

ETSI TS 103 564 V1.3.1 (2020-03)



Plugtests™ scenarios for Mission Critical Services

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
<https://standards.iteh.ai/catalog/standards/sist/06c4e2-76a5-45d4-ac6a-6f852873285e/etsi-ts-103-564-v1.3.1-2020-03>

Reference

RTS/TCCE-00087

Keywordsinteroperability, mission critical communication,
testing**ETSI**

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important noticeThe present document can be downloaded from:
<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format at www.etsi.org/deliver.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at <https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

If you find errors in the present document, please send your comment to one of the following services:
<https://portal.etsi.org/People/CommiteeSupportStaff.aspx>

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2020.

All rights reserved.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members. **3GPP™** and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

oneM2M™ logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners.

GSM® and the GSM logo are trademarks registered and owned by the GSM Association.

Contents

Intellectual Property Rights	19
Foreword.....	19
Modal verbs terminology.....	19
1 Scope	20
2 References	20
2.1 Normative references	20
2.2 Informative references.....	22
3 Definition of terms, symbols and abbreviations.....	22
3.1 Terms.....	22
3.2 Symbols.....	22
3.3 Abbreviations	22
4 Conventions.....	24
4.1 Test Description Proforma	24
4.2 Interoperable Functions Statement.....	25
4.3 Test Overview	25
5 Configurations.....	37
5.1 Common remarks	37
5.2 CFG_ONN_OTT-1	38
5.3 CFG_ONN_UNI-MC-LTE-1	40
5.4 CFG_ONN_MULTI-MC-LTE-1	40
6 Interoperable Functions Statement (IFS).....	41
6.1 Entities.....	41
6.2 UE Features	41
6.3 MCPTT Client Features	42
6.4 MCDATA Client Features.....	43
6.5 MCVideo Client Features.....	44
6.6 IMS Features	44
6.7 MCPTT-Participating AS Features	45
6.8 MCPTT-Controlling AS Features	45
6.9 MCDATA-Participating AS Features.....	46
6.10 MCDATA-Controlling AS Features.....	46
6.11 MCVideo-Participating AS Features.....	47
6.12 MCVideo-Controlling AS Features.....	47
6.13 BM-SC Features	47
6.14 EPS Features	48
6.15 PCRF Features.....	48
7 Test Descriptions.....	48
7.1 Common Remarks	48
7.2 Connectivity (CONN)	49
7.2.1 MCPTT User initiates an on-demand prearranged MCPTT Group Call [CONN-MCPTT/ONN/GROUP/PREA/ONDEM/NFC/01].....	49
7.2.2 MCPTT User initiates an on-demand prearranged MCPTT Group Call: Emergency Group Call [CONN-MCPTT/ONN/GROUP/PREA/ONDEM/NFC/02].....	52
7.2.3 MCPTT User initiates an on-demand prearranged MCPTT Group Call: Imminent Peril Group Call [CONN/ONN/GROUP/PREA/ONDEM/NFC/03]	56
7.2.4 MCPTT User initiates an on-demand prearranged MCPTT Group Call: Broadcast Group Call [CONN-MCPTT/ONN/GROUP/PREA/ONDEM/NFC/04].....	59
7.2.5 MCPTT User initiates an on-demand prearranged MCPTT Group Call: Upgrade to in progress emergency or imminent peril [CONN-MCPTT/ONN/GROUP/PREA/ONDEM/NFC/05]	62
7.2.6 MCPTT User initiates the termination of an on-demand prearranged MCPTT Group Call [CONN-MCPTT/ONN/GROUP/PREA/ONDEM/NFC/06].....	65

7.2.7	MCPTT User initiates a prearranged MCPTT Group Call using pre-established session [CONN-MCPTT/ONN/GROUP/PREA/PRE/NFC/01]	67
7.2.8	MCPTT User initiates the termination of a prearranged MCPTT Group Call using pre-established session [CONN-MCPTT/ONN/GROUP/PREA/PRE/NFC/02]	70
7.2.9	MCPTT User initiates an on-demand Chat Group Call [CONN-MCPTT/ONNGROUP/CHAT/ONDEM/NFC/01]	72
7.2.10	MCPTT User upgrades an ongoing on-demand Chat Group Call to emergency call [CONN-MCPTT/ONN/GROUP/CHAT/ONDEM/NFC/02]	75
7.2.11	MCPTT User upgrades an ongoing on-demand Chat Group Call to imminent-peril call [CONN-MCPTT/ONN/GROUP/CHAT/ONDEM/NFC/03]	79
7.2.12	MCPTT User cancels the emergency condition of an on-demand Chat Group Call [CONN-MCPTT/ONN/GROUP/CHAT/ONDEM/NFC/04]	82
7.2.13	MCPTT User cancels the imminent-peril condition of an on-demand Chat Group Call [CONN-MCPTT/ONNGROUP/CHAT/ONDEM/NFC/05]	85
7.2.14	MCPTT User initiates a Chat group Call using pre-established session [CONN-MCPTT/ONNGROUP/CHAT/PRE/NFC/01]	88
7.2.15	MCPTT User initiates an on-demand private MCPTT call in automatic commencement model with floor control [CONN-MCPTT/ONN/PRIV/AUTO/ONDEM/WFC/NFC/01]	92
7.2.16	MCPTT User initiates an on-demand private MCPTT call in manual commencement mode with floor control [CONN-MCPTT/ONN/PRIV/MANUAL/ONDEM/WFC/NFC/01]	95
7.2.17	MCPTT User initiates a pre-established private MCPTT call in automatic commencement mode with floor control [CONN-MCPTT/ONN/PRIV/AUTO/PRE/WFC/NFC/01]	97
7.2.18	MCPTT User initiates a pre-established private MCPTT call in manual commencement mode with floor control [CONN-MCPTT/ONN/PRIV/MANUAL/PRE/WFC/NFC/01]	100
7.2.19	MCPTT User initiates an on-demand private MCPTT call in automatic commencement mode without floor control [CONN-MCPTT/ONN/PRIV/AUTO/ONDEM/WOFC/01]	103
7.2.20	MCPTT User initiates an on-demand private MCPTT call in manual commencement mode without floor control [CONN-MCPTT/ONN/PRIV/MANUAL/ONDEM/WOFC/01]	106
7.2.21	MCPTT User initiates a pre-established private MCPTT call in automatic commencement mode without floor control [CONN-MCPTT/ONN/PRIV/AUTO/PRE/WOFC/01]	107
7.2.22	MCPTT User initiates a pre-established private MCPTT call in manual commencement mode without floor control [CONN-MCPTT/ONN/PRIV/MANUAL/ONDEM/WOFC/01]	108
7.2.23	MCPTT User initiates an on-demand first-to-answer MCPTT call with floor control [CONN-MCPTT/ONN/FIRST/MANUAL/ONDEM/WFC/NFC/01]	110
7.2.24	MCPTT User initiates an on-demand first-to-answer MCPTT call without floor control [CONN-MCPTT/ONN/FIRST/MANUAL/ONDEM/WOFC/01]	111
7.2.25	MCPTT User initiates an on-demand first-to-answer MCPTT call with floor control using pre-established sessions [CONN-MCPTT/ONN/FIRST/MANUAL/PRE/WFC/NFC/01]	112
7.2.26	MCPTT User initiates a pre-established first-to-answer MCPTT call in manual commencement mode without floor control [CONN-MCPTT/ONN/FIRST/MANUAL/PRE/WOFC/01]	114
7.2.27	MCPTT User setups a private-call callback [CONN-MCPTT/ONN/CALLBACK/SETUP-/01]	115
7.2.28	MCPTT User cancels a private-call callback [CONN-MCPTT/ONN/CALLBACK/CANCEL-/01]	117
7.2.29	MCPTT User fulfils a private-call callback [CONN-MCPTT/ONN/CALLBACK/FULFIL-/01]	118
7.2.30	MCPTT User setups locally an on-demand ambient listening call [CONN-MCPTT/ONN/AMBIENT/ONDEM/LOCAL/01]	120
7.2.31	MCPTT User releases locally an on-demand ambient listening call [CONN-MCPTT/ONN/AMBIENT/ONDEM/LOCAL/02]	121
7.2.32	MCPTT User setups locally an ambient listening call using pre-established session [CONN-MCPTT/ONN/AMBIENT/PRE/LOCAL/01]	123
7.2.33	MCPTT User releases locally an ambient listening call using pre-established session [CONN-MCPTT/ONN/AMBIENT/PRE/LOCAL/02]	124
7.2.34	MCPTT User setups remotely an on-demand ambient listening call [CONN-MCPTT/ONN/AMBIENT/ONDEM/REMOTE/01]	126
7.2.35	MCPTT User releases remotely an on-demand ambient listening call [CONN-MCPTT/ONN/AMBIENT/ONDEM/REMOTE/02]	128
7.2.36	MCPTT User setups remotely an ambient listening call using pre-established session [CONN-MCPTT/ONN/AMBIENT/PRE/REMOTE/01]	130
7.2.37	MCPTT User releases remotely an ambient listening call using pre-established session [CONN-MCPTT/ONN/AMBIENT/PRE/REMOTE/02]	130
7.2.38	Remote change of selected group [CONN-MCPTT/ONN/GROUPCHANGE/01]	130
7.2.39	One-to-one standalone SDS over SIP [CONN-MCDATA/ONN/O2O/STANDALONE/SDS-/SIP/01]	132

7.2.40	One-to-one standalone SDS over media plane (MSRP) [CONN-MCDATA/ONN/O2O/STANDALONE/SDS/MSRP/01]	134
7.2.41	One-to-one SDS session [CONN-MCDATA/ONN/O2O/SESSION/SDS/MSRP/01]	136
7.2.42	Group standalone SDS over SIP [CONN-MCDATA/ONN/GROUP/STANDALONE/SDS-/SIP/01]....	138
7.2.43	Group standalone SDS over media plane (MSRP) [CONN-MCDATA/ONN/GROUP/STANDALONE/SDS/MSRP/01].....	140
7.2.44	Group SDS session [CONN-MCDATA/ONN/GROUP/SESSION/SDS/MSRP/01]	142
7.2.45	One-to-one FD using HTTP [CONN-MCDATA/ONN/O2O/FD/HTTP/01]	144
7.2.46	Group FD using HTTP [CONN-MCDATA/ONN/GROUP/FD/HTTP/01].....	146
7.2.47	One-to-one FD using media plane (MSRP) [CONN-MCDATA/ONN/O2O/FD/MSRP/01]	149
7.2.48	Group FD using media plane (MSRP) [CONN-MCDATA/ONN/GROUP/FD/MSRP/01]	151
7.2.49	Standalone SDS with delivered and read notification [CONN-MCDATA/ONN/DISNOT/SDS/01]	153
7.2.50	Group standalone SDS with delivered and read notification [CONN-MCDATA/ONN/DISNOT/SDS/02]	155
7.2.51	One-to-one FD using HTTP with file download completed notification [CONN- MCDATA/ONN/DISNOT/FD/01]	157
7.2.52	Group FD using HTTP with file download completed notification [CONN- MCDATA/DISNOT/FD/02].....	160
7.2.53	Network triggered FD notifications [CONN-MCDATA/NET/FD/01].....	163
7.2.54	MCVideo User initiates an on-demand private MCVideo call in automatic commencement mode with transmission control [CONN-MCVIDEO/ONN/PRIV/AUTO/ONDEM/WTC/NTC/01]	165
7.2.55	MCVideo User initiates an on-demand private MCVideo call in automatic commencement mode without transmission control [CONN-MCVIDEO/ONN/PRIV/AUTO/ONDEM/WOTC/01].....	168
7.2.56	MCVideo User initiates an on-demand prearranged MCVideo Group Call [CONN- MCVIDEO/ONN/GROUP/PREA/ONDEM/NTC/01]	170
7.2.57	MCVideo User initiates an on-demand Chat Group Call [CONN-MCVIDEO/ONN/GROUP/CHAT/ONDEM/NTC/01].....	173
7.2.58	Late call entry of a MCPTT User during an on-demand prearranged MCPTT Group Call [CONN-MCPTT/ONN/GROUP/PREA/ONDEM/NFC/07].....	176
7.2.59	Late call entry of a MCPTT User during a prearranged MCPTT Group Call using pre-established session [CONN-MCPTT/ONN/GROUP/PREA/PRE/NFC/03]	178
7.2.60	Rejoin of a MCPTT User during an on-demand prearranged MCPTT Group Call [CONN- MCPTT/ONN/GROUP/PREA/ONDEM/NFC/08].....	180
7.2.61	Rejoin of a MCPTT User during an on-demand prearranged MCPTT Group Call using pre- established session [CONN-MCPTT/ONN/GROUP/PREA/PRE/NFC/04].....	182
7.2.62	Subscription to Conference Event Package [CONN-MCPTT/ONN/GROUP/CHAT/ONDEM/SUBCONF/01]	183
7.3	Floor Controlling (FC)	186
7.3.1	Basic FC functionality [FC/BASIC/01].....	186
7.3.2	Basic FC functionality. Effect of Priorities [FC/BASIC/02]	187
7.3.3	Advanced FC functionality. Floor control revoking upon expires (T2) [FC/ADV/01]	189
7.3.4	Advanced FC functionality. Floor control queueing upon release [FC/ADV/02]	191
7.3.5	Advanced FC functionality. Floor control queueing upon revoke [FC/ADV/03].....	193
7.4	Registration and Service Authorization (RegAuth).....	195
7.4.1	MCPTT User authenticates to the IdMS [REGAUTH/IDMSAUTH/01]	195
7.4.2	MCPTT User gets registered and authorized using third-party registration [REGAUTH/3PRTYREG/REGISTER/01]	197
7.4.3	MCPTT User gets authorized using PUBLISH mechanism [REGAUTH/PUBLISH/REGISTER/01]....	199
7.5	Policing (PCC)	201
7.5.0	General.....	201
7.5.1	Setup of a Unicast MC Bearer by SIP Core/IMS [PCC/BEARERSETUP/01].....	202
7.5.2	Setup of a Unicast MC Bearer by MCPTT Participating AS [PCC/BEARERSETUP/02].....	203
7.5.3	Update of a Unicast MC Bearer by SIP Core/IMS [PCC/BEARERUPDATE/01].....	205
7.5.4	Update of a Unicast MC Bearer by MCPTT Participating AS [PCC/BEARERUPDATE/02].....	206
7.5.5	Setup of a Unicast MC Bearer by SIP Core/IMS using pre-established sessions [PCC/BEARERSETUP/03]	207
7.5.6	Setup of a Unicast MC Bearer by MCPTT Participating AS using pre-established sessions [PCC/BEARERSETUP/04]	210
7.6	eMBMS (EMBMS)	213
7.6.1	Void	213
7.6.2	Use of dynamically established MBMS bearers in prearranged MCPTT group calls with pre- allocated TMGIs [EMBMS/ACTIVATEBEARER/WPRETMGI/01]	214

7.6.3	Use of dynamically established MBMS bearers in prearranged MCPTT group calls without pre-allocated TMGIs [EMBMS/ACTIVATEBEARER/WOPRETMGI/01]	220
7.6.4	Use of pre-established MBMS bearers in prearranged group calls with pre-allocated TMGIs [EMBMS/PREBEARER/WPRETMGI/01].....	223
7.6.5	Use of pre-established MBMS bearers in prearranged group calls without pre-allocated TMGIs [EMBMS/PREBEARER/WOPRETMGI/01].....	227
7.6.6	Modification of MBMS bearers upon reception of emergency upgrade request [EMBMS/MODIFYBEARER/01].....	231
7.6.7	Deactivation of MBMS bearers after termination of a prearranged MCPTT group call with TMGI deallocation [EMBMS/DEACTBEARER/WTMGIDEA/01].....	233
7.6.8	Deactivation of MBMS bearers after termination of a prearranged MCPTT group call without TMGI deallocation [EMBMS/DEACTBEARER/WOTMGIDEA/01].....	237
7.6.9	Switching to unicast bearer after TMGI expiration [EMBMS/SWITCHTOUNITMGIEXP/01]	239
7.7	Affiliation (AFFIL)	241
7.7.1	MCPTT User subscribes to its own affiliation [AFFIL/DET/01]	241
7.7.2	MCPTT User subscribes to the affiliation of another user [AFFIL/DET/02]	243
7.7.3	MCPTT User requests its affiliation to a set of groups [AFFIL/CHANGE/01]	245
7.7.4	MCPTT User requests the affiliation of other User to a set of groups in mandatory mode [AFFIL/CHANGE/02].....	247
7.7.5	MCPTT User requests the affiliation of other User to a set of groups in negotiated mode [AFFIL/CHANGE/03].....	249
7.8	Location (LOC)	251
7.8.1	MCPTT Client Configuration upon 3 rd party register [LOC/3PTYREG/CONFIG/01]	251
7.8.2	Explicit Location reporting request sent to the MCPTT Client [LOC/REQUEST/01].....	253
7.8.3	MCPTT Client Location submitted upon some trigger [LOC/SUBMISSION/01].....	255
7.9	OAM procedures (CSC)	256
7.9.0	General.....	256
7.9.1	Subscription and UE configuration document retrieval from the MC UE [CSC-CMS/UECONF/UE/01]	256
7.9.2	Subscription and user profile configuration document retrieval from the MC UE [CSCCMS/UPROCONF/UE/01]	258
7.9.3	Subscription and service configuration document retrieval from the MC UE [CSCCMS/SERVCONF/UE/01]	259
7.9.4	Subscription and service configuration document retrieval from the MCS Server [CSCCMS/SERVCONF/MCSSERV/01].....	261
7.9.5	Subscription and group document retrieval from the MC UE [CSC-GMS/GROUP/UE-/01].....	263
7.9.6	Subscription and group document retrieval from the MCS Server [CSC-GMS/GROUP/MCSSERV/01].....	265
7.9.7	Subscription and retrieval of multiple documents from the CMS using subscription proxy [CSC/MULTIPLESUBS/UE/01]	266
7.9.8	Subscription and retrieval of multiple documents from the GMS using subscription proxy [CSC/MULTIPLESUBSGMSGROUP/UE/01].....	268
7.10	Security mechanisms (SEC)	270
7.10.1	Key material download from KMS to MCPTT client (CSC-8) with proxy [SEC/KEYMDOWNLOAD/WPROXY/01].....	270
7.10.2	Key material download from KMS to MCPTT server (CSC-9) with proxy [SEC/KEYMDOWNLOAD/WPROXY/02].....	272
7.10.3	Key material download from KMS to MCPTT GMS (CSC-10) with proxy [SEC/KEYMDOWNLOAD/WPROXY/03].....	274
7.10.4	Key material download from KMS to MCPTT client (CSC-8) without proxy [SEC/KEYMDOWNLOAD/WOPROXY/01].....	276
7.10.5	Key material download from KMS to MCPTT server (CSC-9) without proxy [SEC/KEYMDOWNLOAD/WOPROXY/02].....	278
7.10.6	Key material download from KMS to MCPTT GMS (CSC-10) without proxy [SEC/KEYMDOWNLOAD/WOPROXY/03].....	280
7.10.7	Key management from MC client to MC server (CSK upload) [SEC/KEYDIST/CSK/01].....	282
7.10.8	Key management for group communications (GMK) [SEC/KEYDIST/GMK/01].....	284
7.10.9	Key management from MC server to MC client (Key download MuSiK) [SEC/KEYDIST/MUSIK/01]	286
7.10.10	Encryption of MCPTT private calls (use of derived encryption keys from PCK for the audio and CSK for floor control and RTCP reports) [SEC/ENCRYPTION/PRIVATE/01].....	287

7.10.11	Encryption of MCPTT group calls (use of derived encryption keys from GMK for the audio and CSK for floor control and RTCP reports) [SEC/ENCRYPTION/GROUP/01]	289
7.10.12	Encryption of MCPTT group calls using eMBMS (use of derived encryption keys from MuSik for the floor control and MSCCK for eMBMS control) [SEC/ENCRYPTION/GROUPEMBMS/01]	291
7.10.13	XML contents encryption in MCPTT private calls (mcptt-info and resource-lists) [SEC/XMLENCRYPT/PRIVATE/01]	294
7.10.14	XML contents encryption in MCPTT group calls (mcptt-info) [SEC/XMLENCRYPT/GROUP/01]	296
7.10.15	XML contents encryption in affiliation procedure [SEC/XMLENCRYPT/AFFIL/01]	298
7.10.16	XML contents encryption in location procedure [SEC/XMLENCRYPT/LOC/01]	301
7.10.17	XML contents encryption in registration and authorization procedures [SEC/XMLENCRYPT/REGAUTH/01]	302
7.11	MCVideo Transmission Control (TC).....	303
7.11.1	Basic TC functionality [TC/BASIC/01]	303
7.11.2	Basic TC functionality. Maximum number of transmitters [TC/BASIC/02].....	306
7.11.3	Basic TC functionality. Maximum number of receivers [TC/BASIC/03]	309
7.12	Server-to-Server communications (S2S).....	312
7.12.1	On-demand prearranged MCPTT Group Call to temporary group in trusted mode [S2S/ONN/GROUP/PREA/ONDEM/TEMP/01]	312
7.12.2	On-demand prearranged MCPTT Group Call to temporary group in untrusted mode [S2S/ONN/GROUP/PREA/ONDEM/TEMP/02]	315
8	eMBMS complementary test cases	317
8.1	Introduction (disclaimer).....	317
8.2	Extended eMBMS test cases	317
8.2.1	TMGI allocation management [EMBMS-ADDITIONAL/MB2C/FUNCT/ALLOCTMGI/01].....	317
8.2.2	TMGI deallocation management [EMBMS-ADDITIONAL/MB2C/FUNCT/DEALLOCTMGI-01]	317
8.2.3	Successful bearer activation [EMBMS-ADDITIONAL/MB2C/FUNCT/ACTIVATEBEARER-01].....	317
8.2.4	Successful bearer deactivation [EMBMS-ADDITIONAL/MB2C/FUNCT/DEACTBEARER-01]	317
8.2.5	Successful bearer modification [EMBMS-ADDITIONAL/MB2C/FUNCT/MODBEARER/01]	318
8.2.6	Management of TMGI expiration [EMBMS-ADDITIONAL/MB2C/FUNCT/TMGIEXP/01]	318
8.2.7	Management of aggregated requests [EMBMS-ADDITIONAL/MB2C/FUNCT/AGGREQUEST-01].....	318
8.2.8	Management of Bearer Pre-emption [EMBMS-ADDITIONAL/MB2C/PRIO/PREEM/01].....	318
8.2.9	Management of Bearer Resumption [EMBMS-ADDITIONAL/MB2C/PRIO/RESUM/01]	318
8.2.10	MB2-C security using TLS over TCP [EMBMS-ADDITIONAL/MB2C/SECURITY/TLS-/01].....	318
8.2.11	MB2-C security using DTLS over SCTP [EMBMS-ADDITIONAL/MB2C/SECURITY/DTLS-/01].....	319
8.2.12	Restoration procedure management [EMBMS-ADDITIONAL/MB2C/ROBUSTNESS/RESTORATION/01]	319
8.2.13	TMGI allocation failure [EMBMS-ADDITIONAL/MB2C/ROBUSTNESS/ALLOCATE/TMGI-01]	319
8.2.14	TMGI deallocation failure [EMBMS-ADDITIONAL/MB2C/ROBUSTNESS/DEALLOCATE/TMGI/01]	319
8.2.15	Bearer activation failure [EMBMS-ADDITIONAL/MB2C/ROBUSTNESS/ACTIVATE/BEARER-01].....	319
8.2.16	Bearer deactivation failure [EMBMS-ADDITIONAL/MB2C/ROBUSTNESS/DEACTIVATE/BEARER/01]	320
8.2.17	Bearer modification failure [EMBMS-ADDITIONAL/MB2C/ROBUSTNESS/MODIFY/BEARER-01].....	320
8.2.18	Multiple GCS-AS management [EMBMS-ADDITIONAL/MB2C/LOAD/MUL-TIPLEGCS-/01]	320
8.2.19	Activation of multiple (100) bearers [EMBMS-ADDITIONAL/MB2C/LOAD/100BEARER-/01].....	320
9	Observers scenarios	320
9.1	Introduction	320
9.2	Common remarks	321
9.3	Emergency call [OS1]	321
9.4	Emergency call handling [OS2]	321
9.5	Encrypted private call [OS3]	322
9.6	eMBMS MCPTT [OS4.1]	323
9.7	eMBMS MCVideo [OS4.2].....	324
9.8	Switching on [OS5]	325
9.9	Encrypted MCPTT group call [OS6].....	326
9.10	Enhanced status [OS7.1]	327
9.11	MCDATA SDS [OS7.2].....	327

9.12	Encrypted MCVideo Group Call [OS8]	327
9.13	Parallel MCPTT and MCVIDEO [OS9]	328
Annex A (informative):	Bibliography	330
History		331

iTeh STANDARD PREVIEW
(standards.iteh.ai)

Full standard:
<https://standards.iteh.ai/catalog/standards/sist/06e62cd2-76a5-45d4-ac6a-6f852873285e/etsi-ts-103-564-v1.3.1-2020-03>

List of figures

Figure 1: Typical MCS scenario to be considered in the second Plugtests	26
Figure 2: MCPTT call types in Release 13	26
Figure 3: MCPTT call types in Release 14	27
Figure 4: MCData services in Release 14	27
Figure 5: MCVideo call types in Release 14.....	28
Figure 6: Functional connectivity modes (figures 5.3.2.1 to 5.3.2.3 of ETSI TS 124 379 [9]).....	38
Figure 7: Functional connectivity modes (figures 5.3.2.4 to 5.3.2.6 of ETSI TS 124 379 [9]).....	38
Figure 8: CFG_ONN_OTT-1 Scheme	39
Figure 9: CFG_ONN_OTT-1 Interfaces for the unicast case.....	39
Figure 10: CFG_ONN_OTT-1 Interfaces for the multicast case	39
Figure 11: CFG_ONN_UNI-MC-LTE-1 Application plane interfaces.....	40
Figure 12: CFG_ONN_MULTI-MC-LTE-1 Application plane interfaces	40
Figure 13: CONN-MCPTT/ONN/GROUP/PREA/ONDEM/NFC/01 Message Sequence	50
Figure 14: CONN-MCPTT/ONN/GROUP/PREA/ONDEM/NFC/02 Message Sequence	53
Figure 15: CONN-MCPTT/ONN/GROUP/PREA/ONDEM/NFC/03 Message Sequence	57
Figure 16: CONN-MCPTT/ONN/GROUP/PREA/ONDEM/NFC/04 Message Sequence	60
Figure 17: CONN-MCPTT/ONN/GROUP/PREA/ONDEM/NFC/05 Message Sequence	63
Figure 18: CONN-MCPTT/ONN/GROUP/PREA/ONDEM/NFC/06 Message Sequence	66
Figure 19: CONN-MCPTT/ONN/GROUP/PREA/PRE/NFC/01 Message Sequence.....	68
Figure 20: CONN-MCPTT/ONN/GROUP/PREA/PRE/NFC/02 Message Sequence.....	71
Figure 21: CONN-MCPTT/ONN/GROUP/CHAT/ONDEM/NFC/01 Message Sequence.....	73
Figure 22: CONN-MCPTT/ONN/GROUP/CHAT/ONDEM/NFC/02 Message Sequence.....	76
Figure 23: CONN-MCPTT/ONN/GROUP/CHAT/ONDEM/NFC/03 Message Sequence.....	80
Figure 24: CONN-MCPTT/ONN/GROUP/CHAT/ONDEM/NFC/04 Message Sequence.....	83
Figure 25: CONN-MCPTT/ONN/GROUP/CHAT/ONDEM/NFC/05 Message Sequence.....	86
Figure 26: CONN-MCPTT/ONN/GROUP/CHAT/PRE/NFC/01 Message Sequence	90
Figure 27: CONN-MCPTT/ONN/PRIV/AUTO/ONDEM/WFC/NFC/01 Message Sequence	93
Figure 28: CONN-MCPTT/ONN/PRIV/MANUAL/ONDEM/WFC/NFC/01 Message Sequence.....	96
Figure 29: CONN-MCPTT/ONN/PRIV/AUTO/PRE/WFC/NFC/01 Message Sequence	98
Figure 30: CONN-MCPTT/ONN/PRIV/MANUAL/PRE/WFC/NFC/01 Message Sequence.....	101
Figure 31: CONN-MCPTT/ONN/PRIV/AUTO/ONDEM/WOFC/01 Message Sequence	104
Figure 32: CONN-MCPTT/ONN/FIRST/MANUAL/ONDEM/WFC/NFC/01 Message Sequence	110
Figure 33: CONN-MCPTT/ONN/FIRST/MANUAL/PRE/WFC/NFC/01 Message Sequence	113

Figure 34: CONN-MCPTT/ONN/CALLBACK/SETUP/01 Message Sequence	116
Figure 35: CONN-MCPTT/ONN/CALLBACK/CANCEL/01 Message Sequence	117
Figure 36: CONN-MCPTT/ONN/CALLBACK/FULFIL/01 Message Sequence	119
Figure 37: CONN-MCPTT/ONN/AMBIENT/ONDEM/LOCAL/01 Message Sequence	120
Figure 38: CONN-MCPTT/ONN/AMBIENT/ONDEM/LOCAL/02 Message Sequence	122
Figure 39: CONN-MCPTT/ONN/AMBIENT/PRE/LOCAL/01 Message Sequence.....	123
Figure 40: CONN-MCPTT/ONN/AMBIENT/PRE/LOCAL/02 Message Sequence.....	125
Figure 41: CONN-MCPTT/ONN/AMBIENT/ONDEM/REMOTE/01 Message Sequence	127
Figure 42: CONN-MCPTT/ONN/AMBIENT/ONDEM/REMOTE/02 Message Sequence	129
Figure 43: CONN-MCPTT/ONN/GROUPCHANGE/01 Message Sequence	131
Figure 44: CONN-MCDATA/ONN/O2O/STANDALONE/SDS/SIP/01 Message Sequence.....	133
Figure 45: CONN-MCDATA/ONN/O2O/STANDALONE/SDS/MSRP/01 Message Sequence.....	135
Figure 46: CONN-MCDATA/ONN/O2O/SESSION/SDS/MSRP/01 Message Sequence.....	137
Figure 47: CONN-MCDATA/ONN/GROUP/STANDALONE/SDS/SIP/01 Message Sequence	139
Figure 48: CONN-MCDATA/ONN/GROUP/STANDALONE/SDS/MSRP/01 Message Sequence	141
Figure 49: CONN-MCDATA/ONN/GROUP/SESSION/SDS/MSRP/01 Message Sequence.....	143
Figure 50: CONN-MCDATA/ONN/O2O/FD/HTTP/01 Message Sequence.....	145
Figure 51: CONN-MCDATA/ONN/GROUP/FD/HTTP/01 Message Sequence.....	147
Figure 52: CONN-MCDATA/ONN/O2O/FD/MSRP/01 Message Sequence	150
Figure 53: CONN-MCDATA/ONN/GROUP/FD/MSRP/01 Message Sequence	152
Figure 54: CONN-MCDATA/ONN/DISNOT/SDS/01 Message Sequence.....	154
Figure 55: CONN-MCDATA/ONN/DISNOT/SDS/02 Message Sequence.....	156
Figure 56: CONN-MCDATA/ONN/DISNOT/FD/01 Message Sequence.....	158
Figure 57: CONN-MCDATA/DISNOT/FD/02 Message Sequence	161
Figure 58: CONN-MCDATA/NET/FD/01 Message Sequence	164
Figure 59: CONN-MCVIDEO/ONN/PRIV/AUTO/ONDEM/WTC/NTC/01 Message Sequence	166
Figure 60: CONN-MCVIDEO/ONN/PRIV/AUTO/ONDEM/WOTC/01 Message Sequence.....	168
Figure 61: CONN-MCVIDEO/ONN/GROUP/PREA/ONDEM/NTC/01 Message Sequence.....	171
Figure 62: CONN-MCVIDEO/ONN/GROUP/CHAT/ONDEM/NTC/01 Message Sequence	174
Figure 62a: CONN-MCPTT/ONN/GROUP/PREA/ONDEM/NFC/07 Message Sequence.....	177
Figure 62b: CONN-MCPTT/ONN/GROUP/PREA/PRE/NFC/03 Message Sequence.....	179
Figure 62c: CONN-MCPTT/ONN/GROUP/PREA/ONDEM/NFC/07 Message Sequence.....	181
Figure 62d: CONN-MCPTT/ONN/GROUP/PREA/PRE/NFC/04 Message Sequence.....	182
Figure 62e: CONN-MCPTT/ONN/GROUP/CHAT/ONDEM/SUBCONF/01 Message Sequence	184
Figure 63: FC/BASIC/01 Message Sequence	186

Figure 64: FC/BASIC/02 Message Sequence	188
Figure 64a: FC/ADV/01 Message Sequence.....	190
Figure 64b: FC/ADV/02 Message Sequence.....	192
Figure 64c: FC/ADV/03 Message Sequence.....	194
Figure 65: REGAUTH/IDMSAUTH/01 Message Sequence	196
Figure 66: REGAUTH/3PRTYREG/REGISTER/01 Message Sequence	197
Figure 67: REGAUTH/PUBLISH/REGISTER/01 Message Sequence	199
Figure 68: PCC/BEARERSETUP/01 Message Sequence.....	202
Figure 69: PCC/BEARERSETUP/02 Message Sequence.....	204
Figure 70: PCC/BEARERUPDATE/01 Message Sequence	205
Figure 71: PCC/BEARERUPDATE/02 Message Sequence	206
Figure 72: PCC/BEARERSETUP/03 (option a) Message Sequence	208
Figure 73: PCC/BEARERSETUP/03 (option b) Message Sequence	209
Figure 74: PCC/BEARERSETUP/04 (option a) Message Sequence	211
Figure 75: PCC/BEARERSETUP/04 (option b) Message Sequence	212
Figure 76: EMBMS/ACTIVATEBEARER/WPRETMGI/01 Message Sequence	215
Figure 77: EMBMS/ACTIVATEBEARER/WOPRETMGI/01 Message Sequence	221
Figure 78: EMBMS/PREBEARER/WPRETMGI/01 Message Sequence	224
Figure 79: EMBMS/PREBEARER/WOPRETMGI/01 Message Sequence.....	228
Figure 80: EMBMS/MODIFYBEARER/01 Message Sequence	232
Figure 81: EMBMS/DEACTBEARER/WTMGIDEA/01 Message Sequence.....	234
Figure 82: EMBMS/DEACTBEARER/WOTMGIDEA/01 Message Sequence.....	237
Figure 83: EMBMS/SWITCHTOUNITMGIEXP/01 Message Sequence	239
Figure 84: AFFIL/DET/01 Message Sequence	242
Figure 85: AFFIL/DET/02 Message Sequence	244
Figure 86: AFFIL/CHANGE/01 Message Sequence	246
Figure 87: AFFIL/CHANGE/02 Message Sequence	248
Figure 88: AFFIL/CHANGE/03 Message Sequence	250
Figure 89: LOC/3PRTYREG/CONFIG/01 Message Sequence	252
Figure 90: LOC/REQUEST/01 Message Sequence	254
Figure 91: LOC/SUBMISSION/01 Message Sequence	255
Figure 92: CSC-CMS/UECONF/UE/01 Message Sequence	257
Figure 93: CSC-CMS/UPROCONF/UE/01 Message Sequence	258
Figure 94: CSC-CMS/SERVCONF/UE/01 Message Sequence.....	260
Figure 95: CSC-CMS/SERVCONF/MCSSERV/01 Message Sequence	261

Figure 96: CSC-CMS/SERVCONF/MCSSERV/01-b Message Sequence	262
Figure 97: CSC-GMS/GROUP/UE/01 Message Sequence.....	264
Figure 98: CSC-GMS/GROUP/MCSSERV/01 Message Sequence	265
Figure 99: CSC/MULTIPLESUBS/UE/01 Message Sequence.....	267
Figure 100: CSC/MULTIPLESUBSGMSGROUP/UE/01 Message Sequence	269
Figure 101: SEC/KEYMDOWNLOAD/WPROXY/01 Message Sequence	271
Figure 102: SEC/KEYMDOWNLOAD/WPROXY/02 Message Sequence	273
Figure 103: SEC/KEYMDOWNLOAD/WPROXY/03 Message Sequence	275
Figure 104: SEC/KEYMDOWNLOAD/WOPROXY/01 Message Sequence	277
Figure 105: SEC/KEYMDOWNLOAD/WOPROXY/02 Message Sequence	279
Figure 106: SEC/KEYMDOWNLOAD/WOPROXY/03 Message Sequence	281
Figure 107: SEC/KEYDIST/CSK/01 Message Sequence	283
Figure 108: SEC/KEYDIST/GMK/01 Message Sequence	285
Figure 109: SEC/KEYDIST/MUSIK/01 Message Sequence.....	286
Figure 110: SEC/ENCRYPTION/PRIVATE/01 Message Sequence.....	288
Figure 111: SEC/ENCRYPTION/GROUP/01 Message Sequence.....	290
Figure 112: SEC/ENCRYPTION/GROUPEMBMS/01 Message Sequence.....	293
Figure 113: SEC/XMLENCRYPT/PRIVATE/01 Message Sequence.....	295
Figure 114: SEC/XMLENCRYPT/GROUP/01 Message Sequence	296
Figure 115: SEC/XMLENCRYPT/AFFIL/01 Message Sequence.....	299
Figure 116: SEC/XMLENCRYPT/LOC/01 Message Sequence.....	301
Figure 117: SEC/XMLENCRYPT/REGAUTH/01 Message Sequence.....	302
Figure 118: TC/BASIC/01 Message Sequence	304
Figure 119: TC/BASIC/02 Message Sequence	307
Figure 120: TC/BASIC/03 Message Sequence	310
Figure 121: S2S/ONN/GROUP/PREA/ONDEM/TEMP/01 Message Sequence.....	313
Figure 122: ONN/GROUP/PREA/ONDEM/TEMP/02 Message Sequence	315
Figure 123: OS1 Message Sequence	321
Figure 124: OS2 Message Sequence	322
Figure 125: OS3 Message Sequence	323
Figure 126: OS4.1 Message Sequence	324
Figure 127: OS4.2 Message Sequence	325
Figure 128: OS5 Message Sequence	326
Figure 129: OS6 Message Sequence	327
Figure 130: OS7.2 Message Sequence	327

Figure 131: OS8 Message Sequence	328
Figure 132: OS9 Message Sequence	329

iTeh STANDARD PREVIEW
(standards.iteh.ai)
Full standard:
<https://standards.iteh.ai/catalog/standards/sist/06e62cd2-76a5-45d4-ac6a-6f852873285e/etsi-ts-103-564-v1.3.1-2020-03>