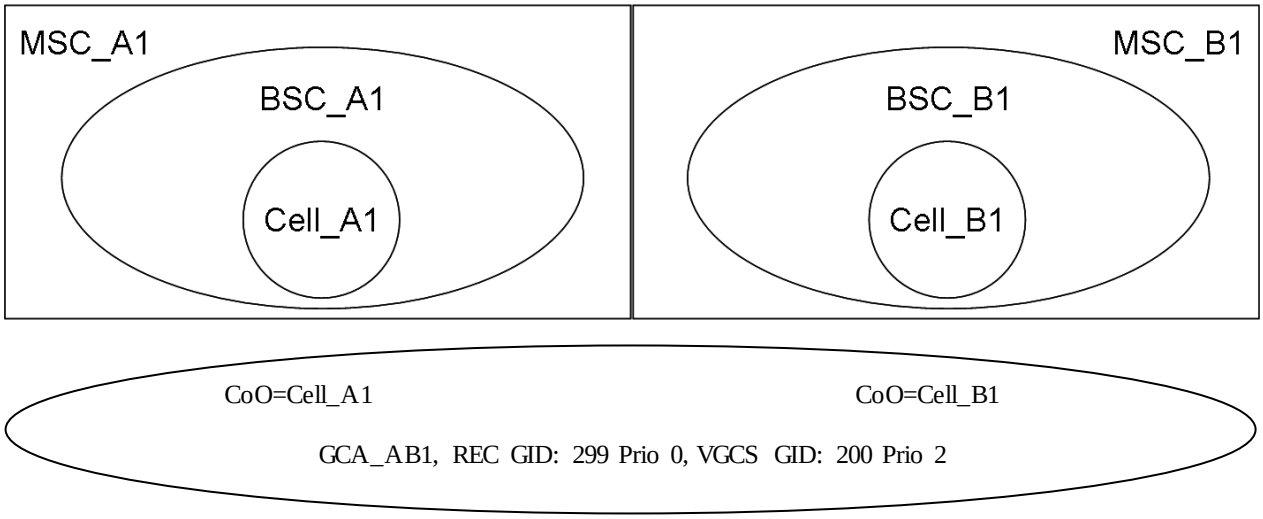
**Step 12: MS of network B in HPLMN originates a REC and MS of network A in HPLMN originates a VGCS (MSC_A1 anchor).**

| Step | Action | Expected result(s) |
|---|---|---|
| 1) | Service subscriber MS_B1 originates REC (GID 299). | REC (GID 299) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_A2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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_A2 originates a VGCS call (GID 200) with priority 2. | VGCS call (GID 200) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_A2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A1, MS_A3 and MS_B1 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_A2 has two-way voice path.<br>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.<br>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). | |
| 7) | MS_A2 releases the uplink. | The uplink is correctly released. Uplink free |

| Step | Action | Expected result(s) |
|---|---|---|
| | | 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_B4 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A1, MS_A3 and MS_B1 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_B4 has two-way voice path.<br>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.<br>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). | |
| 7) | MS_B4 releases the uplink. | The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_B2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_B2 has two-way voice path.<br>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.<br>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). | |
| 7) | MS_B2 releases the uplink. | The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_A4 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_A4 has two-way voice path.<br>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.<br>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). | |
| 7) | MS_A4 releases the uplink. | The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_42 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_B2 has two-way voice path.<br>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.<br>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_B2 releases the uplink. | The uplink is correctly released. Uplink free message is send in cell_A1 and cell_B1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS CALL (GID 200).<br>So long the dedicated channel is not released, MS_B4 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_ A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_A2 has two-way voice path.<br>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.<br>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 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 | |

### *5.6.26 REC first talker notification (MS dedicated mode, incoming second REC, non roaming case)*

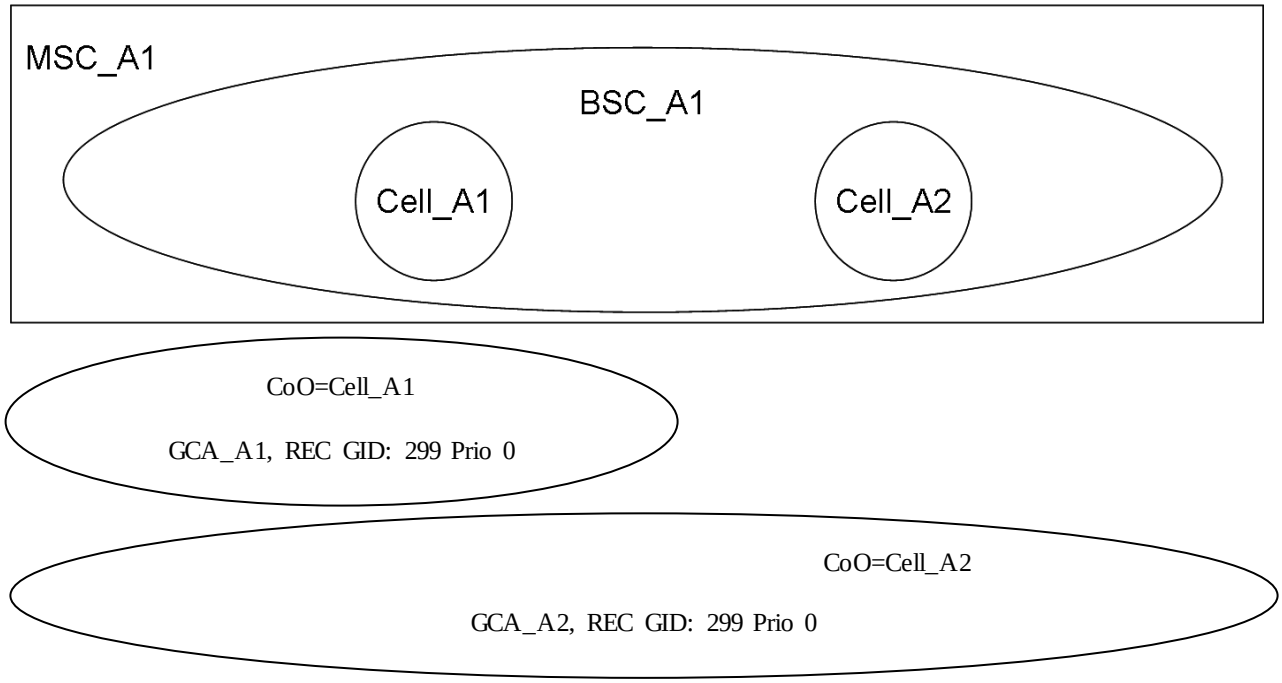
| **Reference to** | **EIRENE FRS V7** | **EIRENE SRS V15** | **other** |
|---|---|---|---|
| | 2.2.1<br>2.5.1<br>5.2.2.47<br>13.3.1 | 5.5.19<br>5.5.20<br>5.5.21 | |

**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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>MS_A2 receives a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A4 receives a notification about the incoming REC (GID 299).<br>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<br>2.5.1<br>5.2.2.47<br>13.3.1 | 5.5.19<br>5.5.20<br>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).

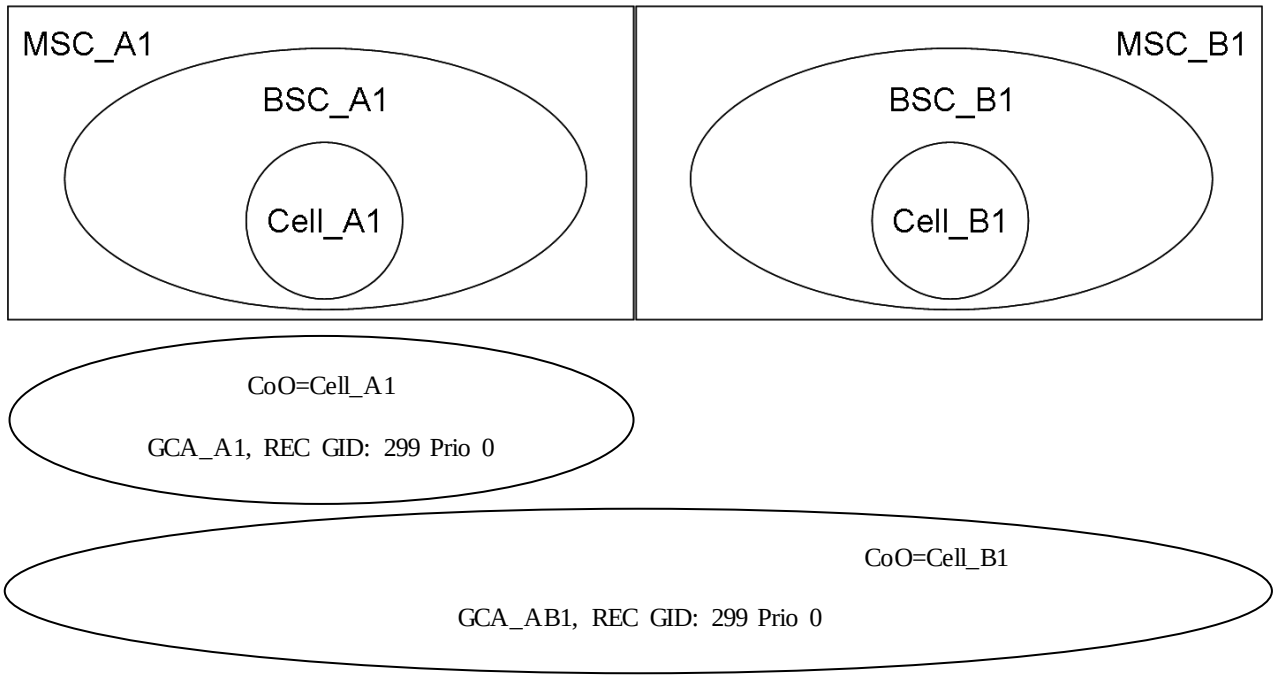
Step 14: MS of network A in VPLMN originates a REC and MS of network A in HPLMN originates a second REC (MSC_A1 anchor for GCA_AB1 and MSC_B1 anchor for GCA_B1).

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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>MS_A2 MS_B3 and MS_B4 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_B2, MS_A3 and MS_A4 receive a notification about the incoming REC (GID 299).<br>So long the dedicated channel is not released, MS_B1 has two-way voice path.<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>MS_A1 MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_B2, MS_A3 and MS_A4 receive a notification about the incoming REC (GID 299).<br>So long the dedicated channel is not released, MS_B1 has two-way voice path.<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>MS_A2 MS_B3 and MS_B4 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_B1, MS_B2 and MS_A4 receive a notification about the incoming REC (GID 299).<br>So long the dedicated channel is not released, MS_A3 has two-way voice path.<br>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. |

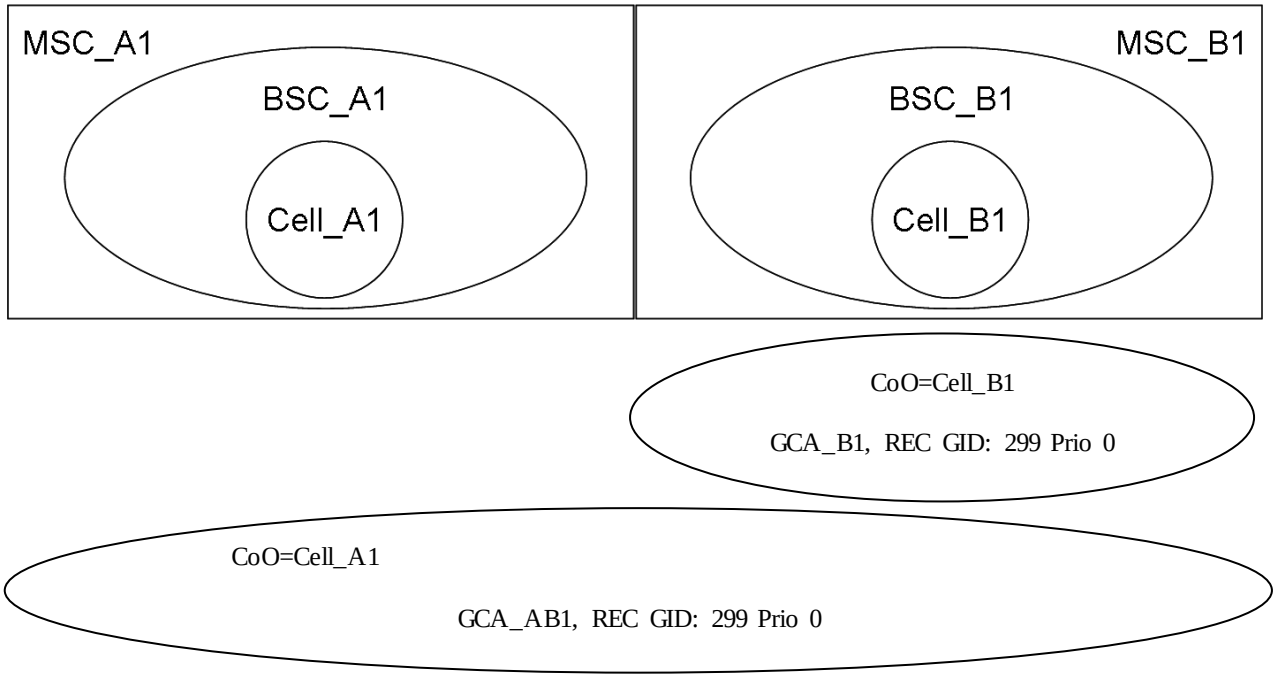
**Step 4: MS of network B in VPLMN originates a REC and MS of network A in VPLMN originates a second REC (MSC_A1 anchor for both GCAs).**

| Step | Action | Expected result(s) |
|---|---|---|
| 1) | Service subscriber MS_B3 originates REC (GID 299). | REC (GID 299) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>MS_A1 MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_B1, MS_B2 and MS_A4 receive a notification about the incoming REC (GID 299).<br>So long the dedicated channel is not released, MS_A3 has two-way voice path.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>MS_B2 MS_A3 and MS_A4 receive a notification about the incoming REC (GID 299).<br>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). |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A2, MS_B3 and MS_B4 receive a notification about the incoming REC (GID 299).<br>So long the dedicated channel is not released, MS_A1 has two-way voice path.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>MS_A1 MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A2, MS_B3 and MS_B4 receive a notification about the incoming REC (GID 299).<br>So long the dedicated channel is not released, MS_A1 has two-way voice path.<br>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. |
| 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. |

**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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>MS_B2 MS_A3 and MS_A4 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_a1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A1, MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299).<br>So long the dedicated channel is not released, MS_B3 has two-way voice path.<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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. |

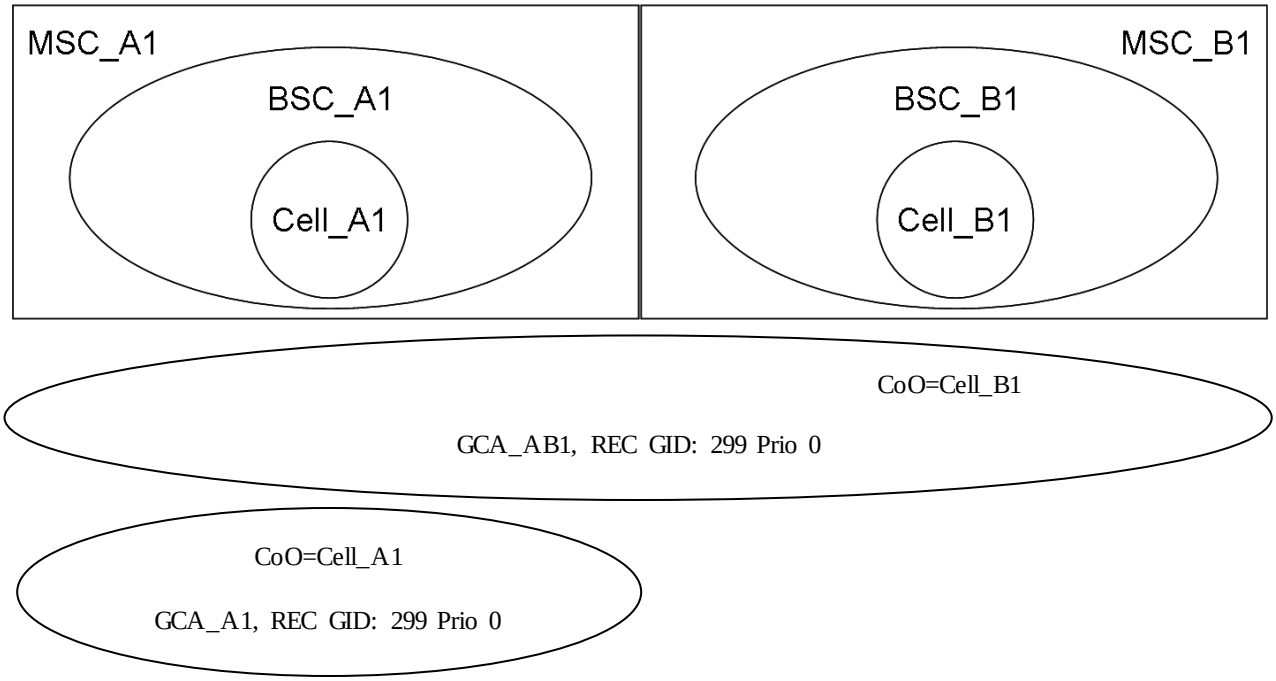
**Step 8: MS of network A in VPLMN originates a REC and MS of network B in VPLMN originates a second REC (MSC_B1 anchor for both GCAs).**

| Step | Action | Expected result(s) |
|---|---|---|
| 1) | Service subscriber MS_A3 originates REC (GID 299). | REC (GID 299) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>MS_B1 MS_B2 and MS_A4 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A1, MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299).<br>So long the dedicated channel is not released, MS_B3 has two-way voice path.<br>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). |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>MS_A2 MS_B3 and MS_B4 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_B2, MS_A3 and MS_A4 receive a notification about the incoming REC (GID 299).<br>So long the dedicated channel is not released, MS_B1 has two-way voice path.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>MS_A1 MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_B2, MS_A3 and MS_A4 receive a notification about the incoming REC (GID 299).<br>So long the dedicated channel is not released, MS_B1 has two-way voice path.<br>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_B3 releases the uplink. | The uplink is correctly released. Uplink free message is send in cell_A1. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>MS_A2 MS_B3 and MS_B4 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_B1, MS_B2 and MS_A4 receive a notification about the incoming REC (GID 299).<br>So long the dedicated channel is not released, MS_A3 has two-way voice path.<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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. |

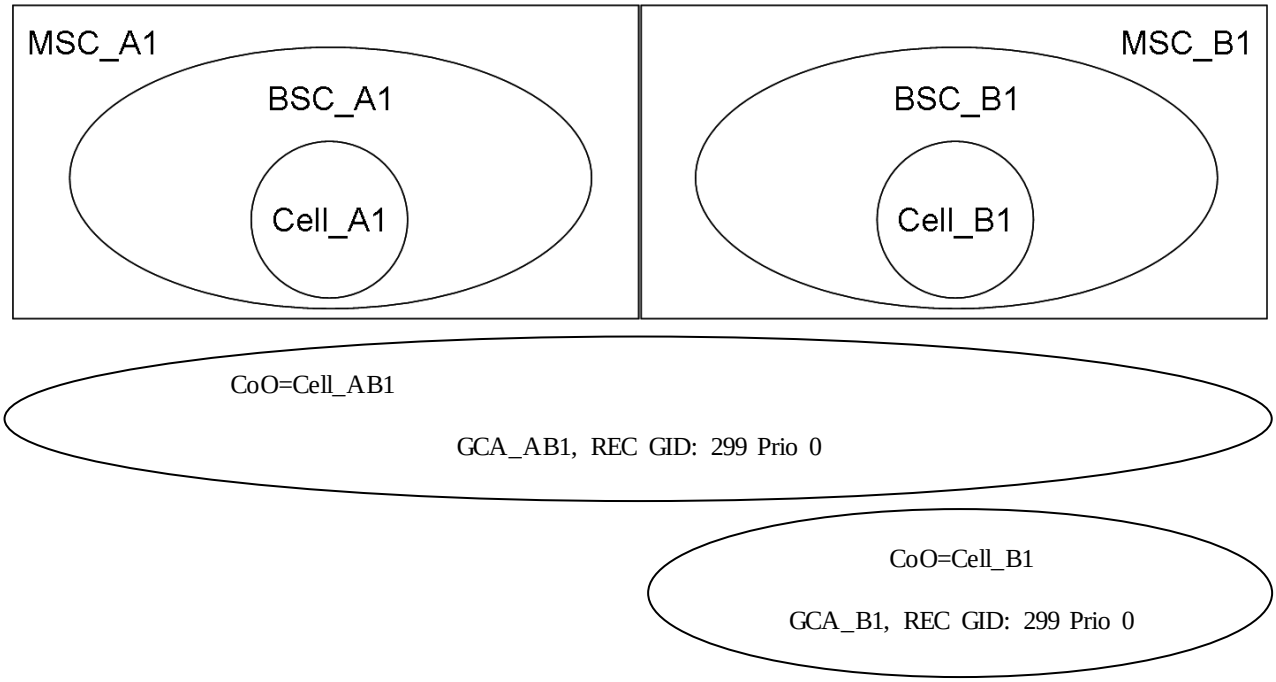
**Step 12: MS of network B in VPLMN originates a REC and MS of network A in VPLMN originates a second REC (MSC_A1 anchor for GCA_A1 and MSC_B1 anchor for GCA_AB1).**

| Step | Action | Expected result(s) |
|---|---|---|
| 1) | Service subscriber MS_B3 originates REC (GID 299). | REC (GID 299) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>MS_A1 MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299).<br>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_A3 originates a REC (GID 299). | REC (GID 299) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_B1, MS_B2 and MS_A4 receive a notification about the incoming REC (GID 299).<br>So long the dedicated channel is not released, MS_A3 has two-way voice path.<br>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_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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>MS_B2 MS_A3 and MS_A4 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A2, MS_B3 and MS_B4 receive a notification about the incoming REC (GID 299).<br>So long the dedicated channel is not released, MS_A1 has two-way voice path.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>MS_A1 MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A2, MS_B3 and MS_B4 receive a notification about the incoming REC (GID 299).<br>So long the dedicated channel is not released, MS_A1 has two-way voice path.<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>MS_B2 MS_A3 and MS_A4 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_a1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A1, MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299).<br>So long the dedicated channel is not released, MS_B3 has two-way voice path.<br>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_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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>MS_B1 MS_B2 and MS_A4 receive a notification about the incoming REC (GID 299).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A1, MS_A2 and MS_B4 receive a notification about the incoming REC (GID 299).<br>So long the dedicated channel is not released, MS_B3 has two-way voice path.<br>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 | |

### *5.7.2 MS in VGCS call on DCH, pre-emption on Um by higher prio PtP call*

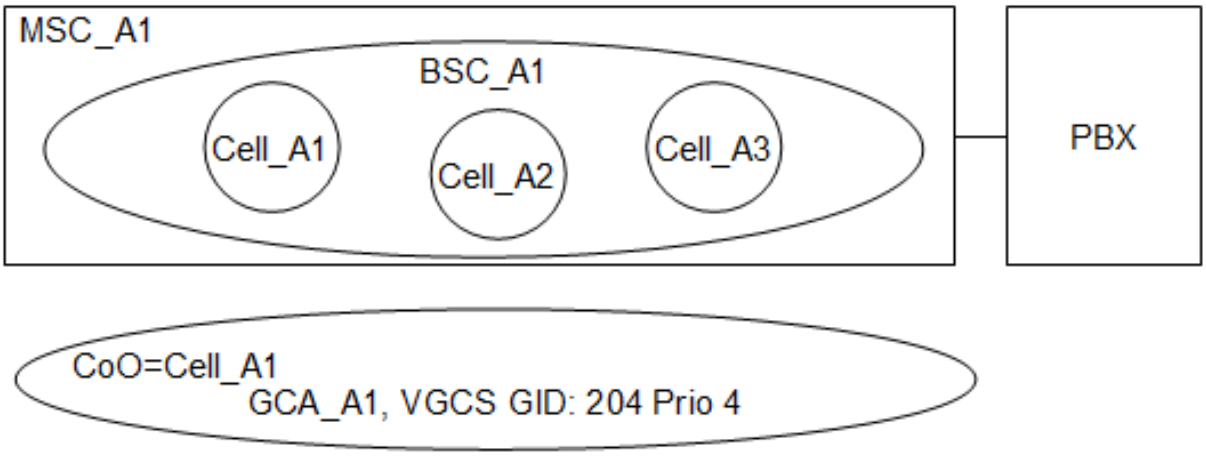
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>3.2.3<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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<br>MS_A3 receives the 204 VGCS<br>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**<br>MS_A4 is connected with MS_A5<br>MS_A1 and MS_A2 are IDLE<br>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*

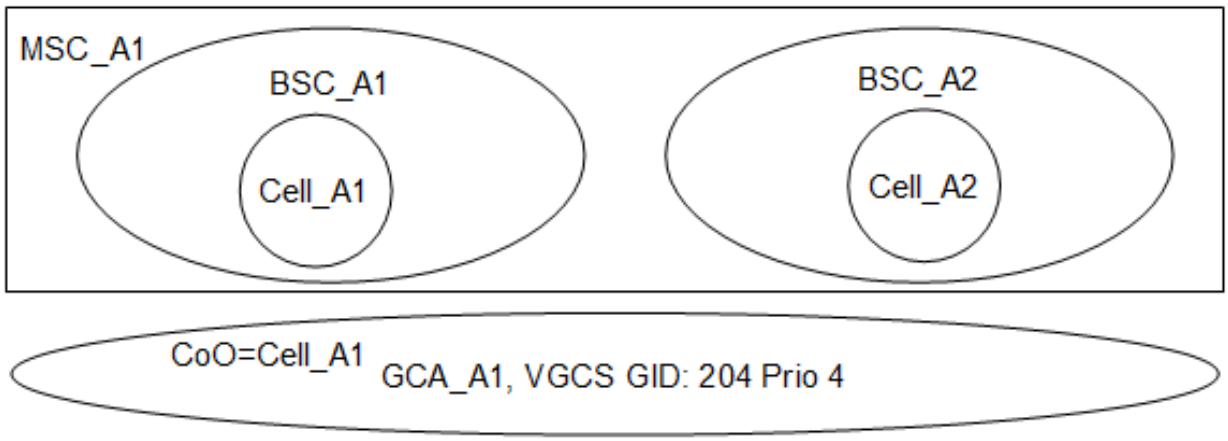
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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 is reduced to one TS**<br>**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<br>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**<br>MS_A4 is connected with MS_A5<br>MS_A2 are IDLE<br>MS_A3 can take the uplink and speak to MS_A1 |
| 5 | MS_A1 releases the group call<br>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<br>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**<br>MS_A5 is connected with MS_A4<br>MS_A2 are IDLE<br>MS_A3 can take the uplink and speak to MS_A1 |
| 10 | MS_A1 releases the group call<br>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 | |

### *5.7.12 MS in PtP call, pre-emption on A IF by higher prio PtP call*

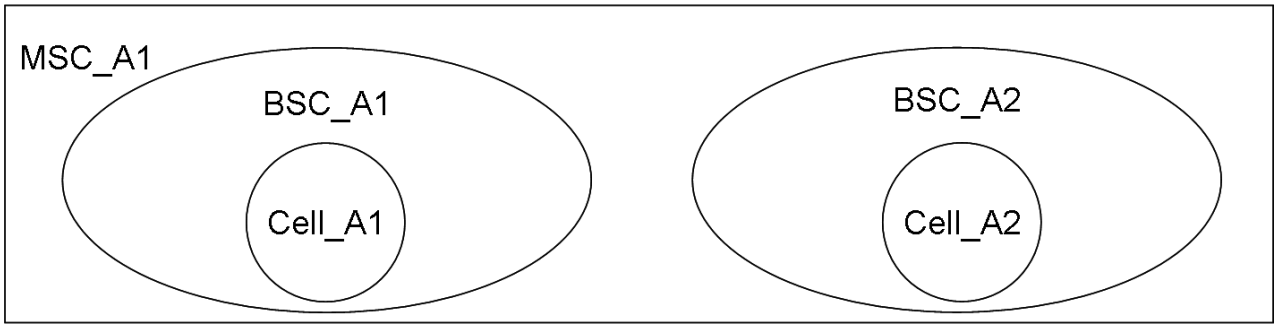
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | Other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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 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_A3 calls MS_A4 with Prio 4 | Call is unsuccessful |
| 3 | MS_A3 calls MS_A4 with Prio 3 | **MS_A1 is disconnected from MS_A2**<br>MS_A1 and MS_A2 are IDLE<br>MS_A3 is connected with MS_A4 with Prio 3 |

| Step | Action | Expected result(s) |
|---|---|---|
| 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)*

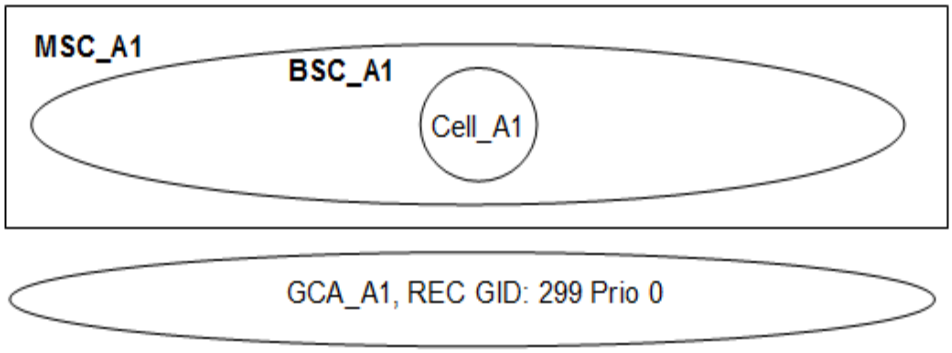
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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<br>**MS_A1 and MS_A2 receives the REC**<br>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 | |

### *5.7.16 MS in VGCS call having the UL of the GCH, pre-emption on MS by higher prio VGCS call (REC)*

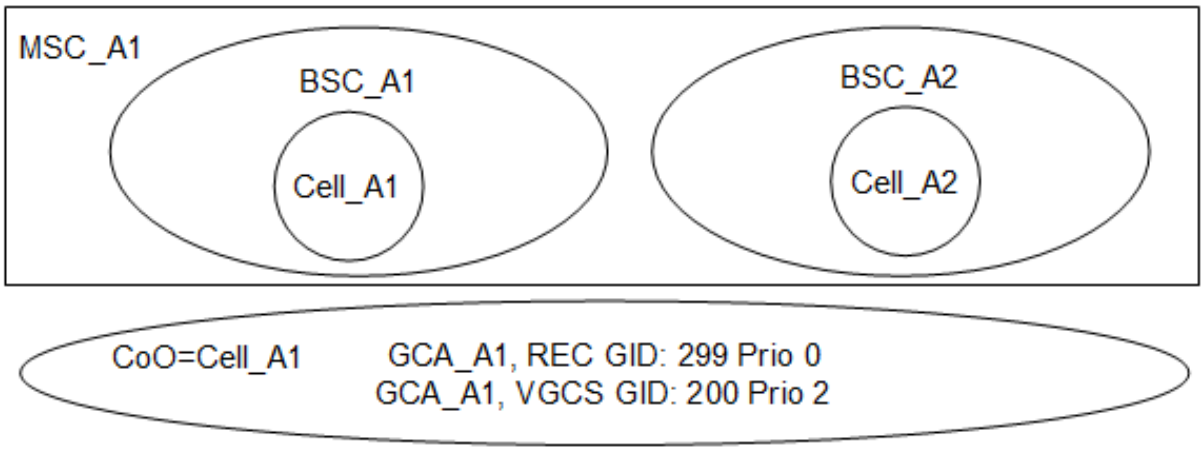
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | | |

**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<br>MS_A2 receives the 299 REC<br>MS_A1 can take the uplink of the 200 VGCS |
| 3 | MS_A3 releases the REC<br>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)*

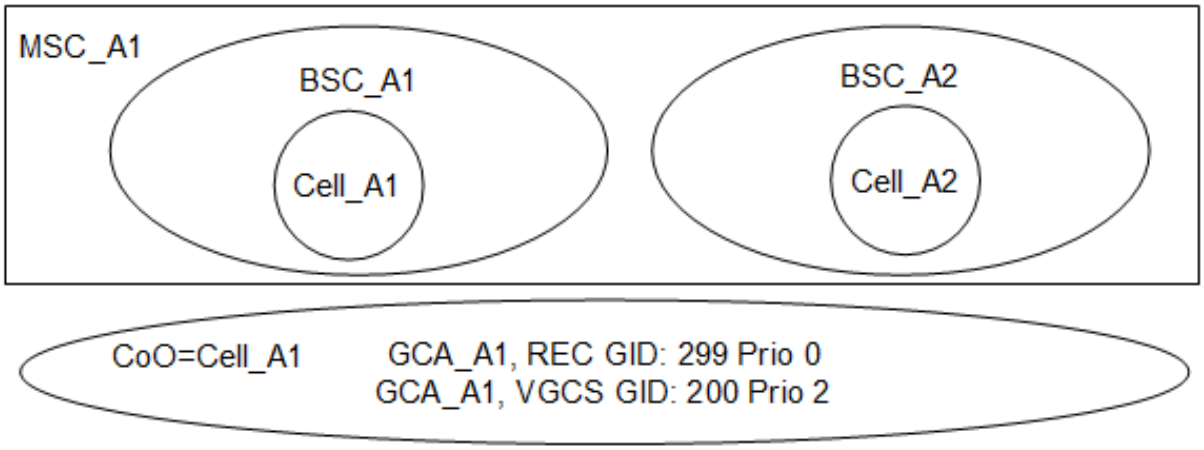
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.2.14<br>2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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 reduced to one TS**<br>**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<br>and take the uplink | MS_A2 receives the 200 VGCS |
| 2 | MS_A3 originates the 299 REC | MS_A4 receives the 299 REC<br>**The group channel of the 200 VGCS is pre-empted**<br>MS_A2 is disconnected from the 200 VGCS |
| 3 | MS_A3 releases the REC<br>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)*

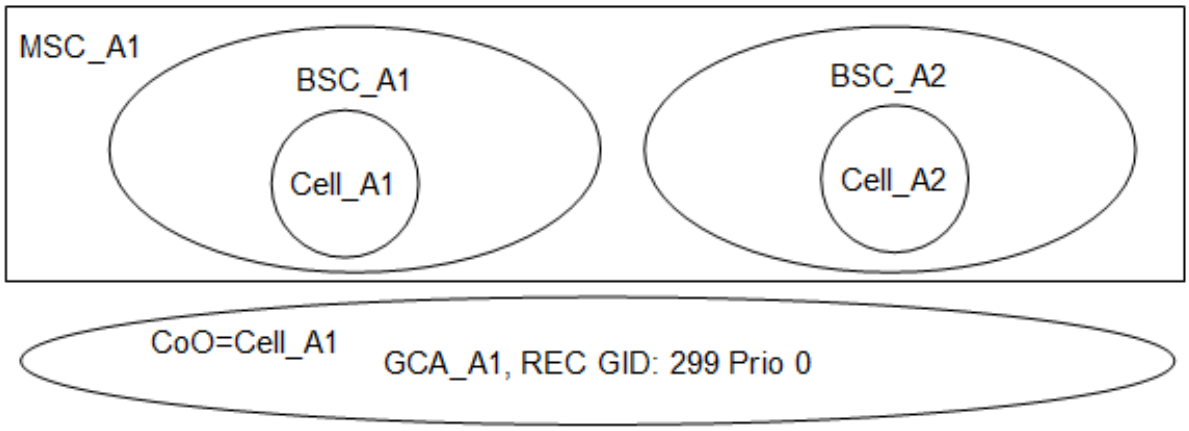
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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 reduced to two TS's** | |

**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<br>One TS in Cell_A1 is BUSY, one TS is IDLE |
| 2 | MS_A1 originates the 299 REC | MS_A2 receives the 299 REC<br>**MS_A3 is pre-empted in Cell_A1**<br>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)*

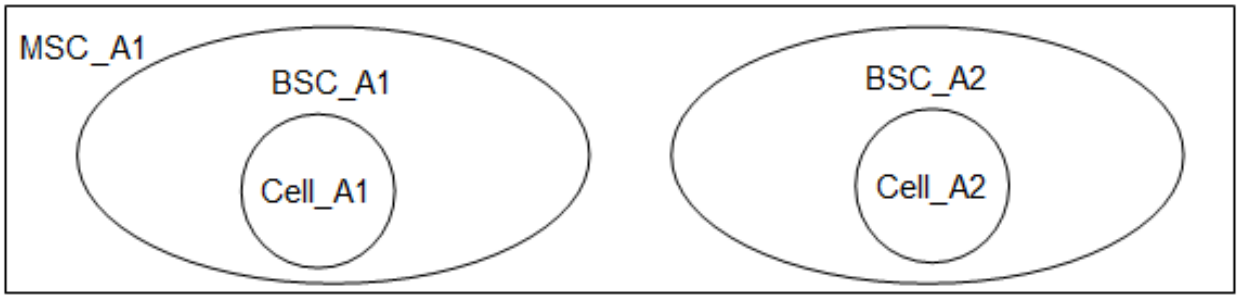
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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 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<br>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**<br>**MS_A1 is pre-empted in Cell_A1**<br>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<br>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**<br>**MS_A1 is pre-empted in Cell_A1**<br>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 | |

### *5.7.21 MS in VGCS call on DCH, pre-emption on A IF by higher prio data call (9.6 kbit/s, transparent)*

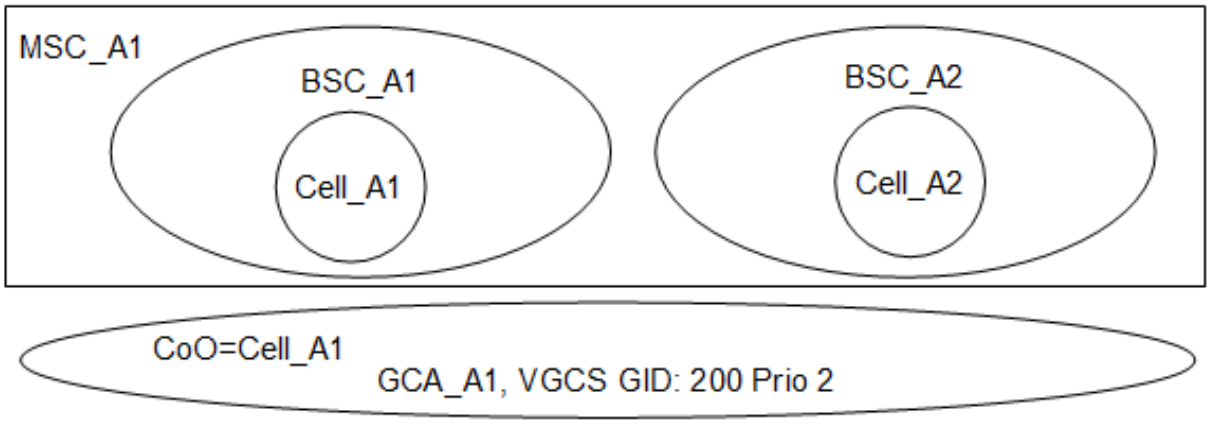
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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 reduced to two TS's** | |

**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**<br>**The DCH or the group channel of the VGCS call is pre-empted:**<br>- DCH => VGCS call is continued<br>- Group Channel => VGCS may be terminated |
| 4 | CT_A1 terminates the VGCS call (if existing)<br>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**<br>**The DCH and the group channel are pre-empted in Cell_A1**<br>The VGCS call may be terminated in BSC_A1 or in all BSC's |
| 7 | CT_A1 terminates the VGCS call (if existing)<br>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)*

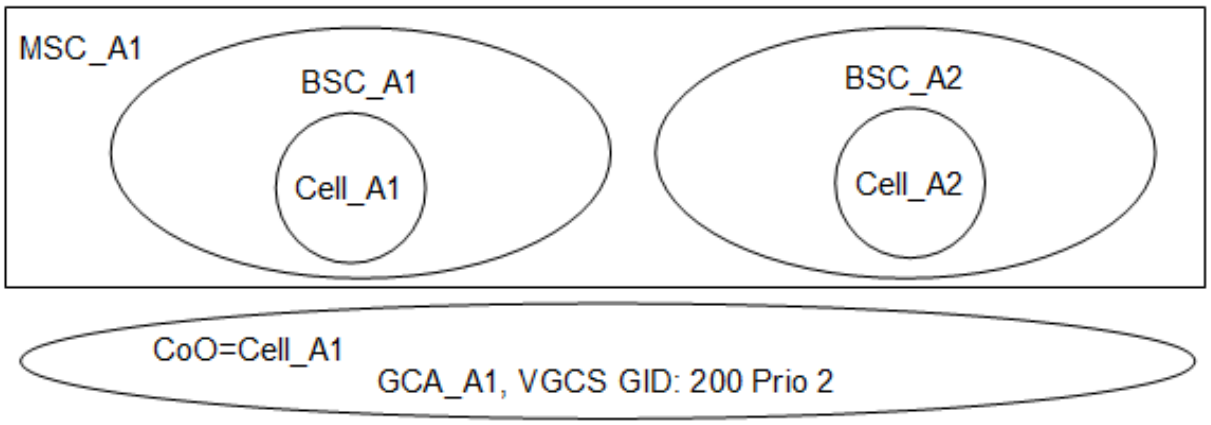
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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 reduced to one TS** | |

**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**<br>**The group channel is pre-empted in Cell_A2**<br>MS_A2 is IDLE<br>MS_A1 and MS_A5 are still in the VGCS call |
| 4 | MS_A1 releases the VGCS call<br>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**<br>**The group channel is pre-empted in Cell_A2**<br>MS_A2 is IDLE<br>MS_A1 and MS_A5 are still in the VGCS call |
| 7 | MS_A1 releases the VGCS call<br>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 | |

### *5.7.26 MS in VGCS call as listener, pre-emption on Um by lower prio PtP call does not take place*

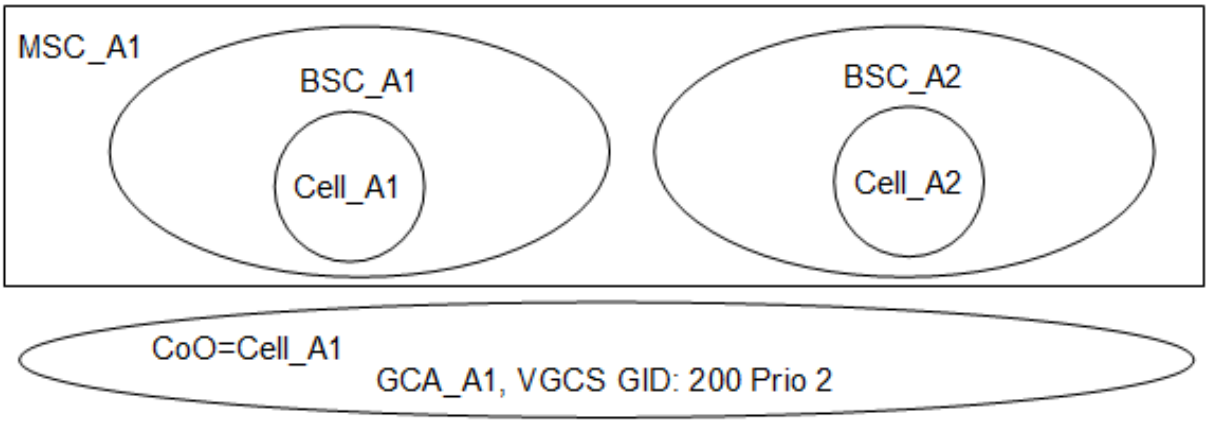
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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*

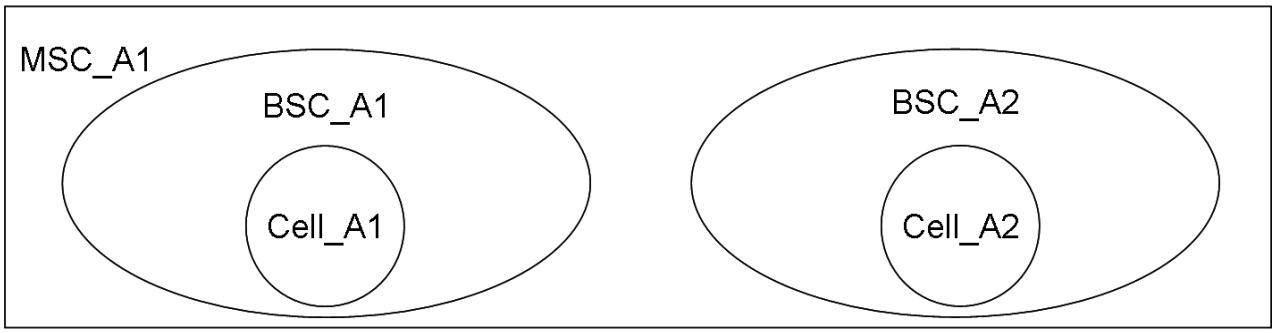
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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 reduced to one TS** | |

**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<br>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 | |

### *5.7.30 MS in VGCS call on DCH, pre-emption on A IF by lower prio VGCS call does not take place*

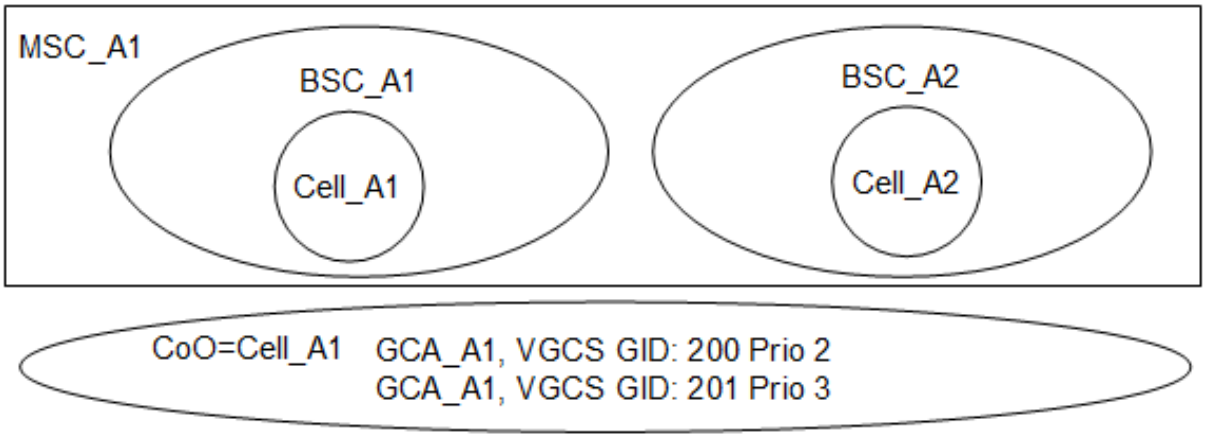
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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**<br>**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.**<br>MS_A3 get a proper release cause.<br>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*

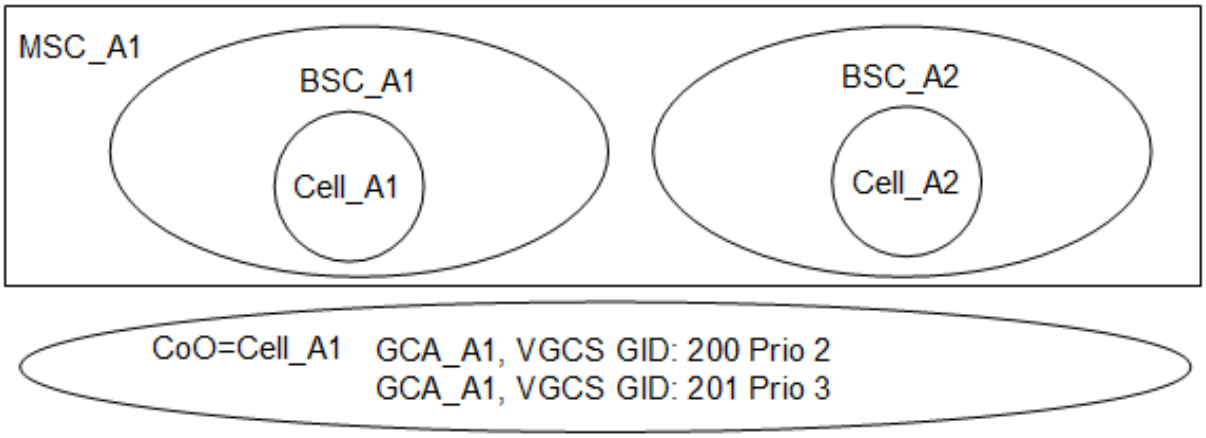
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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 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_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.**<br>The 200 VGCS group channel is not pre-empted<br>The **201** VGCS call is established in Cell_A1 |
| 4 | MS_A1 releases the 200 VGCS call<br>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 | |

### *5.7.35 MS in VGCS call having the UL of the GCH, pre-emption on A IF by lower prio data call does not take place*

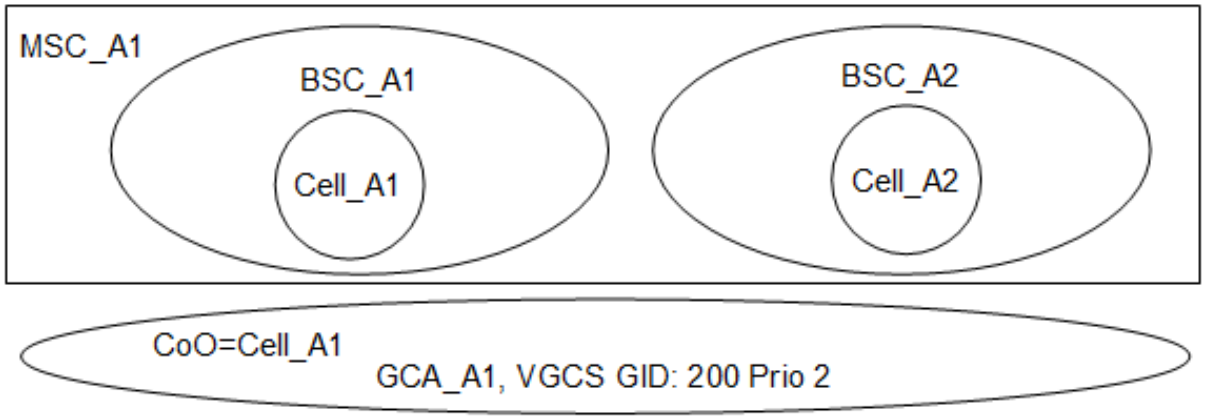
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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**

**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 A-IF to BSC_A1 is reduced to one TS**<br>**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*

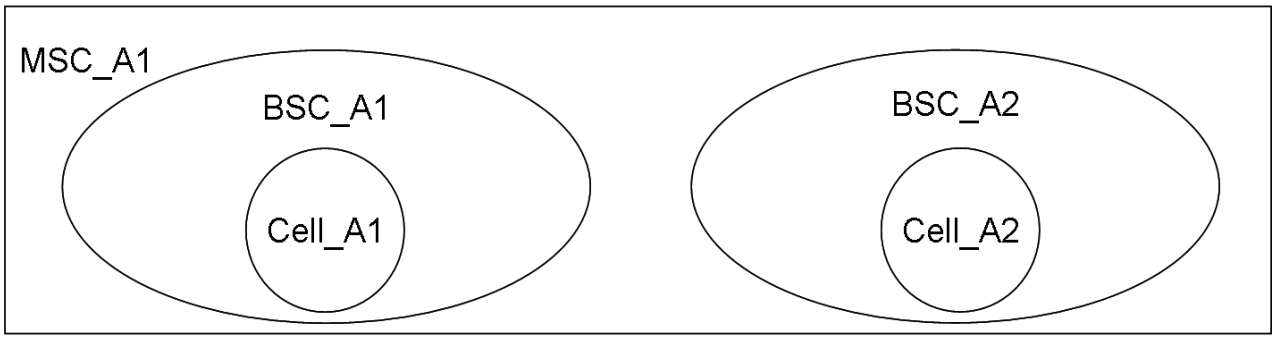
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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 reduced to one TS** | |

**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<br>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 | |

### *5.7.44 eMLPP priority is preserved during CFU (Call Forwarding Unconditionally)*

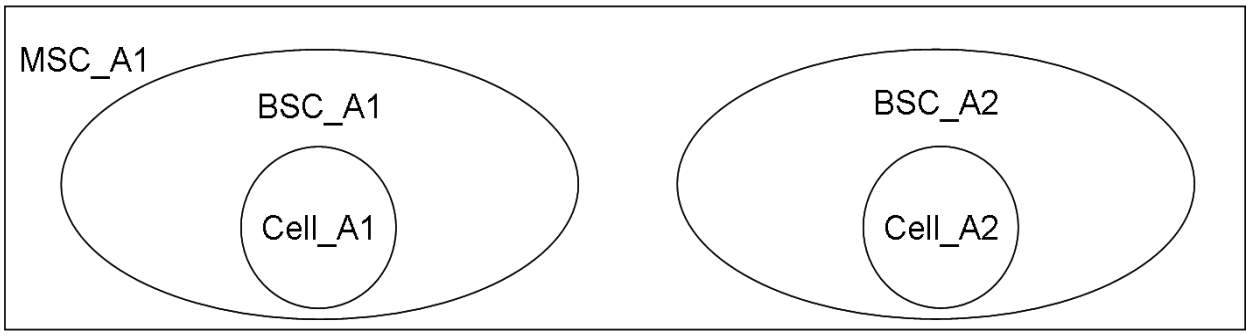
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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 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<br>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<br>**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)*

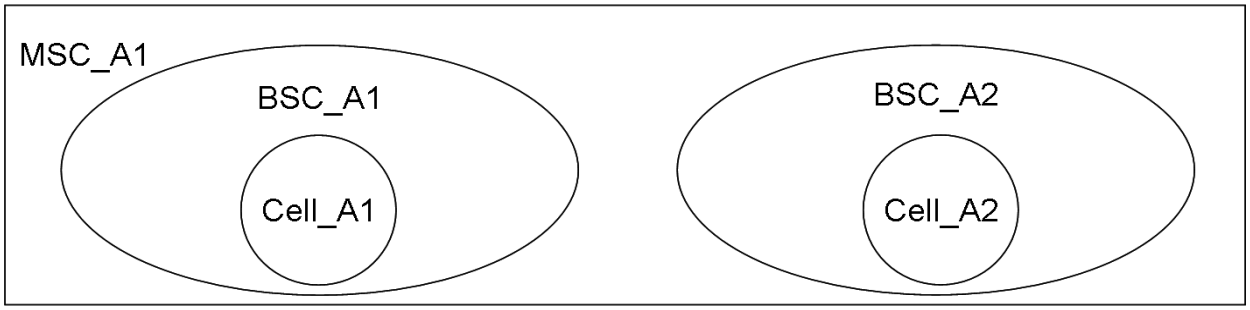
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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 <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<br>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<br>**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*

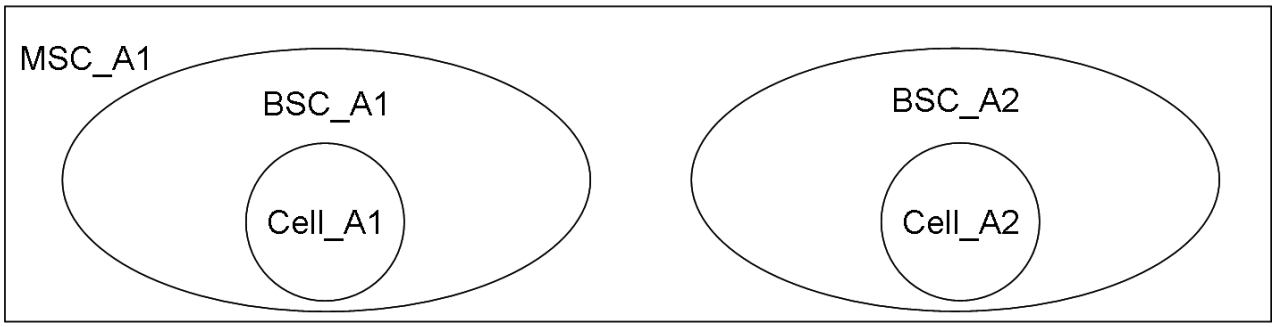
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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 |

| Step | Action | Expected result(s) |
|---|---|---|
| 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<br>**The conference leg of MS_A1 is pre-empted at Um of Cell_A1**<br>The conference is released<br>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<br>**The conference leg of MS_A1 is pre-empted at Um of Cell_A1**<br>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)*

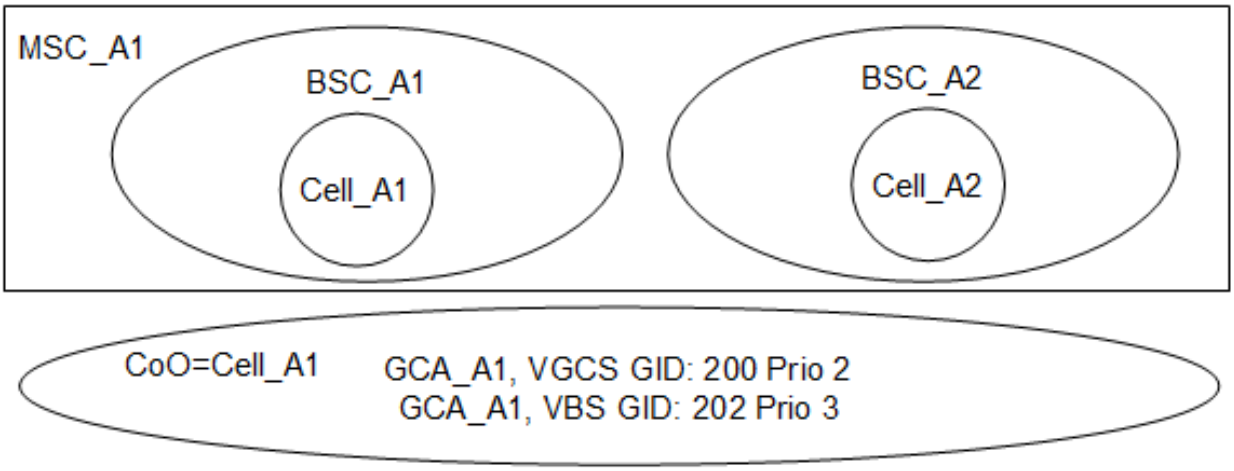
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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 reduced to one TS**<br>**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<br>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 pre-empted.**<br>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<br>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 pre-empted.**<br>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<br>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 pre-empted.**<br>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)*

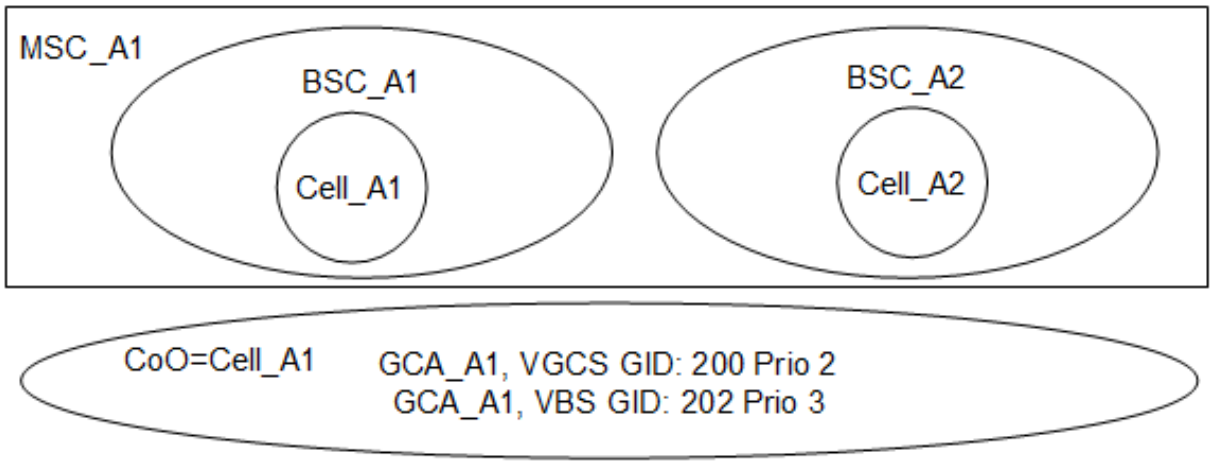
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1<br>2.4.5<br>2.4.6<br>2.4.7<br>10.2.1<br>10.2.2<br>10.2.3 | 2.4.1 | |

**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 reduced to one TS**<br>**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<br>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.<br>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<br>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.<br>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<br>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.<br>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 | |

### *5.7.50 Check of maximum authorized eMLPP level (non-roaming case)*

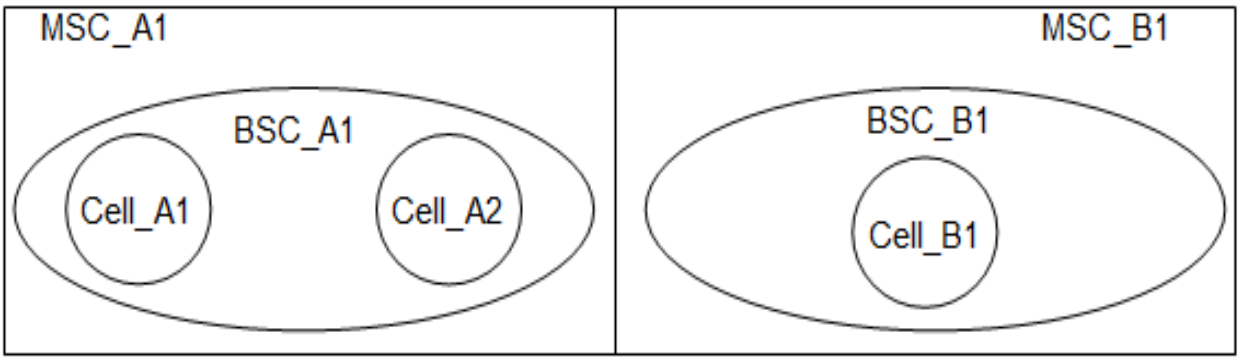
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1 | 2.4.1 | |

**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<br>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<br>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<br>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)*

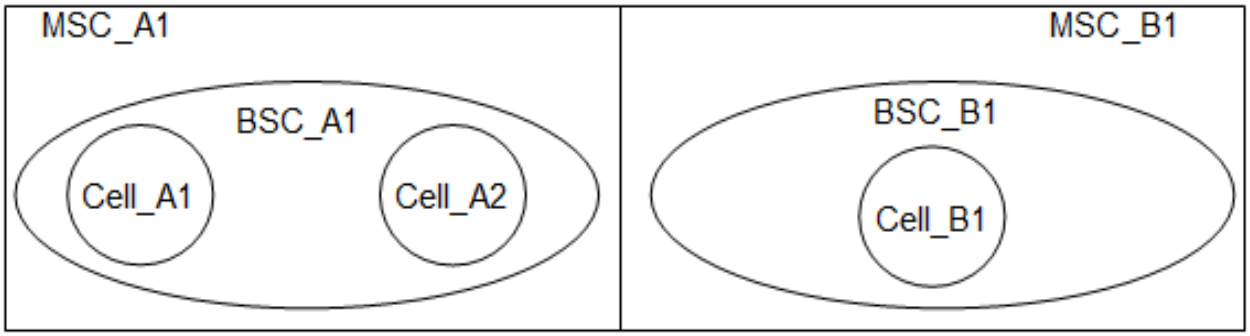
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.4.1 | 2.4.1 | |

**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<br>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<br>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<br>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 | |

### *5.8.1 SS originates VGCS call*

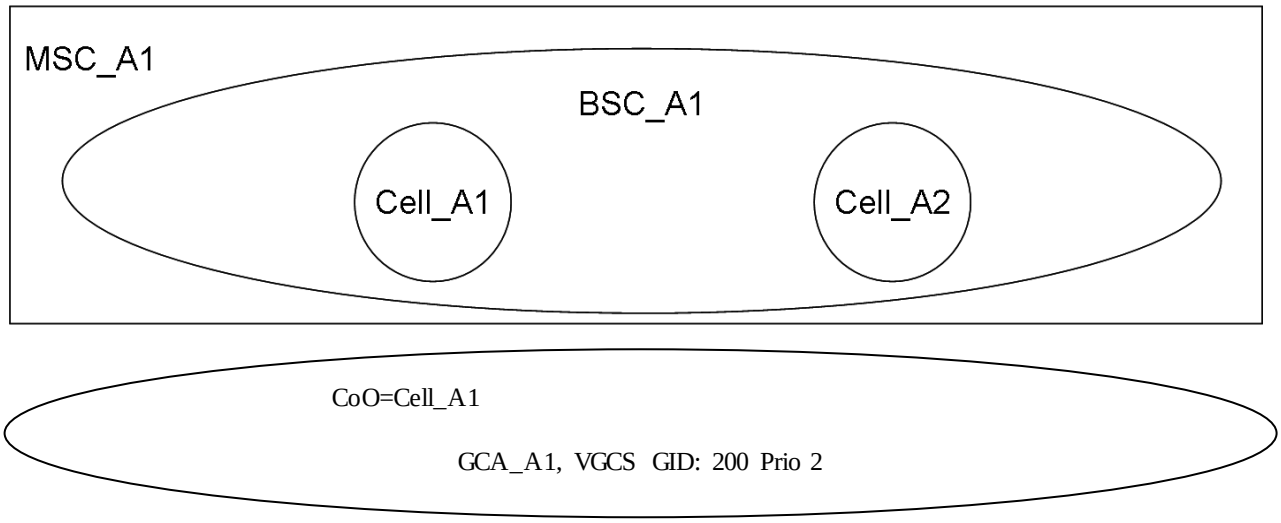
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.2.1<br>2.2.12<br>2.2.15<br>2.2.16<br>3.2.3<br>3.5.2<br>3.5.3<br>9.2.5.1<br>11.2.3.2 | 2.2.1<br>9.2.10<br>9.2.11<br>9.9.3<br>9.9.5 | |

**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) |
|---|---|---|

| Step | Action | Expected result(s) |
|---|---|---|
| 1) | Service subscriber MS_A1 originates a VGCS call. | VGCS call is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A GCCH is allocated in cell_A2.<br>MS_A2 receives notification of the incoming call.<br>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 | |

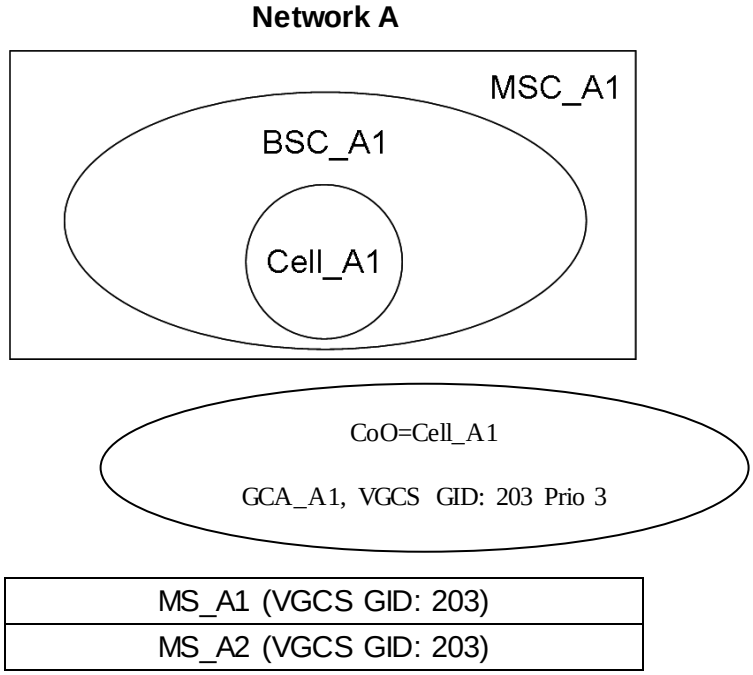
### *5.8.2 Service Subscriber originates a VGCS (priority 3) call*

| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>MS_A2 receives notification of the incoming call.<br>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*

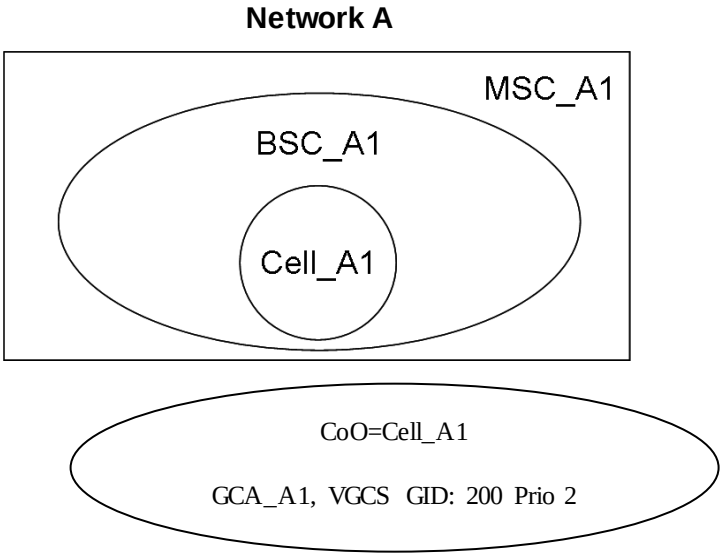
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.2.1<br>3.5.2<br>3.5.3 | 2.2.1<br>3.7.2<br>9.9.2 | |

**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.




| |
|---|
| 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.<br>A group call channel (GCCH) is allocated in cell_A1. Uplink still free in cell_A1.<br>MS_A1 and MS_A2 receive notification of the incoming VGCS call.<br>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.<br>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.<br>CT_A1 is able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1.<br>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 | |

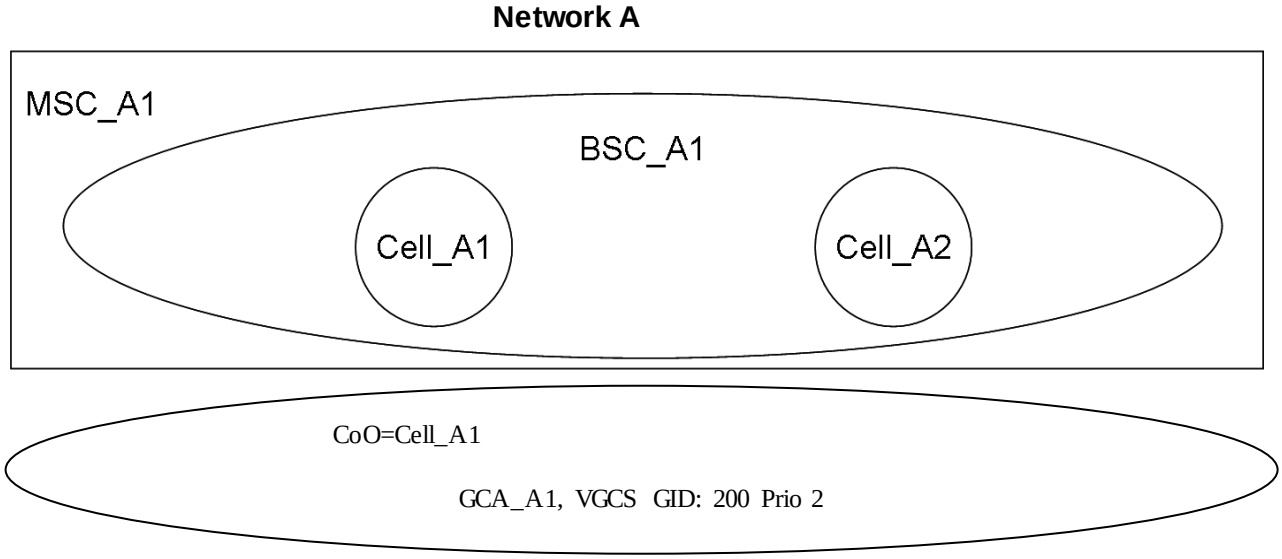
### *5.8.4 SS originates, leaves, rejoins and ends VGCS call*

| 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**




| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A GCCH is allocated in cell_A2.<br>MS_A2 and MS_A3 receive notification of the incoming call.<br>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 | |

### *5.8.6 Controller joins ongoing VGCS call*

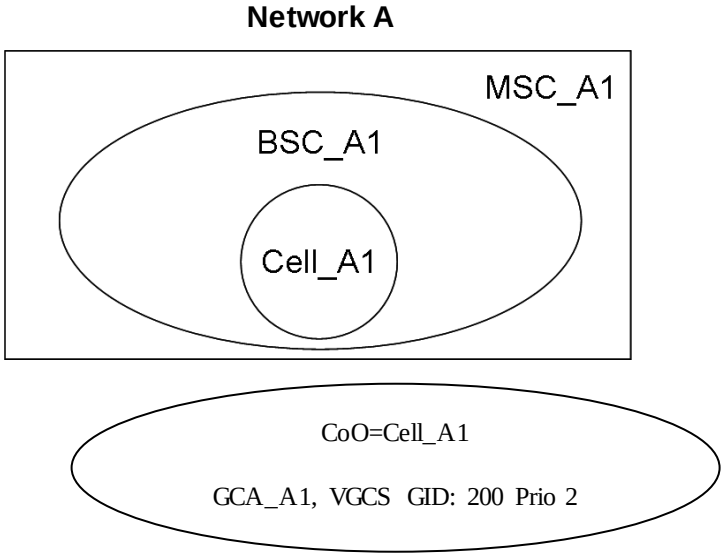
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 9.2.5.1 | 2.2.1 | |

**a) Purpose**

Verify that a controller can join an ongoing VGCS call.

**b) Test configuration / initial conditions**

CT_A1 is connected to network A.




| |
|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>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.<br>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.<br>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.<br>MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1.<br>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.<br>MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1.<br>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 | |

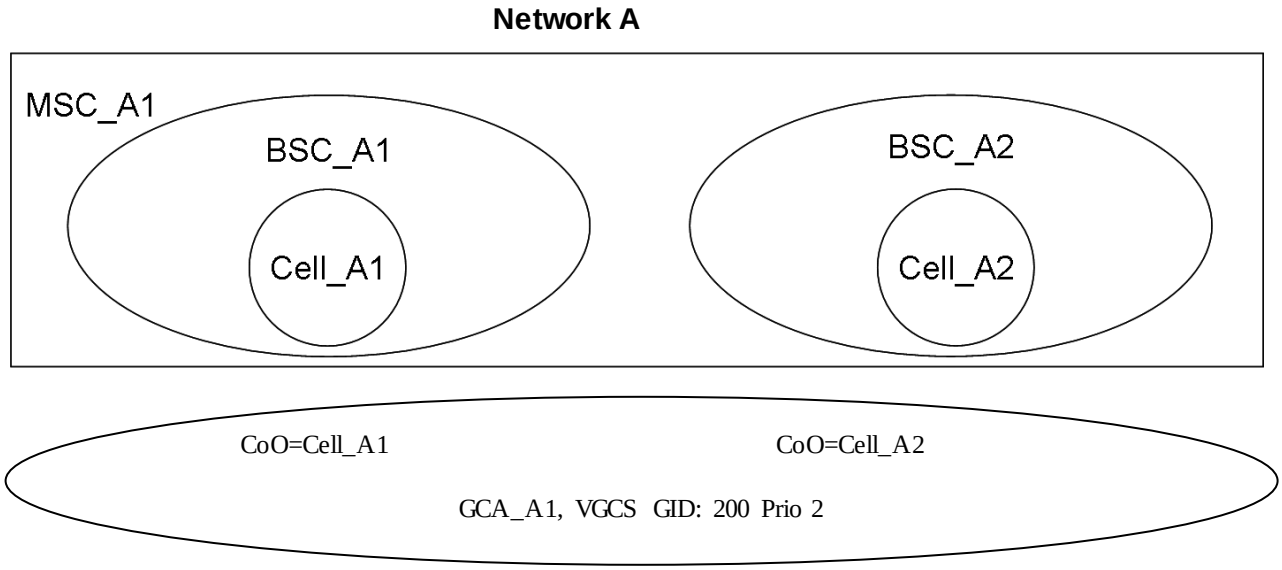
### *5.8.7 Originator of VGCS call releases DCH*

| 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**




| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A GCCH is allocated in cell_A2.<br>MS_A2 receives notification of the incoming call.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2.<br>A GCCH is allocated in cell_A1.<br>MS_A1 receives notification of the incoming call.<br>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. |
| 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 | |

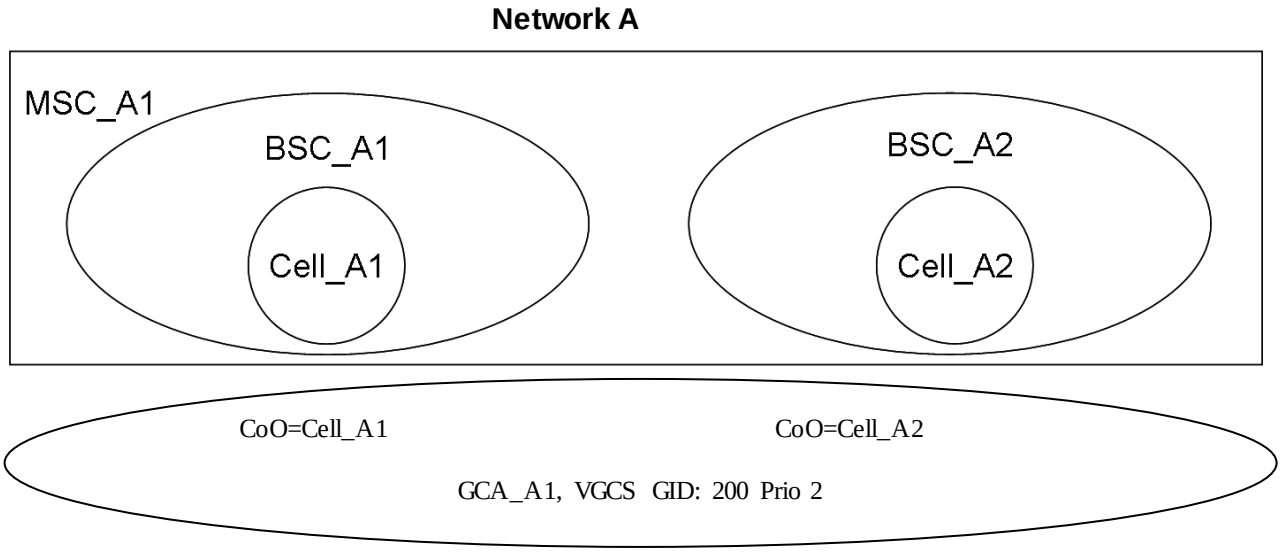
### *5.8.8 Originator of VGCS call takes uplink*

| 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**




| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A GCCH is allocated in cell_A2.<br>MS_A2 receives notification of the incoming call.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2.<br>A GCCH is allocated in cell_A1.<br>MS_A1 receives notification of the incoming call.<br>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. |
| 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 | |

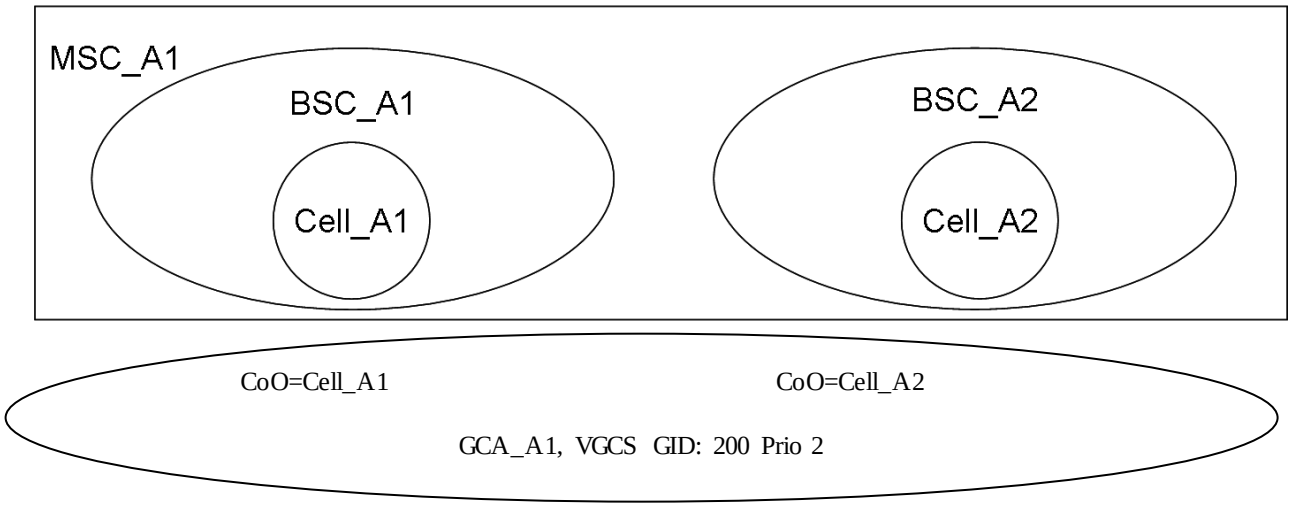
**a) Purpose**

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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A GCCH is allocated in cell_A2.<br>MS_A2 receives notification of the incoming call.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2.<br>A GCCH is allocated in cell_A1.<br>MS_A1 receives notification of the incoming call.<br>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.<br>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<br>3.7.2<br>3.8.1<br>3.8.2<br>3.8.4<br>3.8.5 | |

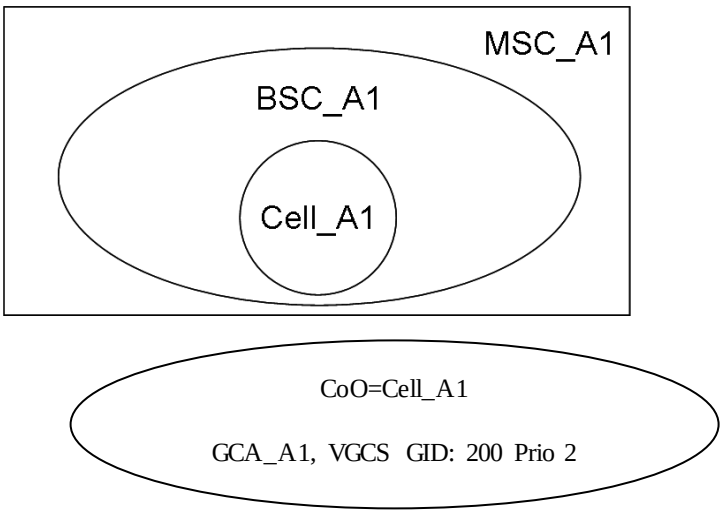
**a) Purpose**

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.<br>A group call channel (GCCH) is allocated in cell_A1. Uplink still free in cell_A1.<br>MS_A1 and MS_A2 receive notification of the incoming VGCS call.<br>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.<br>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.<br>CT_A1 is able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1.<br>MS_A2 still able to listen to the announcement of CT_A1.<br>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*

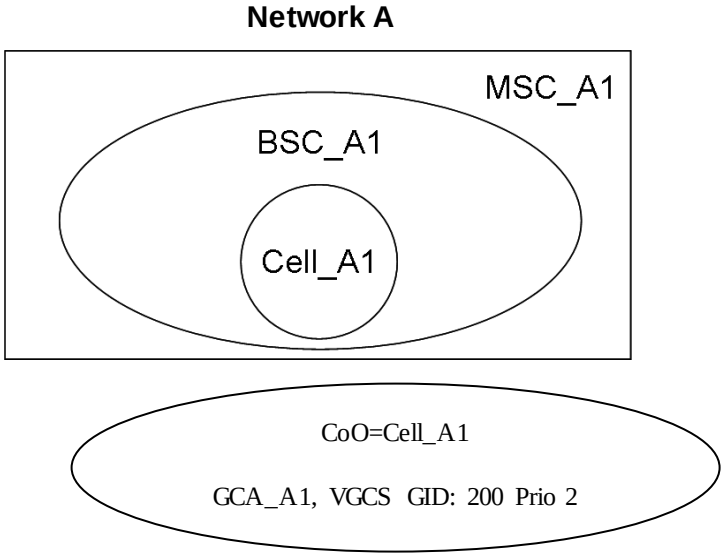
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 9.2.5.1 | 2.2.1<br>3.7.2<br>3.8.1<br>3.8.2<br>3.8.4<br>3.8.5 | |

**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.




| |
|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>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.<br>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.<br>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.<br>MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1.<br>MS_A2 still able to listen to the announcement of CT_A1.<br>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.<br>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.<br>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.<br>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.<br>MS_A1 is not able to listen to the announcement of CT_A1.<br>MS_A2 still able to listen to the announcement of CT_A1.<br>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 | |

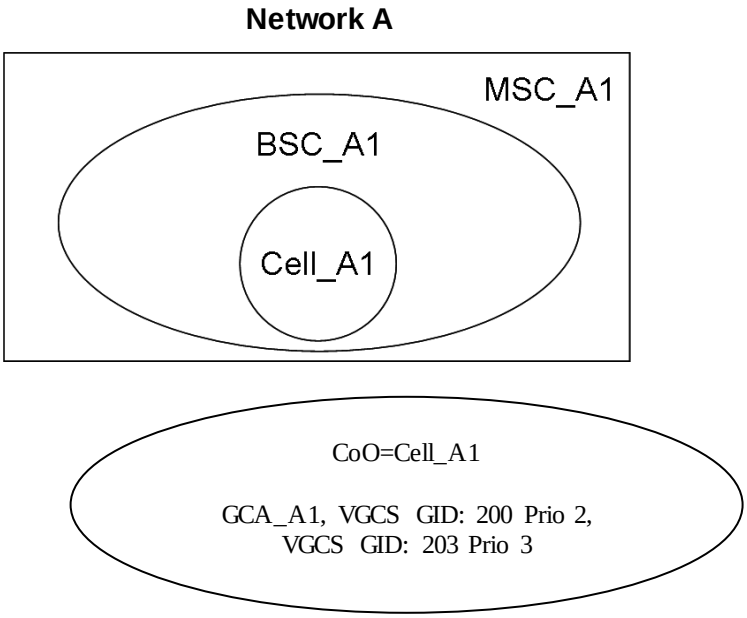
### *5.8.12 Parallel group calls are possible in the same cell*

| 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**




| |
|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>MS_A2 receives notification of the incoming call.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>MS_A4 receives notification of the incoming call.<br>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 | |

### *5.8.17 Origination of VGCS call from non subscribed MS fails*

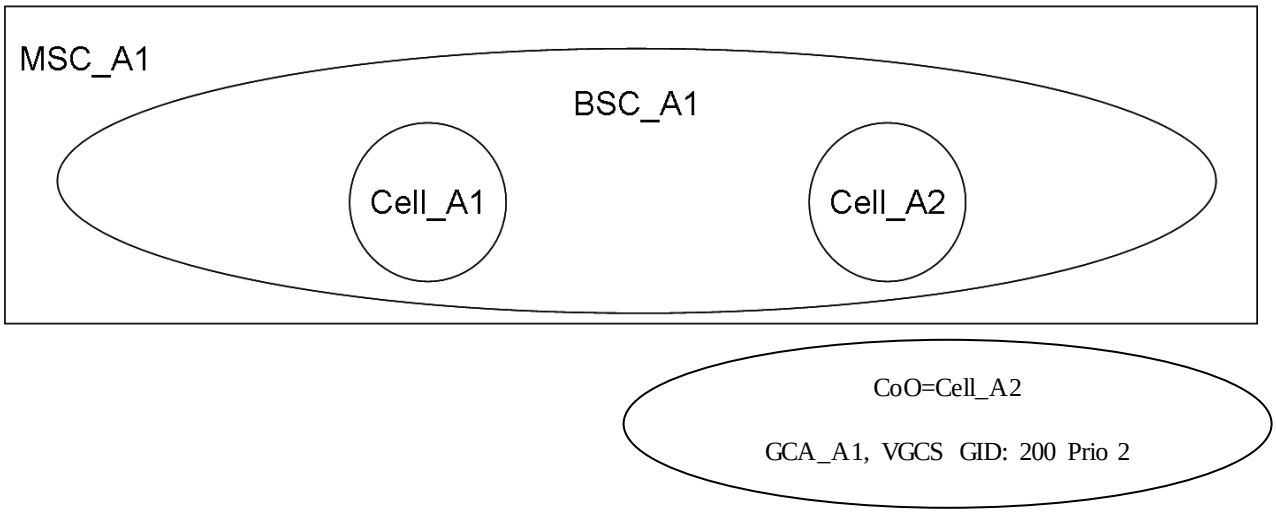
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.2.1 | 2.2.1 | |

**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 | |

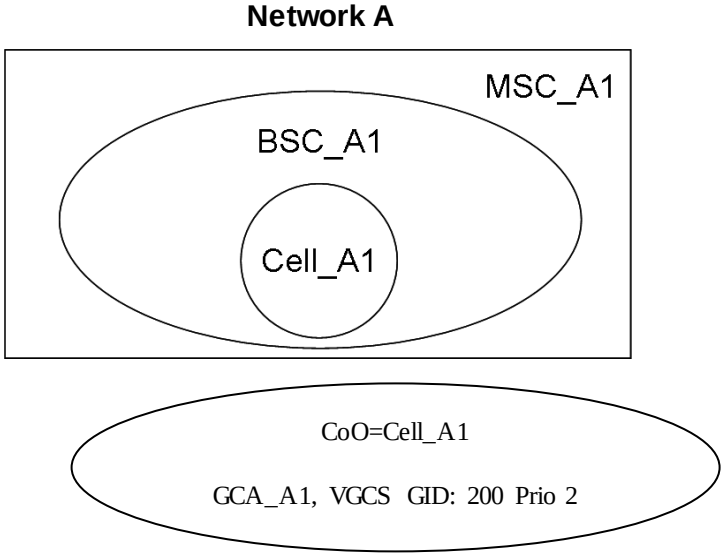
**a) Purpose**

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.




| |
|---|
| 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 | |

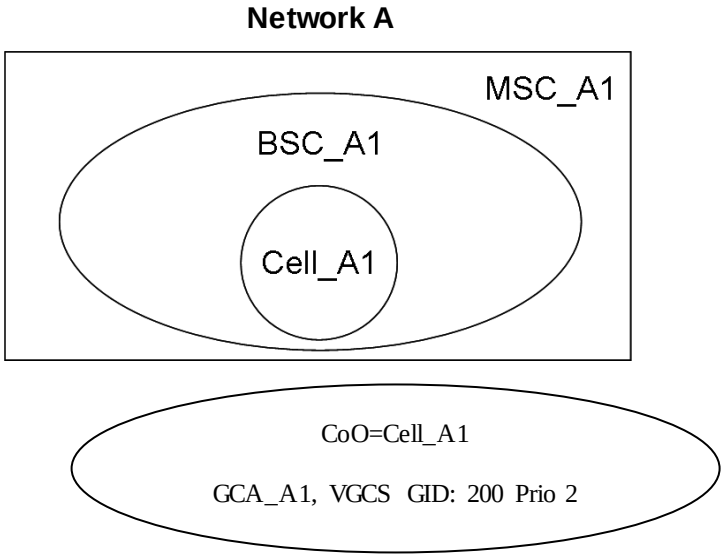
**a) Purpose**

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.




| |
|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>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.<br>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.<br>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.<br>MS_A2 and CT_A1 are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of CT_A1.<br>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 | |

### *5.8.27 Two controllers initiate VGCS with the same GID but different GCAs*

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 3.5.2<br>3.5.3<br>9.2.5.1 | 2.2.1 | EN301515 |

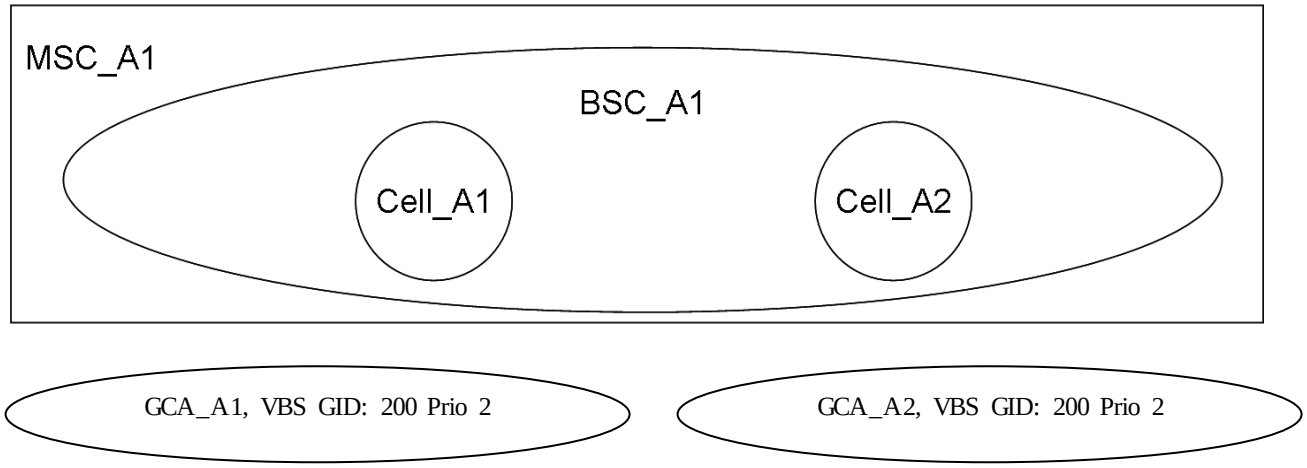
**a) Purpose**

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:<br>controller CT_A1 originates a VGCS call by dialling 50 + < GCA_A1 > + <GID><br>and<br>controller CT_A2 originates a VGCS call by dialling 50 + < GCA_A2 > + <GID> | VGCS calls are correctly established.<br>A group call channel (GCCH) is allocated in cell_A1. Uplink still free in cell_A1.<br>A group call channel (GCCH) is allocated in cell_A2. Uplink still free in cell_A2.<br>MS_A1 receives notification of one incoming VGCS call.<br>MS_A2 receives notification of other incoming VGCS call.<br>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.<br>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.<br>MS_A2 joins the other VGCS call as listener.<br>CT_A1 has voice path and MS_A1 is able to listen to the announcement of CT_A1.<br>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.<br>CT_A1 is able to listen to the announcement of MS_A1.<br>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.<br>CT_A2 is able to listen to the announcement of MS_A2.<br>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*

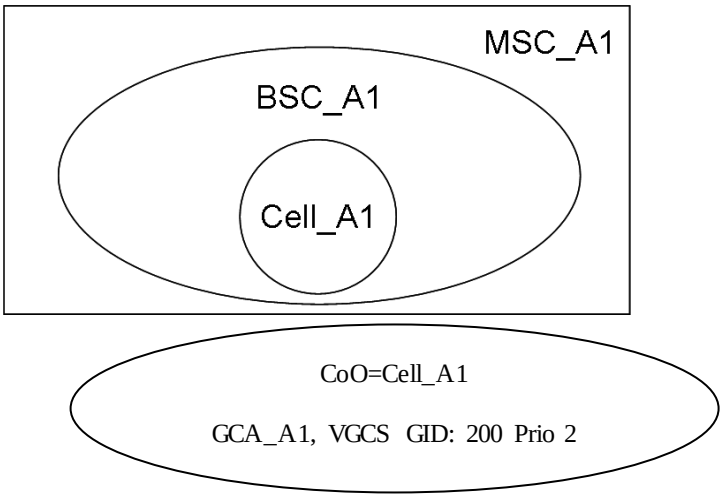
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 9.2.5.1 | 2.2.1 | EN301515 |

**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 |

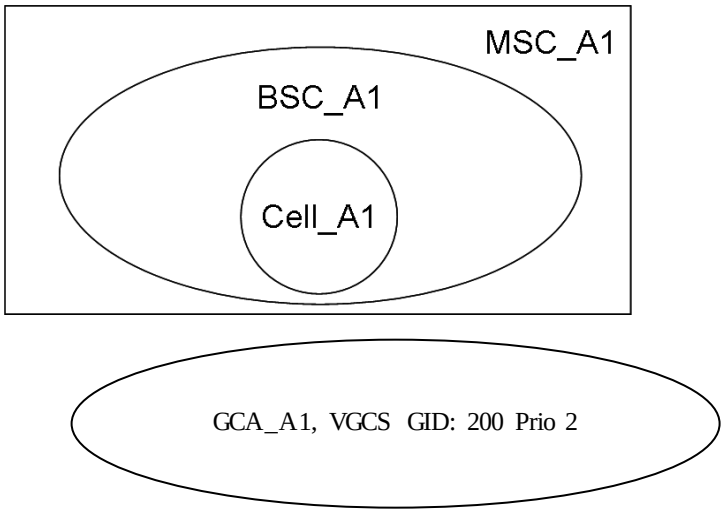
**a) Purpose**

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.

**Network A**




| MS_A1 (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> 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 | |

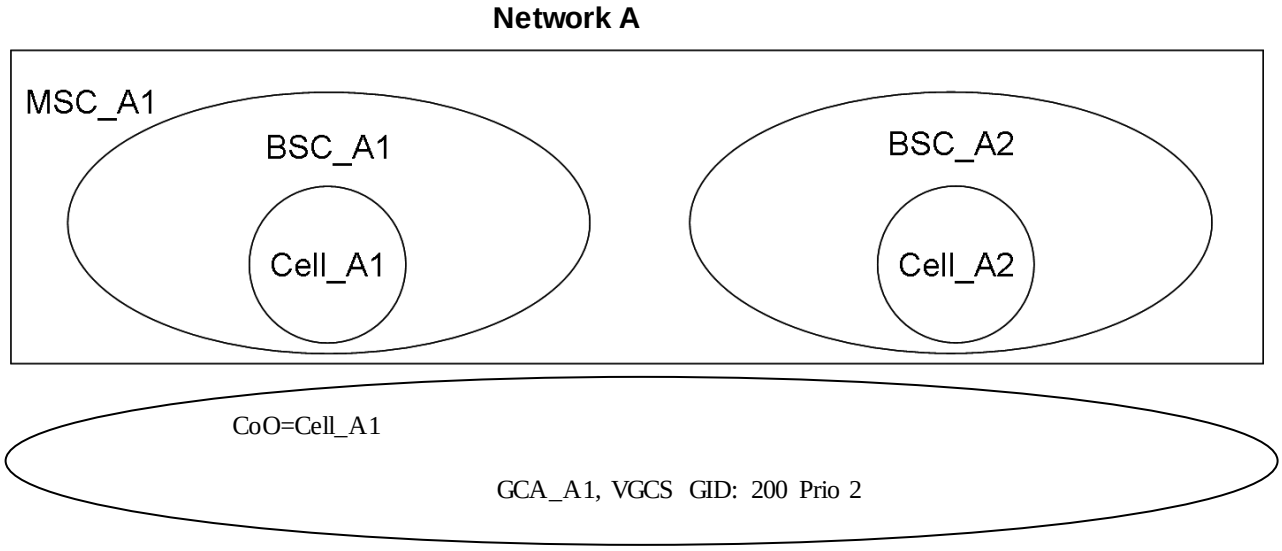
### *5.8.30 More than one Uplink Request at the same time (same BSS and different BSS)*

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.2.16<br>5.2.2.51<br>5.2.2.53<br>5.2.2.54<br>6.2.2.10<br>6.2.2.12<br>6.2.2.13<br>7.2.2.18<br>7.2.2.20<br>7.2.2.21<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A GCCH is allocated in cell_A2.<br>MS_A2 and MS_A3 receive notification of the incoming call.<br>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 | |

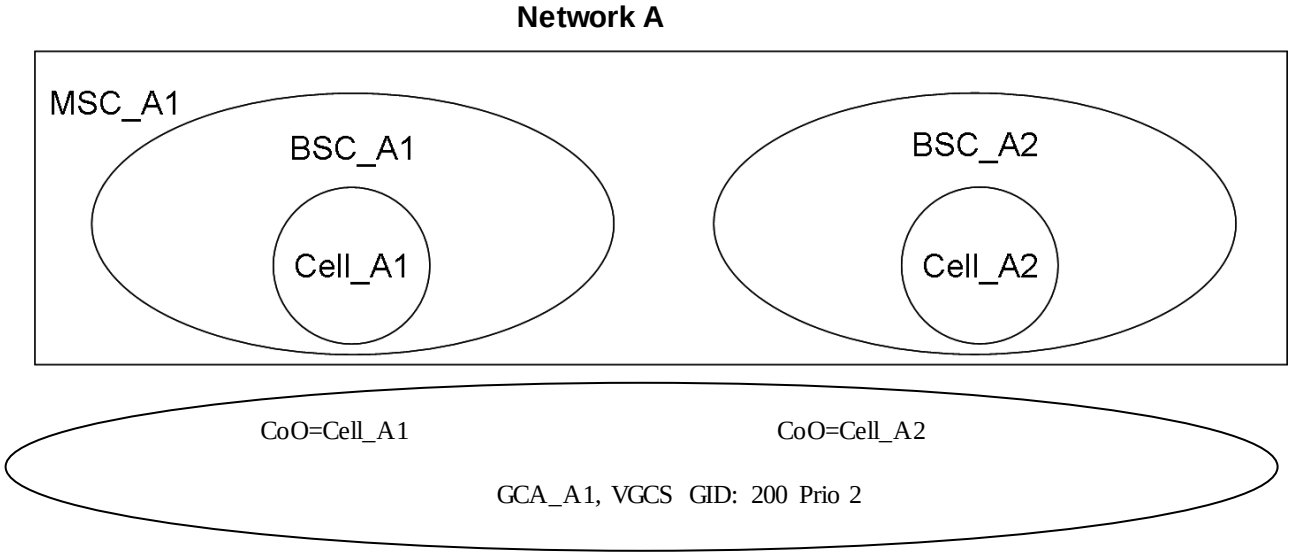
### *5.8.31 Two SS originate VGCS call at same time (same BSS and different BSS)*

| 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**




| 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:<br>Service subscriber MS_A1 originates a VGCS call.<br>Service subscriber MS_A3 originates a VGCS call. | Only one service subscriber can establish the VGCS.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A GCCH is allocated in cell_A2.<br>The other MS and MS_A2 receive notification of the incoming call.<br>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:<br>Service subscriber MS_A1 originates a VGCS call.<br>Service subscriber MS_A2 originates a VGCS call. | Only one service subscriber can establish the VGCS call.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in the cell where the call was established.<br>A GCCH is allocated in the other cell.<br>The other MS and MS_A3 receive notification of the incoming call.<br>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 |

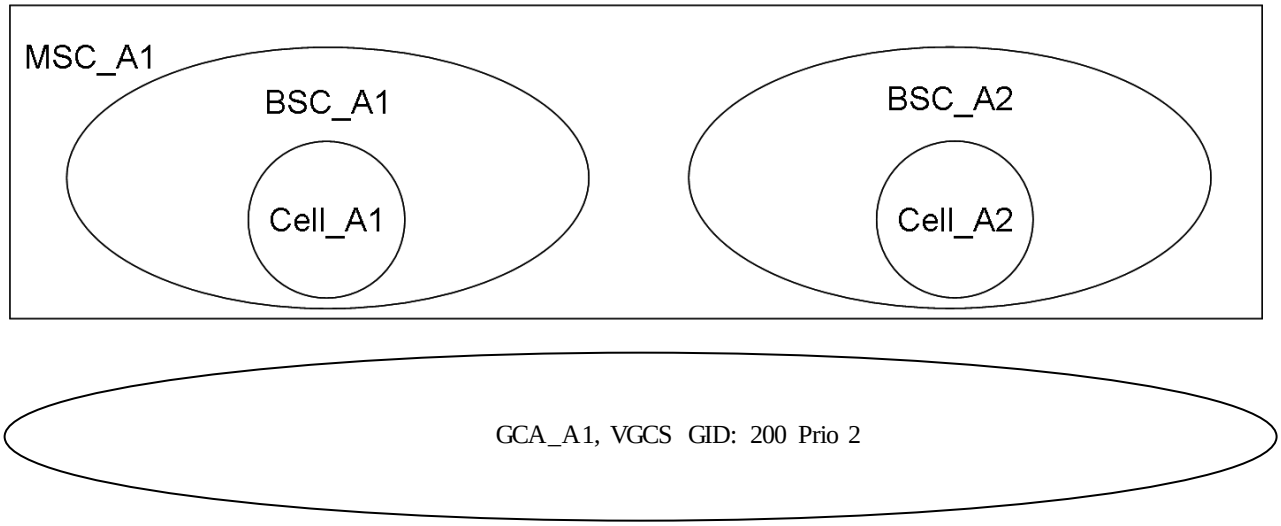
**a) Purpose**

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:<br>Controller CT_A1 originates a VGCS call by dialling 50 + < GCA > + <GID><br>Controller CT_A2 originates a VGCS call by dialling 50 + < GCA > + <GID> | Only one controller manages to establish a VGCS call.<br>VGCS call is correctly established.<br>A group call channel (GCCH) is allocated in cell_A1 and cell_A2.<br>MS_A1 and MS_A2 are notified about the incoming VGCS call.<br>The controller not able to establish the call is notified about the incoming VGCS call.<br>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.<br>Controller not able to establish the call joins the VGCS call.<br>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.<br>Controllers are able to listen to the announcement of MS_A1.<br>MS_A1 is not able to listen to the announcement of the controllers.<br>MS_A2 is still able to listen to the announcement of the controllers. |
| 4) | MS_A1 releases the uplink. | The uplink is correctly released.<br>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*

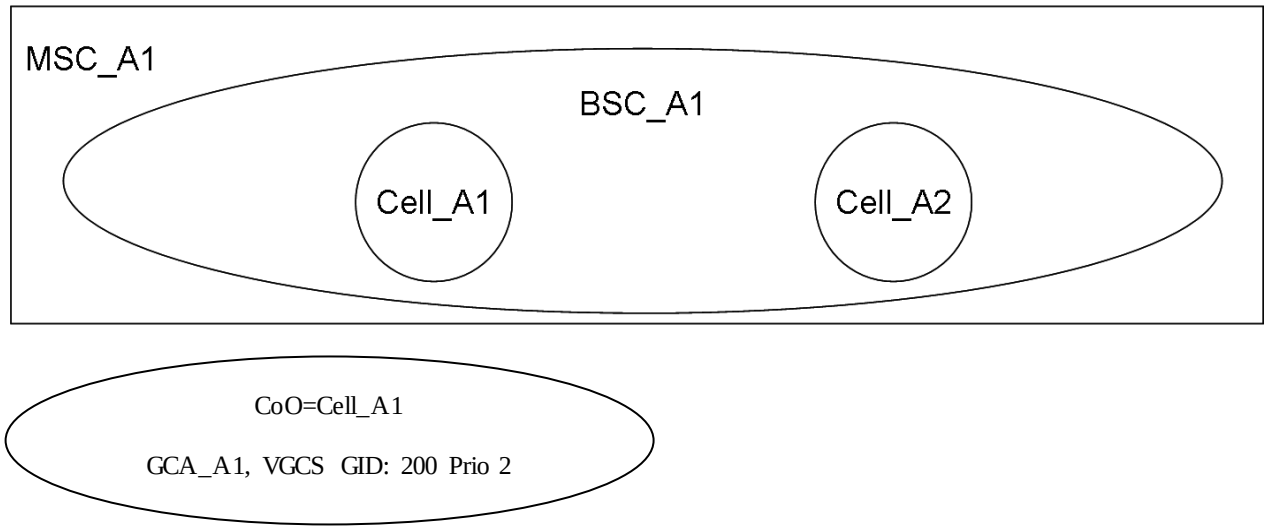
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 9.2.5.1 | 2.2.1 | EN301515 |

**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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>MS_A2 and MS_A3 receive notification of the incoming call.<br>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*

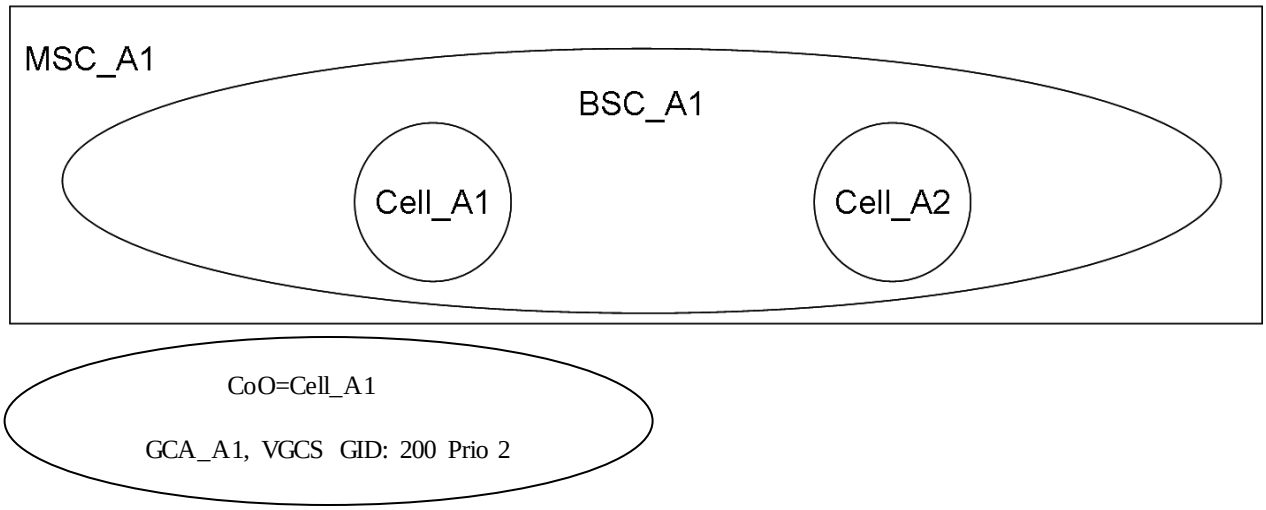
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 9.2.5.1 | 2.2.1 | EN301515 |

**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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>MS_A2 and MS_A3 receive notification of the incoming call.<br>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 | |

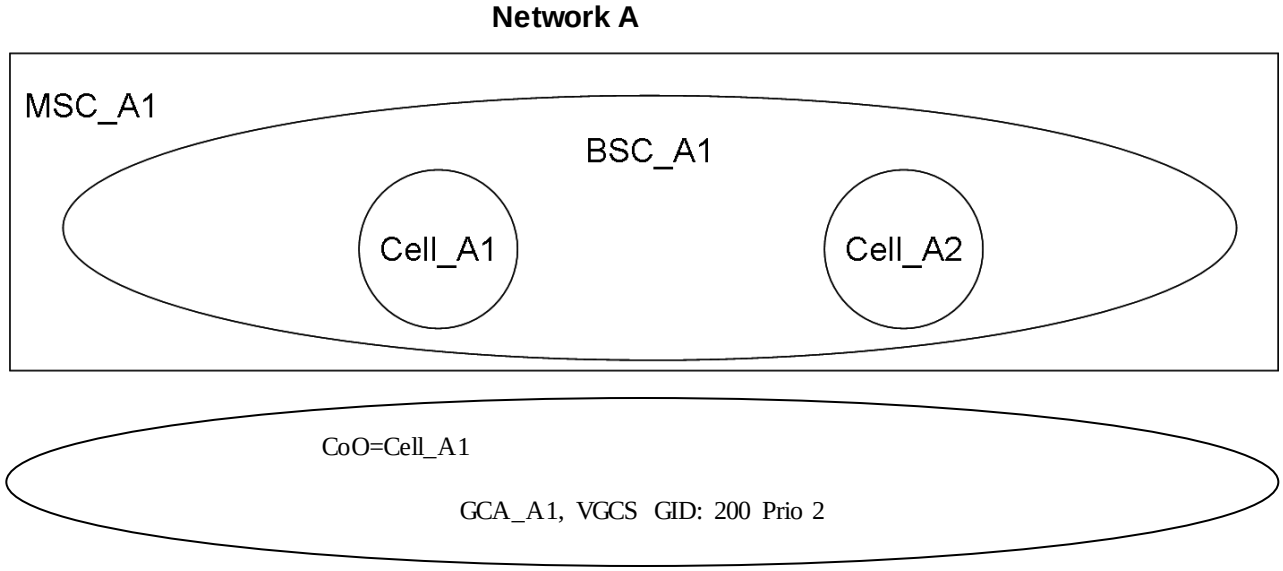
### *5.8.38 VGCS first talker notification (MS dedicated mode, incoming PTP call, non roaming case)*

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.2.1<br>5.2.2.43<br>9.2.5.1 | 2.2.1<br>5.5.19<br>5.5.20<br>5.5.21<br>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**




| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_A2.<br>MS_A2, MS_A3 receives notification of the incoming VGCS call (GID 200).<br>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)*

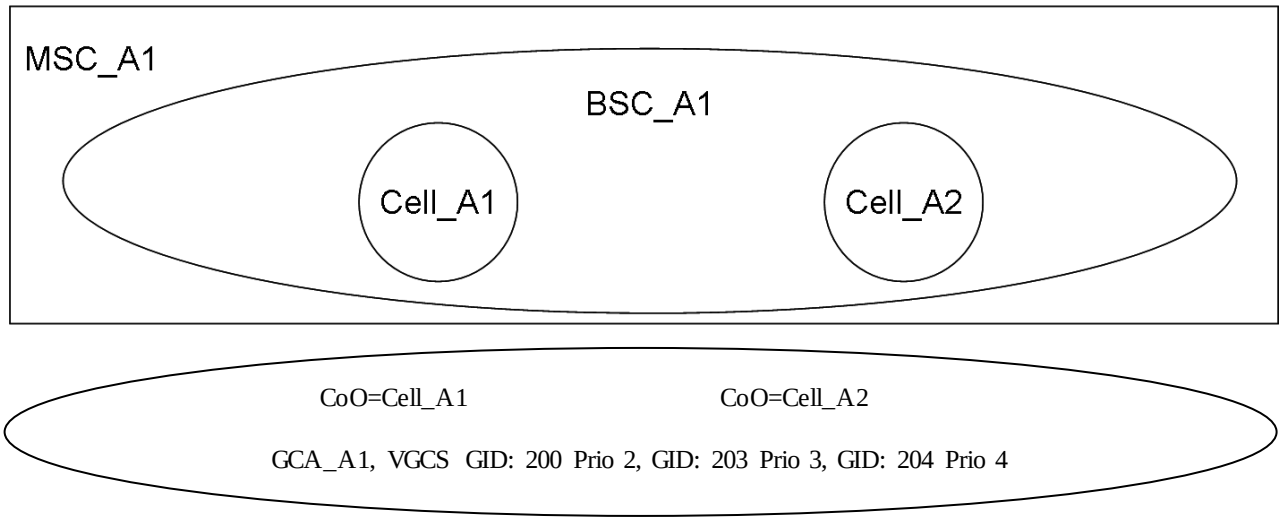
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.2.1<br>5.2.2.47<br>9.2.5.1 | 2.2.1<br>5.5.19<br>5.5.20<br>5.5.21 | |

**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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_A2.<br>MS_A2 receives a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2.<br>A group call channel (GCCH) is allocated in cell_A1.<br>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 | |

### *5.8.41 VGCS first talker notification (MS dedicated mode, incoming PTP call, roaming)*

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.2.1<br>5.2.2.43<br>9.2.5.1 | 2.2.1<br>5.5.19<br>5.5.20<br>5.5.21<br>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).

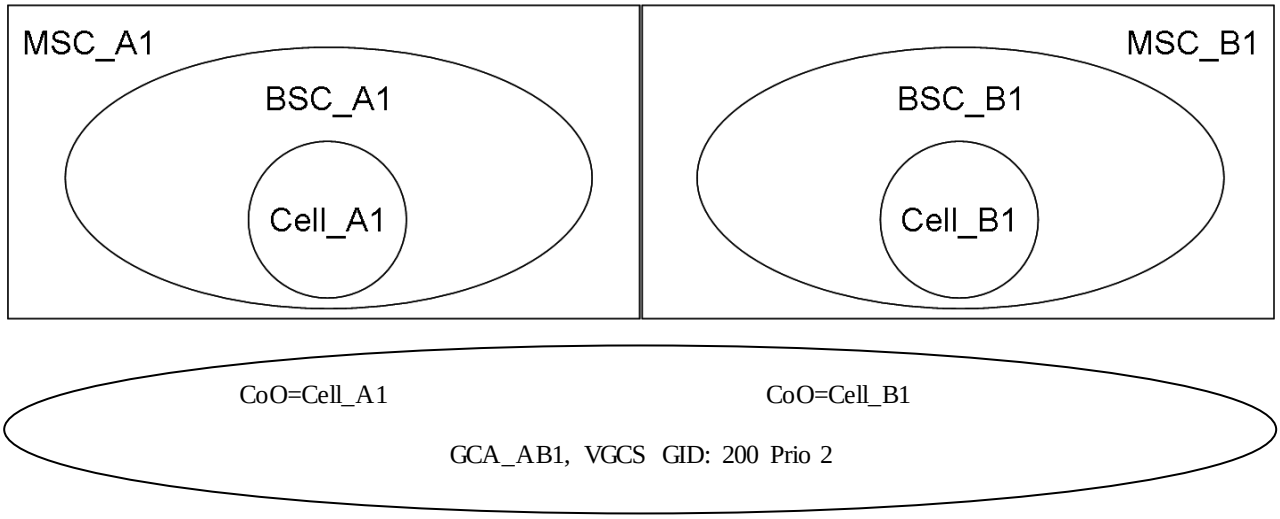
Step 6: Mobile subscriber of network B originates VGCS call in VPLMN (MSC_B1 anchor).

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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A1, MS_B1 and MS_A3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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. | |

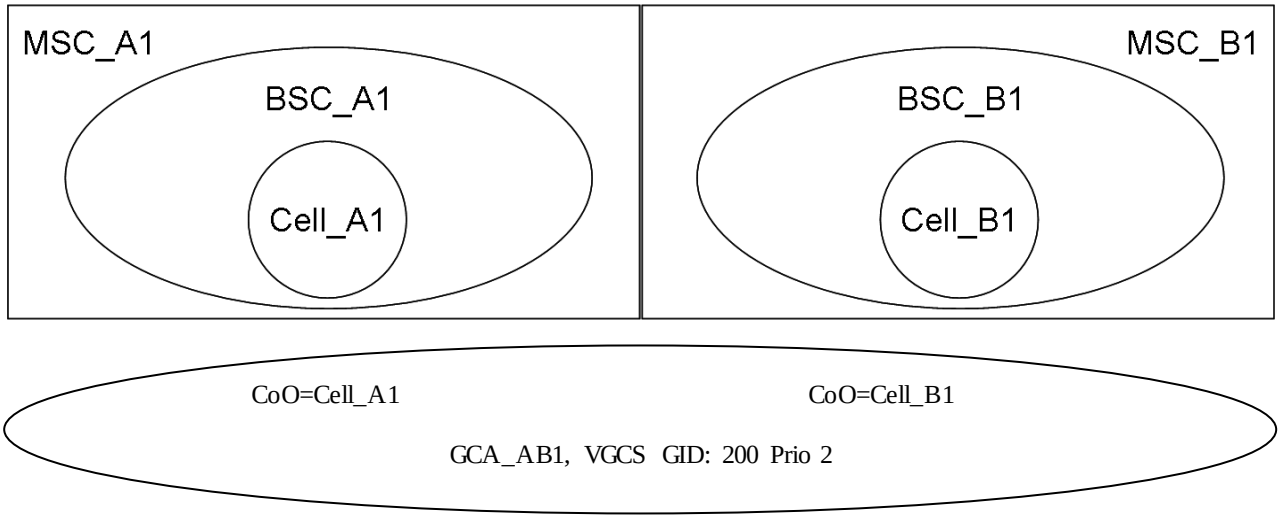
**Step 4: Mobile subscriber of network A originates VGCS call in VPLMN (MSC_A1 anchor)**

| Step | Action | Expected result(s) |
|---|---|---|
| 1) | Service subscriber MS_A3 originates VGCS call (GID 200). | VGCS call (GID 200) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_B3 and MS_B1 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A1, MS_B1 and MS_A3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_B3 and MS_B1 receive a notification about the incoming VGCS call (GID 200).<br>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<br>5.2.2.47<br>9.5.2.1 | 2.2.1<br>5.5.19<br>5.5.20<br>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).

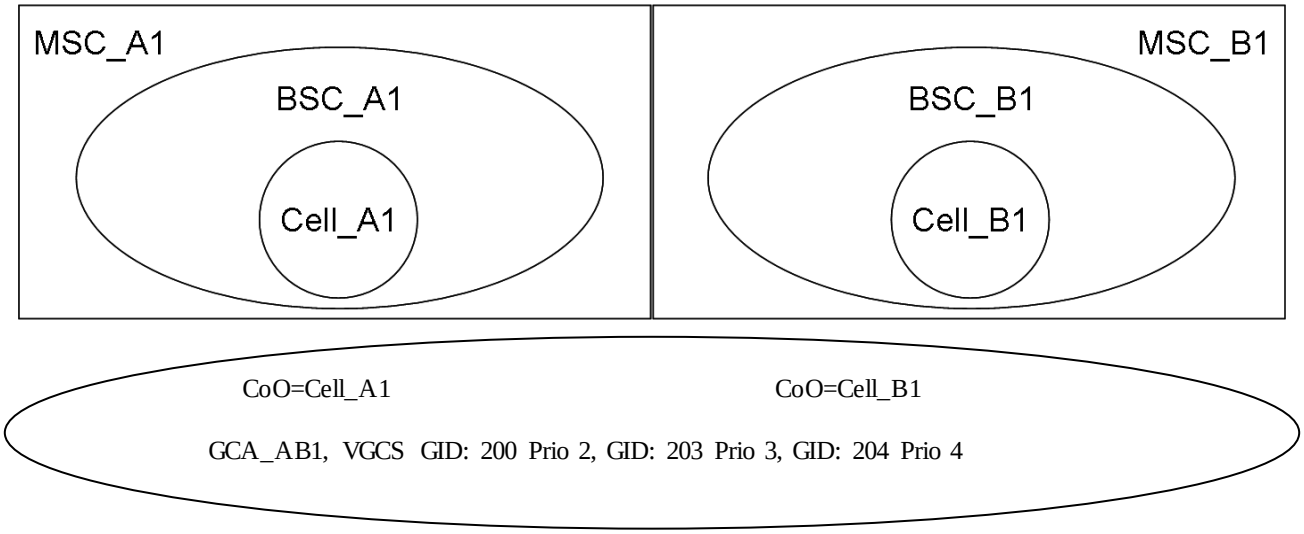
Step 22: Mobile subscriber of network A originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network B in HPLMN (MSC_B1 anchor).

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**

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




| **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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>So long the dedicated channel is not released, MS_A1 has two-way voice path. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_A2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_A2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_B4 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_B4 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_B2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_B2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_A4 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_A4 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_42 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_B2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS (GID 203).<br>So long the dedicated channel is not released, MS_B4 has two-way voice path.<br>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.<br>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). | |

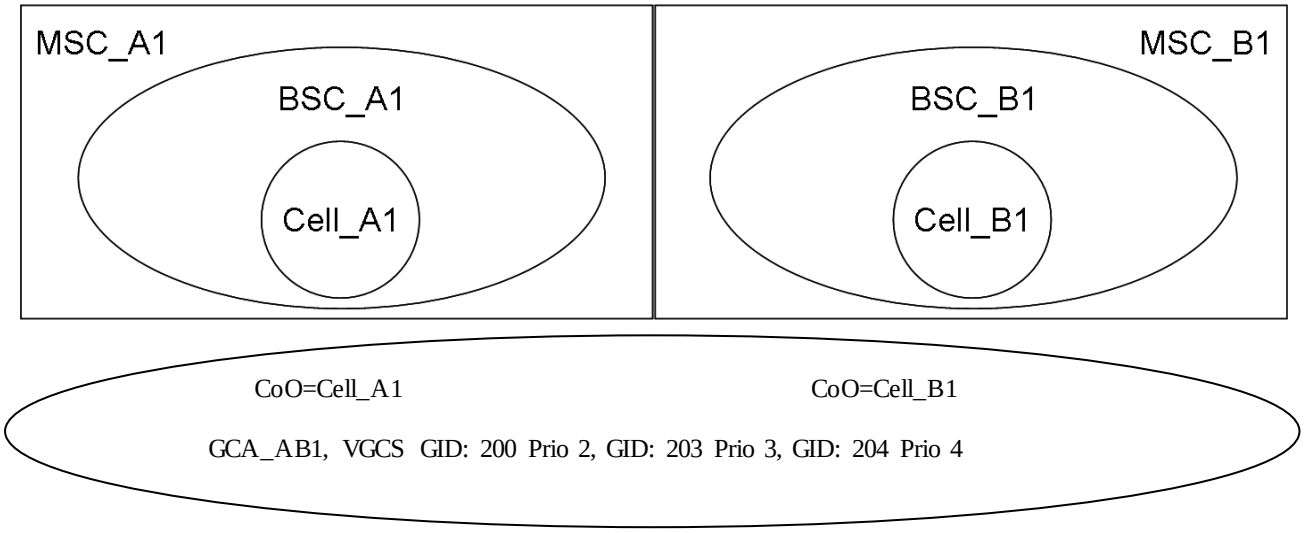
**Step 12: Mobile subscriber of network B originates VGCS call in HPLMN. Second VGCS call originated by mobile subscriber of network A in HPLMN (MSC_A1 anchor)**

| Step | Action | Expected result(s) |
|---|---|---|
| 1) | Service subscriber MS_B1 originates VGCS call (GID 200). | VGCS call (GID 200) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_A2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_A2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_A2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_B4 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A1, MS_A3 and MS_B1 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_B4 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_B2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_B2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_A4 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_A4 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_42 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_B1 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A2, MS_A4 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_B2 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A2, MS_A4 and MS_B2 receive a notification about the incoming VGCS (GID 203).<br>So long the dedicated channel is not released, MS_B4 has two-way voice path.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A3 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A4, MS_B2 and MS_B4 receive a notification about the incoming VGCS call (GID 203).<br>So long the dedicated channel is not released, MS_A2 has two-way voice path.<br>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.<br>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 | |

### *5.8.44 VGCS first talker notification (MS dedicated mode, incoming REC, non roaming case)*

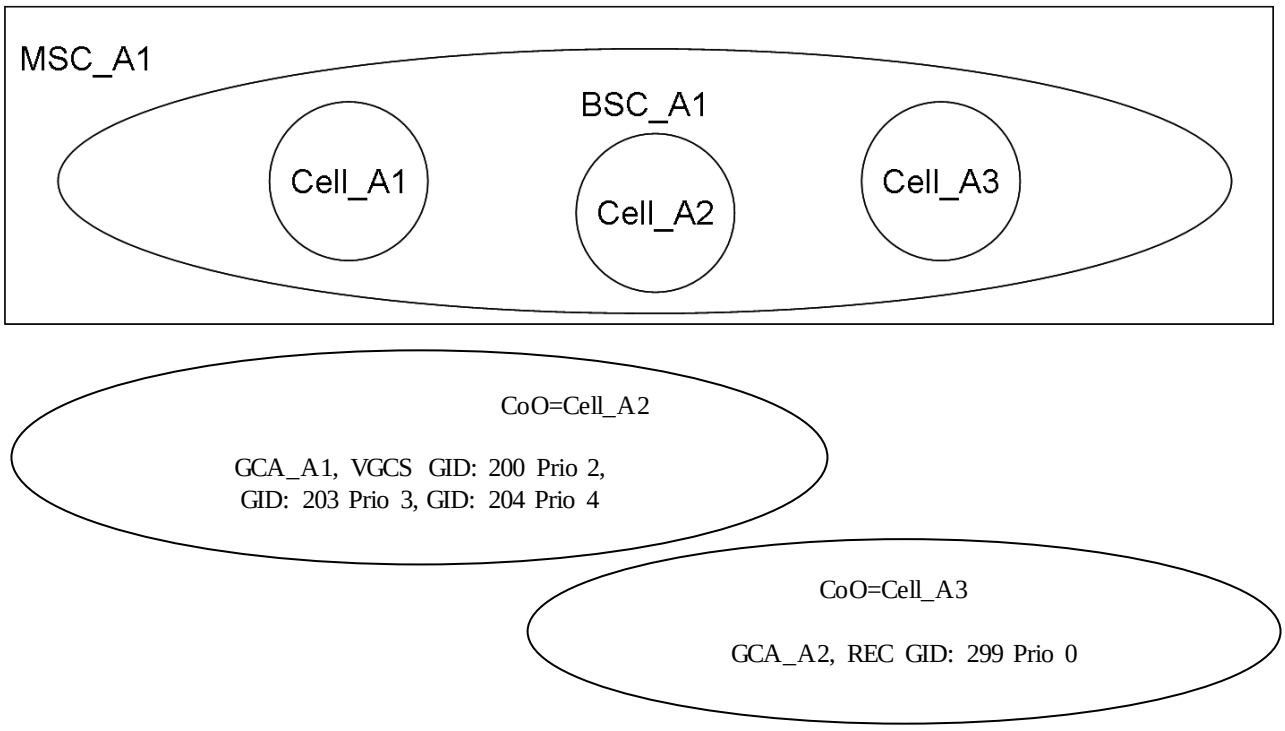
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.2.1<br>5.2.2.47<br>9.2.5.1<br>13.3.1 | 2.2.1<br>5.5.19<br>5.5.20<br>5.5.21 | |

**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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2.<br>A group call channel (GCCH) is allocated in cell_A1.<br>MS_A1, MS_A2 and MS_A4 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A3.<br>A group call channel (GCCH) is allocated in cell_A2.<br>MS_A6 receives a notification about the incoming REC (GID 299).<br>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).<br>The uplink on DCH of MS_A3 for the VGCS call (GID 200) will be released automatically.<br>Uplink free message is send in cell_A1 and cell_A2. |
| 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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>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<br>5.2.2.47<br>9.2.5.1<br>13.3.1 | 2.2.1<br>5.5.19<br>5.5.20<br>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).

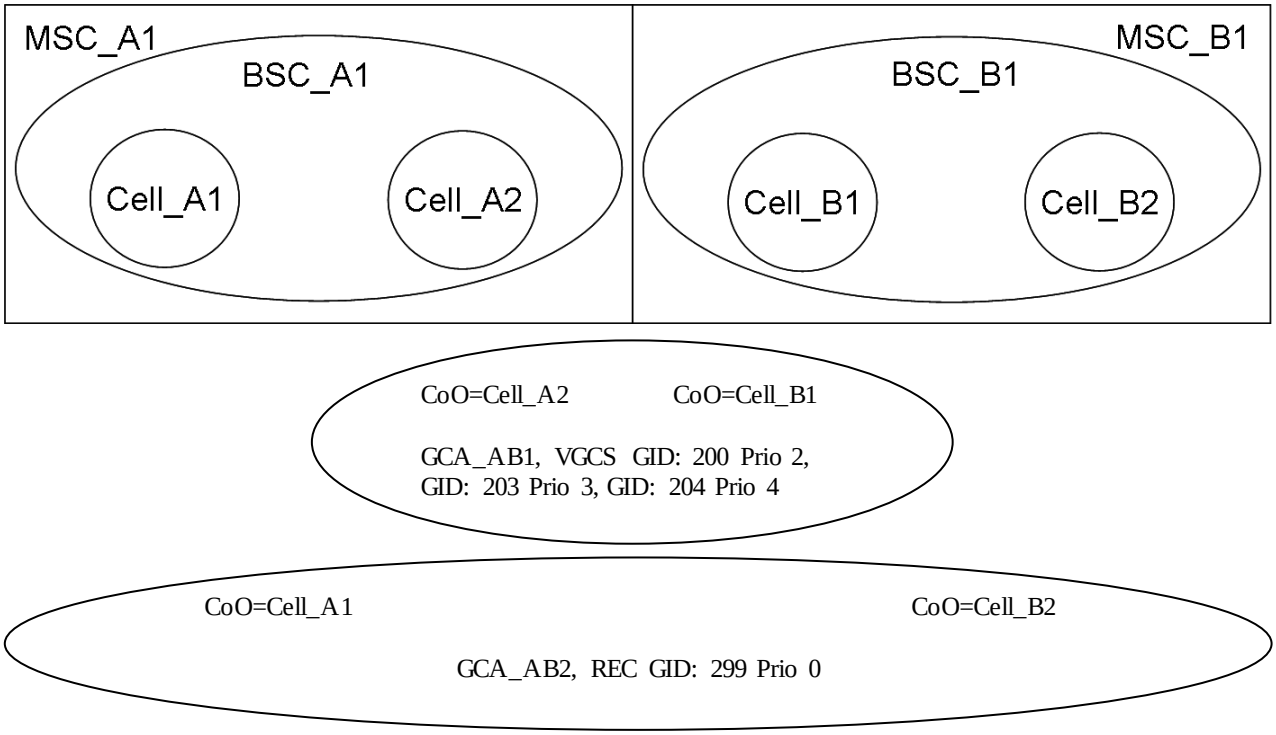
Step 6: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_B1 anchor).

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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_A4 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_A2, cell_B1 and cell_B2.<br>MS_A2, MS_B1 and MS_B2 receiving a notification about the incoming REC (GID 299).<br>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).<br>The uplink on DCH of MS_B4 for the VGCS call (GID 200) will be released automatically.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_A4 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1, cell_A2 and cell_B2.<br>MS_A1, MS_A2 and MS_B2 receiving a notification about the incoming REC (GID 299).<br>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).<br>The uplink on DCH of MS_B4 for the VGCS call (GID 200) will be released automatically.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A2.<br>MS_A3, MS_B3 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_A2, cell_B1 and cell_B2.<br>MS_A2, MS_B1 and MS_B2 receiving a notification about the incoming REC (GID 299).<br>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).<br>The uplink on DCH of MS_A4 for the VGCS call (GID 200) will be released automatically.<br>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.<br>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). | |

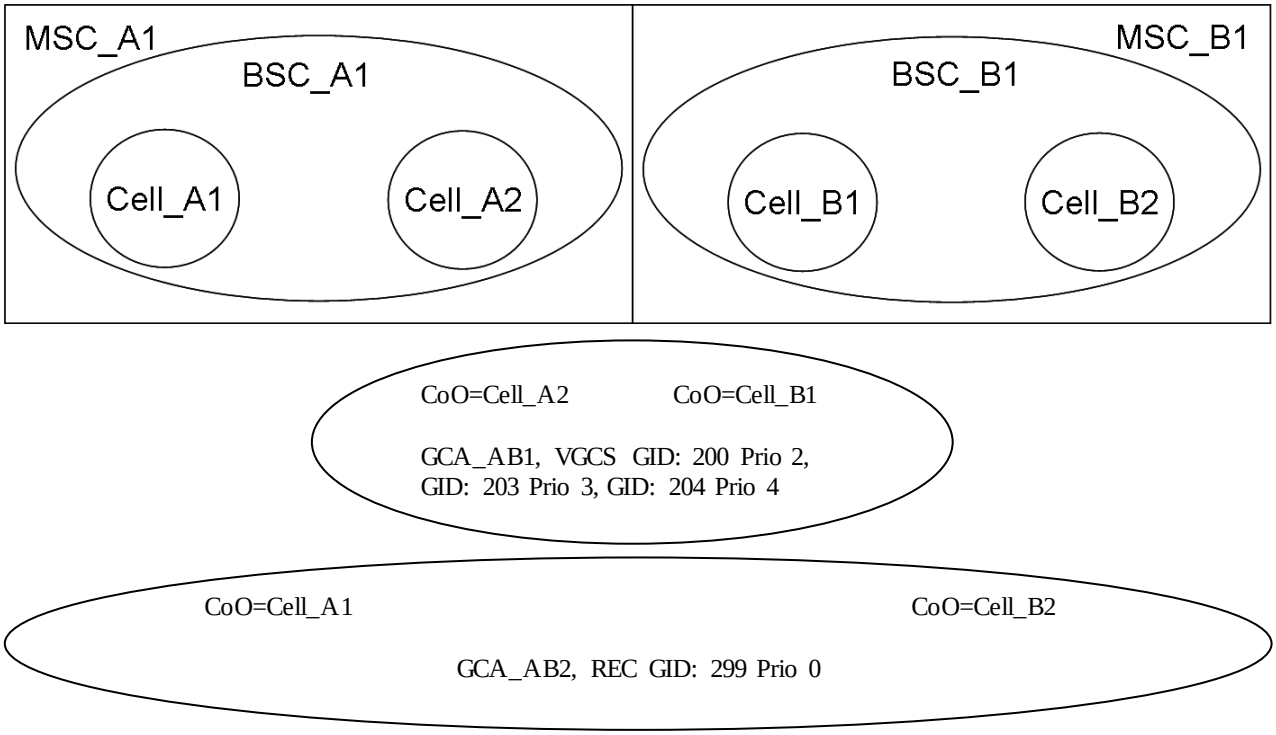
**Step 4: Mobile subscriber of network A originates VGCS call in VPLMN and mobile subscriber of network B in HPLMN originates a REC (MSC_A1 anchor)**

| Step | Action | Expected result(s) |
|---|---|---|
| 1) | Service subscriber MS_A4 originates a VGCS call (GID 200). | VGCS call (GID 200) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A2.<br>MS_A3, MS_B3 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1, cell_A2 and cell_B2.<br>MS_A1, MS_A2 and MS_B2 receiving a notification about the incoming REC (GID 299).<br>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).<br>The uplink on DCH of MS_A4 for the VGCS call (GID 200) will be released automatically.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_A4 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_A2, cell_B1 and cell_B2.<br>MS_A2, MS_B1 and MS_B2 receiving a notification about the incoming REC (GID 299).<br>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).<br>The uplink on DCH of MS_B4 for the VGCS call (GID 200) will be released automatically.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A2.<br>A group call channel (GCCH) is allocated in cell_B1.<br>MS_A3, MS_A4 and MS_B3 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1, cell_A2 and cell_B2.<br>MS_A1, MS_A2 and MS_B2 receiving a notification about the incoming REC (GID 299).<br>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).<br>The uplink on DCH of MS_B4 for the VGCS call (GID 200) will be released automatically.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A2.<br>MS_A3, MS_B3 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_A2, cell_B1 and cell_B2.<br>MS_A2, MS_B1 and MS_B2 receiving a notification about the incoming REC (GID 299).<br>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).<br>The uplink on DCH of MS_A4 for the VGCS call (GID 200) will be released automatically.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A2.<br>MS_A3, MS_B3 and MS_B4 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1, cell_A2 and cell_B2.<br>MS_A1, MS_A2 and MS_B2 receiving a notification about the incoming REC (GID 299).<br>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).<br>The uplink on DCH of MS_A4 for the VGCS call (GID 200) will be released automatically.<br>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.<br>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 | |

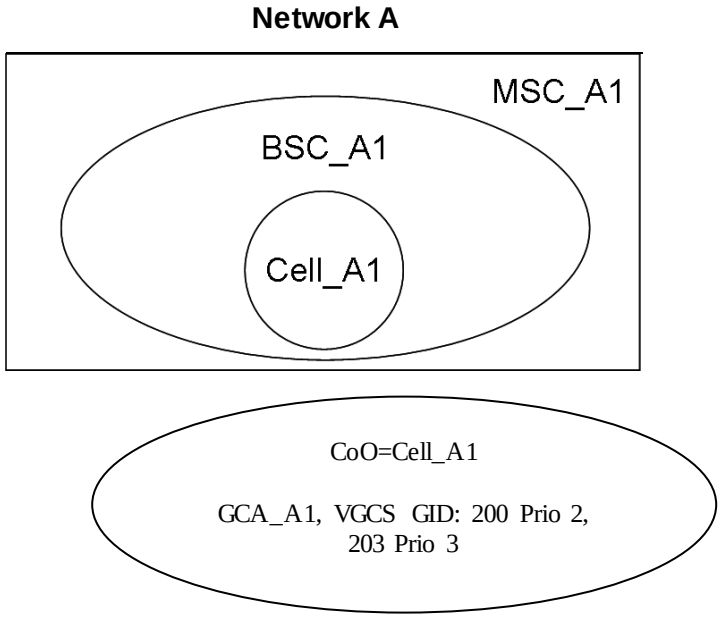
### *5.8.46 Multiple VGCS membership (non roaming case)*

| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 2.2.14<br>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**




| |
|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>MS_A2, MS_A3 and MS_A4 receive a notification about the incoming VGCS call (GID 200).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>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.<br>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<br>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).

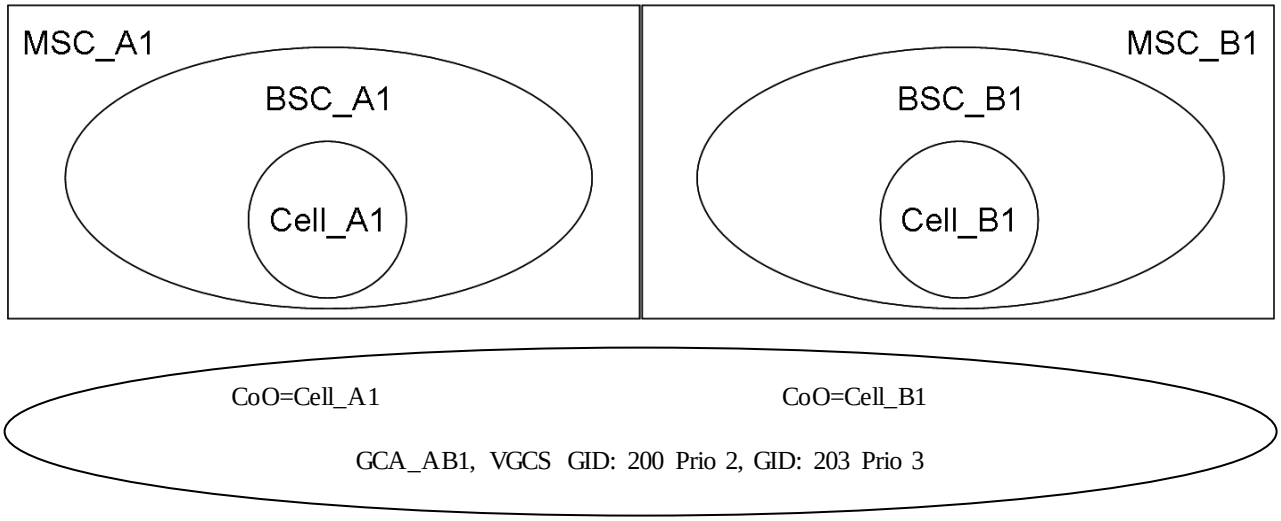
Step 6: Mobile subscriber of network B originates VGCS call in VPLMN and mobile subscriber of network A in HPLMN leaves ongoing VGCS and originates second VGCS call (MSC_B1 anchor).

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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>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).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>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).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>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).<br>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. |
| 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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>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.<br>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. |
| 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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>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).<br>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. |

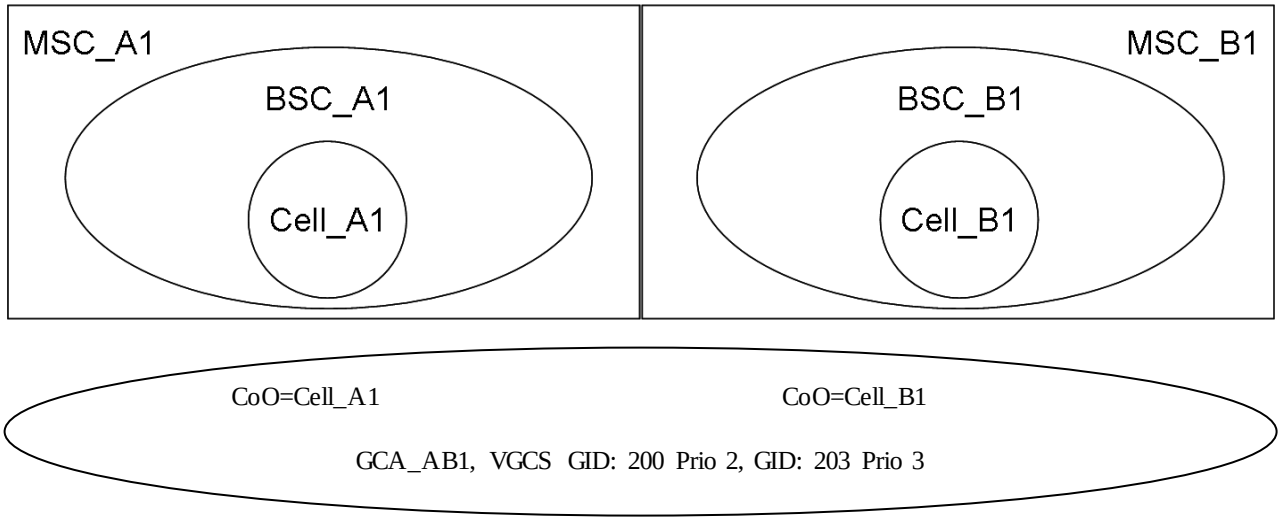
| Step | Action | Expected result(s) |
|---|---|---|
| 4) | MS_A3 releases the uplink. | Uplink free message is send in cell_A1 and cell_B1 and the DCH is correctly released. |
| 5) | MS_A3 takes the uplink on GCCH. | MS_A3 has two-way voice path. MS_A1, MS_A2, MS_A4, MS_B1, MS_B2, MS_B3 and MS_B4 are 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. |
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>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.<br>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). |

| Step | Action | Expected result(s) |
|---|---|---|
| 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. |
| 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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>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).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>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.<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>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).<br>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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>A group call channel (GCCH) is allocated in cell_B1.<br>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.<br>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 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>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).<br>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. |
| 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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>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.<br>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. |
| 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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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) |
|---|---|---|
| 1) | Service subscriber MS_A3 originates a VGCS call (GID 200). | VGCS call (GID 200) is correctly established.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>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).<br>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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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. |
| 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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_B1.<br>A group call channel (GCCH) is allocated in cell_A1.<br>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.<br>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). |

| Step | Action | Expected result(s) |
|---|---|---|
| 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. |
| 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. |

| Step | Action | Expected result(s) |
|---|---|---|
| 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*

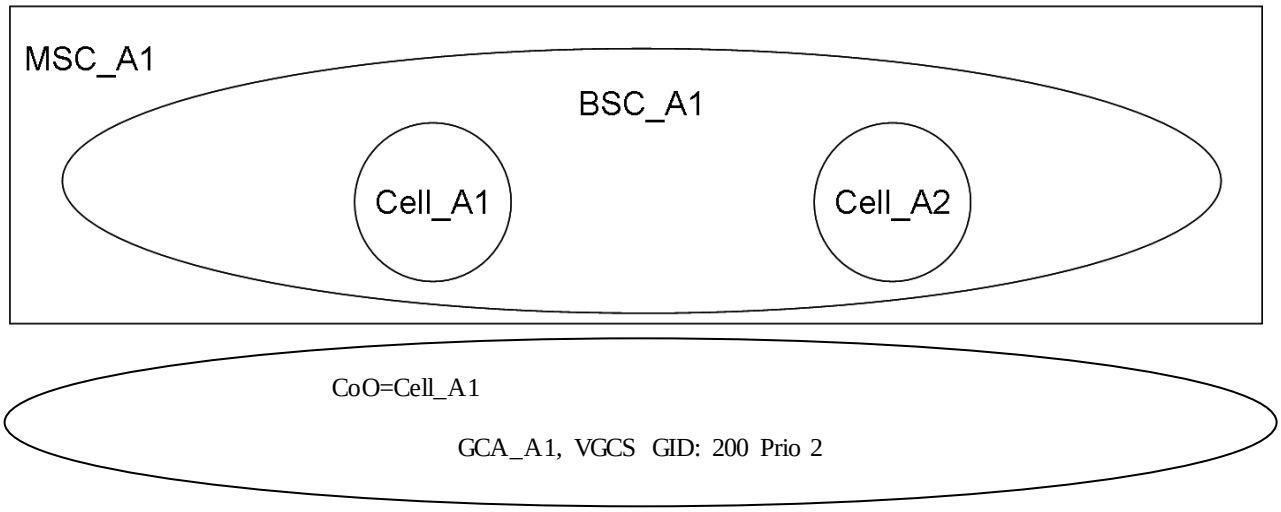
| Reference to | EIRENE FRS V7 | EIRENE SRS V15 | other |
|---|---|---|---|
| | 9.2.5.1 | 2.2.1 | |

**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.<br>A dedicated channel (DCH) and a group call channel (GCCH) are allocated in cell_A1.<br>MS_A2 receives notification of the incoming call.<br>So long the dedicated channel is not released, MS_A1 has two-way voice path.<br>Cell_A2 is locked. No GCCH can be allocated in this cell.<br>'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 | |

**-End of this document -**