

## ERTMS/ETCS

### FFFIS STM Test Specification Traceability of testing the packets specified in the FFFIS STM Application Layer

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Company	Technical Approval	Management approval
ALSTOM		
AZD		
CAF		
HITACHI RAIL STS		
MERMEC		
SIEMENS		
THALES		

## 1. MODIFICATION HISTORY

Issue Number Date	Section Number	Modification / Description	Author
0.0.1 2004-12-21	All	Creation of the document. List of Test Cases for Functional Identities 3 (ETCS->STM) and 12 (Override) included.	P. Lührs (Siemens AG)
0.0.2 2005-01-14	5	List of Test Cases for Functional Identities 4 (STM->ETCS), 10 (Data Entry/Data View) and 11 (Test) included.	A. Schoevaerts (ALSTOM)
0.0.3 2005-01-18	5	List of Test Cases for Functional Identities 5a (STM->STM) included.	P. Lührs (Siemens AG)
0.0.4 2005-01-20	5	List of Test Cases for Functional Identities 1 (SOM) and 2 (ASU) included.	R. Ramos Invensys Rail
0.0.5 2005-01-25	5	List of Test Cases for FI 6 (DA) and 9 (FA) included.	F. Bernaudin (Ansaldo)
0.0.6 2005-01-27	5	Add the new DA test case (6.15.0.0.0) for testing packet 15 & 43.  List of Test Cases for Functional Identities 5b, 5c, 5c1 (STM->STM) included.  Update of list of Test Cases for Functional Identities 9a, 9b, 9c, 9d, 9e (FA).	F. Bernaudin (Ansaldo)
0.0.7 2005-01-27	5	Review Comments included.	P. Lührs (Siemens AG)
0.1.0 2005-01-27		Editorial changes for delivery.	P. Lührs (Siemens AG)
1.0.0 13.10.2005		Editorial changes for delivery	R. Ramos Invensys Rail
2.9.1 2013-01-30	All	Updated to be in line with Subset 35 issue 3.0.0 date 2010-02-29, SRS issue 3.3.0 date 2012-03-07 and ETCS DMI specification issue 3.3.0 date 2012-03-01	F. Dönges (Thales)
2.9.2 2013-08-30	All	Updated according to comments from 2nd internal review and from ERA traceability review	F. Dönges (Thales)

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Issue Number Date	Section Number	Modification / Description	Author
2.9.3 2013-10-31	5	Update according to impact from CR 1173 and CR 1148	F. Dönges (Thales)
2.9.4 2014-02-28	No change	No change to this part of the Subset	Thomas Mandry (Alstom)
3.0.0 2014-04-01	Front page	Baseline 3 first Maintenance Release version	Thomas Mandry (Alstom)
3.0.1 2015-08-17	5	CR 1278: impact from CRs 1094 & 1242 and from STMWP review	F. Dönges (Thales)
3.0.2 2015-10-19	4, 5	CR 1278: Updated according to SUBSET-074v301ERAreview	F. Dönges (Thales)
3.1.0 2015-12-16	-	Baseline 3 2 <sup>nd</sup> release version	Thomas Mandry (Alstom)
3.1.1 2022-09-29	Front page 5	Update of company list CR1338: "airgap" changed to "trackside"	Thomas Mandry (Alstom)
3.9.1 25/11/22	-	Formal update for the 2 <sup>nd</sup> consolidation review for Baseline 4 1 <sup>st</sup> release version	Sven Adomeit (Siemens)
3.9.2 2023-02-16	-	Formal update for the 3 <sup>rd</sup> consolidation review for Baseline 4 1 <sup>st</sup> release version	Thomas Mandry (Alstom)
3.9.4 2023-06-20	-	Formal update for the 4 <sup>th</sup> consolidation review for Baseline 4 1 <sup>st</sup> release version	Thomas Mandry (Alstom)
4.0.0 05/07/2023	-	Baseline 4 1 <sup>st</sup> release version	Thomas Mandry (Alstom)



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## 3. REFERENCES

Ref. N°	Document Reference	Title
[1]	SUBSET-026	System Requirements Specification
[2]	SUBSET-035	Specific Transmission Module FFFIS
[3]	SUBSET-058	FFFIS STM Application Layer



## 4. SCOPE

- 4.1.1.1 This document is part of the FFFIS STM Test Specification (SUBSET-074).
- 4.1.1.2 The scope of this document is to provide the traceability between the specification of the information transmitted via the PROFIBUS [3] and the FFFIS STM Test Specification.
- 4.1.1.3 Chapter 5 of this document includes a list of all packets specified in [3] which are transmitted via the PROFIBUS according to the FFFIS STM Specification. For each packet all the test cases of the FFFIS STM Test Specification, in which the packets are used, are listed. If a packet is not used in the test cases of the FFFIS STM Test Specification, a justification is added to explain why the packet is not tested.



## 5. TRACEABILITY LIST

Packet ID	Packet Name	Tested In Test Case	Comment
STM-1	STM/ETCS function version number	2a.1 - 2a.25, 3g.1, 3g.2, 6g.1, 12a.1	
STM-2	ERTMS/ETCS on-board physical addresses and safety levels	2a.4 - 2a.24	
STM-5	ETCS status data	1a.1 - 1a.8, 1b.1, 1b.2, 2a.4 - 2a.24, 3a.5, 3a.6, 3a.8, 3b.1, 3b.3, 3b.6, 3b.9, 3d.1, 3d.2, 3f.1, 3f.2, 3g.1, 3g.2, 3h.1, 3h.2, 3i.1, 3j.1, 4a.1 - 4a.3, 4b.1, 4c.1, 4c.2, 4d.1, 4d.2, 4e.1, 4e.2, 4g.1, 5c.1 - 5c.11, 5d.1 - 5d.7, 5e.1, 5e.2, 7h.1 - 7h.9, 7i2.1 - 7i2.3, 7i2.7 - 7i2.9, 7i2.13, 7i2.14, 7i3.1 - 7i3.6, 12a.1, 12a.2, 12b.2, 12c.1 - 12c.3	
STM-6	Override activation	7g.11 - 7g.14, 12b.1	
STM-7	Override status	12a.1, 12a.2, 12b.1, 12c.3	
STM-8	Odometer multicast	2a.7, 2a.8, 6f.1, 6f.2, 6i.1, 6i.2	
STM-9	Odometer parameters to STM	2a.7 - 2a. 23, 6f.1, 6f.2	
STM-13	State request from STM	1a.1, 1a.7, 1a.8, 2a.5 - 2a.24, 5e.1, 5e.2, 7i3.1 - 7i3.4, 10a.1, 10a.2 - 10a.6, 10e.1 - 10e.4	
STM-14	State order to STM	1a.1 - 1a.8, 1b.1, 1b.2, 2a.2, 2a.5 - 2a.25, 3a.1 - 3a.3, 3a.5, 3a.6, 3a.8, 3b.1, 3b.3, 3b.6, 3b.9, 3c.1, 3c.2, 3c.4, 3d.1, 3d.2, 3e.1, 3e.2, 3f.1, 3f.2, 3g.1, 3g.2, 3h.1, 3h.2, 3i.1, 3j.1, 4a.1 - 4a.3, 4b.1, 4c.1, 4c.2, 4d.1, 4d.2, 4e.1, 4e.2, 4g.1, 5a.1 - 5a.5, 5b.3, 5c.1 - 5c.9, 5c.11, 5d.1 - 5d.7, 5e.1, 5e.2, 7g.9, 7g.10, 7h.1 - 7h.9, 7i2.1 - 7i2.14, 7i3.1 - 7i3.6, 9a.1, 9b.1, 10a.1 - 10a.6, 10d.3, 10e.1 - 10e.4, 10f.2, 10f.3, 12a.2, 12b.2, 12c.1 - 12c.3	
STM-15	State report from STM	1a.1, 1a.2, 1a.4 - 1a.8, 1b.1, 2a.1 - 2a.25, 3a.1, 3a.3, 3a.5, 3b.1, 3b.3, 3b.6, 3b.9, 3d.1, 3d.2, 3e.1, 3f.1, 3g.1, 3g.2, 3h.1, 3h.2, 3i.1, 3j.1, pre (4a, 4b, 4d, 4e), 4a.1, 4a.2, 4b.1, 4c.1, 4d.1, 4d.2, 4e.1, 4g.1, 5a.1 - 5a.3, 5b.1 - 5b.4, 5c.1 - 5c.11, 5d.1 - 5d.3, 5d.6, 5d.7, 5e.1, 5e.2, 6a.1, 6b.1, 6c.1, 6d.1, 6e.1, 6e.2, 6g.1, 7b2.1 - 7b2.12, 7b3.1 - 7b3.9, 7b4.1 - 7b4.4, 7b5.1 - 7b5.3, 7b6.1 - 7b6.4, 7c2.1 - 7c2.20, 7c3.1 - 7c3.10, 7c5.1 - 7c5.12, 7c6.1 - 7c6.8, 7c7.1 - 7c7.4, 7c8.1 - 7c8.7, 7d.1 - 7d.17, 7e.1 - 7e.40, 7f.2 - 7f.9, 7g.1 - 7g.22, 7h.1 - 7h.9, 7i2.1 - 7i2.4, 7i2.6 - 7i2.10, 7i2.12 - 7i2.14, 7i3.1 - 7i3.6,	

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Packet ID	Packet Name	Tested In Test Case	Comment
		9a.1, 9a.2, 9b.1 - 9b.3, 10a.1 - 10a.6, 10b.1 - 10b.5, 10c.1, 10d.1 - 10d.4, 10e.1 - 10e.4, 10f.2, 10f.3, 11a.1, 12a.1, 12a.2, 12b.1, 12b.2, 12c.1 - 12c.3	
STM-16	Transition variables STM max speed from STM	3b.1, 3b.6, 3b.9, 5b.1 - 5b.3, 5b.4, 5c.1	
STM-17	Transition variables STM system speed and distance from STM	3b.3, 5b.1, 5b.2	
STM-18	National Trip Procedure	4d.1, 4d.2, 4g.1, 5c.7 - 5c.9, 5d.6, 12b.2	
STM-20	Antenna/BTM ID	8a.1, 8a.2	
STM-21	Test Procedure Permission Request	11a.1	
STM-22	Test Procedure Permission	11a.1	
STM-23	End of Test Procedure	11a.1	
STM-30	Driver language transmission	1a.4, 2a.4 - 2a.24	
STM-31	Active DMI channel	2a.4 - 2a.24	
STM-32	Button Request	1a.1, 1a.7, 3g.1, 3g.2, pre (4a, 4b, 4d, 4e), 5c.7, 5c.8, 7c2.1 - 7c2.20, 7c3.1 - 7c3.10, 7c5.1 - 7c5.12, 7c6.1 - 7c6.8, 7c7.1 - 7c7.4, 7c8.1 - 7c8.7, 7g.1, 7g.2, 7g.4, 7g.6, 7g.8, 7g.10, 7g.12, 7g.14, 7g.16, 7g.18 - 7g.20, 7h.2 - 7h.9	
STM-34	Button event report	7c3.1 - 7c3.10, 7g.1, 7g.2, 7g.4, 7g.6, 7g.8, 7g.10, 7g.12, 7g.14, 7g.16, 7g.18 - 7g.20	
STM-35	Indicator request	1a.1, 1a.7, 3g.1, 3g.2, pre (4a, 4b, 4d, 4e), 5c.7, 5c.8, 7b2.1 - 7b2.12, 7b3.1 - 7b3.9, 7b4.1 - 7b4.4, 7b5.1 - 7b5.3, 7b6.1 - 7b6.4, 7g.2 - 7g.22, 7h.2 - 7h.9	
STM-38	Text message	3g.1, 3g.2, pre (4a, 4b, 4d, 4e), 5c.7, 5c.8, 7d.1 - 7d.17, 7h.1 - 7h.9	
STM-39	Delete text message	3g.1, 3g.2, 7d.1 - 7d.16	
STM-40	Acknowledgement reply	7d.7 - 7d.14	
STM-43	Speed and distance supervision information	3g.1, 3g.2, pre (4a, 4b, 4d, 4e), 5b.1 - 5b.4, 7f.2 - 7f.9, 7h.2 - 7h.6, 7h.8, 7h.9	
STM-45	ETCS trackside message for STM	3c.1, 6i.1, 6i.2	
STM-46	Sound command	3g.1, 3g.2, pre (4a, 4b, 4d, 4e), 7e.1 - 7e.40, 7h.2 - 7h.5, 7h.7 - 7h.9	
STM-47	ETCS BTM status message to STM	8b.1	
STM-128	STM emergency and service brake	5c.7, 5c.8, 6e.1, 6e.2, 7g.15, 7g.16	





Packet ID	Packet Name	Tested In Test Case	Comment
	command to brake interface		
STM-129	STM specific brake control command	6a.1	
STM-130	STM commands to train interface	6b.1, 6c.1	
STM-136	Brake interface emergency and service brake status/availability to STM	2a.5 - 2a.24, 3g.1, 3g.2, 6e.1	
STM-139	Train interface inputs status/availability to STM	2a.6 - 2a.23, 3g.1, 3g.2, 6b.1, 6c.1	
STM-141	Train interface command configuration to STM	2a.6 - 2a.23, 3g.1, 3g.2	
STM-143	Emergency and service brake parameters to STM	2a.5 - 2a.24, 3g.1, 3g.2	
STM-161	STM information to JD	2a.10, 2a.12 - 2a.23, 6d.1	
STM-175	Train Data	2a.9 - 2a.23, 7h.6, 7i3.1, 7i3.2, 10a.1 - 10a.6, 10b.1 - 10b.5, 10e.1 - 10e.4	
STM-176	Train data traction/brake parameters to STM	2a.9 - 2a.23, 7h.6, 7i3.1, 7i3.2, 10a.1 - 10a.6, 10b.1 - 10b.5, 10e.1 - 10e.4	
STM-177	Additional data values and date/time to STM	2a.9 - 2a.23, 6h.1, 7g.3, 7g.4	
STM-178	National Values to STM	2a.9 - 2a.23, 6h.1	
STM-179	Specific NTC Data Entry request	2a.11, 7h.6, 7i3.1, 7i3.2, 10a.1, 10a.2, 10a.4 - 10a.6, 10b.1, 10b.3 - 10b.5, 10e.1 - 10e.4	
STM-180	Specific NTC Data values	10a.1, 10a.2, 10a.5, 10a.6, 10b.1, 10e.1 - 10e.4	
STM-181	Specific NTC Data Need	2a.4, 2a.6 - 2a.23, 10d.1 - 10d.4	
STM-182	Request for Specific NTC Data View values	10c.1, 10d.3, 10f.2, 10f.3	
STM-183	Specific NTC Data View values	10c.1, 10f.2, 10f.3	
STM-184	Specific NTC Data Entry flag	2a.9 - 2a.23, 7h.6, 7i3.1, 7i3.2, 10a.1 - 10a.6, 10b.1 - 10b.5, 10e.1 - 10e.4	