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ERTMS/ETCS	
FFFIS STM Test cases of Functional identity 007 **DMI FUNCTION: TEXT MESSAGES** **Total: 17 Test cases**	
REF: SUBSET-074-2-7-d ISSUE: 3.1.0 DATE: 2015-12-16	

Company	Technical Approval	Management approval
ALSTOM		
ANSALDO		
AZD		
BOMBARDIER		
CAF		
SIEMENS		
THALES		

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Modification History

Issue Number Date	Section Number	Modification / Description	Author
2.9.1 2013-01-30	All	Created 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	Bombardier Astrid Geck
2.9.2 2013-08-30	All	Updated according to comments from 2nd internal review and from ERA traceability review	Bombardier Astrid Geck
2.9.3 2013-10-31		Updated according to CR 1158 (considering impact from CR 1173)	Bombardier Astrid Geck
2.9.4 2014-02-28	No change	No change to this part of the Subset	Thomas Mandry (Alstom)
2.9.5 2014-04-24	Front page	Baseline 3 1st Maintenance pre-release version	Thomas Mandry (Alstom)
3.0.0 2014-05-09	-	Baseline 3 1st Maintenance release version	Philippe Prieels
3.0.1 2015-08-17	7.d.17	CR 1278: impact from CRs 1094 & 1242 and from STMWP review: Remove test step with more than 10 text messages	Bombardier Astrid Geck
3.0.2 2015-10-19	No change to this part of the Subset	CR 1278: Updated according to SUBSET-074v301ERAreview	Thomas Mandry (Alstom)
3.1.0 2015-12-16	-	Baseline 3 2nd release version	Thomas Mandry (Alstom)

Table of Contents

2.4 Text Messages

2.4.1 Test Case 7d.1

TEST CASE HEADER	
Test case identification	DMI Function
	7d1.0.1.(7d2.0.1.1.1.1.0).(1.(1.1.(7d2.0.1.*.1.1.0).1)*.3.0)*.5
	Colour Handling test for text messages: group 1 text messages with <= 20 ASCII characters:
	Text messages with all possible combinations of text and background colour, where text colour <> background colour. Text messages are sent in sequences of 6 or 8 messages with increasing text identifiers, then all text messages are deleted and the next set is sent. No ack requested for text messages.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.3, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38, STM-39
ERTMS/ETCS on-board configuration	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen for test).
Comments and constraints	At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

Starting Conditions	Value	Comments
STM State	DA	
ETCS Mode	SN	
ETCS Level	NTC	
Train State	not relevant	

ETCS Train Data	not relevant	
Active DMI channel Connection	Established	
Other DMI channels Connections	not relevant	
TIU Connection	not relevant	
BIU Connection	not relevant	
JD Connection	not relevant	
TIU Regenerative Brake Command	not relevant	
TIU Magnetic Shoes Brake Command	not relevant	
TIU Eddy Current Brake Command for Emergency Brake	not relevant	
TIU Eddy Current Brake Command for Service Brake	not relevant	
TIU Pantograph Command	not relevant	
TIU Air Tightness Command	not relevant	
TIU Main Switch / Circuit Breaker Command	not relevant	
TIU Traction Cut Off Command	not relevant	
TIU Traction Status	not relevant	
TIU Direction Controller Position Status	not relevant	
TIU Cab Status	Cab A or B active	For the test it is not relevant, what cab is active
BIU Emergency Brake Command	not relevant	
BIU Service Brake Command	not relevant	
BIU Emergency Brake Status	not relevant	
BIU Service Brake Status	not relevant	
NTC isolation status	Not isolated for active STM.	

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	Not relevant for other STMs	

ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action
1	STM requests text message with white on dark blue, no flashing in text group 1, no ack request	PROF	T0	connection of active DMI channel: Message-S1	DMI		Text message is displayed in group 1 with white on dark blue, no flashing in text group 1 ♫
2	STM requests text message with red on dark blue, no flashing in text group 1, no ack request	PROF	T0+5s	connection of active DMI channel: Message-S2	DMI		Text message is displayed in group 1 with red on dark blue, no flashing in text group 1 ♫
3	STM requests text message with yellow on dark blue, no flashing in text group 1, no ack request	PROF	T0+10s	connection of active DMI channel: Message-S3	DMI		Text message is displayed in group 1 with yellow on dark blue, no flashing in text group 1 ♫
4	STM requests text message with black on white, no flashing in text group 1, no ack request	PROF	T0+15s	connection of active DMI channel: Message-S4	DMI		Text message is displayed in group 1 with black on white, no flashing in text group 1 ♫
5	STM requests text message with red on white, no flashing in text group 1, no ack request	PROF	T0+20s	connection of active DMI channel: Message-S5	DMI		Text message is displayed in group 1 with red on white, no flashing in text group 1 ♫
6	STM requests text message with yellow on white, no flashing in text group 1, no ack request	PROF	T0+25s	connection of active DMI channel: Message-S6	DMI		Text message is displayed in group 1 with yellow on white, no flashing in text group 1 ♫
7	STM deletes all text messages	PROF	T0+30s	connection of active DMI channel: Message-S7	DMI		All STM text messages are deleted from group 1
8	STM requests text message with black on red, no flashing in text group 1, no ack request	PROF	T0+35s	connection of active DMI channel: Message-S8	DMI		Text message is displayed in group 1 with black on red, no flashing in text group 1 ♫
9	STM requests text message with white on red, no flashing in text group 1, no ack request	PROF	T0+40s	connection of active DMI channel: Message-S9	DMI		Text message is displayed in group 1 with white on red, no flashing in text group 1 ♫

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10	STM requests text message with yellow on red, no flashing in text group 1, no ack request	PROF	T0+45s	connection of active DMI channel: Message-S10	DMI		Text message is displayed in group 1 with yellow on red, no flashing in text group 1 ♫
11	STM requests text message with black on yellow, no flashing in text group 1, no ack request	PROF	T0+50s	connection of active DMI channel: Message-S11	DMI		Text message is displayed in group 1 with black on yellow, no flashing in text group 1 ♫
12	STM requests text message with white on yellow, no flashing in text group 1, no ack request	PROF	T0+55s	connection of active DMI channel: Message-S12	DMI		Text message is displayed in group 1 with white on yellow, no flashing in text group 1 ♫
13	STM requests text message with red on yellow, no flashing in text group 1, no ack request	PROF	T0+60s	connection of active DMI channel: Message-S13	DMI		Text message is displayed in group 1 with red on yellow, no flashing in text group 1 ♫
14	STM deletes all text messages	PROF	T0+65s	connection of active DMI channel: Message-S14	DMI		All STM text messages are deleted from group 1
15	STM requests text message with white on blue, no flashing in text group 1, no ack request	PROF	T0+70s	connection of active DMI channel: Message-S15	DMI		Text message is displayed in group 1 with white on blue, no flashing in text group 1 ♫
16	STM requests text message with red on blue, no flashing in text group 1, no ack request	PROF	T0+75s	connection of active DMI channel: Message-S16	DMI		Text message is displayed in group 1 with red on blue, no flashing in text group 1 ♫
17	STM requests text message with yellow on blue, no flashing in text group 1, no ack request	PROF	T0+80s	connection of active DMI channel: Message-S17	DMI		Text message is displayed in group 1 with yellow on blue, no flashing in text group 1 ♫
18	STM requests text message with black on green, no flashing in text group 1, no ack request	PROF	T0+85s	connection of active DMI channel: Message-S18	DMI		Text message is displayed in group 1 with black on green, no flashing in text group 1 ♫
19	STM requests text message with white on green, no flashing in text group 1, no ack request	PROF	T0+90s	connection of active DMI channel: Message-S19	DMI		Text message is displayed in group 1 with white on green, no flashing in text group 1 ♫
20	STM requests text message with red on green, no flashing in text	PROF	T0+95s	connection of active DMI channel: Message-S20	DMI		Text message is displayed in group 1 with red on green, no flashing in

	group 1, no ack request							text group 1 ♫
21	STM requests text message with yellow on green, no flashing in text group 1, no ack request	PROF	T0+100s	connection of active DMI channel: Message-S21	DMI			Text message is displayed in group 1 with yellow on green, no flashing in text group 1 ♫
22	STM requests text message with black on light red, no flashing in text group 1, no ack request	PROF	T0+105s	connection of active DMI channel: Message-S22	DMI			Text message is displayed in group 1 with black on light red, no flashing in text group 1 ♫
23	STM deletes all text messages	PROF	T0+110s	connection of active DMI channel: Message-S23	DMI			All STM text messages are deleted from group 1
24	STM requests text message with white on light red, no flashing in text group 1, no ack request	PROF	T0+115s	connection of active DMI channel: Message-S24	DMI			Text message is displayed in group 1 with white on light red, no flashing in text group 1 ♫
25	STM requests text message with red on light red, no flashing in text group 1, no ack request	PROF	T0+120s	connection of active DMI channel: Message-S25	DMI			Text message is displayed in group 1 with red on light red, no flashing in text group 1 ♫
26	STM requests text message with yellow on light red, no flashing in text group 1, no ack request	PROF	T0+125s	connection of active DMI channel: Message-S26	DMI			Text message is displayed in group 1 with yellow on light red, no flashing in text group 1 ♫
27	STM requests text message with black on light green, no flashing in text group 1, no ack request	PROF	T0+130s	connection of active DMI channel: Message-S27	DMI			Text message is displayed in group 1 with black on light green, no flashing in text group 1 ♫
28	STM requests text message with white on light green, no flashing in text group 1, no ack request	PROF	T0+135s	connection of active DMI channel: Message-S28	DMI			Text message is displayed in group 1 with white on light green, no flashing in text group 1 ♫
29	STM requests text message with red on light green, no flashing in text group 1, no ack request	PROF	T0+140s	connection of active DMI channel: Message-S29	DMI			Text message is displayed in group 1 with red on light green, no flashing in text group 1 ♫
30	STM requests text message with yellow on light green, no flashing in text group 1, no ack request	PROF	T0+145s	connection of active DMI channel: Message-S30	DMI			Text message is displayed in group 1 with yellow on light green, no flashing in text group 1 ♫
31	STM requests text message with	PROF	T0+150s	connection of active DMI channel:	DMI			Text message is displayed in group

	black on blue, no flashing in text group 1, no ack request			Message-S31			1 with black on blue, no flashing in text group 1 ♬
32	STM deletes all text messages	PROF	T0+155s	connection of active DMI channel: Message-S32	DMI		All STM text messages are deleted from group 1
33	STM requests text message with green on dark blue, no flashing in text group 1, no ack request	PROF	T0+160s	connection of active DMI channel: Message-S33	DMI		Text message is displayed in group 1 with green on dark blue, no flashing in text group 1 ♬
34	STM requests text message with light red on dark blue, no flashing in text group 1, no ack request	PROF	T0+165s	connection of active DMI channel: Message-S34	DMI		Text message is displayed in group 1 with light red on dark blue, no flashing in text group 1 ♬
35	STM requests text message with light green on dark blue, no flashing in text group 1, no ack request	PROF	T0+170s	connection of active DMI channel: Message-S35	DMI		Text message is displayed in group 1 with light green on dark blue, no flashing in text group 1 ♬
36	STM requests text message with blue on white, no flashing in text group 1, no ack request	PROF	T0+175s	connection of active DMI channel: Message-S36	DMI		Text message is displayed in group 1 with blue on white, no flashing in text group 1 ♬
37	STM requests text message with green on white, no flashing in text group 1, no ack request	PROF	T0+180s	connection of active DMI channel: Message-S37	DMI		Text message is displayed in group 1 with green on white, no flashing in text group 1 ♬
38	STM requests text message with light red on white, no flashing in text group 1, no ack request	PROF	T0+185s	connection of active DMI channel: Message-S38	DMI		Text message is displayed in group 1 with light red on white, no flashing in text group 1 ♬
39	STM requests text message with light green on white, no flashing in text group 1, no ack request	PROF	T0+190s	connection of active DMI channel: Message-S39	DMI		Text message is displayed in group 1 with light green on white, no flashing in text group 1 ♬
40	STM requests text message with blue on red, no flashing in text group 1, no ack request	PROF	T0+195s	connection of active DMI channel: Message-S40	DMI		Text message is displayed in group 1 with blue on red, no flashing in text group 1 ♬
41	STM deletes all text messages	PROF	T0+200s	connection of active DMI channel: Message-S41	DMI		All STM text messages are deleted from group 1
42	STM requests text message with	PROF	T0+205s	connection of active DMI channel:	DMI		Text message is displayed in group

	green on red, no flashing in text group 1, no ack request			Message-S42			1 with green on red, no flashing in text group 1 ♫
43	STM requests text message with light red on red, no flashing in text group 1, no ack request	PROF	T0+210s	connection of active DMI channel: Message-S43	DMI		Text message is displayed in group 1 with light red on red, no flashing in text group 1 ♫
44	STM requests text message with light green on red, no flashing in text group 1, no ack request	PROF	T0+215s	connection of active DMI channel: Message-S44	DMI		Text message is displayed in group 1 with light green on red, no flashing in text group 1 ♫
45	STM requests text message with blue on yellow, no flashing in text group 1, no ack request	PROF	T0+220s	connection of active DMI channel: Message-S45	DMI		Text message is displayed in group 1 with blue on yellow, no flashing in text group 1 ♫
46	STM requests text message with green on yellow, no flashing in text group 1, no ack request	PROF	T0+225s	connection of active DMI channel: Message-S46	DMI		Text message is displayed in group 1 with green on yellow, no flashing in text group 1 ♫
47	STM requests text message with light red on yellow, no flashing in text group 1, no ack request	PROF	T0+230s	connection of active DMI channel: Message-S47	DMI		Text message is displayed in group 1 with light red on yellow, no flashing in text group 1 ♫
48	STM requests text message with light green on yellow, no flashing in text group 1, no ack request	PROF	T0+235s	connection of active DMI channel: Message-S48	DMI		Text message is displayed in group 1 with light green on yellow, no flashing in text group 1 ♫
49	STM requests text message with blue on dark blue, no flashing in text group 1, no ack request	PROF	T0+240s	connection of active DMI channel: Message-S49	DMI		Text message is displayed in group 1 with blue on dark blue, no flashing in text group 1 ♫
50	STM deletes all text messages	PROF	T0+245s	connection of active DMI channel: Message-S50	DMI		All STM text messages are deleted from group 1
51	STM requests text message with green on blue, no flashing in text group 1, no ack request	PROF	T0+250s	connection of active DMI channel: Message-S51	DMI		Text message is displayed in group 1 with green on blue, no flashing in text group 1 ♫
52	STM requests text message with light red on blue, no flashing in text group 1, no ack request	PROF	T0+255s	connection of active DMI channel: Message-S52	DMI		Text message is displayed in group 1 with light red on blue, no flashing in text group 1 ♫

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53	STM requests text message with light green on blue, no flashing in text group 1, no ack request	PROF	T0+260s	connection of active DMI channel: Message-S53	DMI		Text message is displayed in group 1 with light green on blue, no flashing in text group 1 ♫
54	STM requests text message with blue on green, no flashing in text group 1, no ack request	PROF	T0+265s	connection of active DMI channel: Message-S54	DMI		Text message is displayed in group 1 with blue on green, no flashing in text group 1 ♫
55	STM requests text message with light red on green, no flashing in text group 1, no ack request	PROF	T0+270s	connection of active DMI channel: Message-S55	DMI		Text message is displayed in group 1 with light red on green, no flashing in text group 1 ♫
56	STM requests text message with light green on green, no flashing in text group 1, no ack request	PROF	T0+275s	connection of active DMI channel: Message-S56	DMI		Text message is displayed in group 1 with light green on green, no flashing in text group 1 ♫
57	STM deletes all text messages	PROF	T0+280s	connection of active DMI channel: Message-S57	DMI		All STM text messages are deleted from group 1
58	STM requests text message with blue on light red, no flashing in text group 1, no ack request	PROF	T0+285s	connection of active DMI channel: Message-S58	DMI		Text message is displayed in group 1 with blue on light red, no flashing in text group 1 ♫
59	STM requests text message with green on light red, no flashing in text group 1, no ack request	PROF	T0+290s	connection of active DMI channel: Message-S59	DMI		Text message is displayed in group 1 with green on light red, no flashing in text group 1 ♫
60	STM requests text message with light green on light red, no flashing in text group 1, no ack request	PROF	T0+295s	connection of active DMI channel: Message-S60	DMI		Text message is displayed in group 1 with light green on light red, no flashing in text group 1 ♫
61	STM requests text message with blue on light green, no flashing in text group 1, no ack request	PROF	T0+300s	connection of active DMI channel: Message-S61	DMI		Text message is displayed in group 1 with blue on light green, no flashing in text group 1 ♫
62	STM requests text message with green on light green, no flashing in text group 1, no ack request	PROF	T0+305s	connection of active DMI channel: Message-S62	DMI		Text message is displayed in group 1 with green on light green, no flashing in text group 1 ♫
63	STM requests text message with light red on light green, no flashing	PROF	T0+310s	connection of active DMI channel: Message-S63	DMI		Text message is displayed in group 1 with light red on light green, no

♪	in text group 1, no ack request						flashing in text group 1 ♪
64	STM deletes all text messages	PROF	T0+315s	connection of active DMI channel: Message-S64	DMI		All STM text messages are deleted from group 1

Message-S1: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	112	Packet Length
NID_XMESSAGE	8	1	
M_XATTRIBUTE	10	0000000001b	white on dark blue, no flashing in text group 1
Q_ACK	1	0	No acknowledgement required
L_TEXT	8	8	Text="M1:WonDB"
X_TEXT(1)	8	"M"	
X_TEXT(2)	8	"1"	
X_TEXT(3)	8	":"	
X_TEXT(4)	8	"W"	
X_TEXT(5)	8	"o"	
X_TEXT(6)	8	"n"	
X_TEXT(7)	8	"D"	

X_TEXT(8)	8	"B"	
Padding bits	7	0000000b	

Message-S2: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	30	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=196, NX=2, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=19, T="M2:red on dark blue"			

Message-S3: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	19	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=108, NX=3, MX=0000000101b (yellow on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=8, T="M3:YonDB"			

Message-S4: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	28	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=180, NX=4, MX=0000001000b (black on white, no flashing in text group 1), Q=0 (No acknowledgement required), L=17, T="M4:black on white"			

Message-S5: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	26	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=164, NX=5, MX=0000001010b (red on white, no flashing in text group 1), Q=0 (No acknowledgement required), L=15, T="M5:red on white"			

Message-S6: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	29	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=188, NX=6, MX=0000001101b (yellow on white, no flashing in text group 1), Q=0 (No acknowledgement required), L=18, T="M6:yellow on white"			

Message-S7: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	

VARIABLE	Length	VALUE	COMMENT
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	2	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	3	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	4	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	5	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	6	
Padding bits	1	0b	

Message-S8: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	26	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=164, NX=1, MX=0000010000b (black on red, no flashing in text group 1), Q=0 (No acknowledgement required), L=15, T="M7:black on red"			

Message-S9: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	26	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=164, NX=2, MX=0000010001b (white on red, no flashing in text group 1), Q=0 (No acknowledgement required), L=15, T="M8:white on red"			

Message-S10: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=172, NX=3, MX=0000010101b (yellow on red, no flashing in text group 1), Q=0 (No acknowledgement required), L=16, T="M9:yellow on red"			

Message-S11: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	30	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=196, NX=4, MX=0000101000b (black on yellow, no flashing in text group 1), Q=0 (No acknowledgement required), L=19, T="M10:black on yellow"			

Message-S12: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	30	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=196, NX=5, MX=0000101001b (white on yellow, no flashing in text group 1), Q=0 (No acknowledgement required), L=19, T="M11:white on yellow"			

Message-S13: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	28	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=180, NX=6, MX=0000101010b (red on yellow, no flashing in text group 1), Q=0 (No acknowledgement required), L=17, T="M12:red on yellow"			

Message-S14: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			
STM-39: PL=29, NX=6			

Message-S15: STM requests first text message of set

VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	28	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=180, NX=1, MX=0000011001b (white on blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=17, T="M13:white on blue"			

Message-S16: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	26	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=164, NX=2, MX=0000011010b (red on blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=15, T="M14:red on blue"			

Message-S17: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	29	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=188, NX=3, MX=0000011101b (yellow on blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=18, T="M15:yellow on blue"			

Message-S18: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	29	Message Length

STM-15: PL=25, ST=7, (State DA)
STM-38: PL=188, NX=4, MX=0000100000b (black on green, no flashing in text group 1), Q=0 (No acknowledgement required), L=18, T="M16:black on green"

Message-S19: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	29	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=188, NX=5, MX=0000100001b (white on green, no flashing in text group 1), Q=0 (No acknowledgement required), L=18, T="M17:white on green"			

Message-S20: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=172, NX=6, MX=0000100010b (red on green, no flashing in text group 1), Q=0 (No acknowledgement required), L=16, T="M18:red on green"			

Message-S21: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	30	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=196, NX=7, MX=0000100101b (yellow on green, no flashing in text group 1), Q=0 (No acknowledgement required), L=19, T="M19:yellow on green"			

Message-S22: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=8, MX=0000110000b (black on light red, no flashing in text group 1), Q=0 (No acknowledgement required), L=10, T="M20:BKonLR"			

Message-S23: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	35	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			
STM-39: PL=29, NX=6			
STM-39: PL=29, NX=7			
STM-39: PL=29, NX=8			

Message-S24: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=1, MX=0000110001b (white on light red, no flashing in text group 1), Q=0 (No acknowledgement required), L=9, T="M21:WonLR"			

Message-S25: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	31	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=204, NX=2, MX=0000110010b (red on light red, no flashing in text group 1), Q=0 (No acknowledgement required), L=20, T="M22:red on light red"			

Message-S26: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=3, MX=0000110101b (yellow on light red, no flashing in text group 1), Q=0 (No acknowledgement required), L=9, T="M23:YonLR"			

Message-S27: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=4, MX=0000111000b (black on light green, no flashing in text group 1), Q=0 (No acknowledgement required), L=10, T="M24:BKonLG"			

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Message-S28: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=5, MX=0000111001b (white on light green, no flashing in text group 1), Q=0 (No acknowledgement required), L=9, T="M25:WonLG"			

Message-S29: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=6, MX=0000111010b (red on light green, no flashing in text group 1), Q=0 (No acknowledgement required), L=9, T="M26:RonLG"			

Message-S30: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=7, MX=0000111101b (yellow on light green, no flashing in text group 1), Q=0 (No acknowledgement required), L=9, T="M27:YonLG"			

Message-S31: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	28	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=180, NX=8, MX=0000011000b (black on blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=17, T="M28:black on blue"			

Message-S32: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	35	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			
STM-39: PL=29, NX=6			
STM-39: PL=29, NX=7			
STM-39: PL=29, NX=8			

Message-S33: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			

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STM-38: PL=116, NX=1, MX=0000000100b (green on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=9, T="M29:GonDB"

Message-S34: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=2, MX=0000000110b (light red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=10, T="M30:LRonDB"			

Message-S35: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=3, MX=0000000111b (light green on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=10, T="M31:LGonDB"			

Message-S36: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	28	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=180, NX=4, MX=0000001011b (blue on white, no flashing in text group 1), Q=0 (No acknowledgement required), L=17, T="M32:blue on white"			

Message-S37: STM requests another text message

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VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	29	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=188, NX=5, MX=0000001100b (green on white, no flashing in text group 1), Q=0 (No acknowledgement required), L=18, T="M33:green on white"			

Message-S38: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=6, MX=0000001110b (light red on white, no flashing in text group 1), Q=0 (No acknowledgement required), L=9, T="M34:LRonW"			

Message-S39: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=7, MX=0000001111b (light green on white, no flashing in text group 1), Q=0 (No acknowledgement required), L=9, T="M35:LGonW"			

Message-S40: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	26	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=164, NX=8, MX=0000010011b (blue on red, no flashing in text group 1), Q=0 (No acknowledgement required), L=15, T="M36:blue on red"

Message-S41: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	35	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			
STM-39: PL=29, NX=6			
STM-39: PL=29, NX=7			
STM-39: PL=29, NX=8			

Message-S42: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=172, NX=1, MX=0000010100b (green on red, no flashing in text group 1), Q=0 (No acknowledgement required), L=16, T="M37:green on red"			

Message-S43: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	31	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=204, NX=2, MX=0000010110b (light red on red, no flashing in text group 1), Q=0 (No acknowledgement required), L=20, T="M38:light red on red"			

Message-S44: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=3, MX=0000010111b (light green on red, no flashing in text group 1), Q=0 (No acknowledgement required), L=9, T="M39:LGonR"			

Message-S45: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	29	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=188, NX=4, MX=0000101011b (blue on yellow, no flashing in text group 1), Q=0 (No acknowledgement required), L=18, T="M40:blue on yellow"			

Message-S46: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	30	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=196, NX=5, MX=0000101100b (green on yellow, no flashing in text group 1), Q=0 (No acknowledgement required), L=19, T="M41:green on yellow"

Message-S47: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=116, NX=6, MX=0000101110b (light red on yellow, no flashing in text group 1), Q=0 (No acknowledgement required), L=9, T="M42:LRonY"

Message-S48: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=116, NX=7, MX=0000101111b (light green on yellow, no flashing in text group 1), Q=0 (No acknowledgement required), L=9, T="M43:LGonY"

Message-S49: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=124, NX=8, MX=0000000011b (blue on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=10, T="M44:BEonDB"

Message-S50: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	35	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			
STM-39: PL=29, NX=6			
STM-39: PL=29, NX=7			
STM-39: PL=29, NX=8			

Message-S51: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	28	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=180, NX=1, MX=0000011100b (green on blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=17, T="M45:green on blue"			

Message-S52: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT

VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=2, MX=0000011110b (light red on blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=10, T="M46:LRonBE"			

Message-S53: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=3, MX=0000011111b (light green on blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=10, T="M47:LGonBE"			

Message-S54: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	28	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=180, NX=4, MX=0000100011b (blue on green, no flashing in text group 1), Q=0 (No acknowledgement required), L=17, T="M48:blue on green"			

Message-S55: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			

STM-38: PL=116, NX=5, MX=0000100110b (light red on green, no flashing in text group 1), Q=0 (No acknowledgement required), L=9, T="M49:LRonG"

Message-S56: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=6, MX=0000100111b (light green on green, no flashing in text group 1), Q=0 (No acknowledgement required), L=9, T="M50:LGonG"			

Message-S57: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			
STM-39: PL=29, NX=6			

Message-S58: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=1, MX=0000110011b (blue on light red, no flashing in text group 1), Q=0 (No acknowledgement required), L=10, T="M51:BEonLR"			

Message-S59: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=2, MX=0000110100b (green on light red, no flashing in text group 1), Q=0 (No acknowledgement required), L=9, T="M52:GonLR"			

Message-S60: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=3, MX=0000110111b (light green on light red, no flashing in text group 1), Q=0 (No acknowledgement required), L=10, T="M53:LGonLR"			

Message-S61: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=4, MX=0000111011b (blue on light green, no flashing in text group 1), Q=0 (No acknowledgement required), L=10, T="M54:BEonLG"			

Message-S62: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=5, MX=0000111100b (green on light green, no flashing in text group 1), Q=0 (No acknowledgement required), L=9, T="M55:GonLG"			

Message-S63: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=6, MX=0000111110b (light red on light green, no flashing in text group 1), Q=0 (No acknowledgement required), L=10, T="M56:LRonLG"			

Message-S64: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			

STM-39: PL=29, NX=5
STM-39: PL=29, NX=6

End Conditions	Value	Comments
STM State	unchanged	
ETCS Mode	unchanged	
ETCS Level	unchanged	
Train State	not relevant	
ETCS Train Data	not relevant	
Active DMI channel Connection	unchanged	
Other DMI channels Connections	not relevant	
TIU Connection	not relevant	
BIU Connection	not relevant	
JD Connection	not relevant	
TIU Regenerative Brake Command	not relevant	
TIU Magnetic Shoes Brake Command	not relevant	
TIU Eddy Current Brake Command for Emergency Brake	not relevant	
TIU Eddy Current Brake Command for Service Brake	not relevant	
TIU Pantograph Command	not relevant	
TIU Air Tightness Command	not relevant	
TIU Main Switch / Circuit Breaker Command	not relevant	
TIU Traction Cut Off Command	not relevant	
TIU Traction Status	not relevant	

TIU Direction Controller Position Status	not relevant	
TIU Cab Status	unchanged	
BIU Emergency Brake Command	not relevant	
BIU Service Brake Command	not relevant	
BIU Emergency Brake Status	not relevant	
BIU Service Brake Status	not relevant	
NTC isolation status	unchanged	

2.4.2 Test Case 7d.2

TEST CASE HEADER	
Test case identification	DMI Function
	7d1.0.1.(7d2.0.2.1.1.1.0).(1.(1.1.(7d2.0.2.*.1.1.0).1)*.3.0)*.5
	Colour Handling test for text messages: group 2 text messages with <= 20 ASCII characters:
	Text messages with all possible combinations of text and background colour, where text colour <> background colour. Text messages are sent in sequences of 6 or 8 messages with increasing text identifiers, then all text messages are deleted and the next set is sent. No ack requested for text messages.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.3, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38, STM-39
ERTMS/ETCS on-board configuration	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen for test).

Comments and constraints	Starting and end conditions as for test case 7d.1
	At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action
1	STM requests text message with white on dark blue, no flashing in text group 2, no ack request	PROF	T0	connection of active DMI channel: Message-S1	DMI		Text message is displayed in group 2 with white on dark blue, no flashing in text group 2
2	STM requests text message with red on dark blue, no flashing in text group 2, no ack request	PROF	T0+5s	connection of active DMI channel: Message-S2	DMI		Text message is displayed in group 2 with red on dark blue, no flashing in text group 2
3	STM requests text message with yellow on dark blue, no flashing in text group 2, no ack request	PROF	T0+10s	connection of active DMI channel: Message-S3	DMI		Text message is displayed in group 2 with yellow on dark blue, no flashing in text group 2
4	STM requests text message with black on white, no flashing in text group 2, no ack request	PROF	T0+15s	connection of active DMI channel: Message-S4	DMI		Text message is displayed in group 2 with black on white, no flashing in text group 2
5	STM requests text message with red on white, no flashing in text group 2, no ack request	PROF	T0+20s	connection of active DMI channel: Message-S5	DMI		Text message is displayed in group 2 with red on white, no flashing in text group 2
6	STM requests text message with yellow on white, no flashing in text group 2, no ack request	PROF	T0+25s	connection of active DMI channel: Message-S6	DMI		Text message is displayed in group 2 with yellow on white, no flashing in text group 2
7	STM deletes all text messages	PROF	T0+30s	connection of active DMI channel: Message-S7	DMI		All STM text messages are deleted from group 2
8	STM requests text message with black on red, no flashing in text group 2, no ack request	PROF	T0+35s	connection of active DMI channel: Message-S8	DMI		Text message is displayed in group 2 with black on red, no flashing in text group 2
9	STM requests text message with	PROF	T0+40s	connection of active DMI channel:	DMI		Text message is displayed in group

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	white on red, no flashing in text group 2, no ack request			Message-S9			2 with white on red, no flashing in text group 2
10	STM requests text message with yellow on red, no flashing in text group 2, no ack request	PROF	T0+45s	connection of active DMI channel: Message-S10	DMI		Text message is displayed in group 2 with yellow on red, no flashing in text group 2
11	STM requests text message with black on yellow, no flashing in text group 2, no ack request	PROF	T0+50s	connection of active DMI channel: Message-S11	DMI		Text message is displayed in group 2 with black on yellow, no flashing in text group 2
12	STM requests text message with white on yellow, no flashing in text group 2, no ack request	PROF	T0+55s	connection of active DMI channel: Message-S12	DMI		Text message is displayed in group 2 with white on yellow, no flashing in text group 2
13	STM requests text message with red on yellow, no flashing in text group 2, no ack request	PROF	T0+60s	connection of active DMI channel: Message-S13	DMI		Text message is displayed in group 2 with red on yellow, no flashing in text group 2
14	STM deletes all text messages	PROF	T0+65s	connection of active DMI channel: Message-S14	DMI		All STM text messages are deleted from group 2
15	STM requests text message with white on blue, no flashing in text group 2, no ack request	PROF	T0+70s	connection of active DMI channel: Message-S15	DMI		Text message is displayed in group 2 with white on blue, no flashing in text group 2
16	STM requests text message with red on blue, no flashing in text group 2, no ack request	PROF	T0+75s	connection of active DMI channel: Message-S16	DMI		Text message is displayed in group 2 with red on blue, no flashing in text group 2
17	STM requests text message with yellow on blue, no flashing in text group 2, no ack request	PROF	T0+80s	connection of active DMI channel: Message-S17	DMI		Text message is displayed in group 2 with yellow on blue, no flashing in text group 2
18	STM requests text message with black on green, no flashing in text group 2, no ack request	PROF	T0+85s	connection of active DMI channel: Message-S18	DMI		Text message is displayed in group 2 with black on green, no flashing in text group 2
19	STM requests text message with white on green, no flashing in text group 2, no ack request	PROF	T0+90s	connection of active DMI channel: Message-S19	DMI		Text message is displayed in group 2 with white on green, no flashing in text group 2

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20	STM requests text message with red on green, no flashing in text group 2, no ack request	PROF	T0+95s	connection of active DMI channel: Message-S20	DMI		Text message is displayed in group 2 with red on green, no flashing in text group 2
21	STM requests text message with yellow on green, no flashing in text group 2, no ack request	PROF	T0+100s	connection of active DMI channel: Message-S21	DMI		Text message is displayed in group 2 with yellow on green, no flashing in text group 2
22	STM requests text message with black on light red, no flashing in text group 2, no ack request	PROF	T0+105s	connection of active DMI channel: Message-S22	DMI		Text message is displayed in group 2 with black on light red, no flashing in text group 2
23	STM deletes all text messages	PROF	T0+110s	connection of active DMI channel: Message-S23	DMI		All STM text messages are deleted from group 2
24	STM requests text message with white on light red, no flashing in text group 2, no ack request	PROF	T0+115s	connection of active DMI channel: Message-S24	DMI		Text message is displayed in group 2 with white on light red, no flashing in text group 2
25	STM requests text message with red on light red, no flashing in text group 2, no ack request	PROF	T0+120s	connection of active DMI channel: Message-S25	DMI		Text message is displayed in group 2 with red on light red, no flashing in text group 2
26	STM requests text message with yellow on light red, no flashing in text group 2, no ack request	PROF	T0+125s	connection of active DMI channel: Message-S26	DMI		Text message is displayed in group 2 with yellow on light red, no flashing in text group 2
27	STM requests text message with black on light green, no flashing in text group 2, no ack request	PROF	T0+130s	connection of active DMI channel: Message-S27	DMI		Text message is displayed in group 2 with black on light green, no flashing in text group 2
28	STM requests text message with white on light green, no flashing in text group 2, no ack request	PROF	T0+135s	connection of active DMI channel: Message-S28	DMI		Text message is displayed in group 2 with white on light green, no flashing in text group 2
29	STM requests text message with red on light green, no flashing in text group 2, no ack request	PROF	T0+140s	connection of active DMI channel: Message-S29	DMI		Text message is displayed in group 2 with red on light green, no flashing in text group 2
30	STM requests text message with yellow on light green, no flashing in	PROF	T0+145s	connection of active DMI channel: Message-S30	DMI		Text message is displayed in group 2 with yellow on light green, no

	text group 2, no ack request						flashing in text group 2
31	STM requests text message with black on blue, no flashing in text group 2, no ack request	PROF	T0+150s	connection of active DMI channel: Message-S31	DMI		Text message is displayed in group 2 with black on blue, no flashing in text group 2
32	STM deletes all text messages	PROF	T0+155s	connection of active DMI channel: Message-S32	DMI		All STM text messages are deleted from group 2
33	STM requests text message with green on dark blue, no flashing in text group 2, no ack request	PROF	T0+160s	connection of active DMI channel: Message-S33	DMI		Text message is displayed in group 2 with green on dark blue, no flashing in text group 2
34	STM requests text message with light red on dark blue, no flashing in text group 2, no ack request	PROF	T0+165s	connection of active DMI channel: Message-S34	DMI		Text message is displayed in group 2 with light red on dark blue, no flashing in text group 2
35	STM requests text message with light green on dark blue, no flashing in text group 2, no ack request	PROF	T0+170s	connection of active DMI channel: Message-S35	DMI		Text message is displayed in group 2 with light green on dark blue, no flashing in text group 2
36	STM requests text message with blue on white, no flashing in text group 2, no ack request	PROF	T0+175s	connection of active DMI channel: Message-S36	DMI		Text message is displayed in group 2 with blue on white, no flashing in text group 2
37	STM requests text message with green on white, no flashing in text group 2, no ack request	PROF	T0+180s	connection of active DMI channel: Message-S37	DMI		Text message is displayed in group 2 with green on white, no flashing in text group 2
38	STM requests text message with light red on white, no flashing in text group 2, no ack request	PROF	T0+185s	connection of active DMI channel: Message-S38	DMI		Text message is displayed in group 2 with light red on white, no flashing in text group 2
39	STM requests text message with light green on white, no flashing in text group 2, no ack request	PROF	T0+190s	connection of active DMI channel: Message-S39	DMI		Text message is displayed in group 2 with light green on white, no flashing in text group 2
40	STM requests text message with blue on red, no flashing in text group 2, no ack request	PROF	T0+195s	connection of active DMI channel: Message-S40	DMI		Text message is displayed in group 2 with blue on red, no flashing in text group 2
41	STM deletes all text messages	PROF	T0+200s	connection of active DMI channel:	DMI		All STM text messages are deleted

				Message-S41			from group 2
42	STM requests text message with green on red, no flashing in text group 2, no ack request	PROF	T0+205s	connection of active DMI channel: Message-S42	DMI		Text message is displayed in group 2 with green on red, no flashing in text group 2
43	STM requests text message with light red on red, no flashing in text group 2, no ack request	PROF	T0+210s	connection of active DMI channel: Message-S43	DMI		Text message is displayed in group 2 with light red on red, no flashing in text group 2
44	STM requests text message with light green on red, no flashing in text group 2, no ack request	PROF	T0+215s	connection of active DMI channel: Message-S44	DMI		Text message is displayed in group 2 with light green on red, no flashing in text group 2
45	STM requests text message with blue on yellow, no flashing in text group 2, no ack request	PROF	T0+220s	connection of active DMI channel: Message-S45	DMI		Text message is displayed in group 2 with blue on yellow, no flashing in text group 2
46	STM requests text message with green on yellow, no flashing in text group 2, no ack request	PROF	T0+225s	connection of active DMI channel: Message-S46	DMI		Text message is displayed in group 2 with green on yellow, no flashing in text group 2
47	STM requests text message with light red on yellow, no flashing in text group 2, no ack request	PROF	T0+230s	connection of active DMI channel: Message-S47	DMI		Text message is displayed in group 2 with light red on yellow, no flashing in text group 2
48	STM requests text message with light green on yellow, no flashing in text group 2, no ack request	PROF	T0+235s	connection of active DMI channel: Message-S48	DMI		Text message is displayed in group 2 with light green on yellow, no flashing in text group 2
49	STM requests text message with blue on dark blue, no flashing in text group 2, no ack request	PROF	T0+240s	connection of active DMI channel: Message-S49	DMI		Text message is displayed in group 2 with blue on dark blue, no flashing in text group 2
50	STM deletes all text messages	PROF	T0+245s	connection of active DMI channel: Message-S50	DMI		All STM text messages are deleted from group 2
51	STM requests text message with green on blue, no flashing in text group 2, no ack request	PROF	T0+250s	connection of active DMI channel: Message-S51	DMI		Text message is displayed in group 2 with green on blue, no flashing in text group 2
52	STM requests text message with	PROF	T0+255s	connection of active DMI channel:	DMI		Text message is displayed in group

	light red on blue, no flashing in text group 2, no ack request			Message-S52			2 with light red on blue, no flashing in text group 2
53	STM requests text message with light green on blue, no flashing in text group 2, no ack request	PROF	T0+260s	connection of active DMI channel: Message-S53	DMI		Text message is displayed in group 2 with light green on blue, no flashing in text group 2
54	STM requests text message with blue on green, no flashing in text group 2, no ack request	PROF	T0+265s	connection of active DMI channel: Message-S54	DMI		Text message is displayed in group 2 with blue on green, no flashing in text group 2
55	STM requests text message with light red on green, no flashing in text group 2, no ack request	PROF	T0+270s	connection of active DMI channel: Message-S55	DMI		Text message is displayed in group 2 with light red on green, no flashing in text group 2
56	STM requests text message with light green on green, no flashing in text group 2, no ack request	PROF	T0+275s	connection of active DMI channel: Message-S56	DMI		Text message is displayed in group 2 with light green on green, no flashing in text group 2
57	STM deletes all text messages	PROF	T0+280s	connection of active DMI channel: Message-S57	DMI		All STM text messages are deleted from group 2
58	STM requests text message with blue on light red, no flashing in text group 2, no ack request	PROF	T0+285s	connection of active DMI channel: Message-S58	DMI		Text message is displayed in group 2 with blue on light red, no flashing in text group 2
59	STM requests text message with green on light red, no flashing in text group 2, no ack request	PROF	T0+290s	connection of active DMI channel: Message-S59	DMI		Text message is displayed in group 2 with green on light red, no flashing in text group 2
60	STM requests text message with light green on light red, no flashing in text group 2, no ack request	PROF	T0+295s	connection of active DMI channel: Message-S60	DMI		Text message is displayed in group 2 with light green on light red, no flashing in text group 2
61	STM requests text message with blue on light green, no flashing in text group 2, no ack request	PROF	T0+300s	connection of active DMI channel: Message-S61	DMI		Text message is displayed in group 2 with blue on light green, no flashing in text group 2
62	STM requests text message with green on light green, no flashing in text group 2, no ack request	PROF	T0+305s	connection of active DMI channel: Message-S62	DMI		Text message is displayed in group 2 with green on light green, no flashing in text group 2

63	STM requests text message with light red on light green, no flashing in text group 2, no ack request	PROF	T0+310s	connection of active DMI channel: Message-S63	DMI		Text message is displayed in group 2 with light red on light green, no flashing in text group 2
64	STM deletes all text messages	PROF	T0+315s	connection of active DMI channel: Message-S64	DMI		All STM text messages are deleted from group 2

Message-S1: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	112	Packet Length
NID_XMESSAGE	8	1	
M_XATTRIBUTE	10	1000000001b	white on dark blue, no flashing in text group 2
Q_ACK	1	0	No acknowledgement required
L_TEXT	8	8	Text="M1:WonDB"
X_TEXT(1)	8	"M"	
X_TEXT(2)	8	"1"	
X_TEXT(3)	8	":"	
X_TEXT(4)	8	"W"	
X_TEXT(5)	8	"o"	

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X_TEXT(6)	8	"n"	
X_TEXT(7)	8	"D"	
X_TEXT(8)	8	"B"	
Padding bits	7	0000000b	

Message-S2: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	30	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=196, NX=2, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=19, T="M2:red on dark blue"			

Message-S3: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	19	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=108, NX=3, MX=1000000101b (yellow on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=8, T="M3:YonDB"			

Message-S4: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	28	Message Length
STM-15: PL=25, ST=7, (State DA)			

STM-38: PL=180, NX=4, MX=1000001000b (black on white, no flashing in text group 2), Q=0 (No acknowledgement required), L=17, T="M4:black on white"

Message-S5: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	26	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=164, NX=5, MX=1000001010b (red on white, no flashing in text group 2), Q=0 (No acknowledgement required), L=15, T="M5:red on white"			

Message-S6: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	29	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=188, NX=6, MX=1000001101b (yellow on white, no flashing in text group 2), Q=0 (No acknowledgement required), L=18, T="M6:yellow on white"			

Message-S7: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	39	delete text message by STM (STM-39)

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L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	2	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	3	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	4	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	5	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	6	
Padding bits	1	0b	

Message-S8: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	26	Message Length

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STM-15: PL=25, ST=7, (State DA)

STM-38: PL=164, NX=1, MX=1000010000b (black on red, no flashing in text group 2), Q=0 (No acknowledgement required), L=15, T="M7:black on red"

Message-S9: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	26	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=164, NX=2, MX=1000010001b (white on red, no flashing in text group 2), Q=0 (No acknowledgement required), L=15, T="M8:white on red"

Message-S10: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=172, NX=3, MX=1000010101b (yellow on red, no flashing in text group 2), Q=0 (No acknowledgement required), L=16, T="M9:yellow on red"

Message-S11: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	30	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=196, NX=4, MX=1000101000b (black on yellow, no flashing in text group 2), Q=0 (No acknowledgement required), L=19, T="M10:black on yellow"

Message-S12: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	30	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=196, NX=5, MX=1000101001b (white on yellow, no flashing in text group 2), Q=0 (No acknowledgement required), L=19, T="M11:white on yellow"			

Message-S13: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	28	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=180, NX=6, MX=1000101010b (red on yellow, no flashing in text group 2), Q=0 (No acknowledgement required), L=17, T="M12:red on yellow"			

Message-S14: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			

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STM-39: PL=29, NX=6

Message-S15: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	28	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=180, NX=1, MX=1000011001b (white on blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=17, T="M13:white on blue"			

Message-S16: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	26	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=164, NX=2, MX=1000011010b (red on blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=15, T="M14:red on blue"			

Message-S17: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	29	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=188, NX=3, MX=1000011101b (yellow on blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=18, T="M15:yellow on blue"			

Message-S18: STM requests another text message

VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	29	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=188, NX=4, MX=1000100000b (black on green, no flashing in text group 2), Q=0 (No acknowledgement required), L=18, T="M16:black on green"			

Message-S19: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	29	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=188, NX=5, MX=1000100001b (white on green, no flashing in text group 2), Q=0 (No acknowledgement required), L=18, T="M17:white on green"			

Message-S20: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=172, NX=6, MX=1000100010b (red on green, no flashing in text group 2), Q=0 (No acknowledgement required), L=16, T="M18:red on green"			

Message-S21: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	30	Message Length

| STM-15: PL=25, ST=7, (State DA) |
| STM-38: PL=196, NX=7, MX=1000100101b (yellow on green, no flashing in text group 2), Q=0 (No acknowledgement required), L=19, T="M19:yellow on green" |

Message-S22: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=8, MX=1000110000b (black on light red, no flashing in text group 2), Q=0 (No acknowledgement required), L=10, T="M20:BKonLR"			

Message-S23: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	35	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			
STM-39: PL=29, NX=6			
STM-39: PL=29, NX=7			
STM-39: PL=29, NX=8			

Message-S24: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=1, MX=1000110001b (white on light red, no flashing in text group 2), Q=0 (No acknowledgement required), L=9, T="M21:WonLR"			

Message-S25: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	31	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=204, NX=2, MX=1000110010b (red on light red, no flashing in text group 2), Q=0 (No acknowledgement required), L=20, T="M22:red on light red"			

Message-S26: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=3, MX=1000110101b (yellow on light red, no flashing in text group 2), Q=0 (No acknowledgement required), L=9, T="M23:YonLR"			

Message-S27: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=4, MX=1000111000b (black on light green, no flashing in text group 2), Q=0 (No acknowledgement required), L=10, T="M24:BKonLG"			

Message-S28: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=5, MX=1000111001b (white on light green, no flashing in text group 2), Q=0 (No acknowledgement required), L=9, T="M25:WonLG"			

Message-S29: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=6, MX=1000111010b (red on light green, no flashing in text group 2), Q=0 (No acknowledgement required), L=9, T="M26:RonLG"			

Message-S30: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=7, MX=1000111101b (yellow on light green, no flashing in text group 2), Q=0 (No acknowledgement required), L=9, T="M27:YonLG"			

Message-S31: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	28	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=180, NX=8, MX=1000011000b (black on blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=17, T="M28:black on blue"			

Message-S32: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	35	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			
STM-39: PL=29, NX=6			
STM-39: PL=29, NX=7			
STM-39: PL=29, NX=8			

Message-S33: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=1, MX=1000000100b (green on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=9, T="M29:GonDB"			

Message-S34: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=2, MX=1000000110b (light red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=10, T="M30:LRonDB"			

Message-S35: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=3, MX=1000000111b (light green on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=10, T="M31:LGonDB"			

Message-S36: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	28	Message Length
STM-15: PL=25, ST=7, (State DA)			

STM-38: PL=180, NX=4, MX=1000001011b (blue on white, no flashing in text group 2), Q=0 (No acknowledgement required), L=17, T="M32:blue on white"

Message-S37: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	29	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=188, NX=5, MX=1000001100b (green on white, no flashing in text group 2), Q=0 (No acknowledgement required), L=18, T="M33:green on white"			

Message-S38: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=6, MX=1000001110b (light red on white, no flashing in text group 2), Q=0 (No acknowledgement required), L=9, T="M34:LRonW"			

Message-S39: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=7, MX=1000001111b (light green on white, no flashing in text group 2), Q=0 (No acknowledgement required), L=9, T="M35:LGonW"			

Message-S40: STM requests another text message

VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	26	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=164, NX=8, MX=1000010011b (blue on red, no flashing in text group 2), Q=0 (No acknowledgement required), L=15, T="M36:blue on red"			

Message-S41: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	35	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			
STM-39: PL=29, NX=6			
STM-39: PL=29, NX=7			
STM-39: PL=29, NX=8			

Message-S42: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length

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STM-15: PL=25, ST=7, (State DA)
STM-38: PL=172, NX=1, MX=1000010100b (green on red, no flashing in text group 2), Q=0 (No acknowledgement required), L=16, T="M37:green on red"

Message-S43: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	31	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=204, NX=2, MX=1000010110b (light red on red, no flashing in text group 2), Q=0 (No acknowledgement required), L=20, T="M38:light red on red"			

Message-S44: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=3, MX=1000010111b (light green on red, no flashing in text group 2), Q=0 (No acknowledgement required), L=9, T="M39:LGonR"			

Message-S45: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	29	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=188, NX=4, MX=1000101011b (blue on yellow, no flashing in text group 2), Q=0 (No acknowledgement required), L=18, T="M40:blue on yellow"			

Message-S46: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	30	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=196, NX=5, MX=1000101100b (green on yellow, no flashing in text group 2), Q=0 (No acknowledgement required), L=19, T="M41:green on yellow"			

Message-S47: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=6, MX=1000101110b (light red on yellow, no flashing in text group 2), Q=0 (No acknowledgement required), L=9, T="M42:LRonY"			

Message-S48: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=7, MX=1000101111b (light green on yellow, no flashing in text group 2), Q=0 (No acknowledgement required), L=9, T="M43:LGonY"			

Message-S49: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=8, MX=1000000011b (blue on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=10, T="M44:BEonDB"			

Message-S50: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	35	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			
STM-39: PL=29, NX=6			
STM-39: PL=29, NX=7			
STM-39: PL=29, NX=8			

Message-S51: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	28	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=180, NX=1, MX=1000011100b (green on blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=17, T="M45:green on blue"			

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Message-S52: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=2, MX=1000011110b (light red on blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=10, T="M46:LRonBE"			

Message-S53: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=3, MX=1000011111b (light green on blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=10, T="M47:LGonBE"			

Message-S54: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	28	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=180, NX=4, MX=1000100011b (blue on green, no flashing in text group 2), Q=0 (No acknowledgement required), L=17, T="M48:blue on green"			

Message-S55: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=5, MX=1000100110b (light red on green, no flashing in text group 2), Q=0 (No acknowledgement required), L=9, T="M49:LRonG"			

Message-S56: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=6, MX=1000100111b (light green on green, no flashing in text group 2), Q=0 (No acknowledgement required), L=9, T="M50:LGonG"			

Message-S57: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			
STM-39: PL=29, NX=6			

Message-S58: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=1, MX=1000110011b (blue on light red, no flashing in text group 2), Q=0 (No acknowledgement required), L=10, T="M51:BEonLR"			

Message-S59: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=2, MX=1000110100b (green on light red, no flashing in text group 2), Q=0 (No acknowledgement required), L=9, T="M52:GonLR"			

Message-S60: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=3, MX=1000110111b (light green on light red, no flashing in text group 2), Q=0 (No acknowledgement required), L=10, T="M53:LGonLR"			

Message-S61: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=4, MX=1000111011b (blue on light green, no flashing in text group 2), Q=0 (No acknowledgement required), L=10, T="M54:BEonLG"			

Message-S62: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	20	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=116, NX=5, MX=1000111100b (green on light green, no flashing in text group 2), Q=0 (No acknowledgement required), L=9, T="M55:GonLG"			

Message-S63: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	21	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=124, NX=6, MX=1000111110b (light red on light green, no flashing in text group 2), Q=0 (No acknowledgement required), L=10, T="M56:LRonLG"			

Message-S64: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			

STM-39: PL=29, NX=2
STM-39: PL=29, NX=3
STM-39: PL=29, NX=4
STM-39: PL=29, NX=5
STM-39: PL=29, NX=6

2.4.3 Test Case 7d.3

TEST CASE HEADER	
Test case identification	DMI Function
	7d1.0.1.(7d2.0.1.1.1.3.0).(1.(1.1.(7d2.0.1.*.1.3.0).1)*.3.0)*.5
	Colour Handling test for text messages: group 1 text messages with > 20 ASCII characters:
	Text messages with all possible combinations of text and background colour, where text colour <> background colour. Text messages are sent in sequences of 6 or 8 messages with increasing text identifiers, then all text messages are deleted and the next set is sent. No ack requested for text messages.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.3, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38, STM-39
ERTMS/ETCS on-board configuration	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen for test).
Comments and constraints	Starting and end conditions as for test case 7d.1
	At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

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ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action
1	STM requests text message with white on dark blue, no flashing in text group 1, no ack request	PROF	T0	connection of active DMI channel: Message-S1	DMI		Text message is displayed in group 1 with white on dark blue, no flashing in text group 1 ♫
2	STM requests text message with red on dark blue, no flashing in text group 1, no ack request	PROF	T0+5s	connection of active DMI channel: Message-S2	DMI		Text message is displayed in group 1 with red on dark blue, no flashing in text group 1 ♫
3	STM requests text message with yellow on dark blue, no flashing in text group 1, no ack request	PROF	T0+10s	connection of active DMI channel: Message-S3	DMI		Text message is displayed in group 1 with yellow on dark blue, no flashing in text group 1 ♫
4	STM requests text message with black on white, no flashing in text group 1, no ack request	PROF	T0+15s	connection of active DMI channel: Message-S4	DMI		Text message is displayed in group 1 with black on white, no flashing in text group 1 ♫
5	STM requests text message with red on white, no flashing in text group 1, no ack request	PROF	T0+20s	connection of active DMI channel: Message-S5	DMI		Text message is displayed in group 1 with red on white, no flashing in text group 1 ♫
6	STM requests text message with yellow on white, no flashing in text group 1, no ack request	PROF	T0+25s	connection of active DMI channel: Message-S6	DMI		Text message is displayed in group 1 with yellow on white, no flashing in text group 1 ♫
7	STM deletes all text messages	PROF	T0+30s	connection of active DMI channel: Message-S7	DMI		All STM text messages are deleted from group 1
8	STM requests text message with black on red, no flashing in text group 1, no ack request	PROF	T0+35s	connection of active DMI channel: Message-S8	DMI		Text message is displayed in group 1 with black on red, no flashing in text group 1 ♫
9	STM requests text message with white on red, no flashing in text group 1, no ack request	PROF	T0+40s	connection of active DMI channel: Message-S9	DMI		Text message is displayed in group 1 with white on red, no flashing in text group 1 ♫
10	STM requests text message with yellow on red, no flashing in text	PROF	T0+45s	connection of active DMI channel: Message-S10	DMI		Text message is displayed in group 1 with yellow on red, no flashing in

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	group 1, no ack request						text group 1 ♫
11	STM requests text message with black on yellow, no flashing in text group 1, no ack request	PROF	T0+50s	connection of active DMI channel: Message-S11	DMI		Text message is displayed in group 1 with black on yellow, no flashing in text group 1 ♫
12	STM requests text message with white on yellow, no flashing in text group 1, no ack request	PROF	T0+55s	connection of active DMI channel: Message-S12	DMI		Text message is displayed in group 1 with white on yellow, no flashing in text group 1 ♫
13	STM requests text message with red on yellow, no flashing in text group 1, no ack request	PROF	T0+60s	connection of active DMI channel: Message-S13	DMI		Text message is displayed in group 1 with red on yellow, no flashing in text group 1 ♫
14	STM deletes all text messages	PROF	T0+65s	connection of active DMI channel: Message-S14	DMI		All STM text messages are deleted from group 1
15	STM requests text message with white on blue, no flashing in text group 1, no ack request	PROF	T0+70s	connection of active DMI channel: Message-S15	DMI		Text message is displayed in group 1 with white on blue, no flashing in text group 1 ♫
16	STM requests text message with red on blue, no flashing in text group 1, no ack request	PROF	T0+75s	connection of active DMI channel: Message-S16	DMI		Text message is displayed in group 1 with red on blue, no flashing in text group 1 ♫
17	STM requests text message with yellow on blue, no flashing in text group 1, no ack request	PROF	T0+80s	connection of active DMI channel: Message-S17	DMI		Text message is displayed in group 1 with yellow on blue, no flashing in text group 1 ♫
18	STM requests text message with black on green, no flashing in text group 1, no ack request	PROF	T0+85s	connection of active DMI channel: Message-S18	DMI		Text message is displayed in group 1 with black on green, no flashing in text group 1 ♫
19	STM requests text message with white on green, no flashing in text group 1, no ack request	PROF	T0+90s	connection of active DMI channel: Message-S19	DMI		Text message is displayed in group 1 with white on green, no flashing in text group 1 ♫
20	STM requests text message with red on green, no flashing in text group 1, no ack request	PROF	T0+95s	connection of active DMI channel: Message-S20	DMI		Text message is displayed in group 1 with red on green, no flashing in text group 1 ♫
21	STM requests text message with	PROF	T0+100s	connection of active DMI channel:	DMI		Text message is displayed in group

	yellow on green, no flashing in text group 1, no ack request			Message-S21			1 with yellow on green, no flashing in text group 1 ♫
22	STM requests text message with black on light red, no flashing in text group 1, no ack request	PROF	T0+105s	connection of active DMI channel: Message-S22	DMI		Text message is displayed in group 1 with black on light red, no flashing in text group 1 ♫
23	STM deletes all text messages	PROF	T0+110s	connection of active DMI channel: Message-S23	DMI		All STM text messages are deleted from group 1
24	STM requests text message with white on light red, no flashing in text group 1, no ack request	PROF	T0+115s	connection of active DMI channel: Message-S24	DMI		Text message is displayed in group 1 with white on light red, no flashing in text group 1 ♫
25	STM requests text message with red on light red, no flashing in text group 1, no ack request	PROF	T0+120s	connection of active DMI channel: Message-S25	DMI		Text message is displayed in group 1 with red on light red, no flashing in text group 1 ♫
26	STM requests text message with yellow on light red, no flashing in text group 1, no ack request	PROF	T0+125s	connection of active DMI channel: Message-S26	DMI		Text message is displayed in group 1 with yellow on light red, no flashing in text group 1 ♫
27	STM requests text message with black on light green, no flashing in text group 1, no ack request	PROF	T0+130s	connection of active DMI channel: Message-S27	DMI		Text message is displayed in group 1 with black on light green, no flashing in text group 1 ♫
28	STM requests text message with white on light green, no flashing in text group 1, no ack request	PROF	T0+135s	connection of active DMI channel: Message-S28	DMI		Text message is displayed in group 1 with white on light green, no flashing in text group 1 ♫
29	STM requests text message with red on light green, no flashing in text group 1, no ack request	PROF	T0+140s	connection of active DMI channel: Message-S29	DMI		Text message is displayed in group 1 with red on light green, no flashing in text group 1 ♫
30	STM requests text message with yellow on light green, no flashing in text group 1, no ack request	PROF	T0+145s	connection of active DMI channel: Message-S30	DMI		Text message is displayed in group 1 with yellow on light green, no flashing in text group 1 ♫
31	STM requests text message with black on blue, no flashing in text group 1, no ack request	PROF	T0+150s	connection of active DMI channel: Message-S31	DMI		Text message is displayed in group 1 with black on blue, no flashing in text group 1 ♫

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32	STM deletes all text messages	PROF	T0+155s	connection of active DMI channel: Message-S32	DMI		All STM text messages are deleted from group 1
33	STM requests text message with green on dark blue, no flashing in text group 1, no ack request	PROF	T0+160s	connection of active DMI channel: Message-S33	DMI		Text message is displayed in group 1 with green on dark blue, no flashing in text group 1 ♫
34	STM requests text message with light red on dark blue, no flashing in text group 1, no ack request	PROF	T0+165s	connection of active DMI channel: Message-S34	DMI		Text message is displayed in group 1 with light red on dark blue, no flashing in text group 1 ♫
35	STM requests text message with light green on dark blue, no flashing in text group 1, no ack request	PROF	T0+170s	connection of active DMI channel: Message-S35	DMI		Text message is displayed in group 1 with light green on dark blue, no flashing in text group 1 ♫
36	STM requests text message with blue on white, no flashing in text group 1, no ack request	PROF	T0+175s	connection of active DMI channel: Message-S36	DMI		Text message is displayed in group 1 with blue on white, no flashing in text group 1 ♫
37	STM requests text message with green on white, no flashing in text group 1, no ack request	PROF	T0+180s	connection of active DMI channel: Message-S37	DMI		Text message is displayed in group 1 with green on white, no flashing in text group 1 ♫
38	STM requests text message with light red on white, no flashing in text group 1, no ack request	PROF	T0+185s	connection of active DMI channel: Message-S38	DMI		Text message is displayed in group 1 with light red on white, no flashing in text group 1 ♫
39	STM requests text message with light green on white, no flashing in text group 1, no ack request	PROF	T0+190s	connection of active DMI channel: Message-S39	DMI		Text message is displayed in group 1 with light green on white, no flashing in text group 1 ♫
40	STM requests text message with blue on red, no flashing in text group 1, no ack request	PROF	T0+195s	connection of active DMI channel: Message-S40	DMI		Text message is displayed in group 1 with blue on red, no flashing in text group 1 ♫
41	STM deletes all text messages	PROF	T0+200s	connection of active DMI channel: Message-S41	DMI		All STM text messages are deleted from group 1
42	STM requests text message with green on red, no flashing in text group 1, no ack request	PROF	T0+205s	connection of active DMI channel: Message-S42	DMI		Text message is displayed in group 1 with green on red, no flashing in text group 1 ♫

43	STM requests text message with light red on red, no flashing in text group 1, no ack request	PROF	T0+210s	connection of active DMI channel: Message-S43	DMI		Text message is displayed in group 1 with light red on red, no flashing in text group 1 ♫
44	STM requests text message with light green on red, no flashing in text group 1, no ack request	PROF	T0+215s	connection of active DMI channel: Message-S44	DMI		Text message is displayed in group 1 with light green on red, no flashing in text group 1 ♫
45	STM requests text message with blue on yellow, no flashing in text group 1, no ack request	PROF	T0+220s	connection of active DMI channel: Message-S45	DMI		Text message is displayed in group 1 with blue on yellow, no flashing in text group 1 ♫
46	STM requests text message with green on yellow, no flashing in text group 1, no ack request	PROF	T0+225s	connection of active DMI channel: Message-S46	DMI		Text message is displayed in group 1 with green on yellow, no flashing in text group 1 ♫
47	STM requests text message with light red on yellow, no flashing in text group 1, no ack request	PROF	T0+230s	connection of active DMI channel: Message-S47	DMI		Text message is displayed in group 1 with light red on yellow, no flashing in text group 1 ♫
48	STM requests text message with light green on yellow, no flashing in text group 1, no ack request	PROF	T0+235s	connection of active DMI channel: Message-S48	DMI		Text message is displayed in group 1 with light green on yellow, no flashing in text group 1 ♫
49	STM requests text message with blue on dark blue, no flashing in text group 1, no ack request	PROF	T0+240s	connection of active DMI channel: Message-S49	DMI		Text message is displayed in group 1 with blue on dark blue, no flashing in text group 1 ♫
50	STM deletes all text messages	PROF	T0+245s	connection of active DMI channel: Message-S50	DMI		All STM text messages are deleted from group 1
51	STM requests text message with green on blue, no flashing in text group 1, no ack request	PROF	T0+250s	connection of active DMI channel: Message-S51	DMI		Text message is displayed in group 1 with green on blue, no flashing in text group 1 ♫
52	STM requests text message with light red on blue, no flashing in text group 1, no ack request	PROF	T0+255s	connection of active DMI channel: Message-S52	DMI		Text message is displayed in group 1 with light red on blue, no flashing in text group 1 ♫
53	STM requests text message with light green on blue, no flashing in	PROF	T0+260s	connection of active DMI channel: Message-S53	DMI		Text message is displayed in group 1 with light green on blue, no

	text group 1, no ack request						flashing in text group 1 ♫
54	STM requests text message with blue on green, no flashing in text group 1, no ack request	PROF	T0+265s	connection of active DMI channel: Message-S54	DMI		Text message is displayed in group 1 with blue on green, no flashing in text group 1 ♫
55	STM requests text message with light red on green, no flashing in text group 1, no ack request	PROF	T0+270s	connection of active DMI channel: Message-S55	DMI		Text message is displayed in group 1 with light red on green, no flashing in text group 1 ♫
56	STM requests text message with light green on green, no flashing in text group 1, no ack request	PROF	T0+275s	connection of active DMI channel: Message-S56	DMI		Text message is displayed in group 1 with light green on green, no flashing in text group 1 ♫
57	STM deletes all text messages	PROF	T0+280s	connection of active DMI channel: Message-S57	DMI		All STM text messages are deleted from group 1
58	STM requests text message with blue on light red, no flashing in text group 1, no ack request	PROF	T0+285s	connection of active DMI channel: Message-S58	DMI		Text message is displayed in group 1 with blue on light red, no flashing in text group 1 ♫
59	STM requests text message with green on light red, no flashing in text group 1, no ack request	PROF	T0+290s	connection of active DMI channel: Message-S59	DMI		Text message is displayed in group 1 with green on light red, no flashing in text group 1 ♫
60	STM requests text message with light green on light red, no flashing in text group 1, no ack request	PROF	T0+295s	connection of active DMI channel: Message-S60	DMI		Text message is displayed in group 1 with light green on light red, no flashing in text group 1 ♫
61	STM requests text message with blue on light green, no flashing in text group 1, no ack request	PROF	T0+300s	connection of active DMI channel: Message-S61	DMI		Text message is displayed in group 1 with blue on light green, no flashing in text group 1 ♫
62	STM requests text message with green on light green, no flashing in text group 1, no ack request	PROF	T0+305s	connection of active DMI channel: Message-S62	DMI		Text message is displayed in group 1 with green on light green, no flashing in text group 1 ♫
63	STM requests text message with light red on light green, no flashing in text group 1, no ack request	PROF	T0+310s	connection of active DMI channel: Message-S63	DMI		Text message is displayed in group 1 with light red on light green, no flashing in text group 1 ♫
64	STM deletes all text messages	PROF	T0+315s	connection of active DMI channel:	DMI		All STM text messages are deleted

Message-S1: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	312	Packet Length
NID_XMESSAGE	8	1	
M_XATTRIBUTE	10	0000000001b	white on dark blue, no flashing in text group 1
Q_ACK	1	0	No acknowledgement required
L_TEXT	8	33	Text="Text message 1:white on dark blue"
X_TEXT(1)	8	"T"	
X_TEXT(2)	8	"e"	
X_TEXT(3)	8	"x"	
X_TEXT(4)	8	"t"	
X_TEXT(5)	8	" "	
X_TEXT(6)	8	"m"	
X_TEXT(7)	8	"e"	
X_TEXT(8)	8	"s"	
X_TEXT(9)	8	"s"	

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X_TEXT(10)	8	"a"	
X_TEXT(11)	8	"g"	
X_TEXT(12)	8	"e"	
X_TEXT(13)	8	" "	
X_TEXT(14)	8	"1"	
X_TEXT(15)	8	":"	
X_TEXT(16)	8	"w"	
X_TEXT(17)	8	"h"	
X_TEXT(18)	8	"i"	
X_TEXT(19)	8	"t"	
X_TEXT(20)	8	"e"	
X_TEXT(21)	8	" "	
X_TEXT(22)	8	"o"	
X_TEXT(23)	8	"n"	
X_TEXT(24)	8	" "	
X_TEXT(25)	8	"d"	
X_TEXT(26)	8	"a"	
X_TEXT(27)	8	"r"	
X_TEXT(28)	8	"k"	
X_TEXT(29)	8	" "	
X_TEXT(30)	8	"b"	
X_TEXT(31)	8	"l"	
X_TEXT(32)	8	"u"	

X_TEXT(33)	8	"e"	
Padding bits	7	0000000b	

Message-S2: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	42	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=292, NX=2, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=31, T="Text message 2:red on dark blue"			

Message-S3: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=316, NX=3, MX=0000000101b (yellow on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=34, T="Text message 3:yellow on dark blue"			

Message-S4: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	40	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=276, NX=4, MX=0000001000b (black on white, no flashing in text group 1), Q=0 (No acknowledgement required), L=29, T="Text message 4:black on white"			

Message-S5: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	38	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=260, NX=5, MX=0000001010b (red on white, no flashing in text group 1), Q=0 (No acknowledgement required), L=27, T="Text message 5:red on white"			

Message-S6: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	41	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=284, NX=6, MX=0000001101b (yellow on white, no flashing in text group 1), Q=0 (No acknowledgement required), L=30, T="Text message 6:yellow on white"			

Message-S7: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	39	delete text message by STM (STM-39)

L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	2	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	3	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	4	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	5	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	6	
Padding bits	1	0b	

Message-S8: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	38	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=260, NX=1, MX=0000010000b (black on red, no flashing in text group 1), Q=0 (No acknowledgement required), L=27, T="Text message 7:black on red"

Message-S9: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	38	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=260, NX=2, MX=0000010001b (white on red, no flashing in text group 1), Q=0 (No acknowledgement required), L=27, T="Text message 8:white on red"			

Message-S10: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	39	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=268, NX=3, MX=0000010101b (yellow on red, no flashing in text group 1), Q=0 (No acknowledgement required), L=28, T="Text message 9:yellow on red"			

Message-S11: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	42	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=292, NX=4, MX=0000101000b (black on yellow, no flashing in text group 1), Q=0 (No acknowledgement required), L=31, T="Text message 10:black on yellow"			

Message-S12: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	42	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=292, NX=5, MX=0000101001b (white on yellow, no flashing in text group 1), Q=0 (No acknowledgement required), L=31, T="Text message 11:white on yellow"			

Message-S13: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	40	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=276, NX=6, MX=0000101010b (red on yellow, no flashing in text group 1), Q=0 (No acknowledgement required), L=29, T="Text message 12:red on yellow"			

Message-S14: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			

STM-39: PL=29, NX=5

STM-39: PL=29, NX=6

Message-S15: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	40	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=276, NX=1, MX=0000011001b (white on blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=29, T="Text message 13:white on blue"			

Message-S16: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	38	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=260, NX=2, MX=0000011010b (red on blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=27, T="Text message 14:red on blue"			

Message-S17: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	41	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=284, NX=3, MX=0000011101b (yellow on blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=30, T="Text message 15:yellow on blue"			

Message-S18: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	41	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=284, NX=4, MX=0000100000b (black on green, no flashing in text group 1), Q=0 (No acknowledgement required), L=30, T="Text message 16:black on green"			

Message-S19: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	41	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=284, NX=5, MX=0000100001b (white on green, no flashing in text group 1), Q=0 (No acknowledgement required), L=30, T="Text message 17:white on green"			

Message-S20: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	39	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=268, NX=6, MX=0000100010b (red on green, no flashing in text group 1), Q=0 (No acknowledgement required), L=28, T="Text message 18:red on green"			

Message-S21: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	42	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=292, NX=7, MX=0000100101b (yellow on green, no flashing in text group 1), Q=0 (No acknowledgement required), L=31, T="Text message 19:yellow on green"			

Message-S22: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=316, NX=8, MX=0000110000b (black on light red, no flashing in text group 1), Q=0 (No acknowledgement required), L=34, T="Text message 20:black on light red"			

Message-S23: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	35	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			

STM-39: PL=29, NX=6
STM-39: PL=29, NX=7
STM-39: PL=29, NX=8

Message-S24: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=316, NX=1, MX=0000110001b (white on light red, no flashing in text group 1), Q=0 (No acknowledgement required), L=34, T="Text message 21:white on light red"			

Message-S25: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	43	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=300, NX=2, MX=0000110010b (red on light red, no flashing in text group 1), Q=0 (No acknowledgement required), L=32, T="Text message 22:red on light red"			

Message-S26: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	46	Message Length
STM-15: PL=25, ST=7, (State DA)			

STM-38: PL=324, NX=3, MX=0000110101b (yellow on light red, no flashing in text group 1), Q=0 (No acknowledgement required), L=35, T="Text message 23:yellow on light red"

Message-S27: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	47	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=332, NX=4, MX=0000111000b (black on light green, no flashing in text group 1), Q=0 (No acknowledgement required), L=36, T="Text message 24:black on light green"			

Message-S28: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	47	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=332, NX=5, MX=0000111001b (white on light green, no flashing in text group 1), Q=0 (No acknowledgement required), L=36, T="Text message 25:white on light green"			

Message-S29: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=316, NX=6, MX=0000111010b (red on light green, no flashing in text group 1), Q=0 (No acknowledgement required), L=34, T="Text message 26:red on light green"			

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Message-S30: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	48	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=340, NX=7, MX=0000111101b (yellow on light green, no flashing in text group 1), Q=0 (No acknowledgement required), L=37, T="Text message 27:yellow on light green"			

Message-S31: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	40	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=276, NX=8, MX=0000011000b (black on blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=29, T="Text message 28:black on blue"			

Message-S32: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	35	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			

STM-39: PL=29, NX=4
STM-39: PL=29, NX=5
STM-39: PL=29, NX=6
STM-39: PL=29, NX=7
STM-39: PL=29, NX=8

Message-S33: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=316, NX=1, MX=0000000100b (green on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=34, T="Text message 29:green on dark blue"			

Message-S34: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	49	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=348, NX=2, MX=0000000110b (light red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=38, T="Text message 30:light red on dark blue"			

Message-S35: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	51	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=364, NX=3, MX=0000000111b (light green on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=40, T="Text message 31:light green on dark blue"

Message-S36: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	40	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=276, NX=4, MX=0000001011b (blue on white, no flashing in text group 1), Q=0 (No acknowledgement required), L=29, T="Text message 32:blue on white"

Message-S37: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	41	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=284, NX=5, MX=0000001100b (green on white, no flashing in text group 1), Q=0 (No acknowledgement required), L=30, T="Text message 33:green on white"

Message-S38: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=316, NX=6, MX=0000001110b (light red on white, no flashing in text group 1), Q=0 (No acknowledgement required), L=34, T="Text message 34:light red on white"

Message-S39: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	47	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=332, NX=7, MX=0000001111b (light green on white, no flashing in text group 1), Q=0 (No acknowledgement required), L=36, T="Text message 35:light green on white"			

Message-S40: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	38	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=260, NX=8, MX=0000010011b (blue on red, no flashing in text group 1), Q=0 (No acknowledgement required), L=27, T="Text message 36:blue on red"			

Message-S41: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	35	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			

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STM-39: PL=29, NX=3
STM-39: PL=29, NX=4
STM-39: PL=29, NX=5
STM-39: PL=29, NX=6
STM-39: PL=29, NX=7
STM-39: PL=29, NX=8

Message-S42: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	39	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=268, NX=1, MX=0000010100b (green on red, no flashing in text group 1), Q=0 (No acknowledgement required), L=28, T="Text message 37:green on red"			

Message-S43: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	43	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=300, NX=2, MX=0000010110b (light red on red, no flashing in text group 1), Q=0 (No acknowledgement required), L=32, T="Text message 38:light red on red"			

Message-S44: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=316, NX=3, MX=0000010111b (light green on red, no flashing in text group 1), Q=0 (No acknowledgement required), L=34, T="Text message 39:light green on red"			

Message-S45: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	41	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=284, NX=4, MX=0000101011b (blue on yellow, no flashing in text group 1), Q=0 (No acknowledgement required), L=30, T="Text message 40:blue on yellow"			

Message-S46: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	42	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=292, NX=5, MX=0000101100b (green on yellow, no flashing in text group 1), Q=0 (No acknowledgement required), L=31, T="Text message 41:green on yellow"			

Message-S47: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	46	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=324, NX=6, MX=0000101110b (light red on yellow, no flashing in text group 1), Q=0 (No acknowledgement required), L=35, T="Text message 42:light red on yellow"

Message-S48: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	48	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=340, NX=7, MX=0000101111b (light green on yellow, no flashing in text group 1), Q=0 (No acknowledgement required), L=37, T="Text message 43:light green on yellow"

Message-S49: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=308, NX=8, MX=0000000011b (blue on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=33, T="Text message 44:blue on dark blue"

Message-S50: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	35	Message Length

| STM-15: PL=25, ST=7, (State DA) |
| STM-39: PL=29, NX=1 |
| STM-39: PL=29, NX=2 |
| STM-39: PL=29, NX=3 |
| STM-39: PL=29, NX=4 |
| STM-39: PL=29, NX=5 |
| STM-39: PL=29, NX=6 |
| STM-39: PL=29, NX=7 |
| STM-39: PL=29, NX=8 |

Message-S51: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	40	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=276, NX=1, MX=0000011100b (green on blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=29, T="Text message 45:green on blue"			

Message-S52: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=2, MX=0000011110b (light red on blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=33, T="Text message 46:light red on blue"			

Message-S53: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	46	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=324, NX=3, MX=0000011111b (light green on blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=35, T="Text message 47:light green on blue"			

Message-S54: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	40	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=276, NX=4, MX=0000100011b (blue on green, no flashing in text group 1), Q=0 (No acknowledgement required), L=29, T="Text message 48:blue on green"			

Message-S55: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=316, NX=5, MX=0000100110b (light red on green, no flashing in text group 1), Q=0 (No acknowledgement required), L=34, T="Text message 49:light red on green"			

Message-S56: STM requests another text message

VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	47	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=332, NX=6, MX=0000100111b (light green on green, no flashing in text group 1), Q=0 (No acknowledgement required), L=36, T="Text message 50:light green on green"			

Message-S57: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			
STM-39: PL=29, NX=6			

Message-S58: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			

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STM-38: PL=308, NX=1, MX=0000110011b (blue on light red, no flashing in text group 1), Q=0 (No acknowledgement required), L=33, T="Text message 51:blue on light red"

Message-S59: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=316, NX=2, MX=0000110100b (green on light red, no flashing in text group 1), Q=0 (No acknowledgement required), L=34, T="Text message 52:green on light red"			

Message-S60: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	51	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=364, NX=3, MX=0000110111b (light green on light red, no flashing in text group 1), Q=0 (No acknowledgement required), L=40, T="Text message 53:light green on light red"			

Message-S61: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	46	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=324, NX=4, MX=0000111011b (blue on light green, no flashing in text group 1), Q=0 (No acknowledgement required), L=35, T="Text message 54:blue on light green"			

Message-S62: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	47	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=332, NX=5, MX=0000111100b (green on light green, no flashing in text group 1), Q=0 (No acknowledgement required), L=36, T="Text message 55:green on light green"			

Message-S63: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	51	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=364, NX=6, MX=0000111110b (light red on light green, no flashing in text group 1), Q=0 (No acknowledgement required), L=40, T="Text message 56:light red on light green"			

Message-S64: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			

STM-39: PL=29, NX=4
STM-39: PL=29, NX=5
STM-39: PL=29, NX=6

2.4.4 Test Case 7d.4

TEST CASE HEADER	
Test case identification	DMI Function
	7d1.0.1.(7d2.0.2.1.1.3.0).(1.(1.1.(7d2.0.2.*.1.3.0).1)*.3.0)*.5
	Colour Handling test for text messages: group 2 text messages with > 20 ASCII characters:
	Text messages with all possible combinations of text and background colour, where text colour <> background colour. Text messages are sent in sequences of 6 or 8 messages with increasing text identifiers, then all text messages are deleted and the next set is sent. No ack requested for text messages.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.3, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38, STM-39
ERTMS/ETCS on-board configuration	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen for test).
Comments and constraints	Starting and end conditions as for test case 7d.1
	At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action

1	STM requests text message with white on dark blue, no flashing in text group 2, no ack request	PROF	T0	connection of active DMI channel: Message-S1	DMI		Text message is displayed in group 2 with white on dark blue, no flashing in text group 2
2	STM requests text message with red on dark blue, no flashing in text group 2, no ack request	PROF	T0+5s	connection of active DMI channel: Message-S2	DMI		Text message is displayed in group 2 with red on dark blue, no flashing in text group 2
3	STM requests text message with yellow on dark blue, no flashing in text group 2, no ack request	PROF	T0+10s	connection of active DMI channel: Message-S3	DMI		Text message is displayed in group 2 with yellow on dark blue, no flashing in text group 2
4	STM requests text message with black on white, no flashing in text group 2, no ack request	PROF	T0+15s	connection of active DMI channel: Message-S4	DMI		Text message is displayed in group 2 with black on white, no flashing in text group 2
5	STM requests text message with red on white, no flashing in text group 2, no ack request	PROF	T0+20s	connection of active DMI channel: Message-S5	DMI		Text message is displayed in group 2 with red on white, no flashing in text group 2
6	STM requests text message with yellow on white, no flashing in text group 2, no ack request	PROF	T0+25s	connection of active DMI channel: Message-S6	DMI		Text message is displayed in group 2 with yellow on white, no flashing in text group 2
7	STM deletes all text messages	PROF	T0+30s	connection of active DMI channel: Message-S7	DMI		All STM text messages are deleted from group 2
8	STM requests text message with black on red, no flashing in text group 2, no ack request	PROF	T0+35s	connection of active DMI channel: Message-S8	DMI		Text message is displayed in group 2 with black on red, no flashing in text group 2
9	STM requests text message with white on red, no flashing in text group 2, no ack request	PROF	T0+40s	connection of active DMI channel: Message-S9	DMI		Text message is displayed in group 2 with white on red, no flashing in text group 2
10	STM requests text message with yellow on red, no flashing in text group 2, no ack request	PROF	T0+45s	connection of active DMI channel: Message-S10	DMI		Text message is displayed in group 2 with yellow on red, no flashing in text group 2
11	STM requests text message with black on yellow, no flashing in text	PROF	T0+50s	connection of active DMI channel: Message-S11	DMI		Text message is displayed in group 2 with black on yellow, no flashing in

	group 2, no ack request						text group 2
12	STM requests text message with white on yellow, no flashing in text group 2, no ack request	PROF	T0+55s	connection of active DMI channel: Message-S12	DMI		Text message is displayed in group 2 with white on yellow, no flashing in text group 2
13	STM requests text message with red on yellow, no flashing in text group 2, no ack request	PROF	T0+60s	connection of active DMI channel: Message-S13	DMI		Text message is displayed in group 2 with red on yellow, no flashing in text group 2
14	STM deletes all text messages	PROF	T0+65s	connection of active DMI channel: Message-S14	DMI		All STM text messages are deleted from group 2
15	STM requests text message with white on blue, no flashing in text group 2, no ack request	PROF	T0+70s	connection of active DMI channel: Message-S15	DMI		Text message is displayed in group 2 with white on blue, no flashing in text group 2
16	STM requests text message with red on blue, no flashing in text group 2, no ack request	PROF	T0+75s	connection of active DMI channel: Message-S16	DMI		Text message is displayed in group 2 with red on blue, no flashing in text group 2
17	STM requests text message with yellow on blue, no flashing in text group 2, no ack request	PROF	T0+80s	connection of active DMI channel: Message-S17	DMI		Text message is displayed in group 2 with yellow on blue, no flashing in text group 2
18	STM requests text message with black on green, no flashing in text group 2, no ack request	PROF	T0+85s	connection of active DMI channel: Message-S18	DMI		Text message is displayed in group 2 with black on green, no flashing in text group 2
19	STM requests text message with white on green, no flashing in text group 2, no ack request	PROF	T0+90s	connection of active DMI channel: Message-S19	DMI		Text message is displayed in group 2 with white on green, no flashing in text group 2
20	STM requests text message with red on green, no flashing in text group 2, no ack request	PROF	T0+95s	connection of active DMI channel: Message-S20	DMI		Text message is displayed in group 2 with red on green, no flashing in text group 2
21	STM requests text message with yellow on green, no flashing in text group 2, no ack request	PROF	T0+100s	connection of active DMI channel: Message-S21	DMI		Text message is displayed in group 2 with yellow on green, no flashing in text group 2
22	STM requests text message with	PROF	T0+105s	connection of active DMI channel:	DMI		Text message is displayed in group

	black on light red, no flashing in text group 2, no ack request			Message-S22			2 with black on light red, no flashing in text group 2
23	STM deletes all text messages	PROF	T0+110s	connection of active DMI channel: Message-S23	DMI		All STM text messages are deleted from group 2
24	STM requests text message with white on light red, no flashing in text group 2, no ack request	PROF	T0+115s	connection of active DMI channel: Message-S24	DMI		Text message is displayed in group 2 with white on light red, no flashing in text group 2
25	STM requests text message with red on light red, no flashing in text group 2, no ack request	PROF	T0+120s	connection of active DMI channel: Message-S25	DMI		Text message is displayed in group 2 with red on light red, no flashing in text group 2
26	STM requests text message with yellow on light red, no flashing in text group 2, no ack request	PROF	T0+125s	connection of active DMI channel: Message-S26	DMI		Text message is displayed in group 2 with yellow on light red, no flashing in text group 2
27	STM requests text message with black on light green, no flashing in text group 2, no ack request	PROF	T0+130s	connection of active DMI channel: Message-S27	DMI		Text message is displayed in group 2 with black on light green, no flashing in text group 2
28	STM requests text message with white on light green, no flashing in text group 2, no ack request	PROF	T0+135s	connection of active DMI channel: Message-S28	DMI		Text message is displayed in group 2 with white on light green, no flashing in text group 2
29	STM requests text message with red on light green, no flashing in text group 2, no ack request	PROF	T0+140s	connection of active DMI channel: Message-S29	DMI		Text message is displayed in group 2 with red on light green, no flashing in text group 2
30	STM requests text message with yellow on light green, no flashing in text group 2, no ack request	PROF	T0+145s	connection of active DMI channel: Message-S30	DMI		Text message is displayed in group 2 with yellow on light green, no flashing in text group 2
31	STM requests text message with black on blue, no flashing in text group 2, no ack request	PROF	T0+150s	connection of active DMI channel: Message-S31	DMI		Text message is displayed in group 2 with black on blue, no flashing in text group 2
32	STM deletes all text messages	PROF	T0+155s	connection of active DMI channel: Message-S32	DMI		All STM text messages are deleted from group 2
33	STM requests text message with	PROF	T0+160s	connection of active DMI channel:	DMI		Text message is displayed in group

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	green on dark blue, no flashing in text group 2, no ack request			Message-S33			2 with green on dark blue, no flashing in text group 2
34	STM requests text message with light red on dark blue, no flashing in text group 2, no ack request	PROF	T0+165s	connection of active DMI channel: Message-S34	DMI		Text message is displayed in group 2 with light red on dark blue, no flashing in text group 2
35	STM requests text message with light green on dark blue, no flashing in text group 2, no ack request	PROF	T0+170s	connection of active DMI channel: Message-S35	DMI		Text message is displayed in group 2 with light green on dark blue, no flashing in text group 2
36	STM requests text message with blue on white, no flashing in text group 2, no ack request	PROF	T0+175s	connection of active DMI channel: Message-S36	DMI		Text message is displayed in group 2 with blue on white, no flashing in text group 2
37	STM requests text message with green on white, no flashing in text group 2, no ack request	PROF	T0+180s	connection of active DMI channel: Message-S37	DMI		Text message is displayed in group 2 with green on white, no flashing in text group 2
38	STM requests text message with light red on white, no flashing in text group 2, no ack request	PROF	T0+185s	connection of active DMI channel: Message-S38	DMI		Text message is displayed in group 2 with light red on white, no flashing in text group 2
39	STM requests text message with light green on white, no flashing in text group 2, no ack request	PROF	T0+190s	connection of active DMI channel: Message-S39	DMI		Text message is displayed in group 2 with light green on white, no flashing in text group 2
40	STM requests text message with blue on red, no flashing in text group 2, no ack request	PROF	T0+195s	connection of active DMI channel: Message-S40	DMI		Text message is displayed in group 2 with blue on red, no flashing in text group 2
41	STM deletes all text messages	PROF	T0+200s	connection of active DMI channel: Message-S41	DMI		All STM text messages are deleted from group 2
42	STM requests text message with green on red, no flashing in text group 2, no ack request	PROF	T0+205s	connection of active DMI channel: Message-S42	DMI		Text message is displayed in group 2 with green on red, no flashing in text group 2
43	STM requests text message with light red on red, no flashing in text group 2, no ack request	PROF	T0+210s	connection of active DMI channel: Message-S43	DMI		Text message is displayed in group 2 with light red on red, no flashing in text group 2

44	STM requests text message with light green on red, no flashing in text group 2, no ack request	PROF	T0+215s	connection of active DMI channel: Message-S44	DMI		Text message is displayed in group 2 with light green on red, no flashing in text group 2
45	STM requests text message with blue on yellow, no flashing in text group 2, no ack request	PROF	T0+220s	connection of active DMI channel: Message-S45	DMI		Text message is displayed in group 2 with blue on yellow, no flashing in text group 2
46	STM requests text message with green on yellow, no flashing in text group 2, no ack request	PROF	T0+225s	connection of active DMI channel: Message-S46	DMI		Text message is displayed in group 2 with green on yellow, no flashing in text group 2
47	STM requests text message with light red on yellow, no flashing in text group 2, no ack request	PROF	T0+230s	connection of active DMI channel: Message-S47	DMI		Text message is displayed in group 2 with light red on yellow, no flashing in text group 2
48	STM requests text message with light green on yellow, no flashing in text group 2, no ack request	PROF	T0+235s	connection of active DMI channel: Message-S48	DMI		Text message is displayed in group 2 with light green on yellow, no flashing in text group 2
49	STM requests text message with blue on dark blue, no flashing in text group 2, no ack request	PROF	T0+240s	connection of active DMI channel: Message-S49	DMI		Text message is displayed in group 2 with blue on dark blue, no flashing in text group 2
50	STM deletes all text messages	PROF	T0+245s	connection of active DMI channel: Message-S50	DMI		All STM text messages are deleted from group 2
51	STM requests text message with green on blue, no flashing in text group 2, no ack request	PROF	T0+250s	connection of active DMI channel: Message-S51	DMI		Text message is displayed in group 2 with green on blue, no flashing in text group 2
52	STM requests text message with light red on blue, no flashing in text group 2, no ack request	PROF	T0+255s	connection of active DMI channel: Message-S52	DMI		Text message is displayed in group 2 with light red on blue, no flashing in text group 2
53	STM requests text message with light green on blue, no flashing in text group 2, no ack request	PROF	T0+260s	connection of active DMI channel: Message-S53	DMI		Text message is displayed in group 2 with light green on blue, no flashing in text group 2
54	STM requests text message with blue on green, no flashing in text	PROF	T0+265s	connection of active DMI channel: Message-S54	DMI		Text message is displayed in group 2 with blue on green, no flashing in

	group 2, no ack request						text group 2
55	STM requests text message with light red on green, no flashing in text group 2, no ack request	PROF	T0+270s	connection of active DMI channel: Message-S55	DMI		Text message is displayed in group 2 with light red on green, no flashing in text group 2
56	STM requests text message with light green on green, no flashing in text group 2, no ack request	PROF	T0+275s	connection of active DMI channel: Message-S56	DMI		Text message is displayed in group 2 with light green on green, no flashing in text group 2
57	STM deletes all text messages	PROF	T0+280s	connection of active DMI channel: Message-S57	DMI		All STM text messages are deleted from group 2
58	STM requests text message with blue on light red, no flashing in text group 2, no ack request	PROF	T0+285s	connection of active DMI channel: Message-S58	DMI		Text message is displayed in group 2 with blue on light red, no flashing in text group 2
59	STM requests text message with green on light red, no flashing in text group 2, no ack request	PROF	T0+290s	connection of active DMI channel: Message-S59	DMI		Text message is displayed in group 2 with green on light red, no flashing in text group 2
60	STM requests text message with light green on light red, no flashing in text group 2, no ack request	PROF	T0+295s	connection of active DMI channel: Message-S60	DMI		Text message is displayed in group 2 with light green on light red, no flashing in text group 2
61	STM requests text message with blue on light green, no flashing in text group 2, no ack request	PROF	T0+300s	connection of active DMI channel: Message-S61	DMI		Text message is displayed in group 2 with blue on light green, no flashing in text group 2
62	STM requests text message with green on light green, no flashing in text group 2, no ack request	PROF	T0+305s	connection of active DMI channel: Message-S62	DMI		Text message is displayed in group 2 with green on light green, no flashing in text group 2
63	STM requests text message with light red on light green, no flashing in text group 2, no ack request	PROF	T0+310s	connection of active DMI channel: Message-S63	DMI		Text message is displayed in group 2 with light red on light green, no flashing in text group 2
64	STM deletes all text messages	PROF	T0+315s	connection of active DMI channel: Message-S64	DMI		All STM text messages are deleted from group 2

	Message-S1: STM requests first text message of set		
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	312	Packet Length
NID_XMESSAGE	8	1	
M_XATTRIBUTE	10	1000000001b	white on dark blue, no flashing in text group 2
Q_ACK	1	0	No acknowledgement required
L_TEXT	8	33	Text="Text message 1:white on dark blue"
X_TEXT(1)	8	"T"	
X_TEXT(2)	8	"e"	
X_TEXT(3)	8	"x"	
X_TEXT(4)	8	"t"	
X_TEXT(5)	8	" "	
X_TEXT(6)	8	"m"	
X_TEXT(7)	8	"e"	
X_TEXT(8)	8	"s"	
X_TEXT(9)	8	"s"	
X_TEXT(10)	8	"a"	

X_TEXT(11)	8	"g"	
X_TEXT(12)	8	"e"	
X_TEXT(13)	8	" "	
X_TEXT(14)	8	"1"	
X_TEXT(15)	8	"."	
X_TEXT(16)	8	"w"	
X_TEXT(17)	8	"h"	
X_TEXT(18)	8	"i"	
X_TEXT(19)	8	"t"	
X_TEXT(20)	8	"e"	
X_TEXT(21)	8	" "	
X_TEXT(22)	8	"o"	
X_TEXT(23)	8	"n"	
X_TEXT(24)	8	" "	
X_TEXT(25)	8	"d"	
X_TEXT(26)	8	"a"	
X_TEXT(27)	8	"r"	
X_TEXT(28)	8	"k"	
X_TEXT(29)	8	" "	
X_TEXT(30)	8	"b"	
X_TEXT(31)	8	"l"	
X_TEXT(32)	8	"u"	
X_TEXT(33)	8	"e"	

Padding bits	7	0000000b	

Message-S2: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	42	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=292, NX=2, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=31, T="Text message 2:red on dark blue"			

Message-S3: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=316, NX=3, MX=1000000101b (yellow on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=34, T="Text message 3:yellow on dark blue"			

Message-S4: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	40	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=276, NX=4, MX=1000001000b (black on white, no flashing in text group 2), Q=0 (No acknowledgement required), L=29, T="Text message 4:black on white"			

Message-S5: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	38	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=260, NX=5, MX=1000001010b (red on white, no flashing in text group 2), Q=0 (No acknowledgement required), L=27, T="Text message 5:red on white"			

Message-S6: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	41	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=284, NX=6, MX=1000001101b (yellow on white, no flashing in text group 2), Q=0 (No acknowledgement required), L=30, T="Text message 6:yellow on white"			

Message-S7: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length

VARIABLE	Length	VALUE	COMMENT
NID_XMESSAGE	8	1	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	2	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	3	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	4	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	5	
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	6	
Padding bits	1	0b	

Message-S8: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	38	Message Length
STM-15: PL=25, ST=7, (State DA)			

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STM-38: PL=260, NX=1, MX=1000010000b (black on red, no flashing in text group 2), Q=0 (No acknowledgement required), L=27, T="Text message 7:black on red"

Message-S9: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	38	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=260, NX=2, MX=1000010001b (white on red, no flashing in text group 2), Q=0 (No acknowledgement required), L=27, T="Text message 8:white on red"			

Message-S10: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	39	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=268, NX=3, MX=1000010101b (yellow on red, no flashing in text group 2), Q=0 (No acknowledgement required), L=28, T="Text message 9:yellow on red"			

Message-S11: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	42	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=292, NX=4, MX=1000101000b (black on yellow, no flashing in text group 2), Q=0 (No acknowledgement required), L=31, T="Text message 10:black on yellow"			

Message-S12: STM requests another text message

VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	42	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=292, NX=5, MX=1000101001b (white on yellow, no flashing in text group 2), Q=0 (No acknowledgement required), L=31, T="Text message 11:white on yellow"			

Message-S13: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	40	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=276, NX=6, MX=1000101010b (red on yellow, no flashing in text group 2), Q=0 (No acknowledgement required), L=29, T="Text message 12:red on yellow"			

Message-S14: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			

STM-39: PL=29, NX=6

Message-S15: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	40	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=276, NX=1, MX=1000011001b (white on blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=29, T="Text message 13:white on blue"			

Message-S16: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	38	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=260, NX=2, MX=1000011010b (red on blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=27, T="Text message 14:red on blue"			

Message-S17: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	41	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=284, NX=3, MX=1000011101b (yellow on blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=30, T="Text message 15:yellow on blue"			

Message-S18: STM requests another text message

VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	41	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=284, NX=4, MX=1000100000b (black on green, no flashing in text group 2), Q=0 (No acknowledgement required), L=30, T="Text message 16:black on green"			

Message-S19: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	41	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=284, NX=5, MX=1000100001b (white on green, no flashing in text group 2), Q=0 (No acknowledgement required), L=30, T="Text message 17:white on green"			

Message-S20: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	39	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=268, NX=6, MX=1000100010b (red on green, no flashing in text group 2), Q=0 (No acknowledgement required), L=28, T="Text message 18:red on green"			

Message-S21: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	42	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=292, NX=7, MX=1000100101b (yellow on green, no flashing in text group 2), Q=0 (No acknowledgement required), L=31, T="Text message 19:yellow on green"			

Message-S22: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=316, NX=8, MX=1000110000b (black on light red, no flashing in text group 2), Q=0 (No acknowledgement required), L=34, T="Text message 20:black on light red"			

Message-S23: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	35	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			
STM-39: PL=29, NX=6			

STM-39: PL=29, NX=7

STM-39: PL=29, NX=8

Message-S24: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=316, NX=1, MX=1000110001b (white on light red, no flashing in text group 2), Q=0 (No acknowledgement required), L=34, T="Text message 21:white on light red"			

Message-S25: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	43	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=300, NX=2, MX=1000110010b (red on light red, no flashing in text group 2), Q=0 (No acknowledgement required), L=32, T="Text message 22:red on light red"			

Message-S26: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	46	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=324, NX=3, MX=1000110101b (yellow on light red, no flashing in text group 2), Q=0 (No acknowledgement required), L=35, T="Text message 23:yellow on			

light red"

Message-S27: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	47	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=332, NX=4, MX=1000111000b (black on light green, no flashing in text group 2), Q=0 (No acknowledgement required), L=36, T="Text message 24:black on light green"			

Message-S28: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	47	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=332, NX=5, MX=1000111001b (white on light green, no flashing in text group 2), Q=0 (No acknowledgement required), L=36, T="Text message 25:white on light green"			

Message-S29: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=316, NX=6, MX=1000111010b (red on light green, no flashing in text group 2), Q=0 (No acknowledgement required), L=34, T="Text message 26:red on light green"			

Message-S30: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	48	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=340, NX=7, MX=1000111101b (yellow on light green, no flashing in text group 2), Q=0 (No acknowledgement required), L=37, T="Text message 27:yellow on light green"			

Message-S31: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	40	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=276, NX=8, MX=1000011000b (black on blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=29, T="Text message 28:black on blue"			

Message-S32: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	35	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			

STM-39: PL=29, NX=5

STM-39: PL=29, NX=6

STM-39: PL=29, NX=7

STM-39: PL=29, NX=8

Message-S33: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=316, NX=1, MX=1000000100b (green on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=34, T="Text message 29:green on dark blue"			

Message-S34: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	49	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=348, NX=2, MX=1000000110b (light red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=38, T="Text message 30:light red on dark blue"			

Message-S35: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	51	Message Length

STM-15: PL=25, ST=7, (State DA)
STM-38: PL=364, NX=3, MX=1000000111b (light green on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=40, T="Text message 31:light green on dark blue"

Message-S36: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	40	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=276, NX=4, MX=1000001011b (blue on white, no flashing in text group 2), Q=0 (No acknowledgement required), L=29, T="Text message 32:blue on white"			

Message-S37: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	41	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=284, NX=5, MX=1000001100b (green on white, no flashing in text group 2), Q=0 (No acknowledgement required), L=30, T="Text message 33:green on white"			

Message-S38: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=316, NX=6, MX=1000001110b (light red on white, no flashing in text group 2), Q=0 (No acknowledgement required), L=34, T="Text message 34:light red on			

white"

Message-S39: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	47	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=332, NX=7, MX=1000001111b (light green on white, no flashing in text group 2), Q=0 (No acknowledgement required), L=36, T="Text message 35:light green on white"			

Message-S40: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	38	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=260, NX=8, MX=1000010011b (blue on red, no flashing in text group 2), Q=0 (No acknowledgement required), L=27, T="Text message 36:blue on red"			

Message-S41: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	35	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			

STM-39: PL=29, NX=4
STM-39: PL=29, NX=5
STM-39: PL=29, NX=6
STM-39: PL=29, NX=7
STM-39: PL=29, NX=8

Message-S42: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	39	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=268, NX=1, MX=1000010100b (green on red, no flashing in text group 2), Q=0 (No acknowledgement required), L=28, T="Text message 37:green on red"			

Message-S43: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	43	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=300, NX=2, MX=1000010110b (light red on red, no flashing in text group 2), Q=0 (No acknowledgement required), L=32, T="Text message 38:light red on red"			

Message-S44: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	45	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=316, NX=3, MX=1000010111b (light green on red, no flashing in text group 2), Q=0 (No acknowledgement required), L=34, T="Text message 39:light green on red"

Message-S45: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	41	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=284, NX=4, MX=1000101011b (blue on yellow, no flashing in text group 2), Q=0 (No acknowledgement required), L=30, T="Text message 40:blue on yellow"

Message-S46: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	42	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=292, NX=5, MX=1000101100b (green on yellow, no flashing in text group 2), Q=0 (No acknowledgement required), L=31, T="Text message 41:green on yellow"

Message-S47: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	46	Message Length

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STM-15: PL=25, ST=7, (State DA)

STM-38: PL=324, NX=6, MX=1000101110b (light red on yellow, no flashing in text group 2), Q=0 (No acknowledgement required), L=35, T="Text message 42:light red on yellow"

Message-S48: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	48	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=340, NX=7, MX=1000101111b (light green on yellow, no flashing in text group 2), Q=0 (No acknowledgement required), L=37, T="Text message 43:light green on yellow"			

Message-S49: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=8, MX=1000000011b (blue on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=33, T="Text message 44:blue on dark blue"			

Message-S50: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	35	Message Length
STM-15: PL=25, ST=7, (State DA)			

STM-39: PL=29, NX=1
STM-39: PL=29, NX=2
STM-39: PL=29, NX=3
STM-39: PL=29, NX=4
STM-39: PL=29, NX=5
STM-39: PL=29, NX=6
STM-39: PL=29, NX=7
STM-39: PL=29, NX=8

Message-S51: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	40	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=276, NX=1, MX=1000011100b (green on blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=29, T="Text message 45:green on blue"			

Message-S52: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=2, MX=1000011110b (light red on blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=33, T="Text message 46:light red on blue"			

Message-S53: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	46	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=324, NX=3, MX=1000011111b (light green on blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=35, T="Text message 47:light green on blue"			

Message-S54: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	40	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=276, NX=4, MX=1000100011b (blue on green, no flashing in text group 2), Q=0 (No acknowledgement required), L=29, T="Text message 48:blue on green"			

Message-S55: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=316, NX=5, MX=1000100110b (light red on green, no flashing in text group 2), Q=0 (No acknowledgement required), L=34, T="Text message 49:light red on green"			

Message-S56: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	47	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=332, NX=6, MX=1000100111b (light green on green, no flashing in text group 2), Q=0 (No acknowledgement required), L=36, T="Text message 50:light green on green"			

Message-S57: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			
STM-39: PL=29, NX=4			
STM-39: PL=29, NX=5			
STM-39: PL=29, NX=6			

Message-S58: STM requests first text message of set			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=1, MX=1000110011b (blue on light red, no flashing in text group 2), Q=0 (No acknowledgement required), L=33, T="Text message 51:blue on light			

red"

Message-S59: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	45	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=316, NX=2, MX=1000110100b (green on light red, no flashing in text group 2), Q=0 (No acknowledgement required), L=34, T="Text message 52:green on light red"			

Message-S60: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	51	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=364, NX=3, MX=1000110111b (light green on light red, no flashing in text group 2), Q=0 (No acknowledgement required), L=40, T="Text message 53:light green on light red"			

Message-S61: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	46	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=324, NX=4, MX=1000111011b (blue on light green, no flashing in text group 2), Q=0 (No acknowledgement required), L=35, T="Text message 54:blue on light green"			

Message-S62: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	47	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=332, NX=5, MX=1000111100b (green on light green, no flashing in text group 2), Q=0 (No acknowledgement required), L=36, T="Text message 55:green on light green"			

Message-S63: STM requests another text message			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	51	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=364, NX=6, MX=1000111110b (light red on light green, no flashing in text group 2), Q=0 (No acknowledgement required), L=40, T="Text message 56:light red on light green"			

Message-S64: STM deletes all text messages			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=1			
STM-39: PL=29, NX=2			
STM-39: PL=29, NX=3			

STM-39: PL=29, NX=4
STM-39: PL=29, NX=5
STM-39: PL=29, NX=6

2.4.5 Test Case 7d.5

TEST CASE HEADER	
Test case identification	DMI Function
	7d1.0.1.(7d2.0.1.1.1.3.0).1.1.1.(7d2.0.1.1.2.1.3.0).1.1.1.(7d2.0.1.1.2.2.3.0).1.1.1.(7d2.0.1.1.3.1.3.0).1.1.1.(7d2.0.1.1.3.2.3.0).1.(3.0) *.5
	Flashing mode and phase test: group 1. Text messages without acknowledgment are displayed and deleted together at the end.:
	Text messages with all possible combinations of flashing mode and phase are displayed. Text messages are requested without acknowledgement. All messages are deleted together at the end.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.3, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.2.3, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38, STM-39
ERTMS/ETCS on-board configuration	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen for test).
Comments and constraints	Starting and end conditions as for test case 7d.1
	At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action

1	Text message T1 without flashing is requested by STM	PROF	T0	connection of active DMI channel: Message-S1	DMI		Text "T1 Text without flashing" is displayed in group 1 without flashing ♫
2	Text message T2 with slow normal flashing is requested by STM	PROF	T0+5s	connection of active DMI channel: Message-S2	DMI		Text "T2 Text with slow normal flashing" is displayed in group 1 with slow normal flashing ♫
3	Text message T3 with slow counterphase flashing is requested by STM	PROF	T0+10s	connection of active DMI channel: Message-S3	DMI		Text "T3 Text with slow counterphase flashing" is displayed in group 1 with slow counterphase flashing ♫
4	Text message T4 with fast normal flashing is requested by STM	PROF	T0+15s	connection of active DMI channel: Message-S4	DMI		Text "T4 Text with fast normal flashing" is displayed in group 1 with fast normal flashing ♫
5	Text message T5 with fast counterphase flashing is requested by STM	PROF	T0+20s	connection of active DMI channel: Message-S5	DMI		Text "T5 Text with fast counterphase flashing" is displayed in group 1 with fast counterphase flashing ♫
6	Text message T1 is deleted by STM	PROF	T0+25s	connection of active DMI channel: Message-S6	DMI		Text messages T2 - T5 are displayed in group 1 with flashing mode and phase according to message content
7	Text message T2 is deleted by STM	PROF	T0+30s	connection of active DMI channel: Message-S7	DMI		Text messages T3 - T5 are displayed in group 1 with flashing mode and phase according to message content
8	Text message T3 is deleted by STM	PROF	T0+35s	connection of active DMI channel: Message-S8	DMI		Text messages T4 - T5 are displayed in group 1 with flashing mode and phase according to message content
9	Text message T4 is deleted by STM	PROF	T0+40s	connection of active DMI channel: Message-S9	DMI		Text message T5 is displayed in group 1 as only text message with fast counterphase flashing

10	Text message T5 is deleted by STM	PROF	T0+45s	connection of active DMI channel: Message-S10	DMI		No STM text message is displayed

Message-S1: STM requests Text message T1 without flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	36	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	240	Packet Length
NID_XMESSAGE	8	1	
M_XATTRIBUTE	10	0000000010b	red on dark blue, no flashing in text group 1
Q_ACK	1	0	No acknowledgement required
L_TEXT	8	24	Text="T1 Text without flashing"
X_TEXT(1)	8	"T"	
X_TEXT(2)	8	"1"	
X_TEXT(3)	8	" "	
X_TEXT(4)	8	"T"	
X_TEXT(5)	8	"e"	
X_TEXT(6)	8	"x"	
X_TEXT(7)	8	"t"	
X_TEXT(8)	8	" "	

VARIABLE	Length	VALUE	COMMENT
X_TEXT(9)	8	"w"	
X_TEXT(10)	8	"i"	
X_TEXT(11)	8	"t"	
X_TEXT(12)	8	"h"	
X_TEXT(13)	8	"o"	
X_TEXT(14)	8	"u"	
X_TEXT(15)	8	"t"	
X_TEXT(16)	8	" "	
X_TEXT(17)	8	"f"	
X_TEXT(18)	8	"l"	
X_TEXT(19)	8	"a"	
X_TEXT(20)	8	"s"	
X_TEXT(21)	8	"h"	
X_TEXT(22)	8	"i"	
X_TEXT(23)	8	"n"	
X_TEXT(24)	8	"g"	
Padding bits	7	0000000b	

Message-S2: STM requests Text message T2 with slow normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			

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STM-38: PL=308, NX=2, MX=0001000010b (red on dark blue, slow flashing, normal phase in text group 1), Q=0 (No acknowledgement required), L=33, T="T2 Text with slow normal flashing"

Message-S3: STM requests Text message T3 with slow counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=356, NX=3, MX=0101000010b (red on dark blue, slow flashing, counter phase in text group 1), Q=0 (No acknowledgement required), L=39, T="T3 Text with slow counterphase flashing"			

Message-S4: STM requests Text message T4 with fast normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=4, MX=0010000010b (red on dark blue, fast flashing, normal phase in text group 1), Q=0 (No acknowledgement required), L=33, T="T4 Text with fast normal flashing"			

Message-S5: STM requests Text message T5 with fast counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=356, NX=5, MX=0110000010b (red on dark blue, fast flashing, counter phase in text group 1), Q=0 (No acknowledgement required), L=39, T="T5 Text with fast counterphase flashing"			

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Message-S6: STM deletes text message T1			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
Padding bits	2	00b	

Message-S7: STM deletes text message T2			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=2			

Message-S8: STM deletes text message T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length

STM-15: PL=25, ST=7, (State DA)
STM-39: PL=29, NX=3

Message-S9: STM deletes text message T4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=4			

Message-S10: STM deletes text message T5			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=5			

2.4.6 Test Case 7d.6

TEST CASE HEADER	
Test case identification	DMI Function
	7d1.0.1.(7d2.0.2.1.1.3.0).1.1.1.(7d2.0.2.1.2.1.3.0).1.1.1.(7d2.0.2.1.2.2.3.0).1.1.1.(7d2.0.2.1.3.1.3.0).1.1.1.(7d2.0.2.1.3.2.3.0).1.(3.0)*.5
	Flashing mode and phase test: group 2. Text messages without acknowledgment are displayed and deleted together at the end.:
	Text messages with all possible combinations of flashing mode and phase are displayed. Text messages are requested without

	acknowledgement. All messages are deleted together at the end.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.3, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.2.3, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38, STM-39
ERTMS/ETCS on-board configuration	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen for test).
Comments and constraints	Starting and end conditions as for test case 7d.1
	At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action
1	Text message T1 without flashing is requested by STM	PROF	T0	connection of active DMI channel: Message-S1	DMI		Text "T1 Text without flashing" is displayed in group 2 without flashing
2	Text message T2 with slow normal flashing is requested by STM	PROF	T0+5s	connection of active DMI channel: Message-S2	DMI		Text "T2 Text with slow normal flashing" is displayed in group 2 with slow normal flashing
3	Text message T3 with slow counterphase flashing is requested by STM	PROF	T0+10s	connection of active DMI channel: Message-S3	DMI		Text "T3 Text with slow counterphase flashing" is displayed in group 2 with slow counterphase flashing
4	Text message T4 with fast normal flashing is requested by STM	PROF	T0+15s	connection of active DMI channel: Message-S4	DMI		Text "T4 Text with fast normal flashing" is displayed in group 2 with fast normal flashing
5	Text message T5 with fast counterphase flashing is requested	PROF	T0+20s	connection of active DMI channel: Message-S5	DMI		Text "T5 Text with fast counterphase flashing" is displayed in group 2 with

	by STM						fast counterphase flashing
6	Text message T1 is deleted by STM	PROF	T0+25s	connection of active DMI channel: Message-S6	DMI		Text messages T2 - T5 are displayed in group 2 with flashing mode and phase according to message content
7	Text message T2 is deleted by STM	PROF	T0+30s	connection of active DMI channel: Message-S7	DMI		Text messages T3 - T5 are displayed in group 2 with flashing mode and phase according to message content
8	Text message T3 is deleted by STM	PROF	T0+35s	connection of active DMI channel: Message-S8	DMI		Text messages T4 - T5 are displayed in group 2 with flashing mode and phase according to message content
9	Text message T4 is deleted by STM	PROF	T0+40s	connection of active DMI channel: Message-S9	DMI		Text message T5 is displayed in group 2 as only text message with fast counterphase flashing
10	Text message T5 is deleted by STM	PROF	T0+45s	connection of active DMI channel: Message-S10	DMI		No STM text message is displayed

Message-S1: STM requests Text message T1 without flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	36	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	240	Packet Length

NID_XMESSAGE	8	1	
M_XATTRIBUTE	10	1000000010b	red on dark blue, no flashing in text group 2
Q_ACK	1	0	No acknowledgement required
L_TEXT	8	24	Text="T1 Text without flashing"
X_TEXT(1)	8	"T"	
X_TEXT(2)	8	"1"	
X_TEXT(3)	8	" "	
X_TEXT(4)	8	"T"	
X_TEXT(5)	8	"e"	
X_TEXT(6)	8	"x"	
X_TEXT(7)	8	"t"	
X_TEXT(8)	8	" "	
X_TEXT(9)	8	"w"	
X_TEXT(10)	8	"i"	
X_TEXT(11)	8	"t"	
X_TEXT(12)	8	"h"	
X_TEXT(13)	8	"o"	
X_TEXT(14)	8	"u"	
X_TEXT(15)	8	"t"	
X_TEXT(16)	8	" "	
X_TEXT(17)	8	"f"	
X_TEXT(18)	8	"l"	
X_TEXT(19)	8	"a"	

X_TEXT(20)	8	"s"	
X_TEXT(21)	8	"h"	
X_TEXT(22)	8	"i"	
X_TEXT(23)	8	"n"	
X_TEXT(24)	8	"g"	
Padding bits	7	0000000b	

Message-S2: STM requests Text message T2 with slow normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=2, MX=1001000010b (red on dark blue, slow flashing, normal phase in text group 2), Q=0 (No acknowledgement required), L=33, T="T2 Text with slow normal flashing"			

Message-S3: STM requests Text message T3 with slow counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=356, NX=3, MX=1101000010b (red on dark blue, slow flashing, counter phase in text group 2), Q=0 (No acknowledgement required), L=39, T="T3 Text with slow counterphase flashing"			

Message-S4: STM requests Text message T4 with fast normal flashing			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=4, MX=1010000010b (red on dark blue, fast flashing, normal phase in text group 2), Q=0 (No acknowledgement required), L=33, T="T4 Text with fast normal flashing"			

Message-S5: STM requests Text message T5 with fast counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=356, NX=5, MX=1110000010b (red on dark blue, fast flashing, counter phase in text group 2), Q=0 (No acknowledgement required), L=39, T="T5 Text with fast counterphase flashing"			

Message-S6: STM deletes text message T1			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	

Padding bits	2	00b	

Message-S7: STM deletes text message T2			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=2			

Message-S8: STM deletes text message T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=3			

Message-S9: STM deletes text message T4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=4			

Message-S10: STM deletes text message T5

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VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=5			

2.4.7 Test Case 7d.7

TEST CASE HEADER	
Test case identification	DMI Function
	7d1.0.2.(7d2.0.1.1.1.3.0).1.4.0.(7d2).1.3.0.1.2.(7d2.0.1.1.2.1.3.0).1.4.0.(7d2).1.3.0.1.2.(7d2.0.1.1.2.2.3.0).1.4.0.(7d2).1.3.0.1.2.(7d2.0.1.1.3.1.3.0).1.4.0.(7d2).1.3.0.1.2.(7d2.0.1.1.3.2.3.0).1.4.0.(7d2).1.3.0.5
	Flashing mode and phase test: group 1. Text messages with acknowledgement with immediate acknowledgment and deletion.:
	Text messages with all possible combinations of flashing mode and phase are displayed. Text messages are requested with acknowledgement. Each text message is acknowledged and deleted before the next message is requested.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.2, 13.4.2.3, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.2.3, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38, STM-39, STM-40
ERTMS/ETCS on-board configuration	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen for test).
Comments and constraints	Starting and end conditions as for test case 7d.1
	At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action
1	Text message T1 without flashing is requested by STM	PROF	T0	connection of active DMI channel: Message-S1	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge ♫
2	Text message T1 is acknowledged by driver	DMI	T0+5s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E1
					DMI		Text "T1 Text without flashing" is displayed in group 1 as only normal text message without acknowledgement without flashing
3	Text message T1 is deleted by STM	PROF	T0+10s	connection of active DMI channel: Message-S2	DMI		No STM text message is displayed
4	Text message T2 with slow normal flashing is requested by STM	PROF	T0+15s	connection of active DMI channel: Message-S3	DMI		Text "T2 Text with slow normal flashing" is displayed as message to acknowledge ♫
5	Text message T2 is acknowledged by driver	DMI	T0+20s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E2
					DMI		Text "T2 Text with slow normal flashing" is displayed in group 1 as only normal text message without acknowledgement with slow normal flashing
6	Text message T2 is deleted by STM	PROF	T0+25s	connection of active DMI channel: Message-S4	DMI		No STM text message is displayed
7	Text message T3 with slow counterphase flashing is requested by STM	PROF	T0+30s	connection of active DMI channel: Message-S5	DMI		Text "T3 Text with slow counterphase flashing" is displayed as message to acknowledge ♫
8	Text message T3 is acknowledged by driver	DMI	T0+35s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E3

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					DMI		Text "T3 Text with slow counterphase flashing" is displayed in group 1 as only normal text message without acknowledgement with slow counterphase flashing
9	Text message T3 is deleted by STM	PROF	T0+40s	connection of active DMI channel: Message-S6	DMI		No STM text message is displayed
10	Text message T4 with fast normal flashing is requested by STM	PROF	T0+45s	connection of active DMI channel: Message-S7	DMI		Text "T4 Text with fast normal flashing" is displayed as message to acknowledge ♫
11	Text message T4 is acknowledged by driver	DMI	T0+50s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E4
					DMI		Text "T4 Text with fast normal flashing" is displayed in group 1 as only normal text message without acknowledgement with fast normal flashing
12	Text message T4 is deleted by STM	PROF	T0+55s	connection of active DMI channel: Message-S8	DMI		No STM text message is displayed
13	Text message T5 with fast counterphase flashing is requested by STM	PROF	T0+60s	connection of active DMI channel: Message-S9	DMI		Text "T5 Text with fast counterphase flashing" is displayed as message to acknowledge ♫
14	Text message T5 is acknowledged by driver	DMI	T0+65s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E5
					DMI		Text "T5 Text with fast counterphase flashing" is displayed in group 1 as only normal text message without acknowledgement with fast counterphase flashing
15	Text message T5 is deleted by STM	PROF	T0+70s	connection of active DMI channel: Message-S10	DMI		No STM text message is displayed

Message-S1: STM requests Text message T1 without flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	36	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	240	Packet Length
NID_XMESSAGE	8	1	
M_XATTRIBUTE	10	0000000010b	red on dark blue, no flashing in text group 1
Q_ACK	1	1	Acknowledgement required
L_TEXT	8	24	Text="T1 Text without flashing"
X_TEXT(1)	8	"T"	
X_TEXT(2)	8	"1"	
X_TEXT(3)	8	" "	
X_TEXT(4)	8	"T"	
X_TEXT(5)	8	"e"	
X_TEXT(6)	8	"x"	
X_TEXT(7)	8	"t"	
X_TEXT(8)	8	" "	
X_TEXT(9)	8	"w"	

VARIABLE	Length	VALUE	
X_TEXT(10)	8	"i"	
X_TEXT(11)	8	"t"	
X_TEXT(12)	8	"h"	
X_TEXT(13)	8	"o"	
X_TEXT(14)	8	"u"	
X_TEXT(15)	8	"t"	
X_TEXT(16)	8	" "	
X_TEXT(17)	8	"f"	
X_TEXT(18)	8	"l"	
X_TEXT(19)	8	"a"	
X_TEXT(20)	8	"s"	
X_TEXT(21)	8	"h"	
X_TEXT(22)	8	"i"	
X_TEXT(23)	8	"n"	
X_TEXT(24)	8	"g"	
Padding bits	7	0000000b	

Message-E1: Acknowledgement reply by ERTMS/ETCS on-board for T1			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
NID_PACKET	8	40	Acknowledgement Reply to STM (STM-40)
L_PACKET	13	29	Packet Length

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NID_XMESSAGE	8	1	
Padding bits	3	NOT RELEVANT	

Message-S2: STM deletes text message T1			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
Padding bits	2	00b	

Message-S3: STM requests Text message T2 with slow normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=2, MX=0001000010b (red on dark blue, slow flashing, normal phase in text group 1), Q=1 (Acknowledgement required), L=33, T="T2 Text with slow normal flashing"			

Message-E2: Acknowledgement reply by ERTMS/ETCS on-board for T2

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VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=2			

Message-S4: STM deletes text message T2			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=2			

Message-S5: STM requests Text message T3 with slow counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=356, NX=3, MX=0101000010b (red on dark blue, slow flashing, counter phase in text group 1), Q=1 (Acknowledgement required), L=39, T="T3 Text with slow counterphase flashing"			

Message-E3: Acknowledgement reply by ERTMS/ETCS on-board for T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length

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STM-40: PL=29, NX=3

Message-S6: STM deletes text message T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=3			

Message-S7: STM requests Text message T4 with fast normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=4, MX=0010000010b (red on dark blue, fast flashing, normal phase in text group 1), Q=1 (Acknowledgement required), L=33, T="T4 Text with fast normal flashing"			

Message-E4: Acknowledgement reply by ERTMS/ETCS on-board for T4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=4			

Message-S8: STM deletes text message T4			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=4			

Message-S9: STM requests Text message T5 with fast counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=356, NX=5, MX=0110000010b (red on dark blue, fast flashing, counter phase in text group 1), Q=1 (Acknowledgement required), L=39, T="T5 Text with fast counterphase flashing"			

Message-E5: Acknowledgement reply by ERTMS/ETCS on-board for T5			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=5			

Message-S10: STM deletes text message T5			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			

STM-39: PL=29, NX=5

2.4.8 Test Case 7d.8

TEST CASE HEADER	
Test case identification	DMI Function
	7d1.0.2.(7d2.0.2.1.1.3.0).1.4.0.(7d2).1.3.0.1.2.(7d2.0.2.1.2.1.3.0).1.4.0.(7d2).1.3.0.1.2.(7d2.0.2.1.2.2.3.0).1.4.0.(7d2).1.3.0.1.2.(7d2.0.2.1.3.1.3.0).1.4.0.(7d2).1.3.0.1.2.(7d2.0.2.1.3.2.3.0).1.4.0.(7d2).1.3.0.5
	Flashing mode and phase test: group 2. Text messages with acknowledgement with immediate acknowledgment and deletion.:
	Text messages with all possible combinations of flashing mode and phase are displayed. Text messages are requested with acknowledgement. Each text message is acknowledged and deleted before the next message is requested.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.2, 13.4.2.3, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.2.3, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38, STM-39, STM-40
ERTMS/ETCS on-board configuration	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen for test).
Comments and constraints	Starting and end conditions as for test case 7d.1
	At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action
1	Text message T1 without flashing is requested by STM	PROF	T0	connection of active DMI channel: Message-S1	DMI		Text "T1 Text without flashing" is displayed as message to

							acknowledge ♫
2	Text message T1 is acknowledged by driver	DMI	T0+5s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E1
					DMI		Text "T1 Text without flashing" is displayed in group 2 as only normal text message without acknowledgement without flashing
3	Text message T1 is deleted by STM	PROF	T0+10s	connection of active DMI channel: Message-S2	DMI		No STM text message is displayed
4	Text message T2 with slow normal flashing is requested by STM	PROF	T0+15s	connection of active DMI channel: Message-S3	DMI		Text "T2 Text with slow normal flashing" is displayed as message to acknowledge ♫
5	Text message T2 is acknowledged by driver	DMI	T0+20s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E2
					DMI		Text "T2 Text with slow normal flashing" is displayed in group 2 as only normal text message without acknowledgement with slow normal flashing
6	Text message T2 is deleted by STM	PROF	T0+25s	connection of active DMI channel: Message-S4	DMI		No STM text message is displayed
7	Text message T3 with slow counterphase flashing is requested by STM	PROF	T0+30s	connection of active DMI channel: Message-S5	DMI		Text "T3 Text with slow counterphase flashing" is displayed as message to acknowledge ♫
8	Text message T3 is acknowledged by driver	DMI	T0+35s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E3
					DMI		Text "T3 Text with slow counterphase flashing" is displayed in group 2 as only normal text message without acknowledgement with slow counterphase flashing

9	Text message T3 is deleted by STM	PROF	T0+40s	connection of active DMI channel: Message-S6	DMI		No STM text message is displayed
10	Text message T4 with fast normal flashing is requested by STM	PROF	T0+45s	connection of active DMI channel: Message-S7	DMI		Text "T4 Text with fast normal flashing" is displayed as message to acknowledge ♫
11	Text message T4 is acknowledged by driver	DMI	T0+50s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E4
					DMI		Text "T4 Text with fast normal flashing" is displayed in group 2 as only normal text message without acknowledgement with fast normal flashing
12	Text message T4 is deleted by STM	PROF	T0+55s	connection of active DMI channel: Message-S8	DMI		No STM text message is displayed
13	Text message T5 with fast counterphase flashing is requested by STM	PROF	T0+60s	connection of active DMI channel: Message-S9	DMI		Text "T5 Text with fast counterphase flashing" is displayed as message to acknowledge ♫
14	Text message T5 is acknowledged by driver	DMI	T0+65s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E5
					DMI		Text "T5 Text with fast counterphase flashing" is displayed in group 2 as only normal text message without acknowledgement with fast counterphase flashing
15	Text message T5 is deleted by STM	PROF	T0+70s	connection of active DMI channel: Message-S10	DMI		No STM text message is displayed

Message-S1: STM requests Text message T1 without flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

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L_MESSAGE	8	36	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	240	Packet Length
NID_XMESSAGE	8	1	
M_XATTRIBUTE	10	1000000010b	red on dark blue, no flashing in text group 2
Q_ACK	1	1	Acknowledgement required
L_TEXT	8	24	Text="T1 Text without flashing"
X_TEXT(1)	8	"T"	
X_TEXT(2)	8	"1"	
X_TEXT(3)	8	" "	
X_TEXT(4)	8	"T"	
X_TEXT(5)	8	"e"	
X_TEXT(6)	8	"x"	
X_TEXT(7)	8	"t"	
X_TEXT(8)	8	" "	
X_TEXT(9)	8	"w"	
X_TEXT(10)	8	"i"	
X_TEXT(11)	8	"t"	
X_TEXT(12)	8	"h"	
X_TEXT(13)	8	"o"	

X_TEXT(14)	8	"u"	
X_TEXT(15)	8	"t"	
X_TEXT(16)	8	" "	
X_TEXT(17)	8	"f"	
X_TEXT(18)	8	"l"	
X_TEXT(19)	8	"a"	
X_TEXT(20)	8	"s"	
X_TEXT(21)	8	"h"	
X_TEXT(22)	8	"i"	
X_TEXT(23)	8	"n"	
X_TEXT(24)	8	"g"	
Padding bits	7	0000000b	

Message-E1: Acknowledgement reply by ERTMS/ETCS on-board for T1			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
NID_PACKET	8	40	Acknowledgement Reply to STM (STM-40)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
Padding bits	3	NOT RELEVANT	

Message-S2: STM deletes text message T1			
VARIABLE	Length	VALUE	COMMENT

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NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
Padding bits	2	00b	

Message-S3: STM requests Text message T2 with slow normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=2, MX=1001000010b (red on dark blue, slow flashing, normal phase in text group 2), Q=1 (Acknowledgement required), L=33, T="T2 Text with slow normal flashing"			

Message-E2: Acknowledgement reply by ERTMS/ETCS on-board for T2			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=2			

Message-S4: STM deletes text message T2			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=2			

Message-S5: STM requests Text message T3 with slow counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=356, NX=3, MX=1101000010b (red on dark blue, slow flashing, counter phase in text group 2), Q=1 (Acknowledgement required), L=39, T="T3 Text with slow counterphase flashing"			

Message-E3: Acknowledgement reply by ERTMS/ETCS on-board for T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=3			

Message-S6: STM deletes text message T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=3			

Message-S7: STM requests Text message T4 with fast normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=4, MX=1010000010b (red on dark blue, fast flashing, normal phase in text group 2), Q=1 (Acknowledgement required), L=33, T="T4 Text with fast normal flashing"			

Message-E4: Acknowledgement reply by ERTMS/ETCS on-board for T4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=4			

Message-S8: STM deletes text message T4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=4			

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Message-S9: STM requests Text message T5 with fast counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=356, NX=5, MX=1110000010b (red on dark blue, fast flashing, counter phase in text group 2), Q=1 (Acknowledgement required), L=39, T="T5 Text with fast counterphase flashing"			

Message-E5: Acknowledgement reply by ERTMS/ETCS on-board for T5			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=5			

Message-S10: STM deletes text message T5			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=5			

2.4.9 Test Case 7d.9

TEST CASE HEADER

Test case identification	DMI Function
	7d1.2.(7d2.0.1.1.3.2.3.0).1.4.0.(7d2).1.(3.0)*.5
	Flashing mode and phase test: group 1. Text messages with acknowledgement with immediate acknowledgment and delayed deletion.: Text messages with all possible combinations of flashing mode and phase are displayed. Text messages are requested with acknowledgement. Each text message is acknowledged before the next message is requested. All messages are deleted together at the end.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.2, 13.4.2.3, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.2.3, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38, STM-39, STM-40
ERTMS/ETCS on-board configuration	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen for test).
Comments and constraints	Starting and end conditions as for test case 7d.1
	At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action
1	Text message T1 without flashing is requested by STM	PROF	T0	connection of active DMI channel: Message-S1	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge ♫
2	Text message T1 is acknowledged by driver	DMI	T0+5s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E1
					DMI		Text "T1 Text without flashing" is displayed in group 1 as only normal

							text message without acknowledgement without flashing
3	Text message T2 with slow normal flashing is requested by STM	PROF	T0+10s	connection of active DMI channel: Message-S2	DMI		Text "T2 Text with slow normal flashing" is displayed as message to acknowledge ♫
4	Text message T2 is acknowledged by driver	DMI	T0+15s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E2
					DMI		Text "T2 Text with slow normal flashing" is displayed in group 1 with previous text messages as normal text message without acknowledgement with slow normal flashing
5	Text message T3 with slow counterphase flashing is requested by STM	PROF	T0+20s	connection of active DMI channel: Message-S3	DMI		Text "T3 Text with slow counterphase flashing" is displayed as message to acknowledge ♫
6	Text message T3 is acknowledged by driver	DMI	T0+25s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E3
					DMI		Text "T3 Text with slow counterphase flashing" is displayed in group 1 with previous text messages as normal text message without acknowledgement with slow counterphase flashing
7	Text message T4 with fast normal flashing is requested by STM	PROF	T0+30s	connection of active DMI channel: Message-S4	DMI		Text "T4 Text with fast normal flashing" is displayed as message to acknowledge ♫
8	Text message T4 is acknowledged by driver	DMI	T0+35s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E4
					DMI		Text "T4 Text with fast normal flashing" is displayed in group 1 with previous text messages as normal

							text message without acknowledgement with fast normal flashing
9	Text message T5 with fast counterphase flashing is requested by STM	PROF	T0+40s	connection of active DMI channel: Message-S5	DMI		Text "T5 Text with fast counterphase flashing" is displayed as message to acknowledge ♫
10	Text message T5 is acknowledged by driver	DMI	T0+45s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E5
					DMI		Text "T5 Text with fast counterphase flashing" is displayed in group 1 with previous text messages as normal text message without acknowledgement with fast counterphase flashing
11	Text message T1 is deleted by STM	PROF	T0+50s	connection of active DMI channel: Message-S6	DMI		Text messages T2 - T5 are displayed in group 1 with flashing mode and phase according to message content
12	Text message T2 is deleted by STM	PROF	T0+55s	connection of active DMI channel: Message-S7	DMI		Text messages T3 - T5 are displayed in group 1 with flashing mode and phase according to message content
13	Text message T3 is deleted by STM	PROF	T0+60s	connection of active DMI channel: Message-S8	DMI		Text messages T4 - T5 are displayed in group 1 with flashing mode and phase according to message content
14	Text message T4 is deleted by STM	PROF	T0+65s	connection of active DMI channel: Message-S9	DMI		Text message T5 is displayed in group 1 as only text message with fast counterphase flashing
15	Text message T5 is deleted by STM	PROF	T0+70s	connection of active DMI channel: Message-S10	DMI		No STM text message is displayed

Message-S1: STM requests Text message T1 without flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	36	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	240	Packet Length
NID_XMESSAGE	8	1	
M_XATTRIBUTE	10	0000000010b	red on dark blue, no flashing in text group 1
Q_ACK	1	1	Acknowledgement required
L_TEXT	8	24	Text="T1 Text without flashing"
X_TEXT(1)	8	"T"	
X_TEXT(2)	8	"1"	
X_TEXT(3)	8	" "	
X_TEXT(4)	8	"T"	
X_TEXT(5)	8	"e"	
X_TEXT(6)	8	"x"	
X_TEXT(7)	8	"t"	
X_TEXT(8)	8	" "	
X_TEXT(9)	8	"w"	
X_TEXT(10)	8	"i"	

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VARIABLE	Length	VALUE	COMMENT
X_TEXT(11)	8	"t"	
X_TEXT(12)	8	"h"	
X_TEXT(13)	8	"o"	
X_TEXT(14)	8	"u"	
X_TEXT(15)	8	"t"	
X_TEXT(16)	8	" "	
X_TEXT(17)	8	"f"	
X_TEXT(18)	8	"l"	
X_TEXT(19)	8	"a"	
X_TEXT(20)	8	"s"	
X_TEXT(21)	8	"h"	
X_TEXT(22)	8	"i"	
X_TEXT(23)	8	"n"	
X_TEXT(24)	8	"g"	
Padding bits	7	0000000b	

Message-E1: Acknowledgement reply by ERTMS/ETCS on-board for T1			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
NID_PACKET	8	40	Acknowledgement Reply to STM (STM-40)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	

Padding bits	3	NOT RELEVANT	

Message-S2: STM requests Text message T2 with slow normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=2, MX=0001000010b (red on dark blue, slow flashing, normal phase in text group 1), Q=1 (Acknowledgement required), L=33, T="T2 Text with slow normal flashing"			

Message-E2: Acknowledgement reply by ERTMS/ETCS on-board for T2			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=2			

Message-S3: STM requests Text message T3 with slow counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=356, NX=3, MX=0101000010b (red on dark blue, slow flashing, counter phase in text group 1), Q=1 (Acknowledgement required), L=39, T="T3 Text with slow counterphase flashing"			

Message-E3: Acknowledgement reply by ERTMS/ETCS on-board for T3

VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=3			

Message-S4: STM requests Text message T4 with fast normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=4, MX=0010000010b (red on dark blue, fast flashing, normal phase in text group 1), Q=1 (Acknowledgement required), L=33, T="T4 Text with fast normal flashing"			

Message-E4: Acknowledgement reply by ERTMS/ETCS on-board for T4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=4			

Message-S5: STM requests Text message T5 with fast counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length
STM-15: PL=25, ST=7, (State DA)			

STM-38: PL=356, NX=5, MX=0110000010b (red on dark blue, fast flashing, counter phase in text group 1), Q=1 (Acknowledgement required), L=39, T="T5 Text with fast counterphase flashing"

Message-E5: Acknowledgement reply by ERTMS/ETCS on-board for T5			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length

STM-40: PL=29, NX=5

Message-S6: STM deletes text message T1			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
Padding bits	2	00b	

Message-S7: STM deletes text message T2			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

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L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=2			

Message-S8: STM deletes text message T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=3			

Message-S9: STM deletes text message T4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=4			

Message-S10: STM deletes text message T5			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=5			

2.4.10 Test Case 7d.10

TEST CASE HEADER	
Test case identification	DMI Function
	7d1.2.(7d2.0.2.1.3.2.3.0).1.4.0.(7d2).1.(3.0)*.5
	Flashing mode and phase test: group 2. Text messages with acknowledgement with immediate acknowledgment and delayed deletion.:
	Text messages with all possible combinations of flashing mode and phase are displayed. Text messages are requested with acknowledgement. Each text message is acknowledged before the next message is requested. All messages are deleted together at the end.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.2, 13.4.2.3, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.2.3, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38, STM-39, STM-40
ERTMS/ETCS on-board configuration	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen for test).
Comments and constraints	Starting and end conditions as for test case 7d.1
	At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action
1	Text message T1 without flashing is requested by STM	PROF	T0	connection of active DMI channel: Message-S1	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge ♫

2	Text message T1 is acknowledged by driver	DMI	T0+5s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E1
					DMI		Text "T1 Text without flashing" is displayed in group 2 as only normal text message without acknowledgement without flashing
3	Text message T2 with slow normal flashing is requested by STM	PROF	T0+10s	connection of active DMI channel: Message-S2	DMI		Text "T2 Text with slow normal flashing" is displayed as message to acknowledge ♫
4	Text message T2 is acknowledged by driver	DMI	T0+15s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E2
					DMI		Text "T2 Text with slow normal flashing" is displayed in group 2 with previous text messages as normal text message without acknowledgement with slow normal flashing
5	Text message T3 with slow counterphase flashing is requested by STM ♫	PROF	T0+20s	connection of active DMI channel: Message-S3	DMI		Text "T3 Text with slow counterphase flashing" is displayed as message to acknowledge ♫
6	Text message T3 is acknowledged by driver	DMI	T0+25s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E3
					DMI		Text "T3 Text with slow counterphase flashing" is displayed in group 2 with previous text messages as normal text message without acknowledgement with slow counterphase flashing
7	Text message T4 with fast normal flashing is requested by STM	PROF	T0+30s	connection of active DMI channel: Message-S4	DMI		Text "T4 Text with fast normal flashing" is displayed as message to acknowledge ♫

8	Text message T4 is acknowledged by driver	DMI	T0+35s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E4
					DMI		Text "T4 Text with fast normal flashing" is displayed in group 2 with previous text messages as normal text message without acknowledgement with fast normal flashing
9	Text message T5 with fast counterphase flashing is requested by STM	PROF	T0+40s	connection of active DMI channel: Message-S5	DMI		Text "T5 Text with fast counterphase flashing" is displayed as message to acknowledge ♫
10	Text message T5 is acknowledged by driver	DMI	T0+45s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E5
					DMI		Text "T5 Text with fast counterphase flashing" is displayed in group 2 with previous text messages as normal text message without acknowledgement with fast counterphase flashing
11	Text message T1 is deleted by STM	PROF	T0+50s	connection of active DMI channel: Message-S6	DMI		Text messages T2 - T5 are displayed in group 2 with flashing mode and phase according to message content
12	Text message T2 is deleted by STM	PROF	T0+55s	connection of active DMI channel: Message-S7	DMI		Text messages T3 - T5 are displayed in group 2 with flashing mode and phase according to message content
13	Text message T3 is deleted by STM	PROF	T0+60s	connection of active DMI channel: Message-S8	DMI		Text messages T4 - T5 are displayed in group 2 with flashing mode and phase according to message content
14	Text message T4 is deleted by STM	PROF	T0+65s	connection of active DMI channel:	DMI		Text message T5 is displayed in

				Message-S9			group 2 as only text message with fast counterphase flashing
15	Text message T5 is deleted by STM	PROF	T0+70s	connection of active DMI channel: Message-S10	DMI		No STM text message is displayed

Message-S1: STM requests Text message T1 without flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	36	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	240	Packet Length
NID_XMESSAGE	8	1	
M_XATTRIBUTE	10	1000000010b	red on dark blue, no flashing in text group 2
Q_ACK	1	1	Acknowledgement required
L_TEXT	8	24	Text="T1 Text without flashing"
X_TEXT(1)	8	"T"	
X_TEXT(2)	8	"1"	
X_TEXT(3)	8	" "	
X_TEXT(4)	8	"T"	
X_TEXT(5)	8	"e"	
X_TEXT(6)	8	"x"	

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X_TEXT(7)	8	"t"	
X_TEXT(8)	8	" "	
X_TEXT(9)	8	"w"	
X_TEXT(10)	8	"i"	
X_TEXT(11)	8	"t"	
X_TEXT(12)	8	"h"	
X_TEXT(13)	8	"o"	
X_TEXT(14)	8	"u"	
X_TEXT(15)	8	"t"	
X_TEXT(16)	8	" "	
X_TEXT(17)	8	"f"	
X_TEXT(18)	8	"l"	
X_TEXT(19)	8	"a"	
X_TEXT(20)	8	"s"	
X_TEXT(21)	8	"h"	
X_TEXT(22)	8	"i"	
X_TEXT(23)	8	"n"	
X_TEXT(24)	8	"g"	
Padding bits	7	0000000b	

Message-E1: Acknowledgement reply by ERTMS/ETCS on-board for T1			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

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L_MESSAGE	8	6	Message Length
NID_PACKET	8	40	Acknowledgement Reply to STM (STM-40)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
Padding bits	3	NOT RELEVANT	

Message-S2: STM requests Text message T2 with slow normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=2, MX=1001000010b (red on dark blue, slow flashing, normal phase in text group 2), Q=1 (Acknowledgement required), L=33, T="T2 Text with slow normal flashing"			

Message-E2: Acknowledgement reply by ERTMS/ETCS on-board for T2			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=2			

Message-S3: STM requests Text message T3 with slow counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length

STM-15: PL=25, ST=7, (State DA)
STM-38: PL=356, NX=3, MX=1101000010b (red on dark blue, slow flashing, counter phase in text group 2), Q=1 (Acknowledgement required), L=39, T="T3 Text with slow counterphase flashing"

Message-E3: Acknowledgement reply by ERTMS/ETCS on-board for T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=3			

Message-S4: STM requests Text message T4 with fast normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=4, MX=1010000010b (red on dark blue, fast flashing, normal phase in text group 2), Q=1 (Acknowledgement required), L=33, T="T4 Text with fast normal flashing"			

Message-E4: Acknowledgement reply by ERTMS/ETCS on-board for T4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=4			

Message-S5: STM requests Text message T5 with fast counterphase flashing

VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=356, NX=5, MX=1110000010b (red on dark blue, fast flashing, counter phase in text group 2), Q=1 (Acknowledgement required), L=39, T="T5 Text with fast counterphase flashing"			

Message-E5: Acknowledgement reply by ERTMS/ETCS on-board for T5			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=5			

Message-S6: STM deletes text message T1			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
Padding bits	2	00b	

Message-S7: STM deletes text message T2			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=2			

Message-S8: STM deletes text message T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=3			

Message-S9: STM deletes text message T4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=4			

Message-S10: STM deletes text message T5			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=5			

2.4.11 Test Case 7d.11

TEST CASE HEADER	
Test case identification	DMI Function
	7d1.0.2.(7d2.0.1.1.1.3.0).1.1.2.(7d2.0.1.1.2.1.3.0).1.1.2.(7d2.0.1.1.2.2.3.0).1.1.2.(7d2.0.1.1.3.1.3.0).1.1.2.(7d2.0.1.1.3.2.3.0).1.(4.0.(7d2).1.3.0)*.5
	Flashing mode and phase test: group 1. Text messages with acknowledgement with delayed acknowledgment and immediate deletion after acknowledgement.:
	Text messages with all possible combinations of flashing mode and phase are displayed. Text messages are requested with acknowledgement. Text messages are acknowledged and deleted one by one after all messages have been requested.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.2, 13.4.2.3, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.2.3, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38, STM-39, STM-40
ERTMS/ETCS on-board configuration	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen for test).
Comments and constraints	Starting and end conditions as for test case 7d.1
	At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action
1	Text message T1 without flashing is requested by STM	PROF	T0	connection of active DMI channel: Message-S1	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge ♫
2	Text message T2 with slow normal flashing is requested by STM	PROF	T0+5s	connection of active DMI channel: Message-S2	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge. New message T2 is not visible.
3	Text message T3 with slow counterphase flashing is requested by STM	PROF	T0+10s	connection of active DMI channel: Message-S3	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge. New message T3 is not visible.
4	Text message T4 with fast normal flashing is requested by STM	PROF	T0+15s	connection of active DMI channel: Message-S4	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge. New message T4 is not visible.
5	Text message T5 with fast counterphase flashing is requested by STM	PROF	T0+20s	connection of active DMI channel: Message-S5	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge. New message T5 is not visible.
6	Text message T1 is acknowledged by driver	DMI	T0+25s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E1
					DMI		Text "T2 Text with slow normal flashing" is displayed as message to acknowledge. ♫
7	Text message T1 is deleted by STM	PROF	T0+30s	connection of active DMI channel: Message-S6	DMI		Text "T2 Text with slow normal flashing" is displayed as message to acknowledge (no change in display).
8	Text message T2 is acknowledged by driver	DMI	T0+35s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E2

					DMI		Text "T3 Text with slow counterphase flashing" is displayed as message to acknowledge. ♫
9	Text message T2 is deleted by STM	PROF	T0+40s	connection of active DMI channel: Message-S7	DMI		Text "T3 Text with slow counterphase flashing" is displayed as message to acknowledge (no change in display).
10	Text message T3 is acknowledged by driver	DMI	T0+45s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E3
					DMI		Text "T4 Text with fast normal flashing" is displayed as message to acknowledge. ♫
11	Text message T3 is deleted by STM	PROF	T0+50s	connection of active DMI channel: Message-S8	DMI		Text "T4 Text with fast normal flashing" is displayed as message to acknowledge (no change in display).
12	Text message T4 is acknowledged by driver	DMI	T0+55s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E4
					DMI		Text "T5 Text with fast counterphase flashing" is displayed as message to acknowledge. ♫
13	Text message T4 is deleted by STM	PROF	T0+60s	connection of active DMI channel: Message-S9	DMI		Text "T5 Text with fast counterphase flashing" is displayed as message to acknowledge (no change in display).
14	Text message T5 is acknowledged by driver	DMI	T0+65s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E5
					DMI		Text "T5 Text with fast counterphase flashing" is displayed in group 1 as only normal text message without acknowledgement with fast counterphase flashing
15	Text message T5 is deleted by STM	PROF	T0+70s	connection of active DMI channel:	DMI		No STM text message is displayed

Message-S1: STM requests Text message T1 without flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	36	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	240	Packet Length
NID_XMESSAGE	8	1	
M_XATTRIBUTE	10	0000000010b	red on dark blue, no flashing in text group 1
Q_ACK	1	1	Acknowledgement required
L_TEXT	8	24	Text="T1 Text without flashing"
X_TEXT(1)	8	"T"	
X_TEXT(2)	8	"1"	
X_TEXT(3)	8	" "	
X_TEXT(4)	8	"T"	
X_TEXT(5)	8	"e"	
X_TEXT(6)	8	"x"	
X_TEXT(7)	8	"t"	
X_TEXT(8)	8	" "	
X_TEXT(9)	8	"w"	

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VARIABLE	Length	VALUE	COMMENT
X_TEXT(10)	8	"i"	
X_TEXT(11)	8	"t"	
X_TEXT(12)	8	"h"	
X_TEXT(13)	8	"o"	
X_TEXT(14)	8	"u"	
X_TEXT(15)	8	"t"	
X_TEXT(16)	8	" "	
X_TEXT(17)	8	"f"	
X_TEXT(18)	8	"l"	
X_TEXT(19)	8	"a"	
X_TEXT(20)	8	"s"	
X_TEXT(21)	8	"h"	
X_TEXT(22)	8	"i"	
X_TEXT(23)	8	"n"	
X_TEXT(24)	8	"g"	
Padding bits	7	0000000b	

Message-S2: STM requests Text message T2 with slow normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=2, MX=0001000010b (red on dark blue, slow flashing, normal phase in text group 1), Q=1 (Acknowledgement required), L=33, T="T2 Text with slow normal flashing"			

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Message-S3: STM requests Text message T3 with slow counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=356, NX=3, MX=0101000010b (red on dark blue, slow flashing, counter phase in text group 1), Q=1 (Acknowledgement required), L=39, T="T3 Text with slow counterphase flashing"			

Message-S4: STM requests Text message T4 with fast normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=4, MX=0010000010b (red on dark blue, fast flashing, normal phase in text group 1), Q=1 (Acknowledgement required), L=33, T="T4 Text with fast normal flashing"			

Message-S5: STM requests Text message T5 with fast counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=356, NX=5, MX=0110000010b (red on dark blue, fast flashing, counter phase in text group 1), Q=1 (Acknowledgement required), L=39, T="T5 Text with fast counterphase flashing"			

Message-E1: Acknowledgement reply by ERTMS/ETCS on-board for T1

VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
NID_PACKET	8	40	Acknowledgement Reply to STM (STM-40)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
Padding bits	3	NOT RELEVANT	

Message-S6: STM deletes text message T1			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
Padding bits	2	00b	

Message-E2: Acknowledgement reply by ERTMS/ETCS on-board for T2			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length

STM-40: PL=29, NX=2

Message-S7: STM deletes text message T2			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=2			

Message-E3: Acknowledgement reply by ERTMS/ETCS on-board for T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=3			

Message-S8: STM deletes text message T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=3			

Message-E4: Acknowledgement reply by ERTMS/ETCS on-board for T4			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=4			

Message-S9: STM deletes text message T4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=4			

Message-E5: Acknowledgement reply by ERTMS/ETCS on-board for T5			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=5			

Message-S10: STM deletes text message T5			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=5			

2.4.12 Test Case 7d.12

TEST CASE HEADER	
Test case identification	DMI Function
	7d1.0.2.(7d2.0.2.1.1.3.0).1.1.2.(7d2.0.2.1.2.1.3.0).1.1.2.(7d2.0.2.1.2.2.3.0).1.1.2.(7d2.0.2.1.3.1.3.0).1.1.2.(7d2.0.2.1.3.2.3.0).1.(4.0.(7d2).1.3.0)*.5
	Flashing mode and phase test: group 2. Text messages with acknowledgement with delayed acknowledgment and immediate deletion after acknowledgement.:
	Text messages with all possible combinations of flashing mode and phase are displayed. Text messages are requested with acknowledgement. Text messages are acknowledged and deleted one by one after all messages have been requested.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.2, 13.4.2.3, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.2.3, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38, STM-39, STM-40
ERTMS/ETCS on-board configuration	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen for test).
Comments and constraints	Starting and end conditions as for test case 7d.1
	At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action
1	Text message T1 without flashing is requested by STM	PROF	T0	connection of active DMI channel: Message-S1	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge ♫
2	Text message T2 with slow normal	PROF	T0+5s	connection of active DMI channel:	DMI		Text "T1 Text without flashing" is

	flashing is requested by STM			Message-S2			displayed as message to acknowledge. New message T2 is not visible.
3	Text message T3 with slow counterphase flashing is requested by STM	PROF	T0+10s	connection of active DMI channel: Message-S3	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge. New message T3 is not visible.
4	Text message T4 with fast normal flashing is requested by STM	PROF	T0+15s	connection of active DMI channel: Message-S4	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge. New message T4 is not visible.
5	Text message T5 with fast counterphase flashing is requested by STM	PROF	T0+20s	connection of active DMI channel: Message-S5	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge. New message T5 is not visible.
6	Text message T1 is acknowledged by driver	DMI	T0+25s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E1
					DMI		Text "T2 Text with slow normal flashing" is displayed as message to acknowledge. ♫
7	Text message T1 is deleted by STM	PROF	T0+30s	connection of active DMI channel: Message-S6	DMI		Text "T2 Text with slow normal flashing" is displayed as message to acknowledge (no change in display).
8	Text message T2 is acknowledged by driver	DMI	T0+35s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E2
					DMI		Text "T3 Text with slow counterphase flashing" is displayed as message to acknowledge. ♫
9	Text message T2 is deleted by STM	PROF	T0+40s	connection of active DMI channel: Message-S7	DMI		Text "T3 Text with slow counterphase flashing" is displayed as message to acknowledge (no change in display).

10	Text message T3 is acknowledged by driver	DMI	T0+45s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E3
					DMI		Text "T4 Text with fast normal flashing" is displayed as message to acknowledge. ♫
11	Text message T3 is deleted by STM	PROF	T0+50s	connection of active DMI channel: Message-S8	DMI		Text "T4 Text with fast normal flashing" is displayed as message to acknowledge (no change in display).
12	Text message T4 is acknowledged by driver	DMI	T0+55s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E4
					DMI		Text "T5 Text with fast counterphase flashing" is displayed as message to acknowledge. ♫
13	Text message T4 is deleted by STM	PROF	T0+60s	connection of active DMI channel: Message-S9	DMI		Text "T5 Text with fast counterphase flashing" is displayed as message to acknowledge (no change in display).
14	Text message T5 is acknowledged by driver	DMI	T0+65s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E5
					DMI		Text "T5 Text with fast counterphase flashing" is displayed in group 2 as only normal text message without acknowledgement with fast counterphase flashing
15	Text message T5 is deleted by STM	PROF	T0+70s	connection of active DMI channel: Message-S10	DMI		No STM text message is displayed

Message-S1: STM requests Text message T1 without flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	36	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	240	Packet Length
NID_XMESSAGE	8	1	
M_XATTRIBUTE	10	1000000010b	red on dark blue, no flashing in text group 2
Q_ACK	1	1	Acknowledgement required
L_TEXT	8	24	Text="T1 Text without flashing"
X_TEXT(1)	8	"T"	
X_TEXT(2)	8	"1"	
X_TEXT(3)	8	" "	
X_TEXT(4)	8	"T"	
X_TEXT(5)	8	"e"	
X_TEXT(6)	8	"x"	
X_TEXT(7)	8	"t"	
X_TEXT(8)	8	" "	
X_TEXT(9)	8	"w"	
X_TEXT(10)	8	"i"	
X_TEXT(11)	8	"t"	
X_TEXT(12)	8	"h"	
X_TEXT(13)	8	"o"	

VARIABLE	Length	VALUE	COMMENT
X_TEXT(14)	8	"u"	
X_TEXT(15)	8	"t"	
X_TEXT(16)	8	" "	
X_TEXT(17)	8	"f"	
X_TEXT(18)	8	"l"	
X_TEXT(19)	8	"a"	
X_TEXT(20)	8	"s"	
X_TEXT(21)	8	"h"	
X_TEXT(22)	8	"i"	
X_TEXT(23)	8	"n"	
X_TEXT(24)	8	"g"	
Padding bits	7	0000000b	

Message-S2: STM requests Text message T2 with slow normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=2, MX=1001000010b (red on dark blue, slow flashing, normal phase in text group 2), Q=1 (Acknowledgement required), L=33, T="T2 Text with slow normal flashing"			

Message-S3: STM requests Text message T3 with slow counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	50	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=356, NX=3, MX=1101000010b (red on dark blue, slow flashing, counter phase in text group 2), Q=1 (Acknowledgement required), L=39, T="T3 Text with slow counterphase flashing"

Message-S4: STM requests Text message T4 with fast normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=308, NX=4, MX=1010000010b (red on dark blue, fast flashing, normal phase in text group 2), Q=1 (Acknowledgement required), L=33, T="T4 Text with fast normal flashing"

Message-S5: STM requests Text message T5 with fast counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=356, NX=5, MX=1110000010b (red on dark blue, fast flashing, counter phase in text group 2), Q=1 (Acknowledgement required), L=39, T="T5 Text with fast counterphase flashing"

Message-E1: Acknowledgement reply by ERTMS/ETCS on-board for T1			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length

VARIABLE	Length	VALUE	COMMENT
NID_PACKET	8	40	Acknowledgement Reply to STM (STM-40)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
Padding bits	3	NOT RELEVANT	

Message-S6: STM deletes text message T1			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
Padding bits	2	00b	

Message-E2: Acknowledgement reply by ERTMS/ETCS on-board for T2			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=2			

Message-S7: STM deletes text message T2

VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=2			

Message-E3: Acknowledgement reply by ERTMS/ETCS on-board for T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=3			

Message-S8: STM deletes text message T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=3			

Message-E4: Acknowledgement reply by ERTMS/ETCS on-board for T4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=4			

Message-S9: STM deletes text message T4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=4			

Message-E5: Acknowledgement reply by ERTMS/ETCS on-board for T5			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=5			

Message-S10: STM deletes text message T5			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=5			

2.4.13 Test Case 7d.13

TEST CASE HEADER

Test case identification	DMI Function
	7d1.0.2.(7d2.0.1.1.1.3.0).1.1.2.(7d2.0.1.1.2.1.3.0).1.1.2.(7d2.0.1.1.2.2.3.0).1.1.2.(7d2.0.1.1.3.1.3.0).1.1.2.(7d2.0.1.1.3.2.3.0).1.(4.0.(7d2).1)*.(3.0)*.5
	Flashing mode and phase test: group 1. Text messages with acknowledgement with delayed acknowledgment and deletion.: Text messages with all possible combinations of flashing mode and phase are displayed. Text messages are requested with acknowledgement. Text messages are acknowledged one by one after all messages have been requested. All messages are deleted together at the end.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.2, 13.4.2.3, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.2.3, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38, STM-39, STM-40
ERTMS/ETCS on-board configuration	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen for test).
Comments and constraints	Starting and end conditions as for test case 7d.1
	At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action
1	Text message T1 without flashing is requested by STM	PROF	T0	connection of active DMI channel: Message-S1	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge ♫
2	Text message T2 with slow normal flashing is requested by STM	PROF	T0+5s	connection of active DMI channel: Message-S2	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge. New message T2 is not visible.

3	Text message T3 with slow counterphase flashing is requested by STM	PROF	T0+10s	connection of active DMI channel: Message-S3	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge. New message T3 is not visible.
4	Text message T4 with fast normal flashing is requested by STM	PROF	T0+15s	connection of active DMI channel: Message-S4	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge. New message T4 is not visible.
5	Text message T5 with fast counterphase flashing is requested by STM	PROF	T0+20s	connection of active DMI channel: Message-S5	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge. New message T5 is not visible.
6	Text message T1 is acknowledged by driver	DMI	T0+25s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E1
					DMI		Text "T2 Text with slow normal flashing" is displayed as message to acknowledge. ♫
7	Text message T2 is acknowledged by driver	DMI	T0+30s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E2
					DMI		Text "T3 Text with slow counterphase flashing" is displayed as message to acknowledge. ♫
8	Text message T3 is acknowledged by driver	DMI	T0+35s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E3
					DMI		Text "T4 Text with fast normal flashing" is displayed as message to acknowledge. ♫
9	Text message T4 is acknowledged by driver	DMI	T0+40s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E4
					DMI		Text "T5 Text with fast counterphase flashing" is displayed as message to

							acknowledge. ♫
10	Text message T5 is acknowledged by driver	DMI	T0+45s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E5
					DMI		Text "T5 Text with fast counterphase flashing" is displayed in group 1 with previously acknowledged text messages as normal text message without acknowledgement with fast counterphase flashing
11	Text message T1 is deleted by STM	PROF	T0+50s	connection of active DMI channel: Message-S6	DMI		Text messages T2 - T5 are displayed in group 1 with flashing mode and phase according to message content
12	Text message T2 is deleted by STM	PROF	T0+55s	connection of active DMI channel: Message-S7	DMI		Text messages T3 - T5 are displayed in group 1 with flashing mode and phase according to message content
13	Text message T3 is deleted by STM	PROF	T0+60s	connection of active DMI channel: Message-S8	DMI		Text messages T4 - T5 are displayed in group 1 with flashing mode and phase according to message content
14	Text message T4 is deleted by STM	PROF	T0+65s	connection of active DMI channel: Message-S9	DMI		Text message T5 is displayed in group 1 as only text message with fast counterphase flashing
15	Text message T5 is deleted by STM	PROF	T0+70s	connection of active DMI channel: Message-S10	DMI		No STM text message is displayed

Message-S1: STM requests Text message T1 without flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	36	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	240	Packet Length
NID_XMESSAGE	8	1	
M_XATTRIBUTE	10	0000000010b	red on dark blue, no flashing in text group 1
Q_ACK	1	1	Acknowledgement required
L_TEXT	8	24	Text="T1 Text without flashing"
X_TEXT(1)	8	"T"	
X_TEXT(2)	8	"1"	
X_TEXT(3)	8	" "	
X_TEXT(4)	8	"T"	
X_TEXT(5)	8	"e"	
X_TEXT(6)	8	"x"	
X_TEXT(7)	8	"t"	
X_TEXT(8)	8	" "	
X_TEXT(9)	8	"w"	
X_TEXT(10)	8	"i"	
X_TEXT(11)	8	"t"	
X_TEXT(12)	8	"h"	
X_TEXT(13)	8	"o"	

VARIABLE			
X_TEXT(14)	8	"u"	
X_TEXT(15)	8	"t"	
X_TEXT(16)	8	" "	
X_TEXT(17)	8	"f"	
X_TEXT(18)	8	"l"	
X_TEXT(19)	8	"a"	
X_TEXT(20)	8	"s"	
X_TEXT(21)	8	"h"	
X_TEXT(22)	8	"i"	
X_TEXT(23)	8	"n"	
X_TEXT(24)	8	"g"	
Padding bits	7	0000000b	

Message-S2: STM requests Text message T2 with slow normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=2, MX=0001000010b (red on dark blue, slow flashing, normal phase in text group 1), Q=1 (Acknowledgement required), L=33, T="T2 Text with slow normal flashing"			

Message-S3: STM requests Text message T3 with slow counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	50	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=356, NX=3, MX=0101000010b (red on dark blue, slow flashing, counter phase in text group 1), Q=1 (Acknowledgement required), L=39, T="T3 Text with slow counterphase flashing"			

Message-S4: STM requests Text message T4 with fast normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=4, MX=0010000010b (red on dark blue, fast flashing, normal phase in text group 1), Q=1 (Acknowledgement required), L=33, T="T4 Text with fast normal flashing"			

Message-S5: STM requests Text message T5 with fast counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=356, NX=5, MX=0110000010b (red on dark blue, fast flashing, counter phase in text group 1), Q=1 (Acknowledgement required), L=39, T="T5 Text with fast counterphase flashing"			

Message-E1: Acknowledgement reply by ERTMS/ETCS on-board for T1			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length

NID_PACKET	8	40	Acknowledgement Reply to STM (STM-40)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
Padding bits	3	NOT RELEVANT	

Message-E2: Acknowledgement reply by ERTMS/ETCS on-board for T2			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=2			

Message-E3: Acknowledgement reply by ERTMS/ETCS on-board for T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=3			

Message-E4: Acknowledgement reply by ERTMS/ETCS on-board for T4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=4			

Message-E5: Acknowledgement reply by ERTMS/ETCS on-board for T5

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VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=5			

Message-S6: STM deletes text message T1			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
Padding bits	2	00b	

Message-S7: STM deletes text message T2			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=2			

Message-S8: STM deletes text message T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=3			

Message-S9: STM deletes text message T4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=4			

Message-S10: STM deletes text message T5			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=5			

2.4.14 Test Case 7d.14

TEST CASE HEADER

Test case identification	DMI Function
	7d1.0.2.(7d2.0.2.1.1.3.0).1.1.2.(7d2.0.2.1.2.1.3.0).1.1.2.(7d2.0.2.1.2.2.3.0).1.1.2.(7d2.0.2.1.3.1.3.0).1.1.2.(7d2.0.2.1.3.2.3.0).1.(4.0.(7d2).1)*.(3.0)*.5
	Flashing mode and phase test: group 2. Text messages with acknowledgement with delayed acknowledgment and deletion.:
	Text messages with all possible combinations of flashing mode and phase are displayed. Text messages are requested with acknowledgement. Text messages are acknowledged one by one after all messages have been requested. All messages are deleted together at the end.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.2, 13.4.2.3, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.2.3, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38, STM-39, STM-40
ERTMS/ETCS on-board configuration	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen for test).
Comments and constraints	Starting and end conditions as for test case 7d.1
	At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action
1	Text message T1 without flashing is requested by STM	PROF	T0	connection of active DMI channel: Message-S1	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge ♫
2	Text message T2 with slow normal flashing is requested by STM	PROF	T0+5s	connection of active DMI channel: Message-S2	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge. New message T2 is not visible.

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3	Text message T3 with slow counterphase flashing is requested by STM	PROF	T0+10s	connection of active DMI channel: Message-S3	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge. New message T3 is not visible.
4	Text message T4 with fast normal flashing is requested by STM	PROF	T0+15s	connection of active DMI channel: Message-S4	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge. New message T4 is not visible.
5	Text message T5 with fast counterphase flashing is requested by STM	PROF	T0+20s	connection of active DMI channel: Message-S5	DMI		Text "T1 Text without flashing" is displayed as message to acknowledge. New message T5 is not visible.
6	Text message T1 is acknowledged by driver	DMI	T0+25s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E1
					DMI		Text "T2 Text with slow normal flashing" is displayed as message to acknowledge. ♫
7	Text message T2 is acknowledged by driver	DMI	T0+30s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E2
					DMI		Text "T3 Text with slow counterphase flashing" is displayed as message to acknowledge. ♫
8	Text message T3 is acknowledged by driver	DMI	T0+35s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E3
					DMI		Text "T4 Text with fast normal flashing" is displayed as message to acknowledge. ♫
9	Text message T4 is acknowledged by driver	DMI	T0+40s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E4
					DMI		Text "T5 Text with fast counterphase flashing" is displayed as message to

							acknowledge. ♫
10	Text message T5 is acknowledged by driver	DMI	T0+45s	Driver action: acknowledge text message	PROF		connection of active DMI channel: Message-E5
					DMI		Text "T5 Text with fast counterphase flashing" is displayed in group 2 with previously acknowledged text messages as normal text message without acknowledgement with fast counterphase flashing
11	Text message T1 is deleted by STM	PROF	T0+50s	connection of active DMI channel: Message-S6	DMI		Text messages T2 - T5 are displayed in group 2 with flashing mode and phase according to message content
12	Text message T2 is deleted by STM	PROF	T0+55s	connection of active DMI channel: Message-S7	DMI		Text messages T3 - T5 are displayed in group 2 with flashing mode and phase according to message content
13	Text message T3 is deleted by STM	PROF	T0+60s	connection of active DMI channel: Message-S8	DMI		Text messages T4 - T5 are displayed in group 2 with flashing mode and phase according to message content
14	Text message T4 is deleted by STM	PROF	T0+65s	connection of active DMI channel: Message-S9	DMI		Text message T5 is displayed in group 2 as only text message with fast counterphase flashing
15	Text message T5 is deleted by STM	PROF	T0+70s	connection of active DMI channel: Message-S10	DMI		No STM text message is displayed

Message-S1: STM requests Text message T1 without flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	36	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	240	Packet Length
NID_XMESSAGE	8	1	
M_XATTRIBUTE	10	1000000010b	red on dark blue, no flashing in text group 2
Q_ACK	1	1	Acknowledgement required
L_TEXT	8	24	Text="T1 Text without flashing"
X_TEXT(1)	8	"T"	
X_TEXT(2)	8	"1"	
X_TEXT(3)	8	" "	
X_TEXT(4)	8	"T"	
X_TEXT(5)	8	"e"	
X_TEXT(6)	8	"x"	
X_TEXT(7)	8	"t"	
X_TEXT(8)	8	" "	
X_TEXT(9)	8	"w"	
X_TEXT(10)	8	"i"	
X_TEXT(11)	8	"t"	
X_TEXT(12)	8	"h"	
X_TEXT(13)	8	"o"	

X_TEXT(14)	8	"u"	
X_TEXT(15)	8	"t"	
X_TEXT(16)	8	" "	
X_TEXT(17)	8	"f"	
X_TEXT(18)	8	"l"	
X_TEXT(19)	8	"a"	
X_TEXT(20)	8	"s"	
X_TEXT(21)	8	"h"	
X_TEXT(22)	8	"i"	
X_TEXT(23)	8	"n"	
X_TEXT(24)	8	"g"	
Padding bits	7	0000000b	

Message-S2: STM requests Text message T2 with slow normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=308, NX=2, MX=1001000010b (red on dark blue, slow flashing, normal phase in text group 2), Q=1 (Acknowledgement required), L=33, T="T2 Text with slow normal flashing"			

Message-S3: STM requests Text message T3 with slow counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	50	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=356, NX=3, MX=1101000010b (red on dark blue, slow flashing, counter phase in text group 2), Q=1 (Acknowledgement required), L=39, T="T3 Text with slow counterphase flashing"

Message-S4: STM requests Text message T4 with fast normal flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	44	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=308, NX=4, MX=1010000010b (red on dark blue, fast flashing, normal phase in text group 2), Q=1 (Acknowledgement required), L=33, T="T4 Text with fast normal flashing"

Message-S5: STM requests Text message T5 with fast counterphase flashing			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=356, NX=5, MX=1110000010b (red on dark blue, fast flashing, counter phase in text group 2), Q=1 (Acknowledgement required), L=39, T="T5 Text with fast counterphase flashing"

Message-E1: Acknowledgement reply by ERTMS/ETCS on-board for T1			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length

NID_PACKET	8	40	Acknowledgement Reply to STM (STM-40)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
Padding bits	3	NOT RELEVANT	

Message-E2: Acknowledgement reply by ERTMS/ETCS on-board for T2			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=2			

Message-E3: Acknowledgement reply by ERTMS/ETCS on-board for T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=3			

Message-E4: Acknowledgement reply by ERTMS/ETCS on-board for T4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=4			

Message-E5: Acknowledgement reply by ERTMS/ETCS on-board for T5

VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	6	Message Length
STM-40: PL=29, NX=5			

Message-S6: STM deletes text message T1			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	1	
Padding bits	2	00b	

Message-S7: STM deletes text message T2			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=2			

Message-S8: STM deletes text message T3			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=3			

Message-S9: STM deletes text message T4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=4			

Message-S10: STM deletes text message T5			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=5			

2.4.15 Test Case 7d.15

TEST CASE HEADER

Test case identification	DMI Function
	7d1.(0.1.(7d2.0.1.1.1.1.0).1.3.0.1)*.(0.1.(7d2.0.1.1.1.2.0).1.3.0.1)*.(0.1.(7d2.0.1.1.1.3.0).1.3.0.1)*.(0.1.(7d2.0.1.1.1.4.0).1.3.0.1)*.(0.1.(7d2.0.1.1.1.5.0).1.3.0.1)*.(0.1.(7d2.0.1.1.1.6.0).1.3.0.1)*.0.1.(7d2.0.1.1.1.6.0).1.3.0.5
	Test of text messages of different size and code: group 1.:
	Text messages with different size and code (all ASCII or partly non-ASCII) are displayed in group 1 and deleted.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.3, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38, STM-39
ERTMS/ETCS on-board configuration	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen for test).
Comments and constraints	Starting and end conditions as for test case 7d.1
	At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action
1	Text message 121 with 1-20 chars, all ASCII is requested by STM	PROF	T0	connection of active DMI channel: Message-S1	DMI		Text "<=20" is displayed in group 1 ♫
2	Text message 121 is deleted by STM	PROF	T0+5s	connection of active DMI channel: Message-S2	DMI		No STM text message is displayed
3	Text message 242 with 1-20 chars, all ASCII is	PROF	T0+10s	connection of active DMI channel: Message-S3	DMI		Text "<=20, all ASCII"

	requested by STM						is displayed in group 1 ♫
4	Text message 242 is deleted by STM	PROF	T0+15s	connection of active DMI channel: Message-S4	DMI		No STM text message is displayed
5	Text message 108 with 1-20 chars, all ASCII is requested by STM	PROF	T0+20s	connection of active DMI channel: Message-S5	DMI		Text "<=20, only ASCII" is displayed in group 1 ♫
6	Text message 108 is deleted by STM	PROF	T0+25s	connection of active DMI channel: Message-S6	DMI		No STM text message is displayed
7	Text message 229 with 1-20 chars, all ASCII is requested by STM	PROF	T0+30s	connection of active DMI channel: Message-S7	DMI		Text "12345678901234567890" is displayed in group 1 ♫
8	Text message 229 is deleted by STM	PROF	T0+35s	connection of active DMI channel: Message-S8	DMI		No STM text message is displayed
9	Text message 95 with 1-20 chars, not all ASCII is requested by STM	PROF	T0+45s	connection of active DMI channel: Message-S9	DMI		Text "¿" is displayed in group 1 ♫
10	Text message 95 is deleted by STM	PROF	T0+50s	connection of active DMI channel: Message-S10	DMI		No STM text message is displayed
11	Text message 216 with 1-20 chars, not all ASCII is requested by STM	PROF	T0+55s	connection of active DMI channel: Message-S11	DMI		Text "<=20, äöüÄÖÜ" is displayed in group 1 ♫
12	Text message 216 is deleted by STM	PROF	T0+60s	connection of active DMI channel: Message-S12	DMI		No STM text message is displayed
13	Text message 82	PROF	T0+65s	connection of active DMI channel:	DMI		Text

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	with 1-20 chars, not all ASCII is requested by STM			Message-S13			"<= 20,áéíúóÁÉÍÚÓ" is displayed in group 1 ♫
14	Text message 82 is deleted by STM	PROF	T0+70s	connection of active DMI channel: Message-S14	DMI		No STM text message is displayed
15	Text message 203 with 1-20 chars, not all ASCII is requested by STM	PROF	T0+75s	connection of active DMI channel: Message-S15	DMI		Text "áéíúóÁÉÍÚÓáéíúóÁÉÍÚÓ" is displayed in group 1 ♫
16	Text message 203 is deleted by STM	PROF	T0+80s	connection of active DMI channel: Message-S16	DMI		No STM text message is displayed
17	Text message 69 with 21-39 chars, all ASCII is requested by STM	PROF	T0+90s	connection of active DMI channel: Message-S17	DMI		Text "21-39 chars all ASCII" is displayed in group 1 ♫
18	Text message 69 is deleted by STM	PROF	T0+95s	connection of active DMI channel: Message-S18	DMI		No STM text message is displayed
19	Text message 190 with 21-39 chars, all ASCII is requested by STM	PROF	T0+100s	connection of active DMI channel: Message-S19	DMI		Text "21-39 characters, all ASCII" is displayed in group 1 ♫
20	Text message 190 is deleted by STM	PROF	T0+105s	connection of active DMI channel: Message-S20	DMI		No STM text message is displayed
21	Text message 56 with 21-39 chars, all ASCII is requested by STM	PROF	T0+110s	connection of active DMI channel: Message-S21	DMI		Text "21-39 characters, only ASCII" is displayed in group 1 ♫
22	Text message 56 is deleted by STM	PROF	T0+115s	connection of active DMI channel: Message-S22	DMI		No STM text message is displayed

23	Text message 177 with 21-39 chars, all ASCII is requested by STM ♫	PROF	T0+120s	connection of active DMI channel: Message-S23	DMI		Text "1234567890123456789012345678 90123456789" is displayed in group 1 ♫
24	Text message 177 is deleted by STM	PROF	T0+125s	connection of active DMI channel: Message-S24	DMI		No STM text message is displayed
25	Text message 43 with 21-39 chars, not all ASCII is requested by STM	PROF	T0+135s	connection of active DMI channel: Message-S25	DMI		Text "21-39 á é í ú ó Á É Í Ú Ó" is displayed in group 1 ♫
26	Text message 43 is deleted by STM	PROF	T0+140s	connection of active DMI channel: Message-S26	DMI		No STM text message is displayed
27	Text message 164 with 21-39 chars, not all ASCII is requested by STM ♫	PROF	T0+145s	connection of active DMI channel: Message-S27	DMI		Text "21-39 characters, áàâÁÀÂ" is displayed in group 1 ♫
28	Text message 164 is deleted by STM	PROF	T0+150s	connection of active DMI channel: Message-S28	DMI		No STM text message is displayed
29	Text message 30 with 21-39 chars, not all ASCII is requested by STM	PROF	T0+155s	connection of active DMI channel: Message-S29	DMI		Text "21-39 chars áéíúóÁÉÍÚÓáéíúóÁÉÍÚÓ" is displayed in group 1 ♫
30	Text message 30 is deleted by STM	PROF	T0+160s	connection of active DMI channel: Message-S30	DMI		No STM text message is displayed
31	Text message 151 with 21-39 chars, not all ASCII is requested by STM	PROF	T0+165s	connection of active DMI channel: Message-S31	DMI		Text "áéíúóÁÉÍÚÓáéíúóÁÉÍÚÓáéíúóÁÉÍ ÚÓáéíúóÁÉÍÚ"

			♫					is displayed in group 1 ♫
32	Text message 151 is deleted by STM	PROF	T0+170s	connection of active DMI channel: Message-S32	DMI			No STM text message is displayed
33	Text message 17 with 40 chars, all ASCII is requested by STM	PROF	T0+180s	connection of active DMI channel: Message-S33	DMI			Text "This is a long text with all ASCII chars" is displayed in group 1 ♫
34	Text message 17 is deleted by STM	PROF	T0+185s	connection of active DMI channel: Message-S34	DMI			No STM text message is displayed
35	Text message 138 with 40 chars, all ASCII is requested by STM	PROF	T0+190s	connection of active DMI channel: Message-S35	DMI			Text "<========== 40 characters =============>" is displayed in group 1 ♫
36	Text message 138 is deleted by STM	PROF	T0+195s	connection of active DMI channel: Message-S36	DMI			No STM text message is displayed
37	Text message 4 with 40 chars, all ASCII is requested by STM	PROF	T0+200s	connection of active DMI channel: Message-S37	DMI			Text "This is a long text of maximum length 40" is displayed in group 1 ♫
38	Text message 4 is deleted by STM	PROF	T0+205s	connection of active DMI channel: Message-S38	DMI			No STM text message is displayed
39	Text message 125 with 40 chars, all ASCII is requested by STM	PROF	T0+210s	connection of active DMI channel: Message-S39	DMI			Text "12345678901234567890123456789 01234567890" is displayed in group 1 ♫

40	Text message 125 is deleted by STM	PROF	T0+215s	connection of active DMI channel: Message-S40	DMI		No STM text message is displayed
41	Text message 246 with 40 chars not all ASCII is requested by STM ♫	PROF	T0+225s	connection of active DMI channel: Message-S41	DMI		Text "Störung -- Störung -- Störung -- Störung" is displayed in group 1 ♫
42	Text message 246 is deleted by STM	PROF	T0+230s	connection of active DMI channel: Message-S42	DMI		No STM text message is displayed
43	Text message 112 with 40 chars not all ASCII is requested by STM ♫	PROF	T0+235s	connection of active DMI channel: Message-S43	DMI		Text "«««««««««««« 40 characters »»»»»»»»»»»»»»" is displayed in group 1 ♫
44	Text message 112 is deleted by STM	PROF	T0+240s	connection of active DMI channel: Message-S44	DMI		No STM text message is displayed
45	Text message 233 with 40 chars not all ASCII is requested by STM ♫	PROF	T0+245s	connection of active DMI channel: Message-S45	DMI		Text "This text is not ASCII : áéíúóÁÉÍÚÓáéíúó" is displayed in group 1 ♫
46	Text message 233 is deleted by STM	PROF	T0+250s	connection of active DMI channel: Message-S46	DMI		No STM text message is displayed
47	Text message 99 with 40 chars not all ASCII is requested by STM ♫	PROF	T0+255s	connection of active DMI channel: Message-S47	DMI		Text "áéíúóÁÉÍÚÓáéíúóÁÉÍÚÓáéíúóÁÉÍÚÓáéíúóÁÉÍÚÓ" is displayed in group 1 ♫
48	Text message 99	PROF	T0+260s	connection of active DMI channel: Message-S48	DMI		No STM text message is displayed

	is deleted by STM						

Message-S1: STM requests text message 121 with 1-20 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	16	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	80	Packet Length
NID_XMESSAGE	8	121	
M_XATTRIBUTE	10	0000000010b	red on dark blue, no flashing in text group 1
Q_ACK	1	0	No acknowledgement required
L_TEXT	8	4	Text="<=20"
X_TEXT(1)	8	"<"	
X_TEXT(2)	8	"="	
X_TEXT(3)	8	"2"	
X_TEXT(4)	8	"0"	
Padding bits	7	0000000b	

Message-S2: STM deletes text message 121			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	9	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	121	
Padding bits	2	00b	

Message-S3: STM requests text message 242 with 1-20 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	26	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=164, NX=242, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=15, T="<=20, all ASCII"			

Message-S4: STM deletes text message 242			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=242			

Message-S5: STM requests text message 108 with 1-20 chars, all ASCII

VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=172, NX=108, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=16, T="<=20, only ASCII"			

Message-S6: STM deletes text message 108			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=108			

Message-S7: STM requests text message 229 with 1-20 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	31	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=204, NX=229, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=20, T="12345678901234567890"			

Message-S8: STM deletes text message 229			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length

STM-15: PL=25, ST=7, (State DA)
STM-39: PL=29, NX=229

Message-S9: STM requests text message 95 with 1-20 chars, not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	13	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=60, NX=95, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=2, T="¿"(C2h, BFh,)			

Message-S10: STM deletes text message 95			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=95			

Message-S11: STM requests text message 216 with 1-20 chars, not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	29	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=188, NX=216, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=18, T="<=20, äöüÄÖÜ"('<', '=', '2', '0', ',', ' ', C3h, A4h, C3h, B6h, C3h, BCh, C3h, 84h, C3h, 96h, C3h, 9Ch,)			

Message-S12: STM deletes text message 216			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=216			

Message-S13: STM requests text message 82 with 1-20 chars, not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	37	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=252, NX=82, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=26, T="<= 20,áéíúóÁÉÍÚÓ"('<', '=', ' ', '2', '0', ',', C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h,)			

Message-S14: STM deletes text message 82			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=82			

Message-S15: STM requests text message 203 with 1-20 chars, not all ASCII			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	51	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=364, NX=203, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=40, T="áéíúóÁÉÍÚÓáéíúóÁÉÍÚÓ"(C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h,)			

Message-S16: STM deletes text message 203			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=203			

Message-S17: STM requests text message 69 with 21-39 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	32	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=212, NX=69, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=21, T="21-39 chars all ASCII"			

Message-S18: STM deletes text message 69			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length

STM-15: PL=25, ST=7, (State DA)
STM-39: PL=29, NX=69

Message-S19: STM requests text message 190 with 21-39 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	38	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=260, NX=190, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=27, T="21-39 characters, all ASCII"			

Message-S20: STM deletes text message 190			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=190			

Message-S21: STM requests text message 56 with 21-39 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	39	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=268, NX=56, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=28, T="21-39 characters, only ASCII"			

Message-S22: STM deletes text message 56			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=56			

Message-S23: STM requests text message 177 with 21-39 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=356, NX=177, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=39, T="123456789012345678901234567890123456789"			

Message-S24: STM deletes text message 177			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=177			

Message-S25: STM requests text message 43 with 21-39 chars, not all ASCII			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	46	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=324, NX=43, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=35, T="21-39 á é í ú ó Á É Í Ú Ó"('2', '1', '-', '3', '9', ' ', C3h, A1h, ' ', C3h, A9h, ' ', C3h, ADh, ' ', C3h, BAh, ' ', C3h, B3h, ' ', C3h, 81h, ' ', C3h, 89h, ' ', C3h, 8Dh, ' ', C3h, 9Ah, ' ', C3h, 93h,)			

Message-S26: STM deletes text message 43			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=43			

Message-S27: STM requests text message 164 with 21-39 chars, not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	41	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=284, NX=164, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=30, T="21-39 characters, áàâÁÀÂ"('2', '1', '-', '3', '9', ' ', 'c', 'h', 'a', 'r', 'a', 'c', 't', 'e', 'r', 's', ',', ' ', C3h, A1h, C3h, A0h, C3h, A2h, C3h, 81h, C3h, 80h, C3h, 82h,)			

Message-S28: STM deletes text message 164			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length

STM-15: PL=25, ST=7, (State DA)
STM-39: PL=29, NX=164

Message-S29: STM requests text message 30 with 21-39 chars, not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	63	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=460, NX=30, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=52, T="21-39 chars áéíúóÁÉÍÚÓáéíúóÁÉÍÚÓ"('2', '1', '-', '3', '9', ' ', 'c', 'h', 'a', 'r', 's', ' ', C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h,)			

Message-S30: STM deletes text message 30			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=30			

Message-S31: STM requests text message 151 with 21-39 chars, not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	89	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=668, NX=151, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=78,			

T="áéíúóÁÉÍÚÓáéíúóÁÉÍÚÓáéíúóÁÉÍÚÓáéíúóÁÉÍÚ"(C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah,)

Message-S32: STM deletes text message 151			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=151			

Message-S33: STM requests text message 17 with 40 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	51	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=364, NX=17, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=40, T="This is a long text with all ASCII chars"			

Message-S34: STM deletes text message 17			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=17			

Message-S35: STM requests text message 138 with 40 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	51	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=364, NX=138, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=40, T="<========== 40 characters ============>"			

Message-S36: STM deletes text message 138			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=138			

Message-S37: STM requests text message 4 with 40 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	51	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=364, NX=4, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=40, T="This is a long text of maximum length 40"			

Message-S38: STM deletes text message 4			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=4			

Message-S39: STM requests text message 125 with 40 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	51	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=364, NX=125, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=40, T="1234567890123456789012345678901234567890"			

Message-S40: STM deletes text message 125			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=125			

Message-S41: STM requests text message 246 with 40 chars not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	55	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=396, NX=246, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=44, T="Störung -- Störung -- Störung -- Störung"('S', 't', C3h, B6h, 'r', 'u', 'n', 'g', ' ', '-', '-', ' ', 'S', 't', C3h, B6h, 'r', 'u', 'n', 'g', ' ', '-', '-', ' ', 'S', 't', C3h, B6h, 'r', 'u', 'n', 'g', ' ', '-', '-', ' ', 'S', 't', C3h, B6h, 'r', 'u', 'n', 'g',)

Message-S42: STM deletes text message 246			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=246			

Message-S43: STM requests text message 112 with 40 chars not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	76	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=564, NX=112, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=65, T="«««««««««««« 40 characters »»»»»»»»»»»»»»"(C2h, ABh, C2h, ABh, C2h, ABh, C2h, ABh, C2h, ABh, C2h, ABh, C2h, ABh, C2h, ABh, C2h, ABh, C2h, ABh, C2h, ABh, ' ', '4', '0', ' ', 'c', 'h', 'a', 'r', 'a', 'c', 't', 'e', 'r', 's', ' ', C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh,)			

Message-S44: STM deletes text message 112			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length

STM-15: PL=25, ST=7, (State DA)
STM-39: PL=29, NX=112

Message-S45: STM requests text message 233 with 40 chars not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	66	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=484, NX=233, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=55, T="This text is not ASCII : áéíúóÁÉÍÚÓáéíúó"('T', 'h', 'i', 's', ' ', 't', 'e', 'x', 't', ' ', 'i', 's', ' ', 'n', 'o', 't', ' ', 'A', 'S', 'C', 'I', 'I', ' ', ':', ' ', C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h,)			

Message-S46: STM deletes text message 233			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=233			

Message-S47: STM requests text message 99 with 40 chars not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	91	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=684, NX=99, MX=0000000010b (red on dark blue, no flashing in text group 1), Q=0 (No acknowledgement required), L=80,			

T="áéíúóÁÉÍÚÓáéíúóÁÉÍÚÓáéíúóÁÉÍÚÓáéíúóÁÉÍÚÓ"(C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h,)

Message-S48: STM deletes text message 99			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=99			

2.4.16 Test Case 7d.16

TEST CASE HEADER	
Test case identification	DMI Function
	7d1.(0.1.(7d2.0.2.1.1.1.0).1.3.0.1)*.(0.1.(7d2.0.2.1.1.2.0).1.3.0.1)*.(0.1.(7d2.0.2.1.1.3.0).1.3.0.1)*.(0.1.(7d2.0.2.1.1.4.0).1.3.0.1)*.(0.1.(7d2.0.2.1.1.5.0).1.3.0.1)*.(0.1.(7d2.0.2.1.1.6.0).1.3.0.1)*.0.1.(7d2.0.2.1.1.6.0).1.3.0.5
	Test of text messages of different size and code: group 2.:
	Text messages with different size and code (all ASCII or partly non-ASCII) are displayed in group 2 and deleted.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.3, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38, STM-39
ERTMS/ETCS on-board	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen

configuration	for test).
Comments and constraints	Starting and end conditions as for test case 7d.1
	At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action
1	Text message 121 with 1-20 chars, all ASCII is requested by STM	PROF	T0	connection of active DMI channel: Message-S1	DMI		Text "<=20" is displayed in group 2
2	Text message 121 is deleted by STM	PROF	T0+5s	connection of active DMI channel: Message-S2	DMI		No STM text message is displayed
3	Text message 242 with 1-20 chars, all ASCII is requested by STM	PROF	T0+10s	connection of active DMI channel: Message-S3	DMI		Text "<=20, all ASCII" is displayed in group 2
4	Text message 242 is deleted by STM	PROF	T0+15s	connection of active DMI channel: Message-S4	DMI		No STM text message is displayed
5	Text message 108 with 1-20 chars, all ASCII is requested by STM	PROF	T0+20s	connection of active DMI channel: Message-S5	DMI		Text "<=20, only ASCII" is displayed in group 2
6	Text message 108 is deleted by STM	PROF	T0+25s	connection of active DMI channel: Message-S6	DMI		No STM text message is displayed
7	Text message 229 with 1-20 chars, all ASCII is requested by STM	PROF	T0+30s	connection of active DMI channel: Message-S7	DMI		Text "12345678901234567890" is displayed in group 2

8	Text message 229 is deleted by STM	PROF	T0+35s	connection of active DMI channel: Message-S8	DMI		No STM text message is displayed
9	Text message 95 with 1-20 chars, not all ASCII is requested by STM	PROF	T0+45s	connection of active DMI channel: Message-S9	DMI		Text "¿" is displayed in group 2
10	Text message 95 is deleted by STM	PROF	T0+50s	connection of active DMI channel: Message-S10	DMI		No STM text message is displayed
11	Text message 216 with 1-20 chars, not all ASCII is requested by STM	PROF	T0+55s	connection of active DMI channel: Message-S11	DMI		Text "<=20, äöüÄÖÜ" is displayed in group 2
12	Text message 216 is deleted by STM	PROF	T0+60s	connection of active DMI channel: Message-S12	DMI		No STM text message is displayed
13	Text message 82 with 1-20 chars, not all ASCII is requested by STM	PROF	T0+65s	connection of active DMI channel: Message-S13	DMI		Text "<= 20,áéíúóÁÉÍÚÓ" is displayed in group 2
14	Text message 82 is deleted by STM	PROF	T0+70s	connection of active DMI channel: Message-S14	DMI		No STM text message is displayed
15	Text message 203 with 1-20 chars, not all ASCII is requested by STM	PROF	T0+75s	connection of active DMI channel: Message-S15	DMI		Text "áéíúóÁÉÍÚÓáéíúóÁÉÍÚÓ" is displayed in group 2
16	Text message 203 is deleted by STM	PROF	T0+80s	connection of active DMI channel: Message-S16	DMI		No STM text message is displayed
17	Text message 69 with 21-39 chars, all ASCII is	PROF	T0+90s	connection of active DMI channel: Message-S17	DMI		Text "21-39 chars all ASCII"

	requested by STM						is displayed in group 2
18	Text message 69 is deleted by STM	PROF	T0+95s	connection of active DMI channel: Message-S18	DMI		No STM text message is displayed
19	Text message 190 with 21-39 chars, all ASCII is requested by STM	PROF	T0+100s	connection of active DMI channel: Message-S19	DMI		Text "21-39 characters, all ASCII" is displayed in group 2
20	Text message 190 is deleted by STM	PROF	T0+105s	connection of active DMI channel: Message-S20	DMI		No STM text message is displayed
21	Text message 56 with 21-39 chars, all ASCII is requested by STM	PROF	T0+110s	connection of active DMI channel: Message-S21	DMI		Text "21-39 characters, only ASCII" is displayed in group 2
22	Text message 56 is deleted by STM	PROF	T0+115s	connection of active DMI channel: Message-S22	DMI		No STM text message is displayed
23	Text message 177 with 21-39 chars, all ASCII is requested by STM	PROF	T0+120s	connection of active DMI channel: Message-S23	DMI		Text "123456789012345678901234567890123456789" is displayed in group 2
24	Text message 177 is deleted by STM	PROF	T0+125s	connection of active DMI channel: Message-S24	DMI		No STM text message is displayed
25	Text message 43 with 21-39 chars, not all ASCII is requested by STM	PROF	T0+135s	connection of active DMI channel: Message-S25	DMI		Text "21-39 á é í ú ó Á É Í Ú Ó" is displayed in group 2
26	Text message 43 is deleted by STM	PROF	T0+140s	connection of active DMI channel: Message-S26	DMI		No STM text message is displayed

27	Text message 164 with 21-39 chars, not all ASCII is requested by STM	PROF	T0+145s	connection of active DMI channel: Message-S27	DMI		Text "21-39 characters, áàâÁÀÂ" is displayed in group 2
28	Text message 164 is deleted by STM	PROF	T0+150s	connection of active DMI channel: Message-S28	DMI		No STM text message is displayed
29	Text message 30 with 21-39 chars, not all ASCII is requested by STM	PROF	T0+155s	connection of active DMI channel: Message-S29	DMI		Text "21-39 chars áéíúóÁÉÍÚÓáéíúóÁÉÍÚÓ" is displayed in group 2
30	Text message 30 is deleted by STM	PROF	T0+160s	connection of active DMI channel: Message-S30	DMI		No STM text message is displayed
31	Text message 151 with 21-39 chars, not all ASCII is requested by STM	PROF	T0+165s	connection of active DMI channel: Message-S31	DMI		Text "áéíúóÁÉÍÚÓáéíúóÁÉÍÚÓáéíúóÁÉÍÚÓáéíúóÁÉÍÚ" is displayed in group 2
32	Text message 151 is deleted by STM	PROF	T0+170s	connection of active DMI channel: Message-S32	DMI		No STM text message is displayed
33	Text message 17 with 40 chars, all ASCII is requested by STM	PROF	T0+180s	connection of active DMI channel: Message-S33	DMI		Text "This is a long text with all ASCII chars" is displayed in group 2
34	Text message 17 is deleted by STM	PROF	T0+185s	connection of active DMI channel: Message-S34	DMI		No STM text message is displayed
35	Text message 138 with 40 chars, all ASCII is	PROF	T0+190s	connection of active DMI channel: Message-S35	DMI		Text "<========== 40 characters

	requested by STM						=============>" is displayed in group 2
36	Text message 138 is deleted by STM	PROF	T0+195s	connection of active DMI channel: Message-S36	DMI		No STM text message is displayed
37	Text message 4 with 40 chars, all ASCII is requested by STM	PROF	T0+200s	connection of active DMI channel: Message-S37	DMI		Text "This is a long text of maximum length 40" is displayed in group 2
38	Text message 4 is deleted by STM	PROF	T0+205s	connection of active DMI channel: Message-S38	DMI		No STM text message is displayed
39	Text message 125 with 40 chars, all ASCII is requested by STM	PROF	T0+210s	connection of active DMI channel: Message-S39	DMI		Text "12345678901234567890123456789 01234567890" is displayed in group 2
40	Text message 125 is deleted by STM	PROF	T0+215s	connection of active DMI channel: Message-S40	DMI		No STM text message is displayed
41	Text message 246 with 40 chars not all ASCII is requested by STM	PROF	T0+225s	connection of active DMI channel: Message-S41	DMI		Text "Störung -- Störung -- Störung -- Störung" is displayed in group 2
42	Text message 246 is deleted by STM	PROF	T0+230s	connection of active DMI channel: Message-S42	DMI		No STM text message is displayed
43	Text message 112 with 40 chars not all ASCII is requested by STM	PROF	T0+235s	connection of active DMI channel: Message-S43	DMI		Text "«««««««««««« 40 characters »»»»»»»»»»»»»»" is displayed in group 2

44	Text message 112 is deleted by STM	PROF	T0+240s	connection of active DMI channel: Message-S44	DMI		No STM text message is displayed
45	Text message 233 with 40 chars not all ASCII is requested by STM	PROF	T0+245s	connection of active DMI channel: Message-S45	DMI		Text "This text is not ASCII : áéíúóÁÉÍÚÓáéíúó" is displayed in group 2
46	Text message 233 is deleted by STM	PROF	T0+250s	connection of active DMI channel: Message-S46	DMI		No STM text message is displayed
47	Text message 99 with 40 chars not all ASCII is requested by STM	PROF	T0+255s	connection of active DMI channel: Message-S47	DMI		Text "áéíúóÁÉÍÚÓáéíúóÁÉÍÚÓáéíúóÁÉÍÚÓáéíúóÁÉÍÚÓ" is displayed in group 2
48	Text message 99 is deleted by STM	PROF	T0+260s	connection of active DMI channel: Message-S48	DMI		No STM text message is displayed

Message-S1: STM requests text message 121 with 1-20 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	16	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	80	Packet Length

NID_XMESSAGE	8	121	
M_XATTRIBUTE	10	1000000010b	red on dark blue, no flashing in text group 2
Q_ACK	1	0	No acknowledgement required
L_TEXT	8	4	Text="<=20"
X_TEXT(1)	8	"<"	
X_TEXT(2)	8	"="	
X_TEXT(3)	8	"2"	
X_TEXT(4)	8	"0"	
Padding bits	7	0000000b	

Message-S2: STM deletes text message 121			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	39	delete text message by STM (STM-39)
L_PACKET	13	29	Packet Length
NID_XMESSAGE	8	121	
Padding bits	2	00b	

Message-S3: STM requests text message 242 with 1-20 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT

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NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	26	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=164, NX=242, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=15, T="<=20, all ASCII"			

Message-S4: STM deletes text message 242			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=242			

Message-S5: STM requests text message 108 with 1-20 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	27	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=172, NX=108, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=16, T="<=20, only ASCII"			

Message-S6: STM deletes text message 108			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			

STM-39: PL=29, NX=108

Message-S7: STM requests text message 229 with 1-20 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	31	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=204, NX=229, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=20, T="12345678901234567890"			

Message-S8: STM deletes text message 229			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=229			

Message-S9: STM requests text message 95 with 1-20 chars, not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	13	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=60, NX=95, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=2, T="¿"(C2h, BFh,)			

Message-S10: STM deletes text message 95			

VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=95			

Message-S11: STM requests text message 216 with 1-20 chars, not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	29	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=188, NX=216, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=18, T="<=20, äöüÄÖÜ"('<', '=', '2', '0', ',', ' ', C3h, A4h, C3h, B6h, C3h, BCh, C3h, 84h, C3h, 96h, C3h, 9Ch,)			

Message-S12: STM deletes text message 216			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=216			

Message-S13: STM requests text message 82 with 1-20 chars, not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

| L_MESSAGE | 8 | 37 | Message Length |

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=252, NX=82, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=26, T="<= 20,áéíúóÁÉÍÚÓ"('<', '=', ' ', '2', '0', ',', C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h,)

Message-S14: STM deletes text message 82			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-39: PL=29, NX=82

Message-S15: STM requests text message 203 with 1-20 chars, not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	51	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=364, NX=203, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=40, T="áéíúóÁÉÍÚÓáéíúóÁÉÍÚÓ"(C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h,)

Message-S16: STM deletes text message 203			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length

STM-15: PL=25, ST=7, (State DA)
STM-39: PL=29, NX=203

Message-S17: STM requests text message 69 with 21-39 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	32	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=212, NX=69, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=21, T="21-39 chars all ASCII"			

Message-S18: STM deletes text message 69			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=69			

Message-S19: STM requests text message 190 with 21-39 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	38	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=260, NX=190, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=27, T="21-39 characters, all ASCII"			

Message-S20: STM deletes text message 190			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=190			

Message-S21: STM requests text message 56 with 21-39 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	39	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=268, NX=56, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=28, T="21-39 characters, only ASCII"			

Message-S22: STM deletes text message 56			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=56			

Message-S23: STM requests text message 177 with 21-39 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	50	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=356, NX=177, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=39, T="123456789012345678901234567890123456789"

Message-S24: STM deletes text message 177			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-39: PL=29, NX=177

Message-S25: STM requests text message 43 with 21-39 chars, not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	46	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=324, NX=43, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=35, T="21-39 á é í ú ó Á É Í Ú Ó"('2', '1', '-', '3', '9', ' ', C3h, A1h, ' ', C3h, A9h, ' ', C3h, ADh, ' ', C3h, BAh, ' ', C3h, B3h, ' ', C3h, 81h, ' ', C3h, 89h, ' ', C3h, 8Dh, ' ', C3h, 9Ah, ' ', C3h, 93h,)

Message-S26: STM deletes text message 43			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length

STM-15: PL=25, ST=7, (State DA)
STM-39: PL=29, NX=43

Message-S27: STM requests text message 164 with 21-39 chars, not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	41	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=284, NX=164, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=30, T="21-39 characters, áàâÁÀÂ"('2', '1', '-', '3', '9', ' ', 'c', 'h', 'a', 'r', 'a', 'c', 't', 'e', 'r', 's', ',', ' ', C3h, A1h, C3h, A0h, C3h, A2h, C3h, 81h, C3h, 80h, C3h, 82h,)			

Message-S28: STM deletes text message 164			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=164			

Message-S29: STM requests text message 30 with 21-39 chars, not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	63	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=460, NX=30, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=52, T="21-39 chars áéíúóÁÉÍÚÓáéíúóÁÉÍÚÓ"('2', '1', '-', '3', '9', ' ', 'c', 'h', 'a', 'r', 's', ' ', C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h,			

93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h,)

Message-S30: STM deletes text message 30			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=30			

Message-S31: STM requests text message 151 with 21-39 chars, not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	89	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=668, NX=151, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=78, T="áéíúóÁÉÍÚÓáéíúóÁÉÍÚÓáéíúóÁÉÍÚÓáéíúóÁÉÍÚ"(C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah,)			

Message-S32: STM deletes text message 151			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=151			

Message-S33: STM requests text message 17 with 40 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	51	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=364, NX=17, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=40, T="This is a long text with all ASCII chars"			

Message-S34: STM deletes text message 17			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=17			

Message-S35: STM requests text message 138 with 40 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	51	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=364, NX=138, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=40, T="<========== 40 characters ============>"			

Message-S36: STM deletes text message 138			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=138			

Message-S37: STM requests text message 4 with 40 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	51	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=364, NX=4, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=40, T="This is a long text of maximum length 40"			

Message-S38: STM deletes text message 4			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=4			

Message-S39: STM requests text message 125 with 40 chars, all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	51	Message Length

STM-15: PL=25, ST=7, (State DA)

STM-38: PL=364, NX=125, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=40, T="12345678901234567890123456789012345678890"

Message-S40: STM deletes text message 125			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=125			

Message-S41: STM requests text message 246 with 40 chars not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	55	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=396, NX=246, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=44, T="Störung -- Störung -- Störung -- Störung"('S', 't', C3h, B6h, 'r', 'u', 'n', 'g', ' ', '-', '-', ' ', 'S', 't', C3h, B6h, 'r', 'u', 'n', 'g', ' ', '-', '-', ' ', 'S', 't', C3h, B6h, 'r', 'u', 'n', 'g', ' ', '-', '-', ' ', 'S', 't', C3h, B6h, 'r', 'u', 'n', 'g',)			

Message-S42: STM deletes text message 246			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			

STM-39: PL=29, NX=246

Message-S43: STM requests text message 112 with 40 chars not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	76	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=564, NX=112, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=65, T="«««««««««««« 40 characters »»»»»»»»»»»»»»"(C2h, ABh, C2h, ABh, C2h, ABh, C2h, ABh, C2h, ABh, C2h, ABh, C2h, ABh, C2h, ABh, C2h, ABh, C2h, ABh, C2h, ABh, ' ', '4', '0', ' ', 'c', 'h', 'a', 'r', 'a', 'c', 't', 'e', 'r', 's', ' ', C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh, C2h, BBh,)			

Message-S44: STM deletes text message 112			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=112			

Message-S45: STM requests text message 233 with 40 chars not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	66	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=484, NX=233, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=55, T="This text is not ASCII : áéíúóÁÉÍÚÓáéíúó"('T', 'h', 'i', 's', ' ', 't', 'e', 'x', 't', ' ', 'i', 's', ' ', 'n', 'o', 't', ' ', 'A', 'S', 'C', 'I', 'I', ' ', ':', ' ', C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h,			

89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h,)

Message-S46: STM deletes text message 233			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=233			

Message-S47: STM requests text message 99 with 40 chars not all ASCII			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	91	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=684, NX=99, MX=1000000010b (red on dark blue, no flashing in text group 2), Q=0 (No acknowledgement required), L=80, T="áéíúóÁÉÍÚÓáéíúóÁÉÍÚÓáéíúóÁÉÍÚÓáéíúóÁÉÍÚÓ"(C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h, C3h, A1h, C3h, A9h, C3h, ADh, C3h, BAh, C3h, B3h, C3h, 81h, C3h, 89h, C3h, 8Dh, C3h, 9Ah, C3h, 93h,)			

Message-S48: STM deletes text message 99			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	9	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-39: PL=29, NX=99			

2.4.17 Test Case 7d.17

TEST CASE HEADER	
Test case identification	DMI Function
	7d1.0.((1.(7d2).1.1)*.(1.(7d2).1.2.0)*.)*.(1.(7d2).2.2.0)*.1.(7d2).2.5 with varying path in 7d2
	Test of text message replacement.: The content and attributes of 10 text messages are changed, by requesting different text and attribute for the same text identifier.
ERTMS/ETCS on-board requirements tested	SUBSET-035 13.4.2.1, 13.4.2.4, 13.4.2.5, 13.4.2.6, 15.1.1.1 a), 15.1.1.4
	ERA ERTMS 015560 (DMI Spec) 9.3.1.2, 9.3.3.1, 9.3.3.2
STM requirements tested	
Packets transmitted via FFFIS STM	STM-15, STM-38
ERTMS/ETCS on-board configuration	Applicable to Unified and customisable DMI service, all configurations, SK and TS technology (one configuration shall be chosen for test).
Comments and constraints	Starting and end conditions as for test case 7d.1 At output actions marked with ♫ sound Sinfo shall be played according to requirement 8.2.3.4.7 h) of the ETCS DMI specification.

ERTMS/ETCS on-board Test Case

Step	Description/Comments	Input I/F	Input time	Input Action	Output I/F	Output time limit	Output action
1	STM requests 8 text messages (set 1): Msg100: "Self test ok" with black on white, no flashing in group 2 Msg101: "Antenna test ok" with	PROF	T0	connection of active DMI channel: Message-S1	DMI	17	The following list of text messages for the STM is displayed on the DMI in the given sequence: ♫ "Radio connecting" black on yellow, no flashing in group 1,

	black on white, no flashing in group 2 Msg102: "Brake test ok" with black on white, no flashing in group 2 Msg50: "Unequipped Area" with black on red, no flashing in group 1 Msg53: "Radio connecting" with black on yellow, no flashing in group 1 Msg103: "Door 1 open" with black on white, slow flashing, normal phase in group 2 Msg104: "Door 2 open" with black on white, slow flashing, normal phase in group 2 Msg105: "Door 3 open" with black on white, slow flashing, normal phase in group 2						"Unequipped Area" black on red, no flashing in group 1, "Door 3 open" black on white, slow flashing, normal phase in group 2, "Door 2 open" black on white, slow flashing, normal phase in group 2, "Door 1 open" black on white, slow flashing, normal phase in group 2, "Brake test ok" black on white, no flashing in group 2, "Antenna test ok" black on white, no flashing in group 2, "Self test ok" black on white, no flashing in group 2,
2	STM requests 4 text messages (set 2): Msg53: "Radio connected" with black on green, no flashing in group 1 Msg103: "Door 1 closed" with black on white, no flashing in group 2 Msg104: "Door 2 closed" with black on white, no flashing in group 2 Msg105: "Door 3 closed" with black on white, no flashing in group 2	PROF	T0+17s	connection of active DMI channel: Message-S2	DMI	11	The following list of text messages for the STM is displayed on the DMI in the given sequence: ♫ "Radio connected" black on green, no flashing in group 1, "Unequipped Area" black on red, no flashing in group 1, "Door 3 closed" black on white, no flashing in group 2, "Door 2 closed" black on white, no flashing in group 2,

							"Door 1 closed" black on white, no flashing in group 2,
							"Brake test ok" black on white, no flashing in group 2,
							"Antenna test ok" black on white, no flashing in group 2,
							"Self test ok" black on white, no flashing in group 2,
3	STM requests 1 text message (set 3): Msg50: "Partially equipped Area" with black on yellow, no flashing in group 1	PROF	T0+28s	connection of active DMI channel: Message-S3	DMI	7	The following list of text messages for the STM is displayed on the DMI in the given sequence: ♫ "Partially equipped Area" black on yellow, no flashing in group 1, "Radio connected" black on green, no flashing in group 1, "Door 3 closed" black on white, no flashing in group 2, "Door 2 closed" black on white, no flashing in group 2, "Door 1 closed" black on white, no flashing in group 2, "Brake test ok" black on white, no flashing in group 2, "Antenna test ok" black on white, no flashing in group 2, "Self test ok" black on white, no flashing in group 2,

4	STM requests 1 text message (set 4): Msg50: "Fully equipped Area" with black on green, no flashing in group 1	PROF	T0+35s	connection of active DMI channel: Message-S4	DMI	7	The following list of text messages for the STM is displayed on the DMI in the given sequence: ♫ "Fully equipped Area" black on green, no flashing in group 1, "Radio connected" black on green, no flashing in group 1, "Door 3 closed" black on white, no flashing in group 2, "Door 2 closed" black on white, no flashing in group 2, "Door 1 closed" black on white, no flashing in group 2, "Brake test ok" black on white, no flashing in group 2, "Antenna test ok" black on white, no flashing in group 2, "Self test ok" black on white, no flashing in group 2,
5	STM requests 3 text messages (set 5): Msg51: "Balise failure" with black on red, no flashing in group 1 Msg52: "X balise code error" with black on white, no flashing in group 1 Msg50: "Speed board Area" with black on blue, no flashing in group 1	PROF	T0+42s	connection of active DMI channel: Message-S5	DMI	9	The following list of text messages for the STM is displayed on the DMI in the given sequence: ♫ "Speed board Area" black on blue, no flashing in group 1, "X balise code error" black on white, no flashing in group 1, "Balise failure" black on red, no flashing in group 1,

							"Radio connected" black on green, no flashing in group 1,
							"Door 3 closed" black on white, no flashing in group 2,
							"Door 2 closed" black on white, no flashing in group 2,
							"Door 1 closed" black on white, no flashing in group 2,
							"Brake test ok" black on white, no flashing in group 2,
							"Antenna test ok" black on white, no flashing in group 2,
							"Self test ok" black on white, no flashing in group 2,
6	STM requests 1 text message (set 6): Msg101: "Antenna failure" with black on white, slow flashing, normal phase in group 2	PROF	T0+51s	connection of active DMI channel: Message-S6	DMI	7	The following list of text messages for the STM is displayed on the DMI in the given sequence: "Speed board Area" black on blue, no flashing in group 1, "X balise code error" black on white, no flashing in group 1, "Balise failure" black on red, no flashing in group 1, "Radio connected" black on green, no flashing in group 1, "Antenna failure" black on white, slow flashing, normal phase in group 2,

							"Door 3 closed" black on white, no flashing in group 2,
							"Door 2 closed" black on white, no flashing in group 2,
							"Door 1 closed" black on white, no flashing in group 2,
							"Brake test ok" black on white, no flashing in group 2,
							"Self test ok" black on white, no flashing in group 2,
7	STM requests 1 text message (set 7): Msg101: "Antenna test ok" with black on white, no flashing in group 2	PROF	T0+58s	connection of active DMI channel: Message-S7	DMI	7	The following list of text messages for the STM is displayed on the DMI in the given sequence: "Speed board Area" black on blue, no flashing in group 1, "X balise code error" black on white, no flashing in group 1, "Balise failure" black on red, no flashing in group 1, "Radio connected" black on green, no flashing in group 1, "Antenna test ok" black on white, no flashing in group 2, "Door 3 closed" black on white, no flashing in group 2, "Door 2 closed" black on white, no flashing in group 2, "Door 1 closed" black on white, no

							flashing in group 2,
							"Brake test ok" black on white, no flashing in group 2,
							"Self test ok" black on white, no flashing in group 2,
8	STM requests 3 text messages (set 8): ♫ Msg51: "Balise reading ok" with black on white, no flashing in group 1 Msg52: "Main signal passed" with black on white, no flashing in group 1 Msg50: "Fully equipped Area" with black on green, no flashing in group 1	PROF	T0+65s	connection of active DMI channel: Message-S8	DMI	9	The following list of text messages for the STM is displayed on the DMI in the given sequence: ♫ "Fully equipped Area" black on green, no flashing in group 1, "Main signal passed" black on white, no flashing in group 1, "Balise reading ok" black on white, no flashing in group 1, "Radio connected" black on green, no flashing in group 1, "Antenna test ok" black on white, no flashing in group 2, "Door 3 closed" black on white, no flashing in group 2, "Door 2 closed" black on white, no flashing in group 2, "Door 1 closed" black on white, no flashing in group 2, "Brake test ok" black on white, no flashing in group 2, "Self test ok" black on white, no flashing in group 2,

9	STM requests 1 text message (set 9): Msg53: "Radio connection lost" with black on red, no flashing in group 1	PROF	T0+74s	connection of active DMI channel: Message-S9	DMI	7	The following list of text messages for the STM is displayed on the DMI in the given sequence: ♫ "Radio connection lost" black on red, no flashing in group 1, "Fully equipped Area" black on green, no flashing in group 1, "Main signal passed" black on white, no flashing in group 1, "Balise reading ok" black on white, no flashing in group 1, "Antenna test ok" black on white, no flashing in group 2, "Door 3 closed" black on white, no flashing in group 2, "Door 2 closed" black on white, no flashing in group 2, "Door 1 closed" black on white, no flashing in group 2, "Brake test ok" black on white, no flashing in group 2, "Self test ok" black on white, no flashing in group 2,

Message-S1: STM requests 8 text messages (set 1)			
VARIABLE	Length	VALUE	COMMENT

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NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	158	Message Length
NID_PACKET	8	15	State report from STM (STM-15)
L_PACKET	13	25	Packet Length
NID_STMSTATE	4	7	State DA
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	144	Packet Length
NID_XMESSAGE	8	100	
M_XATTRIBUTE	10	1000001000b	black on white, no flashing
Q_ACK	1	0	No acknowledgement required
L_TEXT	8	12	Text="Self test ok"
X_TEXT(1)	8	"S"	
X_TEXT(2)	8	"e"	
X_TEXT(3)	8	"l"	
X_TEXT(4)	8	"f"	
X_TEXT(5)	8	" "	
X_TEXT(6)	8	"t"	
X_TEXT(7)	8	"e"	
X_TEXT(8)	8	"s"	
X_TEXT(9)	8	"t"	
X_TEXT(10)	8	" "	
X_TEXT(11)	8	"o"	
X_TEXT(12)	8	"k"	

NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	168	Packet Length
NID_XMESSAGE	8	101	
M_XATTRIBUTE	10	1000001000b	black on white, no flashing
Q_ACK	1	0	No acknowledgement required
L_TEXT	8	15	Text="Antenna test ok"
X_TEXT(1)	8	"A"	
X_TEXT(2)	8	"n"	
X_TEXT(3)	8	"t"	
X_TEXT(4)	8	"e"	
X_TEXT(5)	8	"n"	
X_TEXT(6)	8	"n"	
X_TEXT(7)	8	"a"	
X_TEXT(8)	8	" "	
X_TEXT(9)	8	"t"	
X_TEXT(10)	8	"e"	
X_TEXT(11)	8	"s"	
X_TEXT(12)	8	"t"	
X_TEXT(13)	8	" "	
X_TEXT(14)	8	"o"	
X_TEXT(15)	8	"k"	
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	152	Packet Length

NID_XMESSAGE	8	102	
M_XATTRIBUTE	10	1000001000b	black on white, no flashing
Q_ACK	1	0	No acknowledgement required
L_TEXT	8	13	Text="Brake test ok"
X_TEXT(1)	8	"B"	
X_TEXT(2)	8	"r"	
X_TEXT(3)	8	"a"	
X_TEXT(4)	8	"k"	
X_TEXT(5)	8	"e"	
X_TEXT(6)	8	" "	
X_TEXT(7)	8	"t"	
X_TEXT(8)	8	"e"	
X_TEXT(9)	8	"s"	
X_TEXT(10)	8	"t"	
X_TEXT(11)	8	" "	
X_TEXT(12)	8	"o"	
X_TEXT(13)	8	"k"	
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	168	Packet Length
NID_XMESSAGE	8	50	
M_XATTRIBUTE	10	0000010000b	black on red, no flashing
Q_ACK	1	0	No acknowledgement required
L_TEXT	8	15	Text="Unequipped Area"

X_TEXT(1)	8	"U"	
X_TEXT(2)	8	"n"	
X_TEXT(3)	8	"e"	
X_TEXT(4)	8	"q"	
X_TEXT(5)	8	"u"	
X_TEXT(6)	8	"i"	
X_TEXT(7)	8	"p"	
X_TEXT(8)	8	"p"	
X_TEXT(9)	8	"e"	
X_TEXT(10)	8	"d"	
X_TEXT(11)	8	" "	
X_TEXT(12)	8	"A"	
X_TEXT(13)	8	"r"	
X_TEXT(14)	8	"e"	
X_TEXT(15)	8	"a"	
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	176	Packet Length
NID_XMESSAGE	8	53	
M_XATTRIBUTE	10	0000101000b	black on yellow, no flashing
Q_ACK	1	0	No acknowledgement required
L_TEXT	8	16	Text="Radio connecting"
X_TEXT(1)	8	"R"	
X_TEXT(2)	8	"a"	

X_TEXT(3)	8	"d"	
X_TEXT(4)	8	"i"	
X_TEXT(5)	8	"o"	
X_TEXT(6)	8	" "	
X_TEXT(7)	8	"c"	
X_TEXT(8)	8	"o"	
X_TEXT(9)	8	"n"	
X_TEXT(10)	8	"n"	
X_TEXT(11)	8	"e"	
X_TEXT(12)	8	"c"	
X_TEXT(13)	8	"t"	
X_TEXT(14)	8	"i"	
X_TEXT(15)	8	"n"	
X_TEXT(16)	8	"g"	
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	136	Packet Length
NID_XMESSAGE	8	103	
M_XATTRIBUTE	10	1001001000b	black on white, slow flashing, normal phase
Q_ACK	1	0	No acknowledgement required
L_TEXT	8	11	Text="Door 1 open"
X_TEXT(1)	8	"D"	
X_TEXT(2)	8	"o"	
X_TEXT(3)	8	"o"	

X_TEXT(4)	8	"r"	
X_TEXT(5)	8	" "	
X_TEXT(6)	8	"1"	
X_TEXT(7)	8	" "	
X_TEXT(8)	8	"o"	
X_TEXT(9)	8	"p"	
X_TEXT(10)	8	"e"	
X_TEXT(11)	8	"n"	
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	136	Packet Length
NID_XMESSAGE	8	104	
M_XATTRIBUTE	10	1001001000b	black on white, slow flashing, normal phase
Q_ACK	1	0	No acknowledgement required
L_TEXT	8	11	Text="Door 2 open"
X_TEXT(1)	8	"D"	
X_TEXT(2)	8	"o"	
X_TEXT(3)	8	"o"	
X_TEXT(4)	8	"r"	
X_TEXT(5)	8	" "	
X_TEXT(6)	8	"2"	
X_TEXT(7)	8	" "	
X_TEXT(8)	8	"o"	
X_TEXT(9)	8	"p"	

VARIABLE	Length	VALUE	COMMENT
X_TEXT(10)	8	"e"	
X_TEXT(11)	8	"n"	
NID_PACKET	8	38	text message from STM (STM-38)
L_PACKET	13	136	Packet Length
NID_XMESSAGE	8	105	
M_XATTRIBUTE	10	1001001000b	black on white, slow flashing, normal phase
Q_ACK	1	0	No acknowledgement required
L_TEXT	8	11	Text="Door 3 open"
X_TEXT(1)	8	"D"	
X_TEXT(2)	8	"o"	
X_TEXT(3)	8	"o"	
X_TEXT(4)	8	"r"	
X_TEXT(5)	8	" "	
X_TEXT(6)	8	"3"	
X_TEXT(7)	8	" "	
X_TEXT(8)	8	"o"	
X_TEXT(9)	8	"p"	
X_TEXT(10)	8	"e"	
X_TEXT(11)	8	"n"	
Padding bits	7	0000000b	

Message-S2: STM requests 4 text messages (set 2)			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	82	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=164, NX=53, MX=0000100000b (black on green, no flashing), Q=0 (No acknowledgement required), L=15, T="Radio connected"			
STM-38: PL=148, NX=103, MX=1000001000b (black on white, no flashing), Q=0 (No acknowledgement required), L=13, T="Door 1 closed"			
STM-38: PL=148, NX=104, MX=1000001000b (black on white, no flashing), Q=0 (No acknowledgement required), L=13, T="Door 2 closed"			
STM-38: PL=148, NX=105, MX=1000001000b (black on white, no flashing), Q=0 (No acknowledgement required), L=13, T="Door 3 closed"			

Message-S3: STM requests 1 text messages (set 3)			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	34	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=228, NX=50, MX=0000101000b (black on yellow, no flashing), Q=0 (No acknowledgement required), L=23, T="Partially equipped Area"			

Message-S4: STM requests 1 text messages (set 4)			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	30	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=196, NX=50, MX=0000100000b (black on green, no flashing), Q=0 (No acknowledgement required), L=19, T="Fully equipped Area"			

Message-S5: STM requests 3 text messages (set 5)			
VARIABLE	Length	VALUE	COMMENT

NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	71	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=156, NX=51, MX=0000010000b (black on red, no flashing), Q=0 (No acknowledgement required), L=14, T="Balise failure"			
STM-38: PL=196, NX=52, MX=0000001000b (black on white, no flashing), Q=0 (No acknowledgement required), L=19, T="X balise code error"			
STM-38: PL=172, NX=50, MX=0000011000b (black on blue, no flashing), Q=0 (No acknowledgement required), L=16, T="Speed board Area"			

Message-S6: STM requests 1 text messages (set 6)			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	26	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=164, NX=101, MX=1001001000b (black on white, slow flashing, normal phase), Q=0 (No acknowledgement required), L=15, T="Antenna failure"			

Message-S7: STM requests 1 text messages (set 7)			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	26	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=164, NX=101, MX=1000001000b (black on white, no flashing), Q=0 (No acknowledgement required), L=15, T="Antenna test ok"			

Message-S8: STM requests 3 text messages (set 8)			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM

L_MESSAGE	8	76	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=180, NX=51, MX=0000001000b (black on white, no flashing), Q=0 (No acknowledgement required), L=17, T="Balise reading ok"			
STM-38: PL=188, NX=52, MX=0000001000b (black on white, no flashing), Q=0 (No acknowledgement required), L=18, T="Main signal passed"			
STM-38: PL=196, NX=50, MX=0000100000b (black on green, no flashing), Q=0 (No acknowledgement required), L=19, T="Fully equipped Area"			

Message-S9: STM requests 1 text messages (set 9)			
VARIABLE	Length	VALUE	COMMENT
NID_STM	8	FINITE_VALUE	NID_STM of the active STM
L_MESSAGE	8	32	Message Length
STM-15: PL=25, ST=7, (State DA)			
STM-38: PL=212, NX=53, MX=0000010000b (black on red, no flashing), Q=0 (No acknowledgement required), L=21, T="Radio connection lost"			