# ETSI TS 137 579-1 V17.1.0 (2025-04)



LTE; 5G; Mission Critical (MC) services; Part 1: Common test environment (3GPP TS 37.579-1 version 17.1.0 Release 17)



Reference RTS/TSGR-0537579-1vh10

Keywords

5G,LTE

#### **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 - APE 7112B Association à but non lucratif enregistrée à la Sous-Préfecture de Grasse (06) N° w061004871

#### Important notice

The present document can be downloaded from the ETSI Search & Browse Standards application.

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 on ETSI deliver repository.

Users should be aware that the present document may be revised or have its status changed, this information is available in the <u>Milestones listing</u>.

If you find errors in the present document, please send your comments to the relevant service listed under <u>Committee Support Staff</u>.

If you find a security vulnerability in the present document, please report it through our <u>Coordinated Vulnerability Disclosure (CVD)</u> program.

#### Notice of disclaimer & limitation of liability

The information provided in the present deliverable is directed solely to professionals who have the appropriate degree of experience to understand and interpret its content in accordance with generally accepted engineering or other professional standard and applicable regulations.

No recommendation as to products and services or vendors is made or should be implied.

No representation or warranty is made that this deliverable is technically accurate or sufficient or conforms to any law and/or governmental rule and/or regulation and further, no representation or warranty is made of merchantability or fitness for any particular purpose or against infringement of intellectual property rights.

In no event shall ETSI be held liable for loss of profits or any other incidental or consequential damages.

Any software contained in this deliverable is provided "AS IS" with no warranties, express or implied, including but not limited to, the warranties of merchantability, fitness for a particular purpose and non-infringement of intellectual property rights and ETSI shall not be held liable in any event for any damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of information, or any other pecuniary loss) arising out of or related to the use of or inability to use the software.

#### **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 2025. All rights reserved.

## Intellectual Property Rights

#### Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The declarations pertaining to these essential IPRs, if any, are publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards", which is available from the ETSI Secretariat. Latest updates are available on the ETSI IPR online database.

Pursuant to the ETSI Directives including the ETSI IPR Policy, no investigation regarding the essentiality of IPRs, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

#### Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

**DECT<sup>TM</sup>**, **PLUGTESTS<sup>TM</sup>**, **UMTS<sup>TM</sup>** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members. **3GPP<sup>TM</sup>**, **LTE<sup>TM</sup>** and **5G<sup>TM</sup>** logo are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners. **oneM2M<sup>TM</sup>** logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners. **GSM**<sup>®</sup> and the GSM logo are trademarks registered and owned by the GSM Association.

## Legal Notice

This Technical Specification (TS) has been produced by ETSI 3rd Generation Partnership Project (3GPP).

The present document may refer to technical specifications or reports using their 3GPP identities. These shall be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between 3GPP and ETSI identities can be found at <u>3GPP to ETSI numbering cross-referencing</u>.

## Modal verbs terminology

In the present document "shall", "shall not", "should", "should not", "may", "need not", "will", "will not", "can" and "cannot" are to be interpreted as described in clause 3.2 of the <u>ETSI Drafting Rules</u> (Verbal forms for the expression of provisions).

"must" and "must not" are NOT allowed in ETSI deliverables except when used in direct citation.

## Contents

Intelle	ectual Property Rights	2	
Legal	Legal Notice		
Moda	Modal verbs terminology		
Forew	vord	11	
1	Scope	13	
2	References	13	
3	Definitions of terms, symbols and abbreviations	18	
3.1	Terms	18	
3.2	Symbols	19	
3.3	Abbreviations	19	
4	General		
4.0	Introduction	20	
4.1	MCPTT Conformance testing test points overview	20	
4.2	MCPTT Conformance testing test environment overview	21	
4.3	MCPTT Conformance testing players and roles assumptions		
4.4	References to TS 33.179 and TS 33.180	25	
4.5	MCVideo Conformance testing test points overview	25	
4.6	MCVideo Conformance testing test environment overview	26	
4.7	MCVideo Conformance testing players and roles assumptions	27	
4.8	MCData Conformance testing test points overview	27	
4.9	MCData Conformance testing test environment overview	28	
4.10	MCData Conformance testing players and roles assumptions	29	
5	Common Test Environment	30	
5.1	General		
5.2	Reference test conditions		
5.2.1	General		
5.2.1	On-network		
5.2.2			
5.2.2.2			
5.2.2.2			
5.2.2.2			
5.2.2.2	•		
5.2.2	Off-network		
5.3	Generic test procedures for UE MCS operation		
5.3.1	General	31	
5.3.2	Initial MCX Authentication, Registration, Configuration and Subscription		
5.3.3	MCX pre-established session establishment.		
5.3.3A			
5.3.4	MCX CT session establishment/modification without provisional responses other than 100 Trying		
5.3.5	MCX CT group call establishment with manual commencement		
5.3.6	MCX CT private call establishment with manual commencement		
5.3.7 -	-		
5.3.10			
5.3.11	Void		
5.3.12			
5.3.12			
5.3.22			
	- 5.3.25 Void		
5.3.26			
5.3.20	•		
5.3.27			
5.3.28			
5.3.30		00 60	
5.5.50	mer on medoriol request recept commission meridian		

5.3.31	MCX SIP MESSAGE Request - Accept CT	61
5.3.32	MCX SIP MESSAGE CO	
5.3.33	MCX SIP MESSAGE CT	63
5.3.34	MCX Group Affiliation Status Change	
5.3.35	MCX CO private call establishment with manual commencement	
5.3.36	UE initiated MCX functional alias status determination and subscription	
5.3.37	UE initiated MCX functional alias status change	
5.3A	Generic test procedures for UE MCPTT operation	
5.3A.1	MCPTT CO session establishment/modification without provisional responses other than 100	
	Trying	70
5.3A.2	Void	
5.3A.3	MCPTT CO call establishment using a pre-established session	71
5.3A.4	MCPTT CO call release keeping the pre-established session	
5.3A.5	MCPTT CT call release keeping the pre-established session	
5.3A.6	MCPTT CO session modification	
5.3A.7	Void	
5.3A.8	MCPTT CT Call establishment using a pre-established session	
5.3A.9	Void	75
5.3A.10	Void	75
5.3A.11	MCPTT Floor Request – Floor Granted	75
5.3A.12	MCPTT Floor Request - Floor Queue Position Info	76
5.3A.13	MCPTT Queuing Position Request	77
5.3A.14	MCPTT Floor Request - Floor Deny	77
5.3A.15	MCPTT Floor Release – Floor Idle	78
5.3A.16	MCPTT Floor Release – Floor Taken	
5.3B	Generic test procedures for UE MCVideo operation	79
5.3B.1	MCVideo CO session establishment/modification without provisional responses other than 100	
	Trying	
5.3B.2	MCVideo Transmission request – Transmission Granted	
5.3B.3	MCVideo Media Transmission Notification and Request CT	
5.3B.4	MCVideo Transmission Request - Queue Position Info	
5.3B.5	MCVideo Queue Position Request	
5.3B.6	MCVideo Transmission Request - Transmission Rejected	
5.3B.7	MCVideo Transmission End Request CO	
5.3B.8	MCVideo Media Reception End Request CO	
5.3B.9	MCVideo Transmission End Request CT	
5.3B.10	MCVideo Media Reception End Request CT	
5.3B.11	MCVideo CO session modification	
5.3C	Generic test procedures for UE MCData operation	
5.3C.1	CO SDS or FD message transfer using signalling plane	
5.3C.2	CO MCData Call Establishment	
5.3C.3	CT MCData Call Establishment	
5.3C.4	CO MSRP message transfer	
5.3C.5	CT MSRP message transfer	
5.3C.6	CO MCData call release	
5.3C.7	CT MCData call release	
5.3C.8	Discovery of the absolute URI of the media storage function (one-to-one communication)	
5.3C.9	Discovery of the absolute URI of the media storage function (group communication)	
5.3C.10	FD file upload using HTTP	
5.3C.11	FD file accept and download using HTTP	
5.3C.12	CO MCData call establishment using a pre-established session	
5.3C.13	MCData CO call release keeping the pre-established session	
5.3C.14	Message Store Function Object Upload or Creation using HTTP	
5.3C.15	Message Store Function Delete using HTTP	
5.3C.16	Message Store Function Retrieve using HTTP.	
5.3C.17	Message Store Function Post Request using HTTP.	
5.3C.18	Message Store Function Put Request using HTTP	
5.3C.19 5.4	Message Store Function Post Notification using HTTP	
	Generic test procedures for RRC/NAS signalling	
5.4.1 5.4.1A	General UE APN/PDN support assumptions for E-UTRA/EPC	
5.4.1A 5.4.1B	UE PDU session support assumptions for NR/5GC	
J.4.1D	OF TOO session support assumptions for two of the session support assumptions for two of the session support assumptions for the set of the set	110

5.4.2	Initial registration	110
5.4.2.1	Generic procedure	
5.4.2.2	E-UTRA/EPC signalling	111
5.4.2.3	NR/5GC signalling	
5.4.3	MCX CO communication	
5.4.3.1	Generic procedure	
5.4.3.2	E-UTRA/EPC signalling	
5.4.3.3	NR/5GC signalling	
5.4.4	MCX CT communication	
5.4.4.1	Generic procedure	
5.4.4.2	E-UTRA/EPC signalling	
5.4.4.3	NR/5GC signalling	
5.4.5	MCX CO communication over ProSe direct one-to-one communication out of E-UTRA coverage	-
5.1.5	establishment	
5.4.6	MCX CT communication over ProSe direct one-to-one communication out of E-UTRA coverage-	
5.4.0	establishment	
5.4.7	MCX communication over ProSe direct one-to-one communication out of E-UTRA coverage -	120
5.7.7	release by the SS	131
5.4.8	MCX communication over ProSe direct one-to-one communication out of E-UTRA coverage -	131
J.4.0	release by the UE	122
5.4.9	MCX communication in E-UTRA / Change of cells	
5.4.10	MCX CT communication over ProSe direct one-to-many communication out of E-UTRA coverage	
C 4 1 1	Announcing/Discoveree procedure for group member discovery	
5.4.11	MCX CO communication over ProSe direct one-to-many communication out of E-UTRA coverage	_
5 4 10	Monitoring/Discoverer procedure for group member discovery / One-to-many communication	
5.4.12	MCX communication over MBMS	
5.4.13	Void	
5.4.14	MCX communication release	
5.4.14.1	Generic procedure	
5.4.14.2	E-UTRA/EPC signalling	
5.4.14.3	NR/5GC signalling	
5.5	Default message and other information elements content	
5.5.1	General	
5.5.2	Default SIP message and other information elements	
5.5.2.1	SIP ACK	
5.5.2.1.1	SIP ACK from the UE	
5.5.2.1.2	SIP ACK from the SS	148
5.5.2.2	SIP BYE	149
5.5.2.2.1	SIP BYE from the UE	
5.5.2.2.2	SIP BYE from the SS	152
5.5.2.3	SIP CANCEL	153
5.5.2.4	SIP INFO	153
5.5.2.5	SIP INVITE	
5.5.2.5.1	SIP INVITE from the UE	
5.5.2.5.2	SIP INVITE from the SS	
5.5.2.6	Void	
5.5.2.7	SIP MESSAGE	
5.5.2.7.1	SIP MESSAGE from the UE	
5.5.2.7.2	SIP MESSAGE from the SS	
5.5.2.8	SIP NOTIFY	
5.5.2.9	SIP OPTIONS	
5.5.2.10	SIP PRACK	
5.5.2.10.1	SIP PRACK from the UE	
5.5.2.10.2	SIP PRACK from the SS	
5.5.2.10.2	SIP PUBLISH	
5.5.2.11	SIP PUBLISH	
5.5.2.13	SIP REGISTER	
5.5.2.14	SIP SUBSCRIBE	
5.5.2.15	SIP UPDATE	
5.5.2.15.1	SIP UPDATE from the UE	
5.5.2.15.2	SIP UPDATE from the SS	
5.5.2.16	SIP 1xx	225

5 5 0 1 6 1		225
5.5.2.16.1	SIP 100 (Trying)	
5.5.2.16.2	SIP 180 (Ringing)	
5.5.2.16.3	SIP 183 (Session Progress)	
5.5.2.17	SIP 2xx	
5.5.2.17.1	SIP 200 (OK)	
5.5.2.17.2	SIP 202 (Accepted)	
5.5.2.18	SIP 3xx	
5.5.2.18.1	SIP 302 (Moved Temporarily)	
5.5.2.19	SIP 4xx	
5.5.2.19.1	SIP 403 (Forbidden)	
5.5.2.19.2	SIP 404 (Not Found)	
5.5.2.19.3	SIP 423 (Interval Too Brief)	
5.5.2.19.4	SIP 480 (Temporarily unavailable)	
5.5.2.19.5	SIP 486 (Busy Here)	
5.5.2.19.6	SIP 488 (Not Acceptable Here)	
5.5.2.19.7	SIP 401 (Unauthorized)	
5.5.2.19.8	SIP 487 (Request Terminated)	
5.5.2.20	SIP 5xx	
5.5.2.20.1	SIP 500 (Server Internal Error)	
5.5.2.21	SIP 6xx	
5.5.2.21.1	SIP 606 (Not Acceptable)	
5.5.3 5.5.3.1	Default SDP message and other information elements	
5.5.3.2	SDP Message MCS Info Lists	
5.5.3.2.1	MCS Info Lists from the UE	
-	MCPTT MCVideo	
-	MCData	
- 5.5.3.2.2	MCD at a	
5.5.5.2.2	MCS mild Lists from the SS	
-	MCVideo	
-	MCData	
- 5.5.3.3	Resource-lists	
5.5.3.3.1	Resource-lists from the UE for call control	
-	MCPTT	
_	MCVideo	
_	MCData	
5.5.3.3.1A	Resource-lists from the UE for initial configuration	
5.5.3.3.2	Resource-lists from the SS	
-	MCPTT	
-	MCVideo	
-	MCData	
5.5.3.4	Location-info	
5.5.3.4.1	Location-info (Report from the UE)	
_	MCPTT	
-	MCVideo	
-	MCData	
5.5.3.4.2	Location-info (Configuration sent by the SS)	
-	MCPTT	
-	MCVideo	
-	MCData	
5.5.3.4.3	Location-info (Request sent by the SS)	
-	MCPTT	
-	MCVideo	
-	MCData	
-	MCVideo	
-	MCData	
5.5.3.5	PIDF	
5.5.3.5.1	PIDF from the UE	
-	MCPTT	
-	MCVideo	
-	MCData	

5.5.3.5.2	PIDF from the SS	
-	MCPTT	
-	MCVideo	
-	MCData	
5.5.3.6	SIMPLE-FILTER	
5.5.3.7	AFFILIATION-COMMAND	
-	MCPTT	
-	MCVideo	
-	MCData	
5.5.3.8	MCData Data signalling messages	
5.5.3.8.1	SDS SIGNALLING PAYLOAD message from the UE	
5.5.3.8.2	SDS SIGNALLING PAYLOAD message from the SS	
5.5.3.8.5	FD SIGNALLING PAYLOAD message from the UE	
5.5.3.8.6	FD SIGNALLING PAYLOAD message from the SS	
5.5.3.8.9	SDS OFF-NETWORK MESSAGE message from the UE	
5.5.3.8.10	SDS OFF-NETWORK MESSAGE message from the SS	
5.5.3.8.11	SDS OFF-NETWORK NEISSAGE message from the UE	
5.5.3.8.12	SDS OFF-NETWORK NOTIFICATION message from the SS	
5.5.3.9	MCData Data Payload	
5.5.3.9.1	MCData Data Payload for group communication	
5.5.3.9.2	MCData Data Payload for one-to-one communication	
5.5.3.10	MCData Protected Payload Message	
5.5.3.10	PoC Settings	
5.5.3.11.1		
	PoC Settings from the UE	
5.5.3.11.2	PoC Settings from the SS	
5.5.3.12	Xcap-diff documents	
5.5.3.13	Void	
5.5.3.14	MCS group key transport payloads (GKTP) document	
5.5.3.15	Conference-info	
5.5.3.16	MCS-Regroup	
5.5.3.16.1	Common conditions for MCS-Regroup	
5.5.3.16.2	MCS-Regroup from the UE	
5.5.3.16.3	MCS-Regroup from the SS	
5.5.4	Default HTTP message and other information elements	
5.5.4.1	General	
5.5.4.2	GET	
5.5.4.3	POST	
5.5.4.4	PUT	
5.5.4.5	DELETE	
5.5.4.6	HTTP 200 (OK)	
5.5.4.7	HTTP 201 (Created)	
5.5.4.7A	HTTP 204 (No Content)	
5.5.4.8	HTTP 302 (Found)	
5.5.4.9	HTTP 409 (Conflict)	
5.5.4.10	HTTP Message Bodies	
5.5.4.10.1	Authentication Request	
5.5.4.10.2	Authentication Response	
5.5.4.10.3	Token Request	
5.5.4.10.4	Token Response	
5.5.4.10.5	Void	401
5.5.4.10.6	KMS Certificate	401
5.5.4.10.7	Void	
5.5.4.10.8	KMS Key Set	
5.5.4.10.9	Signed KMS Request	
5.5.5	Default MCPTT call control Off-network messages and other information elements	
5.5.5.1	GROUP CALL PROBE	
5.5.5.2	GROUP CALL ANNOUNCEMENT	
5.5.5.2.1	GROUP CALL ANNOUNCEMENT from the UE	
5.5.5.2.2	GROUP CALL ANNOUNCEMENT from the SS	
5.5.5.3	GROUP CALL ACCEPT	
5.5.5.3.1	GROUP CALL ACCEPT from the UE	
5.5.5.3.2	GROUP CALL ACCEPT from the SS	
5.5.5.5.4		

		(1.2
5.5.5.4	GROUP CALL EMERGENCY END	
5.5.5.4.1	GROUP CALL EMERGENCY END from the UE	
5.5.5.4.2	GROUP CALL EMERGENCY END from the SS	
5.5.5.5	GROUP CALL IMMINENT PERIL END	
5.5.5.5.1	GROUP CALL IMMINENT PERIL END from the UE	
5.5.5.5.2	GROUP CALL IMMINENT PERIL END from the SS	
5.5.5.6	GROUP CALL BROADCAST	
5.5.5.6.1	GROUP CALL BROADCAST from the UE	
5.5.5.6.2	GROUP CALL BROADCAST from the SS	
5.5.5.7	GROUP CALL BROADCAST END	
5.5.5.7.1	GROUP CALL BROADCAST END from the UE	
5.5.5.7.2	GROUP CALL BROADCAST END from the SS	
5.5.5.8	PRIVATE CALL SETUP REQUEST	
5.5.5.8.1	PRIVATE CALL SETUP REQUEST from the UE	
5.5.5.8.2	PRIVATE CALL SETUP REQUEST from the SS	
5.5.5.9	PRIVATE CALL RINGING	
5.5.5.10	PRIVATE CALL ACCEPT	
5.5.5.11	PRIVATE CALL REJECT	
5.5.5.11.1	PRIVATE CALL REJECT from the UE	
5.5.5.11.2	PRIVATE CALL REJECT from the SS	
5.5.5.12	PRIVATE CALL RELEASE	
5.5.5.13	PRIVATE CALL RELEASE ACK	
5.5.5.14	PRIVATE CALL ACCEPT ACK	
5.5.5.15	PRIVATE CALL EMERGENCY CANCEL	
5.5.5.15.1	PRIVATE CALL EMERGENCY CANCEL from the UE	
5.5.5.15.2	PRIVATE CALL EMERGENCY CANCEL from the SS	
5.5.5.16	PRIVATE CALL EMERGENCY CANCEL ACK	
5.5.5.16.1	PRIVATE CALL EMERGENCY CANCEL ACK from the UE	
5.5.5.16.2	PRIVATE CALL EMERGENCY CANCEL ACK from the SS	
5.5.5.17	GROUP EMERGENCY ALERT	
5.5.5.17.1	GROUP EMERGENCY ALERT from the UE	
5.5.5.17.2	GROUP EMERGENCY ALERT from the SS	
5.5.5.18	GROUP EMERGENCY ALERT ACK	
5.5.5.18.1	GROUP EMERGENC ALERT ACK from the UE	
5.5.5.18.2	GROUP EMERGENC ALERT ACK from the SS	
5.5.5.19	GROUP EMERGENCY ALERT CANCEL	
5.5.5.19.1	GROUP EMERGENCY ALERT CANCEL from the UE	
5.5.5.19.2	GROUP EMERGENCY ALERT CANCEL from the SS	
5.5.5.20	GROUP EMERGENCY ALERT CANCEL ACK	
5.5.5.20.1	GROUP EMERGENCY ALERT CANCEL ACK from the UE	
5.5.5.20.2	GROUP EMERGENCY ALERT CANCEL ACK from the SS	
5.5.6	Default MCPTT media plane control messages and other information elements	
5.5.6.1	General	
5.5.6.2	Floor Request	
5.5.6.3	Floor Granted	
5.5.6.4	Floor Deny	
5.5.6.5	Floor Release	
5.5.6.6	Floor Idle	
5.5.6.7	Floor Taken	
5.5.6.8	Floor Revoke	
5.5.6.9	Floor Queue Position Request	
5.5.6.10	Floor Queue Position Info	
5.5.6.11	Floor Ack	
5.5.6.11A	Floor Release Multi Talker	
5.5.6.12	Connect	
5.5.6.13	Disconnect	
5.5.6.14	Acknowledge	
5.5.6.15	Map Group To Bearer	
5.5.6.16	Unmap Group To Bearer	
5.5.6.17	Application Paging	
5.5.6.18	Bearer Announcement	
5.5.7	Default MCX group management messages and other information elements	

5.5.7.1	MCPTT Group Configuration	445
5.5.7.2	MCVideo Group Configuration	
5.5.7.3	MCData Group Configuration	
5.5.8	Default MCS configuration management messages and other information elements	
5.5.8.1	MCX Initial UE Configuration	
5.5.8.2	MCPTT UE Configuration	
5.5.8.3	MCPTT User Profile	
5.5.8.4	MCPTT Service Configuration	
5.5.8.5	Void	
5.5.8.6	MCVideo UE Configuration	
5.5.8.7	MCVideo User Profile	
5.5.8.8	MCVideo Service Configuration	
5.5.8.9	Void	
5.5.8.10	MCData UE Configuration	
5.5.8.11	MCData User Profile	
5.5.8.12	MCData Service Configuration	
5.5.9	Default miscellaneous messages and other information elements	
5.5.9.1	MIKEY-SAKKE I_MESSAGE	
-	CSK distribution (MIKEY-SAKKE sent by the UE)	
_	CSK distribution (MIKEY-SAKKE sent by the SS)	
_	Private call (MIKEY-SAKKE sent by the SS)	
_	Private call (MIKEY-SAKKE sent by the UE)	
_	GMK distribution (MIKEY-SAKKE sent by the SS)	
_	MSCCK distribution (MIKEY-SAKKE sent by the SS)	
_	MuSiK distribution (MIKEY-SAKKE sent by the SS)	
5.5.10	Common MCS test USIM parameters	
5.5.10.1	General	
5.5.10.2	Default settings for the Elementary Files (EFs)	
5.5.11	Default MCVideo Transmission Control Messages and other Information Elements	
5.5.11.0	General	
5.5.11.1	Transmission Control Specific Messages Sent by the Transmission Participant	
5.5.11.1	Transmission Request	
5.5.11.1.2	Transmission Refuest	
5.5.11.1.2	Queue Position Request	
5.5.11.1.4	Receive Media Request	
5.5.11.1.4	Void	
5.5.11.1.6	Remote Transmission Request	
5.5.11.1.7	Remote Transmission Cancel Request	
5.5.11.2	Transmission Control Specific Messages Sent by the Transmission Control Server	
5.5.11.2.1	Transmission Control Specific Messages Sent by the Transmission Control Server	
5.5.11.2.2	Transmission Granted	
5.5.11.2.3	Transmission Rejected	
5.5.11.2.4	Transmission Arbitration Released	
5.5.11.2.4	Transmission Arotration Released	
5.5.11.2.6	Queue Position Info	
5.5.11.2.7 5.5.11.2.8	Media Transmission Notification	
	Receive Media Response	
5.5.11.2.9	Media Reception Notification	
5.5.11.2.10	Void Transmission Cancel Request Notify	
5.5.11.2.11		
5.5.11.2.12	Remote Transmission Response	
5.5.11.2.13	Remote Transmission Cancel Response	
5.5.11.2.14	Media Reception Override Notification	
5.5.11.2.15	Transmission End Notify	
5.5.11.2.16	Transmission Idle	
5.5.11.3	Transmission control specific messages sent by both the transmission control server and	=
551121	transmission control participant	
5.5.11.3.1	Transmission End Request	
5.5.11.3.2	Transmission End Response	
5.5.11.3.3	Media Reception End Request	
5.5.11.3.4	Media Reception End Response	
5.5.11.3.5	Transmission Control Ack	

5.5.12.2.1 5.5.12.2.2	MSRP 200 (OK) from the UE MSRP 200 (OK) from the SS	573
5.5.12.2.2 5.5.13	MSRP 200 (OK) from the SS Default XML messages and elements for XML security	
5.5.13.1	XML signature for integrity protection of MIME bodies	
5.5.13.2	XML <encrypteddata> element for encryption of XML element content</encrypteddata>	
5.5.14	Default MCVideo Call Control Off-network Messages and Other Information Elements	
5.5.14.1	GROUP CALL PROBE	
5.5.14.2	GROUP CALL ANNOUNCEMENT	
5.5.14.3	GROUP CALL ACCEPT	
5.5.14.4	GROUP CALL EMERGENCY END	
5.5.14.5	GROUP CALL IMMINENT PERIL END	
5.5.14.6	GROUP CALL BROADCAST	
5.5.14.7	GROUP CALL BROADCAST END	
5.5.14.8	PRIVATE CALL SETUP REQUEST	
5.5.14.9	PRIVATE CALL RINGING	
5.5.14.10	PRIVATE CALL ACCEPT	
5.5.14.11	PRIVATE CALL REJECT	
5.5.14.12	PRIVATE CALL RELEASE	
5.5.14.13	PRIVATE CALL RELEASE ACK	
5.5.14.14	PRIVATE CALL ACCEPT ACK	
5.5.14.15	GROUP EMERGENCY ALERT	
5.5.14.16	GROUP EMERGENCY ALERT ACK	
5.5.14.17	GROUP EMERGENCY ALERT CANCEL	
5.5.14.18	GROUP EMERGENCY ALERT CANCEL ACK message	
5.5.14.19	PRIVATE REMOTE VIDEO PUSH REQUEST message	
5.5.14.20	GROUP REMOTE VIDEO PUSH REQUEST message	
5.5.14.21	VIDEO PUSH TRYING RESPONSE message	
5.5.14.22	NOTIFY VIDEO PUSH message	
5.5.15	Default MCData call control messages and other information elements	
5.5.15.1	General	
5.5.15.2	Map Group To Bearer	
5.5.15.3	Unmap Group To Bearer	
5.5.15.4	Application Paging	
5.5.15.5 5.5.15.6	Bearer Announcement GROUP EMERGENCY ALERT	
	GROUP EMERGENCY ALERT from the UE	
5.5.15.6.1	GROUP EMERGENCY ALERT from the SS	
5.5.15.6.2 5.5.15.7	GROUP EMERGENCY ALERT ACK	
5.5.15.7	GROUP EMERGENC I ALERT ACK from the UE	
5.5.15.7.1	GROUP EMERGENC ALERT ACK from the SS	
5.5.15.7.2	GROUP EMERGENCY ALERT CANCEL	
5.5.15.8.1	GROUP EMERGENCY ALERT CANCEL from the UE	
5.5.15.8.2	GROUP EMERGENCY ALERT CANCEL from the SS	
5.5.15.9	GROUP EMERGENCY ALERT CANCEL ACK	
5.5.15.9.1	GROUP EMERGENCY ALERT CANCEL ACK from the UE	
5.5.15.9.2	GROUP EMERGENCY ALERT CANCEL ACK from the SS	
	oid	
5.0 V	014	
Annex A (	informative): Change history	

## Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
  - 1 presented to TSG for information;
  - 2 presented to TSG for approval;
  - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

The present document is part 1 of a multi-part deliverable covering conformance test specification for Mission Critical Services consisting of:

## 3GPP TS 37.579-1: "Mission Critical (MC) services; Part 1: Common test environment" (the present document)

3GPP TS 37.579-2 [2]: "Mission Critical (MC) services; Part 2: Mission Critical Push To Talk (MCPTT) User Equipment (UE) Protocol conformance specification"

3GPP TS 37.579-4 [4]: "Mission Critical (MC) services; Part 4: Test Applicability and Implementation Conformance Statement (ICS)"

3GPP TS 37.579-5 [5]: "Mission Critical (MC) services; Part 5: Abstract test suite (ATS)"

3GPP TS 37.579-6 [84]: "Mission Critical (MC) services: Mission Critical Video (MCVideo) User Equipment (UE) Protocol conformance specification"

3GPP TS 37.579-7 [85]: "Mission Critical (MC) services; Part 7: Mission Critical Data (MCData) User Equipment (UE) Protocol conformance specification"

In the present document, modal verbs have the following meanings:

shall indicates a mandatory requirement to do something

shall not indicates an interdiction (prohibition) to do something

The constructions "shall" and "shall not" are confined to the context of normative provisions, and do not appear in Technical Reports.

The constructions "must" and "must not" are not used as substitutes for "shall" and "shall not". Their use is avoided insofar as possible, and they are not used in a normative context except in a direct citation from an external, referenced, non-3GPP document, or so as to maintain continuity of style when extending or modifying the provisions of such a referenced document.

should	indicates a recommendation to do something
should not	indicates a recommendation not to do something
may	indicates permission to do something
need not	indicates permission not to do something

The construction "may not" is ambiguous and is not used in normative elements. The unambiguous constructions "might not" or "shall not" are used instead, depending upon the meaning intended.

can	indicates that something is possible
cannot	indicates that something is impossible
The constructions "	can" and "cannot" are not substitutes for "may" and "need not".
will	indicates that something is certain or expected to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document
will not	indicates that something is certain or expected not to happen as a result of action taken by an agency the behaviour of which is outside the scope of the present document
might	indicates a likelihood that something will happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document
might not	indicates a likelihood that something will not happen as a result of action taken by some agency the behaviour of which is outside the scope of the present document
In addition:	
is	(or any other verb in the indicative mood) indicates a statement of fact
is not	(or any other negative verb in the indicative mood) indicates a statement of fact

The constructions "is" and "is not" do not indicate requirements.

## 1 Scope

The present document defines the common test environment required for testing Client and Server implementations for compliance to the Mission Critical Services protocol requirements defined by 3GPP.

It contains definitions of reference conditions and test signals, default messages and other parameters, generic procedures, and, common requirements for test equipment with the goal for facilitating testing in general and test procedures specification in particular. Various parts of its content are referred to from other parts of the Mission Critical Services protocol conformance testing specification e.g. TS 37.579-2 [2], 3GPP TS 37.579-6 [84], 3GPP TS 37.579-7 [85].

The present document does not define the common test environment required for testing the implementation of the underlying RRC/NAS protocols, i.e. the bearers used for transport of the Mission Critical Services signalling and media. This is defined in TS 36.508 [6] and referred to from the present document whenever needed.

In regard to default messages or other information elements contents, the present document refers to content defined in requirements specifications specified by 3GPP or other organisations.

## 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.
- [1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 37.579-2: "Mission Critical (MC) services; Part 2: Mission Critical Push To Talk (MCPTT) User Equipment (UE) Protocol conformance specification".
- [3] Void
- [4] 3GPP TS 37.579-4: "Mission Critical (MC) services; Part 4: Test Applicability and Implementation Conformance Statement (ICS)".
- [5] 3GPP TS 37.579-5: "Mission Critical (MC) services; Part 5: Abstract test suite (ATS)".
- [6] 3GPP TS 36.508: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC); Common Test Environments for User Equipment (UE) Conformance Testing".
- [7] 3GPP TS 22.179: "Mission Critical Push To Talk (MCPTT) over LTE; Stage 1".
- [8] 3GPP TS 23.179: "Functional architecture and information flows to support mission critical communication services; Stage 2".
- [9] 3GPP TS 24.379: "Mission Critical Push To Talk (MCPTT) call control; Protocol specification".
- [10] 3GPP TS 24.380: "Mission Critical Push To Talk (MCPTT) floor control; Protocol specification".
- [11] 3GPP TS 24.481: "Mission Critical Services (MCS) group management; Protocol specification".
- [12] 3GPP TS 24.482: "Mission Critical Services (MCS) identity management; Protocol specification".
- [13] 3GPP TS 24.483: "Mission Critical Services (MCS) Management Object (MO)".

- [14] 3GPP TS 24.484: "Mission Critical Services (MCS) configuration management; Protocol specification".
- [15] 3GPP TS 33.179: "Security of Mission Critical Push-To-Talk (MCPTT) over LTE".
- [16] 3GPP TS 24.229: "IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3".
- [17] Void
- [18] Void
- [19] Void
- [20] Void
- [21] Void
- [22] IETF RFC 3261 (June 2002): "SIP: Session Initiation Protocol".
- [23] IETF RFC 6509 (February 2012): "MIKEY-SAKKE: Sakai-Kasahara Key Encryption in Multimedia Internet KEYing (MIKEY)".
- [24] IETF RFC 3830: "MIKEY: Multimedia Internet KEYing".
- [25] IETF RFC 6043: "MIKEY-TICKET: Ticket-Based Modes of Key Distribution in Multimedia Internet KEYing (MIKEY)".
- [26] IETF RFC 2616: "Hypertext Transfer Protocol -- HTTP/1.1".
- [27] IETF RFC 4566 (July 2006): "SDP: Session Description Protocol".
- [28] Void
- [29] IETF RFC 3841 (August 2004): "Caller Preferences for the Session Initiation Protocol (SIP)".
- [30] IETF RFC 4028 (April 2005): "Session Timers in the Session Initiation Protocol (SIP)".
- [31] IETF RFC 6050 (November 2010): "A Session Initiation Protocol (SIP) Extension for the Identification of Services".
- [32] IETF RFC 3325 (November 2002): "Private Extensions to the Session Initiation Protocol (SIP) for Asserted Identity within Trusted Networks".
- [33] IETF RFC 3840 (August 2004): "Indicating User Agent Capabilities in the Session Initiation Protocol (SIP)".
- [34] IETF RFC 5373 (November 2008): "Requesting Answering Modes for the Session Initiation Protocol (SIP)".
- [35] IETF RFC 5366 (October 2008): "Conference Establishment Using Request-Contained Lists in the Session Initiation Protocol (SIP)".
- [36] IETF RFC 4488 (May 2006): "Suppression of Session Initiation Protocol (SIP) REFER Method Implicit Subscription".
- [37] IETF RFC 4538 (June 2006): "Request Authorization through Dialog Identification in the Session Initiation Protocol (SIP)".
- [38] IETF RFC 3515 (April 2003): "The Session Initiation Protocol (SIP) Refer Method".
- [39] IETF RFC 6665 (July 2012): "SIP-Specific Event Notification".
- [40] IETF RFC 4412 (February 2006): "Communications Resource Priority for the Session Initiation Protocol (SIP)".
- [41] Void

[42]	Void
[43]	IETF RFC 3903 (October 2004): "Session Initiation Protocol (SIP) Extension for Event State Publication".
[44]	IETF RFC 4567 (July 2006): "Key Management Extensions for Session Description Protocol (SDP) and Real Time Streaming Protocol (RTSP)".
[45]	IETF RFC 8101 "IANA Registration of New Session Initiation Protocol (SIP) Resource-Priority Namespace for Mission Critical Push To Talk service".
[46]	Void
[47]	Void
[48]	IETF RFC 4661 (September 2006): "An Extensible Markup Language (XML)-Based Format for Event Notification Filtering".
[49]	Void
[50]	Void
[51]	IETF RFC 7913 (June 2016): "P-Access-Network-Info ABNF Update".
[52]	IETF RFC 7315 (July 2014): "Private Header (P-Header) Extensions to the Session Initiation Protocol (SIP) for the 3GPP".
[53]	IETF RFC 3329 (January 2003): "Security Mechanism Agreement for the Session Initiation Protocol (SIP)".
[54]	IETF RFC 5031 (January 2008): "A Uniform Resource Name (URN) for Emergency and Other Well-Known Services".
[55]	IETF RFC 3581 (August 2003): "An Extension to the Session Initiation Protocol (SIP) for Symmetric Response Routing".
[56]	IETF RFC 3312 (October 2002): "Integration of resource management and Session Initiation Protocol (SIP)".
[57]	IETF RFC 7134: "The Management Policy of the Resource Priority Header (RPH) Registry Changed to "IETF Review"".
[58]	IETF RFC 5621 (September 2009): "Message Body Handling in the Session Initiation Protocol (SIP)".
[59]	IETF RFC 4867: "RTP Payload Format and File Storage Format for the Adaptive Multi-Rate (AMR) and Adaptive Multi-Rate Wideband (AMR-WB) Audio Codecs".
[60]	IETF RFC 5009 (September 2007): "Private Header (P-Header) Extension to the Session Initiation Protocol (SIP) for Authorization of Early Media".
[61]	IETF RFC 3842 (August 2004) "A Message Summary and Message Waiting Indication Event Package for the Session Initiation Protocol (SIP)".
[62]	IETF RFC 6442 (December 2011): "Location Conveyance for the Session Initiation Protocol".
[63]	IETF RFC 6335: "Internet Assigned Numbers Authority (IANA) Procedures for the Management of the Service Name and Transport Protocol Port Number Registry".
[64]	3GPP TS 26.114: "IP Multimedia Subsystem (IMS); Multimedia telephony; Media handling and interaction".
[65]	3GPP TS 23.032: "Universal Geographical Area Description (GAD)".
[66]	3GPP TS 26.171: "Speech codec speech processing functions; Adaptive Multi-Rate - Wideband (AMR-WB) speech codec; General description".

- [67] 3GPP TS 33.303: "Proximity-based Services (ProSe); Security aspects". [68] 3GPP TS 23.303: "Proximity-based services (ProSe); Stage 2". [69] 3GPP TS 23.003: "Numbering, addressing and identification". [70] 3GPP TS 33.310: "Network Domain Security (NDS); Authentication Framework (AF)". [71] Void [72] IETF RFC 2617: "HTTP Authentication: Basic and Digest Access Authentication". 3GPP TS 31.102: "Characteristics of the Universal Subscriber Identity Module (USIM) [73] application". [74] 3GPP TS 36.523-3: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification; Part 3: Abstract Test Suites (ATS)". 3GPP TS 36.523-2: "User Equipment (UE) conformance specification; Part 2: Implementation [75] Conformance Statement (ICS) proforma specification". [76] IETF RFC 3550: "RTP: A Transport Protocol for Real-Time Applications". IETF RFC 6749: "The OAuth 2.0 Authorization Framework". [77] [78] 3GPP TS 24.334: "Proximity-services (ProSe) User Equipment (UE) to ProSe function protocol aspects; Stage 3". [79] 3GPP TS 31.101: "UICC-terminal interface; Physical and logical characteristics. [80] 3GPP TS 31.103: "Characteristics of the IP Multimedia Services Identity Module (ISIM) application". [81] IETF RFC 6809 (November 2012): "Mechanism to Indicate Support of Features and Capabilities in the Session Initiation Protocol (SIP)". [82] IETF RFC 7462 (March 2015): "URNs for the Alert-Info Header Field of the Session Initiation Protocol (SIP)". [83] IETF RFC 4826 (May 2007): " Extensible Markup Language (XML) Formats for Representing Resource Lists". 3GPP TS 37.579-6: "Mission Critical (MC) services; Part 6: Mission Critical Video (MCVideo) [84] User Equipment (UE) Protocol conformance specification" 3GPP TS 37.579-7: "Mission Critical (MC) services; Part 7: Mission Critical Data (MCData) User [85] Equipment (UE) Protocol conformance specification" [86] 3GPP TS 24.281: "Mission Critical Video (MCVideo) signalling control; Protocol specification". 3GPP TS 24.282: "Mission Critical Data (MCData) signalling control; Protocol specification". [87] 3GPP TS 24.581: "Mission Critical Video (MCVideo) media plane control; Protocol [88] specification". [89] 3GPP TS 24.582: "Mission Critical Data (MCData) media plane control; Protocol specification". [90] 3GPP TS 23.281: "Functional architecture and information flows to support Mission Critical Video (MCVideo); Stage 2". [91] 3GPP TS 23.282: "Functional architecture and information flows to support Mission Critical Data (MCData); Stage 2". 3GPP TS 22.281: "Mission Critical Video over LTE". [92]
- [93] 3GPP TS 22.282: "Mission Critical Data over LTE".

- [94] 3GPP TS 33.180: "Security of the mission critical service".
- [95] OpenID Connect 1.0: "OpenID Connect Core 1.0 incorporating errata set 1", http://openid.net/specs/openid-connect-core-1\_0.html.
- [96] IETF RFC 3310: "Hypertext Transfer Protocol (HTTP) Digest Authentication Using Authentication and Key Agreement (AKA)".
- [97] IETF RFC 3262: "Reliability of Provisional Responses in the Session Initiation Protocol (SIP)".
- [98] IETF RFC 6507: "Elliptic Curve-Based Certificateless Signatures for Identity-Based Encryption (ECCSI)".
- [99] IETF RFC 6508: "Sakai-Kasahara Key Encryption (SAKKE)".
- [100] IETF RFC 7636: "Proof Key for Code Exchange by OAuth Public Clients".
- [101] IETF RFC 7519: "JSON Web Token (JWT)".
- [102] IETF RFC 7515: "JSON Web Signature (JWS)".
- [103] IETF RFC 4354 "A Session Initiation Protocol (SIP) Event Package and Data Format for Various Settings in Support for the Push-to-Talk over Cellular (PoC) Service"
- [104] IETF RFC 6750 "The OAuth 2.0 Authorization Framework: Bearer Token Usage"
- [105] HTML 4.01 Specification: https://www.w3.org/TR/html401/.
- [106] IETF RFC 4122: "A Universally Unique IDentifier (UUID) URN Namespace".
- [107] IETF RFC 5874: "An Extensible Markup Language (XML) Document Format for Indicating a Change in XML Configuration Access Protocol (XCAP) Resources".
- [108] W3C: "XML Encryption Syntax and Processing Version 1.1", <u>https://www.w3.org/TR/xmlenc-core1/</u>.
- [109] IETF RFC 5322: "Internet Message Format".
- [110] 3GPP TS 22.280: "Common functional architecture to support mission critical services; Stage 2".
- [111] IETF RFC 2854: "The 'text/html' Media Type".
- [112] IETF RFC 7303: "XML Media Types".
- [113] IETF RFC 3556: "Session Description Protocol (SDP) Bandwidth Modifiers for RTP Control Protocol (RTCP) Bandwidth".
- [114] IETF RFC 3863 (August 2004): "Presence Information Data Format (PIDF)".
- [115] IETF RFC 5245: "Interactive Connectivity Establishment (ICE): A Protocol for Network Address Translator (NAT) Traversal for Offer/Answer Protocols"
- [116] IETF RFC 5576: "Source-Specific Media Attributes in the Session Description Protocol (SDP)"
- [117] IETF RFC 3891: The Session Initiation Protocol (SIP) "Replaces" Header
- [118] IETF RFC 7231: Hypertext Transfer Protocol (HTTP/1.1): Semantics and Content
- [119] IETF RFC 4145: "TCP-Based Media Transport in the Session Description Protocol (SDP)"
- [120] IETF RFC 4975: "The Message Session Relay Protocol (MSRP)"
- [121] IETF RFC 4976: "Relay Extensions for the Message Session Relay Protocol (MSRP)"
- [122] IETF RFC 6135: "An Alternative Connection Model for the Message Session Relay Protocol (MSRP)"
- [123] IETF RFC 3986: "Uniform Resource Identifier (URI): Generic Syntax"

- [124] IETF RFC 5547: "A Session Description Protocol (SDP) Offer/Answer Mechanism to Enable File Transfer"
- [125] IETF RFC 3326: "The Reason Header Field for the Session Initiation Protocol (SIP)"
- [126] 3GPP TS 23.179: "Functional architecture and information flows to support Mission Critical Push To Talk (MCPTT)"
- [127] IETF RFC 3326: "A Session Initiation Protocol (SIP) Event Package for Conference State"
- [128] IETF RFC 5939: "Session Description Protocol (SDP) Capability Negotiation"
- [129] IETF RFC 6184: "RTP Payload Format for H.264 Video"
- [130] IETF RFC 4585: "Extended RTP Profile for Real-time Transport Control Protocol (RTCP)-Based Feedback (RTP/AVPF)"
- [131] IETF RFC 6086: "Session Initiation Protocol (SIP) INFO Method and Package Framework"
- [132] 3GPP TS 38.508-1: "5GS; User Equipment (UE) conformance specification; Part 1: Common test environment"
- [133] 3GPP TS 38.508-2: "5GS; User Equipment (UE) conformance specification; Part 2: Common Implementation Conformance Statement (ICS) proforma"
- [134] 3GPP TS 23.501: "System Architecture for the 5G System"

## 3 Definitions of terms, symbols and abbreviations

Editor's Note: Implication to the content of the present chapter due to the introduction of MCVideo and MCData are FFS.

## 3.1 Terms

For the purposes of the present document, the terms given in TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in TR 21.905 [1].

For the purpose of the present document, the following terms and definitions given in TS 24.379 [9] apply:

An MCPTT user is affiliated to an MCPTT group An MCPTT user is affiliated to an MCPTT group at an MCPTT client Affiliation status Group identity In-progress emergency private call state In-progress imminent peril group state MCPTT client ID MCPTT emergency alert state MCPTT emergency group state MCPTT emergency group call state MCPTT emergency private call state MCPTT emergency private priority state MCPTT imminent peril group call state MCPTT imminent peril group state MCPTT private emergency alert state MCPTT speech Media-floor control entity Temporary MCPTT group identity Trusted mutual aid Untrusted mutual aid

For the purposes of the present document, the following terms and definitions given in TS 22.179 [7] apply:

In-progress emergency MCPTT emergency alert MCPTT emergency group call MCPTT emergency state Partner MCPTT system Primary MCPTT system

For the purpose of the present document, the following terms and definitions given in 3GPP TS 24.380 [10] apply:

#### MBMS subchannel

For the purpose of the present document, the following terms and definitions given in 3GPP TS 23.179 [8] apply:

Pre-selected MCPTT user profile

## 3.2 Symbols

Void.

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [1].

ECGI	E-UTRAN Cell Global Identification
FFS	For Further Study
ICS	Implementation Conformance Statement
IPEG	In-Progress Emergency Group
IPEPC	In-Progress Emergency Private Call
IPIG	In-Progress Imminent peril Group
IUT	Implementation Under Test
IXIT	Implementation eXtra Information for Testing
MBMS	Multimedia Broadcast and Multicast Service
MBSFN	Multimedia Broadcast multicast service Single Frequency Network
MCData	Mission Critical Data
MCPTT	Mission Critical Push To Talk
MCPTT group I	D MCPTT group IDentity
MCVideo	Mission Critical Video
MCX	Mission Critical X, with $X = PTT$ or $X = Video$ or $X = Data$
MEA	MCPTT Emergency Alert
MEG	MCPTT Emergency Group
MEGC	MCPTT Emergency Group Call
MEPC	MCPTT Emergency Private Call
MEPP	MCPTT Emergency Private Priority
MES	MCPTT Emergency State
MIME	Multipurpose Internet Mail Extensions
MIG	MCPTT Imminent peril Group
MIGC	MCPTT Imminent peril Group Call
MONP	MCPTT Off-Network Protocol
MPEA	MCPTT Private Emergency Alert
NAT	Network Address Translation
QCI	QoS Class Identifier
RTP	Real-time Transport Protocol
SAI	Service Area Identifier
SDP	Session Description Protocol
SIP	Session Initiation Protocol
SS	System Simulator
SSRC	Synchronization SouRCe
SUT	System Under Test

TGI	Temporary MCPTT Group Identity
TMGI	Temporary Mobile Group Identity
TP	Transmission Point
URI	Uniform Resource Identifier

## 4 General

Editor's note: Implication to the content of the present chapter due to the introduction of MCVideo and MCData are FFS.

## 4.0 Introduction

Depending on the TS 37.579-5[5] test model being used, either the UE (with the MCX Client installed) is considered as the IUT (MCX EUTRA test model), or, only the MCX Client is considered as the IUT (MCX IPCAN test model). In both cases the SUT is the UE, communicating with the SS over the Uu radio interface.

## 4.1 MCPTT Conformance testing test points overview

Figure 4.1.1 provides a general overview of all MCPTT players which may have a role in different conformance testing scenarios together with virtual test points representing the information flow which is intended for conformance testing. The figure is mainly for descriptive purposes and may not necessarily represent a real MCPTT deployment or implementation.

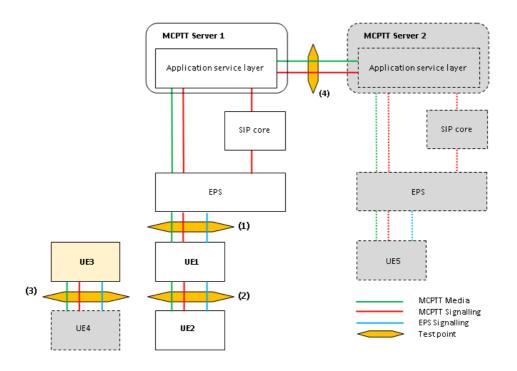


Figure 4.1.1: MCPTT Conformance testing test points model

- NOTE 1: Which of the shown entities will be simulated and which will be real implementation depends on the test scenario. In the test scenarios in which they play a part, the entities presented with dashed borders and grey fill will be always simulated whereas, the entities with light yellow fill (UE3) will be Implementation Under Test (IUT). The entities with white fill will be either simulated or IUTs or real implementation (e.g. network) depending on the test scenario.
- NOTE 2: While showing the different players, figure 4.1.1 should not be understood as showing test environment implementation.

The test points shown on Figure 4.1.1 cover behaviour/requirements observed at various reference points and communication scenarios:

- MCPTT on-network (whenever relevant, reference points as specified in TS 23.179 [8] Functional model description clause 7.3.1 'On-network functional model' are referred):
  - Application plane (MCPTT-1, MCPTT-4, MCPTT-7, MCPTT-8 and MCPTT-9), and, (CSC-1, CSC-2, CSC-4 and CSC-8); Signalling control plane (SIP-1, HTTP-1 and HTTP-2). Test point: (1) or (2). IUT: the UE or the MCPTT Client or the MCPTT Server.
  - MCPTT-3 (between different MCPTT Servers), CSC-7 (other group management Servers, normally associated with other MCPTT Servers); Signalling control plane (SIP-2, HTTP-1, HTTP2 and HTTP-3). Test point: (4). IUT: the MCPTT Server.
- MCPTT off-network (TS 23.179 [8], clause 7.3.2 'Off-network functional model'). Test point: (3). IUT: the UE.
- LTE Legacy requirements between UE and EPS and between 2 UEs (covering e.g. Bearer Management at the UE side, ProSe including among others UE-to-network relay, MBMS). Test point: (1), (2) or (3).

Figure 4.1.2 provides a general overview of functions distributions at the MCPTT server side when multiple MCPTT Servers are involved. More functional models can be found in TS 24.379 [9].

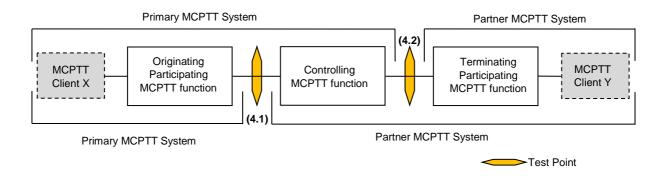


Figure 4.1.2: MCPTT Conformance testing Client-to-Client test points model

NOTE 3: While showing the different players and Server functionality, figure 4.1.2 should not be understood as showing test environment implementation.

The test points shown on Figure 4.1.2 provide an example of how 2 different communication scenarios between 2 MCPTT Servers will result in the communication between the servers being monitored at different test points (4.1) and (4.2). It should be noted that Figure 4.1.2 does not imply the physical existence of 2 test points during MCPTT Server-to-Server testing rather it shows two different information flows which need to be verified for conformance. In practice this will also mean that for testing the MCPTT Server on the Server-to-Server interface (test point 4 on Figure 4.1.1), the System Simulator (SS) will need to implement (i.e. be able to simulate) at least all 3 MCPTT functions.

## 4.2 MCPTT Conformance testing test environment overview

Based on the test points models shown in clause 4.1 examples for test environment implementations are provided below. Figures 4.2.1 to 4.2.3 show test configuration where the Implementation Under Test (IUT) and the System Simulator communicate, one with the other, over the radio interface (test points (1), (2) and (3)). Figure 4.2.4 shows test configuration where the IUT and the system simulator, simulating MCPTT Clients, communicate, one with the other, over the radio interface (test points (1)). Figures 4.2.5 and 4.2.6 show test configuration where the IUT and the System Simulator communicate, one with the other, over the MCPTT-3 interface, as defined by TS 23.179 [8], clause 7.5.2.4 (test points (4)).

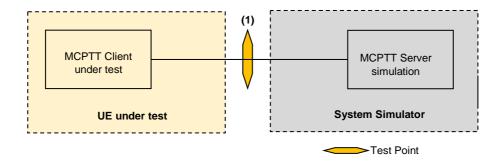


Figure 4.2.1: Testing the MCPTT Client (on-network)

NOTE 1: Figure 4.2.1 covers also the case for testing the UE at interface (1) when the IUT behaves as a Relay. For testing this the existence of another UE playing the role of an UE off-network which uses the Relay to connect to the Server will be needed. This could be implemented by the SS simulating both in similar manner as it is shown on Figure 4.2.2.

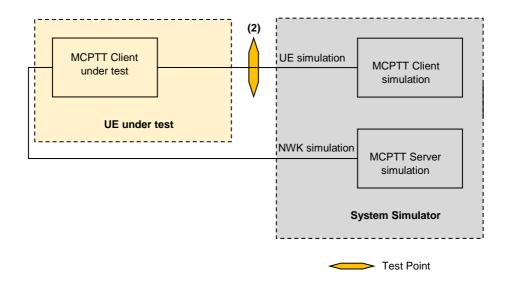


Figure 4.2.2: Testing the MCPTT Client (on-network) Relay side

NOTE 1: Figure 4.2.2 covers the case for testing the UE at interface (2) when the IUT behaves as a Relay. For testing this, the existence of NWK and Server to which the Relay relays the data will be needed. This could be implemented by the SS simulating both.

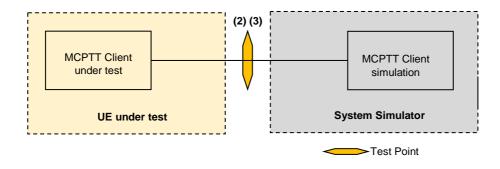


Figure 4.2.3: Testing the MCPTT Client (off-network)

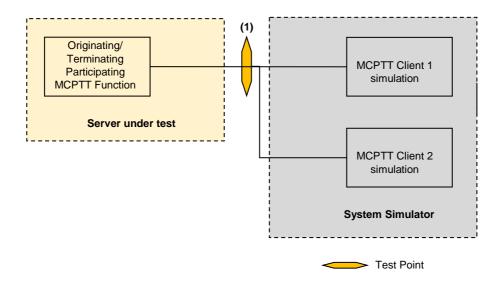


Figure 4.2.4: Testing the MCPTT Server (server-to-client)

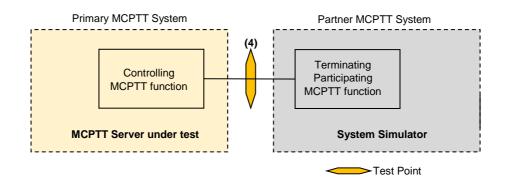


Figure 4.2.5: Testing the MCPTT Server (server-to-server), Controlling function

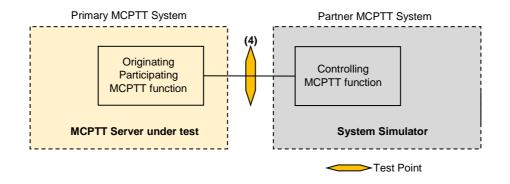


Figure 4.2.6: Testing the MCPTT Server (server-to-server), Originating function

## 4.3 MCPTT Conformance testing players and roles assumptions

Based on the described in clause 4.2 test environment scenarios a number of players and their roles have been designated to facilitate the test specification and provide a consistent test description.

For the purposes of MCPTT Client testing

#### 1 MCPTT Server:

- Server A simulated by the SS (in the case of on-network operation).

#### 2 MCPTT Clients:

- Client A installed on the implementation under test
- Client B simulated by the System Simulator (SS) either explicitly (in the case of off-network operations), or, implicitly (in the case of on-network operation).

#### 3 MCPTT Users:

- User A registered with Client A and operating on the implementation under test
- User B registered with Client B simulated by the System Simulator (SS) either explicitly (in the case of offnetwork operations), or, implicitly (in the case of on-network operation); pre-set at User A configuration as User allowed to be called by User A for any types of calls
- User C known to the User A, not involved in any communication, defined for the sole purpose of testing if the User A/Client A can distinguish between different users when choosing one of them for action; pre-set at User A configuration as User allowed to be called by User A for any types of calls.

#### 4 MCPTT groups:

- Group A to which User A is implicitly affiliated, pre-set at User A configuration, and, comprising as members User A, User B and User C, to be available throughout the entire testing.
- Group D to which User A is not implicitly affiliated, pre-set at User A configuration, and, comprising as members User B and User C, to be used for testing group affiliation.
- Groups B and C not pre-set at User A configuration, to be used for testing creation and termination of groups.

#### For the purposes of MCPTT Server testing

#### 1 MCPTT Server:

- Server A installed on the implementation under test.

2 MCPTT Clients:

- Client A simulated by the System Simulator (SS)
- Client B simulated by the System Simulator (SS).

2 MCPTT Users:

- User A registered with Client A simulated by the System Simulator (SS) ; pre-set at User A configuration as User allowed to be called by User A for any types of calls
- User B registered with Client B simulated by the System Simulator (SS); pre-set at User A configuration as User allowed to be called by User A for any types of calls

1 MCPTT group:

- Group A to which User A is implicitly affiliated, pre-set at User A configuration, and, comprising as members User A and User B to be available throughout the entire testing.

## 4.4 References to TS 33.179 and TS 33.180

For the purposes of this Technical Specification, it is assumed that TS 33.180 supersedes TS 33.179 and is a backwards compatible substitute for TS 33.179.

## 4.5 MCVideo Conformance testing test points overview

Figure 4.5.1 provides a general overview of all MCVideo players which may have a role in different conformance testing scenarios together with virtual test points representing the information flow which is intended for conformance testing. The figure is mainly for descriptive purposes and may not necessarily represent a real MCVideo deployment or implementation.

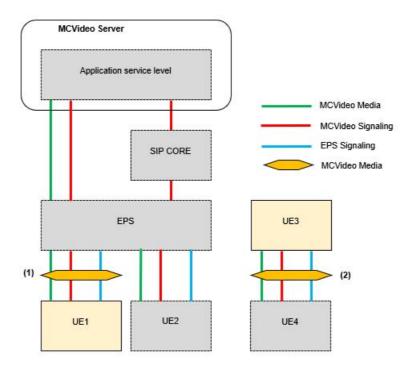


Figure 4.5.1: MCVideo Conformance testing test points model

- NOTE 1: Which of the shown entities will be simulated and which will be real implementation depends on the test scenario. In the test scenarios in which they play a part, the entities presented with dashed borders and grey fill will be always simulated whereas, the entities with light yellow fill (UE 1 or UE3) will be Implementation Under Test (IUT).
- NOTE 2: While showing the different players, figure 4.5.1 should not be understood as showing test environment implementation.

The test points shown on Figure 4.5.1 cover behaviour/requirements observed at various reference points and communication scenarios:

- MCVideo on-network (TS 23.280 [110] Functional model description clause 7.3.1 'On-network functional model' and TS 23.281 [91] Functional model description clause 6.1.1 'On-network functional model'.):
- Application plane (MCVideo-1, MCVideo-4, MCVideo-5, MCVideo-6, MCVideo-7, MCVideo-8 and MCVideo-9), and, (CSC-1, CSC-2, CSC-4, CSC-8, and CSC-14); Signalling control plane (SIP-1, HTTP-1 and HTTP-2). Test point: (1). IUT: the UE or the MCVideo Client.
- MCVideo off-network (TS 23.280 [110], clause 7.3.2 'Off-network functional model' and TS 23.281 [91], clause 6.1.2 'Off-network functional model'.). Test point: (2). IUT: the UE.
- LTE Legacy requirements between UE and EPS and between 2 UEs (covering e.g. Bearer Management at the UE side, ProSe, MBMS). Test point: (1) or (2).

## 4.6 MCVideo Conformance testing test environment overview

Based on the test points models shown in clause 4.5 examples for test environment implementations are provided below. Figures 4.6.1 and 4.6.2 show test configuration where the Implementation Under Test (IUT) and the System Simulator communicate, one with the other, over the radio interface (test points (1) and (2)).

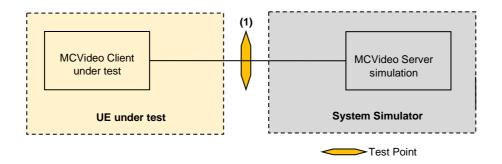


Figure 4.6.1: Testing the MCVideo Client (on-network)

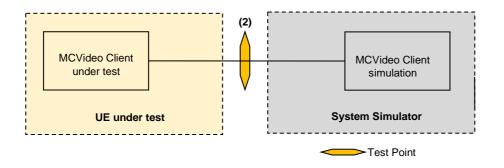


Figure 4.6.2: Testing the MCVideo Client (off-network)

# 4.7 MCVideo Conformance testing players and roles assumptions

Based on the described test environment scenarios in clause 4.6, a number of players and their roles have been designated to facilitate the test specification and provide a consistent test description.

For the purposes of MCVideo Client testing

1 MCVideo Server:

- Server A simulated by the SS (in the case of on-network operation).

2 MCVideo Clients:

- Client A installed on the implementation under test
- Client B simulated by the System Simulator (SS) either explicitly (in the case of off-network operations), or, implicitly (in the case of on-network operation).

3 MCVideo Users:

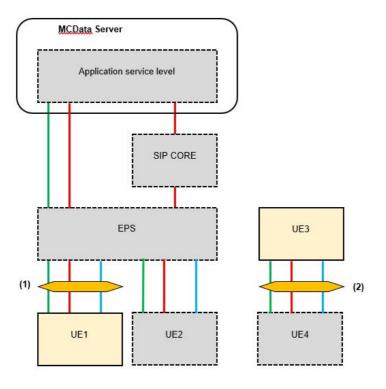
- User A registered with Client A and operating on the implementation under test
- User B registered with Client B simulated by the System Simulator (SS) either explicitly (in the case of offnetwork operations), or, implicitly (in the case of on-network operation); pre-set at User A configuration as User allowed to be called by User A for any types of calls
- User C known to the User A, not involved in any communication, defined for the sole purpose of testing if the User A/Client A can distinguish between different users when choosing one of them for action; pre-set at User A configuration as User allowed to be called by User A for any types of calls.

4 MCVideo groups:

- Group A to which User A is implicitly affiliated, pre-set at User A configuration, and, comprising as members User A, User B and User C, to be available throughout the entire testing.
- Group D to which User A is not implicitly affiliated, pre-set at User A configuration, and, comprising as members User B and User C, to be used for testing group affiliation.
- Groups B and C not pre-set at User A configuration, to be used for testing creation and termination of groups.

## 4.8 MCData Conformance testing test points overview

Figure 4.8.1 provides a general overview of all MCData players which may have a role in different conformance testing scenarios together with virtual test points representing the information flow which is intended for conformance testing. The figure is mainly for descriptive purposes and may not necessarily represent a real MCData deployment or implementation.



#### Figure 4.8.1: MCData Conformance testing test points model

- NOTE 1: Which of the shown entities will be simulated and which will be real implementation depends on the test scenario. In the test scenarios in which they play a part, the entities presented with dashed borders and grey fill will be always simulated whereas, the entities with light yellow fill (UE1 or UE3) will be Implementation Under Test (IUT).
- NOTE 2: While showing the different players, figure 4.8.1 should not be understood as showing test environment implementation.

The test points shown on Figure 4.8.1 cover behaviour/requirements observed at various reference points and communication scenarios:

- MCData on-network (TS 23.280 [110] Functional model description clause 7.3.1 'On-network functional model' and TS 23.282 [91] Functional model description clause 6.4.1, 6.5.1, and 6.6.1 'On-network functional model'.):
- Application plane (MCData-SDS-1, MCData-SDS-2, MCData-SDS-3, MCData-FD-1, MCData-FD-2, MCData-FD-3, MCData-FD-4, MCData -5, and MCData -6), and, (CSC-1, CSC-2, CSC-4, CSC-8, and CSC-14); Signalling control plane (SIP-1, HTTP-1 and HTTP-2). Test point: (1). IUT: the UE or the MCData Client.
- MCData off-network (TS 23.280 [110], clause 7.3.2 'Off-network functional model' and TS 23.282 [91], clause 6.4.2 'Off-network functional model'.). Test point: (2). IUT: the UE.
- LTE Legacy requirements between UE and EPS and between 2 UEs (covering e.g. Bearer Management at the UE side, ProSe). Test point: (1) or (2).

## 4.9 MCData Conformance testing test environment overview

Based on the test points models shown in clause 4.8 examples for test environment implementations are provided below. Figures 4.9.1 and 4.9.2 show test configuration where the Implementation Under Test (IUT) and the System Simulator communicate, one with the other, over the radio interface (test points (1) and (2)).

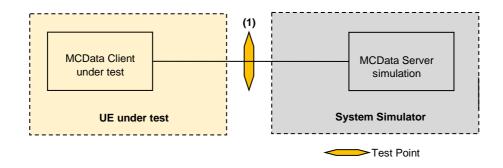


Figure 4.9.1: Testing the MCData Client (on-network)

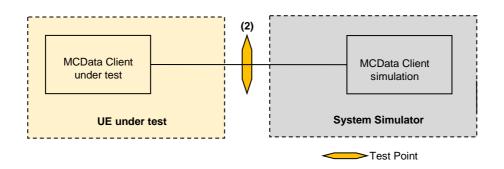


Figure 4.9.2: Testing the MCData Client (off-network)

# 4.10 MCData Conformance testing players and roles assumptions

Based on the described test environment scenarios in clause 4.9, a number of players and their roles have been designated to facilitate the test specification and provide a consistent test description.

For the purposes of MCData Client testing

1 MCdata Server:

- Server A simulated by the SS (in the case of on-network operation).

2 MCData Clients:

- Client A installed on the implementation under test
- Client B simulated by the System Simulator (SS) either explicitly (in the case of off-network operations), or, implicitly (in the case of on-network operation).

3 MCData Users:

- User A registered with Client A and operating on the implementation under test
- User B registered with Client B simulated by the System Simulator (SS) either explicitly (in the case of offnetwork operations), or, implicitly (in the case of on-network operation); pre-set at User A configuration as User allowed to be called by User A for any types of calls

- User C known to the User A, not involved in any communication, defined for the sole purpose of testing if the User A/Client A can distinguish between different users when choosing one of them for action; pre-set at User A configuration as User allowed to be called by User A for any types of calls.

4 MCData groups:

- Group A to which User A is implicitly affiliated, pre-set at User A configuration, and, comprising as members User A, User B and User C, to be available throughout the entire testing.
- Group D to which User A is not implicitly affiliated, pre-set at User A configuration, and, comprising as members User B and User C, to be used for testing group affiliation.
- Groups B and C not pre-set at User A configuration, to be used for testing creation and termination of groups.

## 5 Common Test Environment

## 5.1 General

Clause 5 provides basic test requirements, and, Generic Procedures and Default messages content to be used by the test cases wherever applicable.

## 5.2 Reference test conditions

## 5.2.1 General

For E-UTRA any frequency band can be used to provide the underlying communication bearer to carry the MCS communication. The requirements are defined in TS 36.508 [6].

## 5.2.2 On-network

## 5.2.2.1 General

In on-network test scenarios, for UE testing, the system simulator (SS) provides radio connectivity and acts as MCX server, the UE (with the MCX client installed) is the system under test (SUT). Depending on the test case requirements there are different test configurations: Single cell configuration, multi-cell configuration and single cell configuration with MBMS.

#### 5.2.2.2 Test configuration for on-network UE testing

### 5.2.2.2.1 Single cell configuration

System Simulator:

- SS (MCX server)
- One cell:

The cell belongs to the PLMN which is configured in the <HPLMN> element of the MCX Initial UE Configuration document (Table 5.5.8.1-1). For E-UTRA the cell uses default system information as specified in TS 36.508 [6] clause 4.4.

For NR the cell uses default system information as specified in TS 38.508-1 [132] clause 4.4.

#### IUT:

- UE (MCX client)
- The test USIM as defined in clause 5.5.10 is used.

### 5.2.2.2.2 Multi-cell configuration

System Simulator:

- SS (MCX server)
- Two or more cells:

The details of the multi-cell configuration (number of cells, PLMN, cell power) are specified in the test case. For E-UTRA the cells use default system information as specified in TS 36.508 [6] clause 4.4. For NR the cells use default system information as specified in TS 38.508-1 [132] clause 4.4.

#### IUT:

- UE (MCX client)
- The test USIM as defined in clause 5.5.10 is used.

## 5.2.2.2.3 Single cell configuration with MBMS

System Simulator:

- SS (MCX server)
- One cell:

The cell belongs to the PLMN which is configured in the <HPLMN> element of the MCX Initial UE Configuration document (Table 5.5.8.1-1). For E-UTRA the cell uses system information combination 15 as defined in TS 36.508[6] clause 4.4.3.1; a pre-activated MBMS bearer exists.

#### IUT:

- UE (MCX client)
- The test USIM as defined in clause 5.5.10 is used.

## 5.2.3 Off-network

When operating in off-network environment a MCS client shall:

- implement the procedures for ProSe direct discovery for public safety use as specified in 3GPP TS 24.334 [78];
- implement the procedures for one-to-one ProSe direct communication for Public Safety use as specified in 3GPP TS 24.334 [78].
- implement the procedures for one-to-many ProSe direct communication for Public Safety use as specified in 3GPP TS 24.334 [78].

## 5.3 Generic test procedures for UE MCS operation

## 5.3.1 General

The purpose of the procedures specified in the following clauses is to facilitate test description by providing procedure sequences which can be referred from the relevant test cases specified e.g. in 3GPP TS 37.579-2 [2], 3GPP TS 37.579-6 [84], 3GPP TS 37.579-7 [85].

The procedures specified are required to ensure that any MC service can take place or specific MC relevant preconditions are met before a test case can be executed.

Within the context of the procedures, MCX refers to MCPTT, MCVideo or MCData.

## 5.3.2 Initial MCX Authentication, Registration, Configuration and Subscription

#### 5.3.2.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

In addition:

- The MCX Client has been provisioned either with the address information of the server from which the client can retrieve the MCX UE initial configuration document (steps 1a1-1a2 of procedure 'MCX Initial Configuration and User Authentication', Table 5.3.2.3.1-1) or directly with the Initial UE Configuration Data as specified in Table 5.5.8.1-1.
- According to TS 33.180 [94] all HTTP connections are secured by TLS. The HTTP-1 interface authentication between the HTTP client in the MC UE and the HTTP server endpoint (HTTP proxy, IdM server or KMS) shall be performed by one-way authentication of the HTTP server endpoint based on server certificate as described in TS 33.180 [94] clause 6.1.1.
- The UE User is provided with username/password for user authentication (px\_MCX\_User\_A\_username, px\_MCX\_User\_A\_password as provided in TS 37.579-5 [5], Table 9.2-1: MCX Client Common PIXIT).
- The UE is provisioned with the names and values of the Transport Key (TrK) and the Integrity Key (InK), since the KMS shall encrypt the key material sent to the client with the TrK and sign the response with the TrK or the InK according to TS 33.180 [94].

#### 5.3.2.2 Main Procedure

#### 5.3.2.2.1 Procedure

#### Table 5.3.2.2.1-1: Initial MCX Authentication, Registration, Configuration and Subscription

St	Procedure	Message Sequence		
		U - S	Message	
-	EXCEPTION: The procedures of steps 1 and 2	-	-	
	happen in parallel			
1	The UE (MCX client) performs procedure	-	-	
	<b>'MCX Initial Configuration and User</b>			
	Authentication' as described in Table			
	5.3.2.3.1-1			
2	The UE (MCX client) performs procedure 'SIP	-	-	
	registration' as described in Table 5.3.2.4.1-1			
	(NOTE 1)			
-	EXCEPTION: The procedures of steps 3, 4	-	-	
	and 5 happen in parallel			
3	The UE (MCX client) performs procedure 'Publication of MCX service settings' as	-	-	
	described in Table 5.3.2.5.1-1			
	(NOTE 1)			
4	The UE (MCX client) performs procedure	-	-	
	'Configuration management subscription'			
	as described in Table 5.3.2.6.1-1			
5	The UE (MCX client) performs procedure	-	-	
	'Group management subscription with			
	optional GMK retrieval' as described in Table			
	5.3.2.7.1-1			
6	The SS (MCX server) sends a SIP MESSAGE	<	SIP MESSAGE	
	for configuration of Location Info reporting.			
7	The UE (MCX client) responds with SIP 200	>	SIP 200 (OK)	
	(OK)			
NOTE			be provided using either a SIP REGISTER at initial	
			SIP PUBLISH for MCPTT server settings (Table	
	5.3.2.5.1-1 step 1b1); the SIP REGISTER ca	an only be	e used when the access token is already available.	

#### 5.3.2.2.2 Specific message contents

All message contents are as specified in clause 5.5 with the following clarifications:

### Table 5.3.2.2.2-1: SIP MESSAGE (step 6, Table 5.3.2.2.1-1)

Derivation Path: Table 5.5.2.7.2-	1, condition LOCATION_0	CONFIG		
Information Element	Value/remark	Comment	Reference	Condition
Message-body				
MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-body	MCPTT-Info as described in Table 5.3.2.2.2-2			MCPTT
	MCVideo-Info as described in Table 5.3.2.2.2-3			MCVIDEO
	MCData-Info as described in Table 5.3.2.2.2-4			MCDATA

### Table 5.3.2.2.2-2: MCPTT Info in SIP MESSAGE (Table 5.3.2.2.2-1)

Derivation Path: Table 5.5.3.2.2-1					
Information Element	Value/remark	Comment	Reference	Condition	
mcpttinfo					
mcptt-Params					
mcptt-calling-user-id	not present				

#### Table 5.3.2.2.3: MCVideo Info in SIP MESSAGE (Table 5.3.2.2.1)

Derivation Path: Table 5.5.3.2.2-2					
Information Element	Value/remark	Comment	Reference	Condition	
mcvideoinfo					
mcvideo-Params					
mcvideo-calling-user-id	not present				

#### Table 5.3.2.2.2-4: MCData Info in SIP MESSAGE (Table 5.3.2.2.2-1)

Derivation Path: Table 5.5.3.2.2-3				
Information Element	Value/remark	Comment	Reference	Condition
mcdatainfo				
mcdata-Params				
mcdata-calling-user-id	not present			

- 5.3.2.3 MCX Initial Configuration and User Authentication
- 5.3.2.3.1 Procedure

Table 5.3.2.3.1-1: MCX Initial Configuration and User Authentication

St	Procedure		Message Sequence		Verdict	
5.	i i occure	U - S	Message	TP	T GI GI GI GI	
-	EXCEPTION: Steps 1a1-1a2 describe behaviour that depends on UE implementation.	-	-	-	-	
1a1	IF the UE (MCX client) is capable of downloading the MCX UE initial configuration document THEN the UE (MCX client) sends an HTTP GET Request to retrieve the initial UE configuration from the server.	>	HTTP GET (initial UE configuration)	-	Ρ	
	NOTE: Otherwise the UE needs to be preconfigured with the Initial UE Configuration Data as initial condition.					
1a2	The SS sends an HTTP 200 (OK) including the initial UE configuration document	<	HTTP 200 (OK)	-	-	
2	Void	-	-	-	-	
-	EXCEPTION: The messages in steps 3a1-7 are transmitted over a secure TLS tunnel that has been established by the UE (MCX client) as specified by 3GPP TS 33.310 [70], to the authorisation endpoint of the IdM server as specified in 3GPP TS 33.180 [94] using the configured URL of the authorisation endpoint of the IdM server as specified in the " <x>/OnNetwork/AppServerInfo/IDMSAuthEndpoint" leaf node, Table 5.5.8.1-1.</x>	-	-	-	-	
-	EXCEPTION: Steps 3a1-3b1 describe behaviour that depends on UE implementation of the OpenID Connect protocol; the UE may either use an HTTP GET or an HTTP POST to send the OpenID Connect Authentication Request.	-	-	-	-	
3a1	The UE (MCX client) sends an OpenID Connect Authentication Request using HTTP GET.	>	HTTP GET (Authorization)	-	Р	
3b1	The UE (MCX client) sends an OpenID Connect Authentication Request using HTTP POST.	>	HTTP POST (Authorization)	-	Р	
4	The SS sends an HTTP 200 (OK) including the HTML form requesting username and password.	<	HTTP 200 (OK)	-	-	
5	Provide the UE (MCX client) with user credentials: username and password (px_MCX_User_A_username, px_MCX_User_A_password). (NOTE 1)	-	-	-	-	
6	The UE (MCX client) sends an HTTP POST Request containing user name and password.	>	HTTP POST	-	Р	
7	The SS sends a HTTP 302 (Found) as the OpenID Connect Authentication Response containing an authorization code.	<	HTTP 302 (Found)	-	-	
8	Void	-	-	-	-	
-	EXCEPTION: The messages in steps 9-10 are transmitted over a secure TLS tunnel that has been established by the UE (MCX client) as specified by 3GPP TS 33.310 [70] to the token endpoint of the IdM server as specified in 3GPP TS 33.180 [94] using the configured URL of the token endpoint of the IdM server as specified in the "/ <x>/OnNetwork/AppServerInfo/IDMSTokenEndpoint" leaf node, Table 5.5.8.1-1.</x>	-	-	-	-	
9	The UE (MCX client) sends an HTTP POST Request (OIDC Token Request), passing the authorization code obtained in step 7.	>	HTTP POST	-	Р	
10	The SS sends an HTTP 200 (OK) providing id_token, access_token and refresh token.	<	HTTP 200 (OK)	-	-	
-	EXCEPTION: The messages in steps 11-14 are transmitted over a secure TLS tunnel that has been established by the UE (MCX client) as specified by 3GPP TS 33.310 [70] to the HTTP Proxy as specified in 3GPP TS 33.180 [94] using the configured URL of the HTTP Proxy as specified in the "/ <x>/OnNetwork/AppServerInfo/HTTPproxy" leaf node, Table 5.5.8.1-1.</x>	-	-	-	-	
11	The UE (MCX client) sends an HTTP POST presenting the access token obtained in step 10.	>	HTTP POST	-	Р	

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message	]	
12	The SS replies with identity specific key information.	<	HTTP 200 (OK)	-	-
13	The UE (MCX client) sends an HTTP POST presenting an access token for Key Material Request.	>	HTTP POST	-	Р
14	The SS replies to the UE with identity specific key information.	<	HTTP 200 (OK)	-	-
NOTE	NOTE 1: The UE is expected to prompt the MCX user for username and password, or it may be stored on the UE. The provision of the username/password is expected to be done via a suitable implementation dependent MMI.				

# 5.3.2.3.2 Specific message contents

All message contents are as specified in clause 5.5 with the following clarifications:

#### Table 5.3.2.3.2-1: HTTP GET (Step 1, Table 5.3.2.3.1-1)

#### Derivation Path: Table 5.5.4.2-1, condition UEINITIALCONFIG

#### Table 5.3.2.3.2-2: HTTP 200 (OK) (Step 2, Table 5.3.2.3.1-1)

Derivation Path: Table 5.5.4.6-1, condition UEINITIALCONFIG

## Table 5.3.2.3.2-3: HTTP GET (Step 3a1, Table 5.3.2.3.1-1)

Derivation Path: Table 5.5.4.2-1, condition AUTH

#### Table 5.3.2.3.2-4: HTTP POST (Step 3b1, Table 5.3.2.3.1-1)

Derivation Path: Table 5.5.4.3-1, condition AUTH

## Table 5.3.2.3.2-5: HTTP 200 (OK) (Step 4, Table 5.3.2.3.1-1)

Derivation Path: Table 5.5.4.6-1 Information Element	Value/remark	Comment	Reference	Condition
Content-Type	Value/Telliark		Reference	oonanion
media-type	"text/html"		RFC 2854 [111]	
Message-body				
HTML form	<pre><!DOCTYPE html>     <html> <html> <body> <form action="/idms/userauth" method="post"> Username: <input name="user" type="text"/> Password: <input name="password" type="password"/><bu tton="" type="submit">Login </bu></form> </body> </html></html></pre>	"/idms/userauth" given by tsc_MCX_IdMS_userau th_UriPath is the URI to be used by the UE as request URI in the HTTP POST request for user authentication	HTML 4.01 Specification [105]	

#### Table 5.3.2.3.2-6: HTTP POST (Step 6, Table 5.3.2.3.1-1)

Derivation Path: Table 5.5.4.3-1, condition USERAUTH

#### Table 5.3.2.3.2-7: HTTP 302 (Found) (Step 7, Table 5.3.2.3.1-1)

Derivation Path: Table 5.5.4.8-1, condition AUTH.

#### Table 5.3.2.3.2-8: HTTP POST (Step 9, Table 5.3.2.3.1-1)

Derivation Path: Table 5.5.4.3-1, condition TOKEN

#### Table 5.3.2.3.2-9: HTTP 200 (OK) (Step 10, Table 5.3.2.3.1-1)

Derivation Path: Table 5.5.4.6-1, condition TOKEN

#### Table 5.3.2.3.2-10: HTTP POST (Step 11, Table 5.3.2.3.1-1)

Derivation Path: Table 5.5.4.33-1, condition KMSINIT.

#### Table 5.3.2.3.2-11: HTTP 200 (OK) (Step 12, Table 5.3.2.3.1-1)

Derivation Path: Table 5.5.4.6-1, condition KMSINIT.

#### Table 5.3.2.3.2-12: HTTP POST (Step 13, Table 5.3.2.3.1-1)

Derivation Path: Table 5.5.4.3-1, condition KMSKEY.

#### Table 5.3.2.3.2-13: HTTP 200 (OK) (Step 14, Table 5.3.2.3.1-1)

Derivation Path: Table 5.5.4.6-1, condition KMSKEY.

# 5.3.2.4 SIP Registration

#### 5.3.2.4.1 Procedure

# Table 5.3.2.4.1-1: SIP Registration

St	Procedure		Message Sequence			
		U - S	Message			
1	The UE sends an initial registration for IMS services.	>	SIP REGISTER			
2	The SS responds with a valid AKAv1-MD5 authentication challenge and security mechanisms supported by the network.	<	SIP 401 Unauthorized			
-	EXCEPTION: The UE completes the security negotiation procedures, sets up a temporary set of SAs and uses those for sending another SIP REGISTER with AKAv1-MD5 credentials at step 3a1 or 3a2	-	-			
-	EXCEPTION: Steps 3a1-3b1 describe behaviour that depends on UE implementation and on availability of an access-token (NOTE 1)	-	-			
3a1	IF the client has retrieved the access token already at MCX User Authentication (Table 5.3.2.3.1-1 steps 9-10) THEN the UE may use the SIP REGISTER to provide access token and CSK for service authorisation (NOTE 2)	>	SIP REGISTER (access token, CSK)			
3b1	ELSE the UE sends SIP REGISTER without access token and CSK	>	SIP REGISTER			
4	The SS responds with 200 OK.	<	SIP 200 OK			
	<ul> <li>NOTE 1: According to TS 33.180 [94], clause 5.1.3.2.1 sending of the SIP REGISTER shall not be delayed for lack of an access token ⇒ If the client does not have the access token yet, the client shall sent the SIP REGISTER without service authorisation and shall provide the access token in the SIP PUBLISH (Table 5.3.2.5.1-1, step 1b1)</li> <li>NOTE 2: As the MCPTT/MCVideo/MCData Info containing the access token is security protected the client also needs to provide the CSK used for cyphering and integrity protection.</li> </ul>					

## 5.3.2.4.2 Specific message contents

All message contents are as specified in clause 5.5 with the following clarifications:

# Table 5.3.2.4.2-1: SIP REGISTER (Step 1, Table 5.3.2.4.1-1)

Derivation Path: Table 5.5.2.13-1, condition SIP\_REGISTER\_INITIAL

# Table 5.3.2.4.2-2: SIP REGISTER (Step 3a1, Table 5.3.2.4.1-1)

Derivation Path: Table 5.5.2.13-1,	Derivation Path: Table 5.5.2.13-1, condition SERVICE_AUTH						
Information Element	Value/remark	Comment	Reference	Condition			
Message-body			RFC 3261 [22]				
MIME body part		MCPTT/MCVideo/MCD ata Info					
MIME-part-body	MCPTT-Info as described in Table 5.3.2.4.2-3		TS 24.379 [9] clause F.1	MCPTT			
	MCVideo-Info as described in Table 5.3.2.4.2-4		TS 24.281 [86] clause F.1	MCVIDEO			
	MCData-Info as described in Table 5.3.2.4.2-5		TS 24.282 [87] clause D.1	MCDATA			

## Table 5.3.2.4.2-3: MCPTT-Info in SIP REGISTER (Table 5.3.2.4.2-2)

Derivation Path: Table 5.5.3.2.1-1, condition CONFIG, REGISTER\_PUBLISH

#### Table 5.3.2.4.2-4: MCVideo-Info in SIP REGISTER (Table 5.3.2.4.2-2)

Derivation Path: Table 5.5.3.2.1-2, condition CONFIG, REGISTER\_PUBLISH

#### Table 5.3.2.4.2-5: MCData-Info in SIP REGISTER (Table 5.3.2.4.2-2)

Derivation Path: Table 5.5.3.2.1-3, condition CONFIG, REGISTER

- 5.3.2.5 Publication of MCX service settings
- 5.3.2.5.1 Procedure

#### Table 5.3.2.5.1-1: Publication of MCX service settings

St	Procedure		Message Sequence	TP	Verdict	
		U - S	Message			
	EXCEPTION: Steps 1a1-1b1 describe behaviour that depends on whether or not the client has provided an access token for service authorisation already at SIP registration (Table 5.3.2.4.1-1)					
1a1	IF the UE (MCX client) has provided the access token at SIP registration THEN the UE (MCX client) sends a SIP PUBLISH request for update of PoC-settings only. (NOTE 1).	>	SIP PUBLISH	-	Р	
1b1	ELSE the UE (MCX client) sends a SIP PUBLISH request for service authorisation and update of PoC-settings. (NOTE 1).	>	SIP PUBLISH	-	Р	
2	The SS (MCX server) sends SIP 200 (OK).	<	SIP 200 (OK)	-	-	
NOTE	NOTE 1: The PoC-settings document contains the user profile index of the selected user profile.					
	$\Rightarrow$ In general the UE sends the SIP PUBLISH request 5.3.2.6.1-1.	t not before	e it has retrieved the user profile	at step 8	in Table	

#### 5.3.2.5.2 Specific message contents

All message contents are as specified in clause 5.5 with the following clarifications:

## Table 5.3.2.5.2-1: SIP PUBLISH (Step 1a1, Table 5.3.2.5.1-1)

Derivation Path: Table 5.5.2.11-1	Derivation Path: Table 5.5.2.11-1, condition POC-SETTINGS-EVENT							
Information Element	Value/remark	Comment	Reference	Condition				
Message-body								
MIME body part		MCPTT/MCVideo/MCD ata Info						
MIME-part-body	MCPTT-Info as described in Table 5.3.2.5.2-3			MCPTT				
	MCVideo-Info as described in Table 5.3.2.5.2-4			MCVIDEO				
	MCData-Info as described in Table 5.3.2.5.2-5			MCDATA				

Derivation Path: Table 5.5.2.11-1,	Derivation Path: Table 5.5.2.11-1, condition POC-SETTINGS-EVENT, SERVICE_AUTH							
Information Element	Value/remark	Comment	Reference	Condition				
Message-body								
MIME body part		MCPTT/MCVideo/MCD ata Info						
MIME-part-body	MCPTT-Info as described in Table 5.3.2.5.2-3			MCPTT				
	MCVideo-Info as described in Table 5.3.2.5.2-4			MCVIDEO				
	MCData-Info as described in Table 5.3.2.5.2-5			MCDATA				

Table 5.3.2.5.2-2: SIP PUBLISH	(Step 1a2, Table 5.3.2.5.1-1)
--------------------------------	-------------------------------

# Table 5.3.2.5.2-3: MCPTT-Info in SIP PUBLISH (Table 5.3.2.5.2-1/2)

Derivation Path: Table 5.5.3.2.1-1, condition CONFIG, REGISTER\_PUBLISH

# Table 5.3.2.4.2-4: MCVideo-Info in SIP PUBLISH (Table 5.3.2.5.2-1/2)

Derivation Path: Table 5.5.3.2.1-2, condition CONFIG, REGISTER\_PUBLISH

## Table 5.3.2.4.2-5: MCData-Info in SIP PUBLISH (Table 5.3.2.5.2-1/2)

Derivation Path: Table 5.5.3.2.1-3, condition CONFIG, REGISTER

## 5.3.2.6 Configuration management subscription

## 5.3.2.6.1 Procedure

# Table 5.3.2.6.1-1: Configuration management subscription

St	Procedure	dure Message Sequence TP Ver		Verdict	
		U - S	Message		
1	The UE (MCX client) sends a SIP SUBSCRIBE -	>	SIP SUBSCRIBE	-	Р
	subscription to multiple documents simultaneously -				
	containing the access token and a resource list body				
	containing a list adressing the following documents:				
	MCX UE Configuration document, MCX User Profile				
	Configuration Document, and the MCX Service				
	configuration document. The base URI of each list entry				
	is set to the CMS XCAP-ROOT-URI.				
2	The SS sends a SIP 200 (OK).	<	SIP 200 (OK)	-	-
3	The SS sends a SIP NOTIFY containing the XCAP-	<	SIP NOTIFY	-	-
	URIs of the documents.				
-	EXCEPTION: The order of steps 4, 5, 7 and 9 depends	-	-	-	-
	on UE and SS implementation and is not checked by				
	the implementation				
4	The UE (MCX client) sends a SIP 200 (OK).	>	SIP 200 (OK)	-	Р
5	The UE (MCX client) sends an HTTP GET Request	>	HTTP GET	-	Р
	containing the access token and the XCAP-URI of the				
	MCX UE Configuration Document.				
	NOTE: The MCX Client is requesting the MCX UE				
	Configuration Document.				
6	The SS sends an HTTP 200 (OK) including the MCX UE	<	HTTP 200 (OK)	-	-
	Configuration Document.				
7	The UE (MCX client) sends an HTTP GET Request	>	HTTP GET	-	Р
	containing the access token and the XCAP-URI of the				
	MCX User Profile Configuration Document.				
	NOTE: The MCX Client is requesting the MCX User				
	Profile Configuration Document.				
8	The SS sends an HTTP 200 (OK) including the MCX	<	HTTP 200 (OK)	-	-
	User Profile Configuration Document.				
	NOTE: The MCX User Profile Configuration Document				
	includes information on MCX groups including for which				
	groups the MCX Client is a member. The MCX User				
	Profile Configuration Document includes Group A as a				
	group for which the MCX Client is a member and is				
	implicitly affiliated. Group A is used as the default group				
	for all test cases in TS 37.579-2.				
9	The UE (MCX client) sends an HTTP GET Request	>	HTTP GET	-	Р
	containing the access token and the XCAP-URI of the				
	MCX Service Configuration Document.				
	NOTE: The MCX Client is requesting the MCX Service				
	Configuration Document.				
10	The SS sends an HTTP 200 (OK) including the MCX	<	HTTP 200 (OK)	-	
	Service Configuration Document.				

## 5.3.2.6.2 Specific message contents

All message contents are as specified in clause 5.5 with the following clarifications:

# Table 5.3.2.6.2-1: SIP SUBSCRIBE (Step 1, Table 5.3.2.6.1-1)

Derivation Path: Table 5.5.2.14-1, condition CONFIG

#### Table 5.3.2.6.2-2: SIP NOTIFY (Step 3, Table 5.3.2.6.1-1)

Derivation Path: Table 5.5.2.8-1, condition CONFIG

#### Table 5.3.2.6.2-3: HTTP GET (Step 5, Table 5.3.2.6.1-1)

Derivation Path: Table 5.5.4.2-1, condition UECONFIG.

#### Table 5.3.2.6.2-4: HTTP GET (Step 7, Table 5.3.2.6.1-1)

Derivation Path: Table 5.5.4.2-1, condition UEUSERPROF.

#### Table 5.3.2.6.2-5: HTTP GET (Step 9, Table 5.3.2.6.1-1)

Derivation Path: Table 5.5.4.2-1, condition UESERVCONFIG.

#### Table 5.3.2.6.2-6: HTTP 200 (OK) (Step 6, Table 5.3.2.6.1-1)

Derivation Path: Table 5.5.4.6-1, condition UECONFIG.

# Table 5.3.2.6.2-7: HTTP 200 (OK) (Step 8, Table 5.3.2.6.1-1)

Derivation Path: Table 5.5.4.6-1, condition UEUSERPROF.

#### Table 5.3.2.6.2-8: HTTP 200 (OK) (Step 10, Table 5.3.2.6.1-1)

Derivation Path: Table 5.5.4.6-1, condition UESERVCONFIG.

# 5.3.2.7 Group management subscription with optional GMK retrieval

# 5.3.2.7.1 Procedure

# Table 5.3.2.7.1-1: Group management subscription with optional GMK retrieval

St	Procedure		Message Sequence		Verdict
		U - S	Message		
-	EXCEPTION: Steps 1a1-1c4 describe behaviour that				
	depends on UE implementation; the UE may either				
	use a single SIP SUBSCRIBE for subscription to				
	group A and the GKTP or it uses separate SIP				
	SUBSCRIBE requests.				
1a1	The UE (MCX client) sends a SIP SUBSCRIBE	>	SIP SUBSCRIBE (group A,	-	Р
	containing a resource-lists body with an entry for		GKTP)		
	subscription to the group configuration document				
	(group A) and an entry for subscription to the MCS				
	GKTP document for Group communication key				
	retrieval (GMK retrieval).				
1a2	The SS sends a SIP 200 (OK).	<	SIP 200 (OK)	-	-
1b1	The UE (MCX client) sends a SIP SUBSCRIBE	>	SIP SUBSCRIBE (group A)	-	-
	containing a resource-lists body with a single entry for				
	subscription to the group configuration document				
	(group A).				
1b2	The SS sends a SIP 200 (OK).	<	SIP 200 (OK)	-	-
1c1	The UE (MCX client) sends a SIP SUBSCRIBE	>	SIP SUBSCRIBE (GKTP)	-	-
	containing a resource-lists body with a single entry for				
	subscription to the MCS GKTP document for Group				
	communication key retrieval (GMK retrieval).				
1c2	The SS sends a SIP 200 (OK).	<	SIP 200 (OK)	-	-
1c3	The UE (MCX client) sends a SIP SUBSCRIBE	>	SIP SUBSCRIBE (group A)	-	-
	containing a resource-lists body with a single entry for				
	subscription to the group configuration document				
	(group A).				
1c4	The SS sends a SIP 200 (OK).	<	SIP 200 (OK)	-	-
2	Void	-	-	-	-
-	EXCEPTION: IF and only if the UE has performed	-	-	-	-
	steps 1b1-1b2 THEN in parallel to the events				
	described in steps 3-6, the behaviour of Table				
	5.3.2.7.1-2 happens: The UE (MCX client) optionally				
	subscribes to the MCS GKTP document for Group				
	communication key retrieval (GMK retrieval).				
3	The SS sends a SIP NOTIFY containing the XCAP-	<	SIP NOTIFY (group A)	-	-
	URI of the Group Configuration document for group A.				
-	EXCEPTION: The order of steps 4 and 5 depends on	-	-	-	-
4	UE and SS implementation and is not checked.				
<u>4</u> 5	The UE (MCX client) sends a SIP 200 (OK). The UE (MCX client) sends an HTTP GET Request	>	SIP 200 (OK) HTTP GET (group A)	-	P P
Э	containing the access token and the XCAP-URI of the	>		-	
	Group Configuration document.				
6	The SS sends an HTTP 200 (OK) containing the	-	HTTP 200 (OK)	-	
0	Group Configuration Document.	<		-	-
-	EXCEPTION: Steps 7a1-7a2 describe behaviour that	-	-		_
-	depends on whether the UE has requested a GMK at	-		-	-
	step 1a1, step 1c1 or at step 2a1 of the parallel				
	behaviour in Table 5.3.2.7.1-2				
7a1	IF the UE has requested a GMK THEN the SS sends	<	SIP NOTIFY (GKTP)	-	-
701	a SIP NOTIFY containing the group key transport			-	_
	payloads (GKTP) document with the GMK.				
7a2	The UE (MCX client) sends a SIP 200 (OK).	>	SIP 200 (OK)	-	Р
, u2				1 -	

St	Procedure	Message Sequence		TP	Verdict	
		U - S	Message			
1	The SS starts timer Timer_1 = 5 seconds.	-	-	-	-	
-	EXCEPTION: Steps 2a1-2b1 describe behaviour that depends on UE implementation; in general the group communication key retrieval is optional at initial registration. (NOTE 1)	-	-	-	-	
2a1	The UE (MCX client) sends a SIP SUBSCRIBE creating a new dialog and containing a resource list body containing a single entry for subscription to the MCS GKTP document for Group communication key retrieval (GMK retrieval).	>	SIP SUBSCRIBE (GKTP)	-	Р	
2a2	The SS sends a SIP 200 (OK)	<	SIP 200 (OK)	-	-	
2a3	The SS stops Timer_1.	-	-	-	-	
2b1	Timer_1 expires	-	-	-	-	
NOTE	NOTE 1: The key retrieval from the GMS is necessary for the MCX UE under test to enable ciphering exchanged media in group communications.					

Table 5.3.2.7.1-2: Stand-alone group communication key request

#### 5.3.2.7.2 Specific message contents

All message contents are as specified in clause 5.5 with the following clarifications:

## Table 5.3.2.7.2-1: SIP SUBSCRIBE (Step 1a1, Table 5.3.2.7.1-1)

Derivation Path: Table 5.5.2.14-1, condition GROUPCONFIG							
Information Element Value/remark Comment Reference Condition							
Message-body							
MIME body part		Resource-lists					
MIME-part-body	Resource-lists as described in Table 5.3.2.7.2-2						

# Table 5.3.2.7.2-2: Resource-Lists in SIP SUBSCRIBE (Table 5.3.2.7.2-1)

Derivation Path: Table 5.5.3.3.1A-1, condition GROUPCONFIG, GROUPKEY

# Table 5.3.2.7.2-3: SIP SUBSCRIBE (Step 1b1, Table 5.3.2.7.1-1; step 1c3, Table 5.3.2.7.1-1)

Derivation Path: Table 5.5.2.14-1, condition GROUPCONFIG							
Information Element Value/remark Comment Reference Condition							
Message-body							
MIME body part		Resource-lists					
MIME-part-body	Resource-lists as described in Table 5.3.2.7.2-4						

# Table 5.3.2.7.2-4: Resource-Lists in SIP SUBSCRIBE (Table 5.3.2.7.2-3)

Derivation Path: Table 5.5.3.3.1A-1, condition GROUPCONFIG

Derivation Path: Table 5.5.2.14-1, condition GROUPCONFIG								
Information Element Value/remark Comment Reference Condition								
Message-body								
MIME body part		Resource-lists						
MIME-part-body	Resource-lists as described in Table 5.3.2.7.2-6							

## Table 5.3.2.7.2-6: Resource-Lists in SIP SUBSCRIBE (Table 5.3.2.7.2-5)

Derivation Path: Table 5.5.3.3.1A-1, condition GROUPKEY

#### Table 5.3.2.7.2-7: SIP NOTIFY (Step 3, Table 5.3.2.7.1-1)

Derivation Path: Table 5.5.2.8-1, condition GROUPCONFIG

## Table 5.3.2.7.2-8: HTTP GET (Step 5, Table 5.3.2.7.1-1)

Derivation Path: Table 5.5.4.2-1, condition GROUPCONFIG

#### Table 5.3.2.7.2-9: HTTP 200 (OK) (Step 6, Table 5.3.2.7.1-1)

Derivation Path: Table 5.5.4.6-1, condition GROUPCONFIG.

#### Table 5.3.2.7.2-10: SIP NOTIFY (Step 7a1, Table 5.3.2.7.1-1)

Derivation Path: Table 5.5.2.8-1, condition GROUPCONFIG						
Information Element	Value/remark	Comment	Reference	Condition		
Message-body						
xcap-diff document	xcap-diff document as described in Table 5.3.2.7.2-11					

#### Table 5.3.2.7.2-11: Xcap-Diff Document (Table 5.3.2.7.2-10)

Derivation Path: Table 5.5.3.12-2, condition GROUPKEY

# 5.3.3 MCX pre-established session establishment

#### 5.3.3.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_IDLE state.

# 5.3.3.2 Void

## 5.3.3.3 Procedure

# Table 5.3.3.3-1: MCX pre-established session establishment CO

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message		
1	The procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
2-7	Void	-	-	-	-
8	Check: Does the UE (MCX Client) send a SIP INVITE message in order to create a pre-established session?	>	SIP INVITE	-	Р
-	EXCEPTION: In parallel to the steps below a dedicated bearer gets established as described in clause 5.4.3.	-	-	-	-
8A	The SS sends a SIP 100 Trying	<	SIP 100 Trying	-	-
9	Void	-	-	-	-
10	The SS (MCX server) responds with a SIP 200 (OK) message.	<	SIP 200 (OK)	-	-
10A	Check: Does the UE (MCX Client) respond with a SIP ACK message?	>	SIP ACK	-	Р
11	Void	-	-	-	-
12	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection keeping the dedicated bearer.	-	-	-	-

5.3.3.4 Specific message contents

Table 5.3.3.4-1: SIP INVITE from the UE (step 8, Table 5.3.3.3-1)

Derivation Path: Table 5.5.2.5.1 Information Element	Value/remark	Comment	Reference	Condition
Contact			RFC 3261 [22	
feature-param	"+g.3gpp.mcptt"	This media feature tag	RFC 3840 [33]	MCPTT
	· 3.0355	when used in a SIP		
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports Mission		
		Critical Push To Talk (MCPTT)		
		communication.		
	"+g.3gpp.mcvideo"	This media feature tag		MCVIDEO
	-g.ogpp.monace	when used in a SIP		MOVIDEO
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports Mission		
		Critical Video		
		(MCVideo) communication.		
	"+g.3gpp.mcdata.sds"	This media feature tag		MCDATA_
	' g.ogpp.modala.sus	when used in a SIP		SDS
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports mission		
		critical data (MCData)		
facture perce	"audio"	service.communication.		MCPTT
feature-param	audio	This feature tag indicates that the		OR
		device supports audio		MCVIDEO
		as a streaming media		MOVIDEO
		type.		
feature-param	"video"	This feature tag		MCVIDEO
		indicates that the		
		device supports video		
		as a streaming media		
factura param	"text"	type. This feature tag		MCDATA_
feature-param	lexi	indicates that the		SDS
		device supports text as		000
		a streaming media		
		type.		
Accept			RFC 3261 [22]	
media-range[1]	"application/sdp"			
Answer-Mode	not present			
Content-Type	Hammeller (* 1719			MODIT
media-type	"application/sdp"			MCPTT
				OR MCVIDEO
media-type	"multipart/mixed"			MCDATA_
modia type	maniputentined			SDS
Message-body				MCPTT
<b>C</b>				OR
				MCVIDEO
SDP Message	SDP message as			MCPTT
	described in Table			
	5.5.3.1.1-1 with			
	PRE_ESTABLISHED_			
	SESSION, INITIAL_SDP_OFFER			

	SDP message as described in Table 5.5.3.1.1-2 with condition PRE_ESTABLISHED_ SESSION, INITIAL_SDP_OFFER		MCVIDEO
Message-body			MCDATA_ SDS
MIME body part		SDP message	
MIME-part-body	SDP message as described in Table 5.5.3.1.1-3 with condition PRE_ESTABLISHED_ SESSION, MCDATA_SDS, SDP_OFFER, SDS_SESSION		
MIME body part		MCData-Info	
MIME-part-body	MCData-Info message as described in Table 5.5.3.2.1-3 with condition PRE_ESTABLISHED_ SESSION		

# Table 5.3.3.4-2: SIP 200 (OK) from the SS (step 10, Table 5.3.3.3-1)

Derivation Path: Table 5.5.2.17.	1.2-1, condition INVITE-RSP	1		
Information Element	Value/remark	Comment	Reference	Condition
Contact				
addr-spec				
user-info and host	tsc_MCX_SessionID_B	The URI that identifies the pre-established session		
Message-body				
SDP Message	SDP message as described in Table 5.5.3.1.2-1 with condition PRE_ESTABLISHED_ SESSION, SDP_ANSWER			MCPTT
	SDP message as described in Table 5.5.3.1.2-2 with condition PRE_ESTABLISHED_ SESSION, SDP_ANSWER			MCVIDEO
	SDP message as described in Table 5.5.3.1.2-3 with condition PRE_ESTABLISHED_ SESSION, MCDATA_SDS, SDP_ANSWER, SDS_SESSION			MCDATA_ SDS

# 5.3.3A Void

# 5.3.4 MCX CT session establishment/modification without provisional responses other than 100 Trying

5.3.4.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

- 5.3.4.2 Void
- 5.3.4.3 Procedure

# Table 5.3.4.3-1: MCX CT session establishment/modification without provisional responses other than 100 Trying

St	Procedure		Message Sequence TP Verd		Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that	-	-	-	-
	depends on the UE's RRC state.				
1a1	IF the UE is in RRC_IDLE state THEN the	-	-	-	-
	procedure 'MCX CT communication' as				
	described in clause 5.4.4 is started to establish				
	an RRC connection and a dedicated bearer.				
2	The SS (MCX Server) sends a SIP INVITE	<	SIP INVITE	-	-
	requesting the establishment/modification of an				
	MCX call.				
-	EXCEPTION: Step 3a1 describes behaviour that	-	-	-	-
	depends on the UE implementation; the "lower				
	case letter" identifies a step sequence that take				
	place if the UE responds to a SIP INVITE with a				
	SIP 100 (Trying).				
3a1	The UE (MCX client) sends a SIP 100 (Trying)	>	SIP 100 (Trying)	-	-
4	Check: Does the UE (MCX client) respond to the	>	SIP 200 (OK)	-	Р
	SIP INVITE with SIP 200 (OK)?				
5	The SS (MCX server) sends a SIP ACK to	<	SIP ACK	-	-
	acknowledge the session				
	establishment/modification				

#### 5.3.4.4 Specific message contents

All message contents are as specified in clause 5.5 with the following clarifications:

None

# Table 5.3.4.4-1: Void

# 5.3.5 MCX CT group call establishment with manual commencement

5.3.5.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

#### 5.3.5.2 Void

#### 5.3.5.3 Procedure

# Table 5.3.5.3-1: MCX CT group call establishment with manual commencement

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CT communication' as described in clause 5.4.4 is started to establish an RRC connection and a dedicated bearer.	-	-	-	-
2	The SS (MCX Server) sends an initial SIP INVITE requesting the establishment of an MCX group call.	<	SIP INVITE	-	-
-	EXCEPTION: Step 3a1 describes behaviour that depends on the UE implementation; the "lower case letter" identifies a step sequence that take place if the UE responds to a SIP INVITE with a SIP 100 (Trying)	-	-	-	-
3a1	The UE (MCX client) sends SIP 100 (Trying).	>	SIP 100 (Trying)	-	-
4	The SS starts timer Timer_1 = 5 seconds.	-	-	-	-
-	EXCEPTION: Steps 5a1 to 5c1 describe behaviour that depends on the UE implementation; the "lower case letter" identifies a step sequence that may take place if the UE responds reliably or unreliably to a SIP INVITE with a SIP 183 (Session Progress)	-	-	-	-
5a1	Check: Does the UE (MCX client) send a SIP 183 (Session Progress) unreliably?	>	SIP 183 (Session Progress)	-	Р
5a2	The SS stops Timer_1.	-	-	-	-
5b1	Check: Does the UE (MCX client) send a SIP 183 (Session Progress) reliably?	>	SIP 183 (Session Progress)	-	Р
5b2	The SS stops Timer_1.	-	-	-	-
5b3	The SS (MCX Server) acknowledges the receipt of SIP 183 (Session Progress)	<	PRACK	-	-
5b4	The UE (MCX Client) responds PRACK with SIP 200 (OK)	>	SIP 200 (OK)	-	-
5c1	Check: Does Timer_1 expire?	-	-	-	Р
5A	Check: Does the UE (MCX client) notify the User of the incoming call request? (NOTE 1)	-	-	-	Р
6	Make UE (MCX User) accept the call. (NOTE 1)	-	-	-	-
7	Check: Does the UE (MCX client) respond to the SIP INVITE with SIP 200 (OK)?	>	SIP 200 (OK)	-	Р
8	The SS (MCX server) sends a SIP ACK to acknowledge the session establishment	<	SIP ACK	-	-
NOTE	1: This expected to be done via a suitable impleme	entation de	ependent MMI.		

## 5.3.5.4 Specific message contents

All message contents are as specified in clause 5.5 with condition GROUP-CALL where applicable and with the following clarifications:

None

Table 5.3.5.4-1..3: Void

# 5.3.6 MCX CT private call establishment with manual commencement

5.3.6.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

5.3.6.2 Void

5.3.6.3 Procedure

# Table 5.3.6.3-1: MCX CT private call establishment with manual commencement

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that	-	-	-	-
	depends on the UE's RRC state.				
1a1	IF the UE is in RRC_IDLE state THEN the	-	-	-	-
	procedure 'MCX CT communication' as				
	described in clause 5.4.4 is started to establish				
	an RRC connection and a dedicated bearer.				
2	The SS (MCX Server) sends an initial SIP	<	SIP INVITE	-	-
	INVITE requesting the establishment of an MCX				
	private call.				
-	EXCEPTION: Step3a1 describes behaviour that	-	-	-	-
	depends on the UE implementation; the "lower				
	case letter" identifies a step sequence that take				
	place if the UE responds to a SIP INVITE with a				
201	SIP 100 (Trying)				
3a1	The UE (MCX client) sends a SIP 100 (Trying).	>	SIP 100 (Trying)	-	-
-	EXCEPTION: Steps 4a1 to 4b3 describe behaviour that depends on the UE	-	-	-	-
	implementation; the "lower case letter" identifies				
	a step sequence that takes place if the UE				
	responds either unreliably or reliably to a SIP				
	INVITE with a SIP 180 (Ringing)				
4a1	Check: Does the UE (MCX client) send a SIP	>	SIP 180 (Ringing)	-	Р
141	180 (Ringing) unreliably?	-			•
4b1	Check: Does the UE (MCX client) send a SIP	>	SIP 180 (Ringing)	-	Р
	180 (Ringing) reliably?				-
4b2	The SS (MCX Server) acknowledges the receipt	<	PRACK	-	-
	of SIP 180 (Ringing)				
4b3	The UE (MCX Client) responds PRACK with SIP	>	SIP 200 (OK)	-	-
	200 (OK)				
4A	Check: Does the UE (MCX client) notify the user	-	-	-	Р
	of the incoming call?				
	(NOTE 1)				
5	Make UE (MCX client) accept the call.	-	-	-	-
	(NOTE 1)				
6	Check: Does the UE (MCX client) respond to the	>	SIP 200 (OK)	-	Р
	SIP INVITE with SIP 200 (OK)?				
7	The SS (MCX server) sends a SIP ACK to	<	SIP ACK	-	-
	acknowledge the session establishment				
NOTE	1: This expected to be done via a suitable implement	ntation dep	endent MMI.		

# 5.3.6.4 Specific message contents

All message contents are as specified in clause 5.5 with condition PRIVATE-CALL where applicable and in the test case calling the procedure, with the following clarifications:

#### Table 5.3.6.4-1..1A: Void

#### Table 5.3.6.4-2: SIP 180 (Ringing) (step 4b1, Table 5.3.6.3-1)

Derivation Path: Table 5.5.2.16.2.1-1, condition 100rel

#### Table 5.3.6.4-3: Void

# 5.3.7 - 5.3.9 Void

# 5.3.10 MCX CO call release

## 5.3.10.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

5.3.10.2 Void

#### 5.3.10.3 Procedure

#### Table 5.3.10.3-1: MCX CO call release

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCX Client) send a SIP BYE request to terminate the MCX session?	>	SIP BYE	-	Р
2	The SS (MCX Server) responds with a SIP 200 (OK) message?	<	SIP 200 (OK)	-	-
3	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to deactivate the dedicated bearer and to release the RRC connection.	-	-	-	-

#### 5.3.10.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3.11 Void

# 5.3.12 MCX CT call release

#### 5.3.12.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

# 5.3.12.2 Void

#### 5.3.12.3 Procedure

# Table 5.3.12.3-1: MCX CT call release

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message		
1	The SS (MCX Server) sends a SIP BYE request to terminate the MCX session.	<	SIP BYE	-	-
2	Check: Does the UE (MCX Client) respond with a SIP 200 (OK) message?	>	SIP 200 (OK)	-	Р
3	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to deactivate the dedicated bearer and to release the RRC connection.	-	-	-	-

# 5.3.12.4 Specific message contents

All message contents are as specified in clause 5.5. and in the test case calling the procedure, with the following clarifications:

None

# 5.3.13 - 21 Void

# 5.3.22 MCX NW initiated notifications regarding temporary group creation or tear down

# 5.3.22.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state.

#### 5.3.22.2 Void

#### 5.3.22.3 Procedure

# Table 5.3.22.3-1: MCX NW initiated notifications regarding temporary group creation or tear down

St Procedure		Message Sequence		TP	Verdict
		U - S	Message		
1	The SS (MCX server) sends a SIP NOTIFY informing about change of group A's configuration document.	<	SIP NOTIFY	-	-
2	The UE sends a SIP 200 (OK) message.	>	SIP 200 (OK)	-	-
2A- 2F	Void	-	-	-	-
3	The UE (MCX client) sends an HTTP GET Request message containing the access token and the XCAP-URI of the Group Configuration document.	>	HTTP GET	-	-
4	The SS (MCX server) sends the HTTP 200 (OK) message including the updated Group Document	<	HTTP 200 (OK)	-	-
5	The SS (MCX server) sends a SIP NOTIFY message containing the group key transport payloads (GKTP) document including the group keys.	<-	SIP NOTIFY	-	-
5a1- 5a2	Void	-	-	-	-
6	The UE (MCX client) sends a SIP 200 (OK) message.	>	SIP 200 (OK)	-	-

#### 5.3.22.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

## Table 5.3.22.4-1: SIP NOTIFY (Step 1)

Derivation Path: Table 5.5.2.8-1, condition GROUPCONFIG							
Information Element Value/remark Comment Reference Condition							
Message-body							
MIME body part		xcap-diff					
MIME-part-body	Xcap-diff as described						
	in Table 5.3.22.4-1A						

#### Table 5.3.22.4-1A: Xcap-diff document in SIP NOTIFY (Table 5.3.22.4-1)

Derivation Path: Table 5.5.3.12-2, condition GROUPCONFIG

#### Table 5.3.22.4-2: SIP 200 (OK) (Steps 2, 6)

Derivation Path: Table 5.5.2.17.1.1-1

#### Table 5.3.22.4-2A..2G: Void

#### Table 5.3.22.4-3: HTTP GET (Step 3)

Derivation Path: Table 5.5.4.2-1, condition GROUPCONFIG

Derivation Path: Table 5.5.4.6-1, condition GROUPCONFIG						
Information Element Value/remark Comment			Reference	Condition		
Message-body						
group-configuration	As described in Table	Group Configuration				
	5.3.22.4-5	document returned				

# Table 5.3.22.4-4: HTTP 200 (OK) (Step 4)

# Table 5.3.22.4-5: Group Configuration document (Table 5.3.22.4-4)

Derivation Path: Table 5.5.7.4-2					
Information Element	Value/remark	Comment	Reference	Condition	
list-service[1]			TO 04 404 1041	TEMPODO	
mcpttgi:on-network- regrouped			TS 24.481 [31] clause 7.2.4.2	TEMPGRO UPCREAT E	
temporary-MCPTT-group-ID attribute	px_MCPTT_Group_T_I D	MCS temporary group identity	TS 24.481 [31] clause 7.2.4.2	MCPTT	
	px_MCVideo_Group_T _ID			MCVIDEO	
	px_MCData_Group_T_ ID			MCDATA	
temporary-MCPTT-group- requestor attribute	px_MCPTT_ID_User_B	Identity of the responsible for formatting the MCS temporary group.	TS 24.481 [31] clause 7.2.4.2	MCPTT	
	px_MCVideo_ID_User_ B			MCVIDEO	
	px_MCData_ID_User_ B			MCDATA	
constituent-MCPTT-group-IDs			TS 24.481 [31] clause 7.2.4.2		
constituent-MCPTT-group- ID[1]	px_MCPTT_Group_A_I D	MCS group ID of a constituent MCS group of the temporary MCS group	TS 24.481 [31] clause 7.2.4.2	MCPTT	
	px_MCVideo_Group_A _ID			MCVIDEO	
	px_MCData_Group_A_ ID			MCDATA	
constituent-MCPTT-group- ID[1]	px_MCPTT_Group_B_I D	MCS group ID of a constituent MCS group of the temporary MCS group	TS 24.481 [31] clause 7.2.4.2	MCPTT	
	px_MCVideo_Group_B _ID			MCVIDEO	
	px_MCData_Group_B_ ID			MCDATA	
protect-media	"true"	Indicates whether confidentiality and integrity of media is required on the MCPTT temporary group	TS 24.481 [31] clause 7.2.4.2		
protect-floor-control-signalling	"true"	Indicates whether confidentiality and integrity of floor control signalling is required on the temporary MCPTT group	TS 24.481 [31] clause 7.2.4.2		

Condition	Explanation	
TEMPGROUPCREATE	Procedure is used for creation of a temporary group (but not for tear	
	down)	

# Table 5.3.22.4-5A: Void

# Table 5.3.22.4-6: SIP NOTIFY (Step 5)

Derivation Path: Table 5.5.2.8-1, condition GROUPCONFIG						
Information Element Value/remark Comment Reference Co				Condition		
Message-body						
xcap-diff document	xcap-diff document as described in Table 5.3.22.4-7					

# Table 5.3.22.4-7: xcap-diff document for MCX group configuration (Table 5.3.22.4-6)

Derivation Path: Table 5.5.3.12-2, condition GROUPKEY					
Information Element	Value/remark	Comment	Reference	Condition	
xcap-diff	encrypted according to NOTE 1 of Table 5.5.3.12-2				
element[1]					
sel attribute	Doc-Sel & "~~" & Node- Sel	Document and node selector for Group T according to NOTEs 2a, 2b and 3 of Table 5.5.3.12-2			
GKTPs	group key transport payloads (GKTP) document as described in Table 5.3.22.4-8				

# Table 5.3.22.4-8: group key transport payloads (GKTP) document (Table 5.3.22.4-7)

Derivation Path: TS 24.481 [11] cl	ause 7.7			
Information Element	Value/remark	Comment	Reference	Condition
GKTPs				
GMK-GKTPs				
GKTP[1]	MIKEY message as used in group communication key retrieval procedure	MIKEY message containing the GMK for Group A	TS 33.180 [94]	
id attribute	Same value as used in group communication key retrieval procedure			
on-network-regrouped- GKTPs[1]				TEMPGRO UPCREAT E
temporary-MCPTT-group-ID attribute	px_MCPTT_Group_T_I D			MCPTT
	px_MCVideo_Group_T _ID			MCVIDEO
	px_MCData_Group_T_ ID			MCDATA
GKTP[1]	MIKEY message as described in Table 5.3.22.4-9	MIKEY message containing the GMK for Group T	TS 33.180 [94]	
id attribute	arbitrary value	unique charstring assigned by the SS		

Condition	Explanation
TEMPGROUPCREATE	Procedure is used for creation of a temporary group (but not for tear
	down)

# Table 5.3.22.4-9: MIKEY-SAKKE I\_MESSAGE (GMK distribution by the SS) (Table 5.3.22.4-8)

Derivation Path: Table 5.5.9.1-3			
Information Element	Value/remark	Comment	Condition
General Extension Payload {			
Content {			
Payload {			
Data {		See TS 33.180 [94] clause E.6	
Group IDs {			
Number of Group IDs	'1'		
Group ID	px_MCPTT_Group_T_ID	The ID for the group associated with the key.	MCPTT
	px_MCVideo_Group_T_I D		MCVIDEO
	px_MCData_Group_T_ID		MCDATA
}			
}			
}			
}			
}			

# 5.3.23 - 5.3.25 Void

# 5.3.26 MCX CO Group Creation

# 5.3.26.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state.

- 5.3.26.2 Void
- 5.3.26.3 Procedure

## Table 5.3.26.3-1: MCX CO Group Creation procedure

St	Procedure		Message Sequence		Verdict
		U - S	Message		
1	Check: Does the UE (MCX Client) send an HTTP PUT to request for creation of the new group?	>	HTTP PUT	-	Р
2	The SS (MCX Server) sends an HTTP 201 (Created).	<	HTTP 201 (Created)	-	-

#### 5.3.26.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3.27 MCX CO Temporary Group Creation

# 5.3.27.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state.

5.3.27.2 Void

5.3.27.3 Procedure

# Table 5.3.27.3-1: MCX CO Temporary Group Creation procedure

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCX Client) send an HTTP POST to request for creation of a temporary group?	>	HTTP POST	-	Р
2	The SS (MCX Server) sends an HTTP 200 (OK) containing the GMOP group-regroup- creation-response.	<	HTTP 200 (OK)	-	-

# 5.3.27.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# Table 5.3.27.4-1..2: Void

# 5.3.28 MCX CO Temporary Group Tear Down

#### 5.3.28.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state.

5.3.28.2 Void

# 5.3.28.3 Procedure

# Table 5.3.28.3-1: MCX CO Temporary Group Creation procedure

St	Procedure		Message Sequence		Verdict
		U - S	Message		
1	Check: Does the UE (MCX Client) send an HTTP DELETE to request for tear down of a temporary group?	>	HTTP DELETE	-	Р
2	The SS (MCX Server) sends an HTTP 200 (OK).	<	HTTP 200 (OK)	-	-

#### 5.3.28.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3.29 MCX Subscription and Notification

5.3.29.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

- 5.3.29.2 Void
- 5.3.29.3 Procedure

#### Table 5.3.29.3-1: MCX Subscription and Notification

St	Procedure		Message Sequence		Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour	-	-	-	-
	that depends on the UE's RRC state.				
1a1	IF the UE is in RRC_IDLE state THEN the	-	-	-	-
	procedure 'MCX CO communication' as				
	described in clause 5.4.3 is started to establish				
	an RRC connection.				
2	Check: Does the UE (MCX Client) send a SIP	>	SIP SUBSCRIBE	-	Р
	SUBSCRIBE message request?				
3	The SS (MCX Server) responds to the SIP		SIP 200 (OK)	-	-
	SUBSCRIBE message with a SIP 200 (OK)	<			
	message.				
4	The SS (MCX Server) sends a SIP NOTIFY		SIP NOTIFY	-	-
	message	<			
5	The UE (MCX Client) responds with a SIP 200		SIP 200 (OK)	-	-
	(OK) message.	>			
6	The procedure 'MCX communication release'	-	-	-	-
	as described in clause 5.4.14 is performed to				
	release the RRC connection.				

#### 5.3.29.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3.30 MCX SIP MESSAGE Request - Accept CO

# 5.3.30.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

#### 5.3.30.2 Void

#### 5.3.30.3 Procedure

# Table 5.3.30.3-1: MCX SIP MESSAGE Request - Accept CO

St	Procedure		Message Sequence		Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
2	Check: Does the UE (MCX Client) send a SIP MESSAGE message?	>	SIP MESSAGE	-	Р
3	The SS (MCX Server) responds with a SIP 200 (OK) message?	<	SIP 200 (OK)	-	-
4	The SS (MCX server) sends SIP MESSAGE accepting the request.	<	SIP MESSAGE	-	-
5	Check: Does the UE (MCX Client) respond with a SIP 200 (OK) message?	>	SIP 200 (OK)	-	Р
6	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection.	-	-	-	-

#### 5.3.30.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3.31 MCX SIP MESSAGE Request - Accept CT

#### 5.3.31.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

## 5.3.31.2 Void

#### 5.3.31.3 Procedure

# Table 5.3.31.3-1: MCX SIP MESSAGE Request - Accept CT

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CT communication' as described in clause 5.4.4 is started to establish an RRC connection.	-	-	-	-
2	The SS (MCX server) sends SIP MESSAGE	<	SIP MESSAGE	-	-
3	Check: Does the UE (MCX Client) respond with a SIP 200 (OK) message?	>	SIP 200 (OK)	-	Р
4	Check: Does the UE (MCX Client) send a SIP MESSAGE message?	>	SIP MESSAGE	-	Р
5	The SS (MCX Server) responds with a SIP 200 (OK) message?	<	SIP 200 (OK)	-	-
6	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection.	-	-	-	-

# 5.3.31.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3.32 MCX SIP MESSAGE CO

#### 5.3.32.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

5.3.32.2 Void

# 5.3.32.3 Procedure

# Table 5.3.32.3-1: MCX SIP MESSAGE CO

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
2	Check: Does the UE (MCX Client) send a SIP MESSAGE message?	>	SIP MESSAGE	-	Р
3	The SS (MCX Server) responds with a SIP 200 (OK) message?	<	SIP 200 (OK)	-	-
4	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection.	-	-	-	-

#### 3GPP TS 37.579-1 version 17.1.0 Release 17

63

#### 5.3.32.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3.33 MCX SIP MESSAGE CT

#### 5.3.33.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

5.3.33.2 Void

#### 5.3.33.3 Procedure

# Table 5.3.33.3-1: MCX SIP MESSAGE CT

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CT communication' as described in clause 5.4.4 is started to establish an RRC connection.	-	-	-	-
2	The SS (MCX server) sends SIP MESSAGE	<	SIP MESSAGE	-	-
3	Check: Does the UE (MCX Client) respond with a SIP 200 (OK) message?	>	SIP 200 (OK)	-	Р
4	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection.	-	-	-	-

## 5.3.33.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3.34 MCX Group Affiliation Status Change

# 5.3.34.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

## 5.3.34.2 Void

#### 5.3.34.3 Procedure

# Table 5.3.34.3-1: MCX Group Affiliation Status Change

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
2	Check: Does the UE (MCX Client) send a SIP PUBLISH message?	>	SIP PUBLISH	-	Р
3	The SS responds to the SIP PUBLISH message with a SIP 200 (OK) message.	<	SIP 200 (OK)	-	-
4	The SS sends a SIP NOTIFY message informing about the status change progress.	<	SIP NOTIFY	-	-
5	The UE responds with a SIP 200 (OK)	>	SIP 200 (OK)	-	-
6	The SS sends a SIP NOTIFY informing about the affiliation status of the user.	<	SIP NOTIFY	-	-
7	The UE responds with a SIP 200 (OK)	>	SIP 200 (OK)	-	-
8	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection.	-	-	-	-

#### 5.3.34.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3.35 MCX CO private call establishment with manual commencement

## 5.3.35.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_IDLE state.

#### 5.3.35.2 Void

#### 5.3.35.3 Procedure

# Table 5.3.35.3-1: MCX CO private call establishment with manual commencement

St	Procedure		Message Sequence		Verdict
		U - S	Message		
1	The procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
2	Check: Does the UE (MCX client) send a SIP INVITE requesting the establishment of a private call?	>	SIP INVITE	-	P
-	EXCEPTION: In parallel to the steps below a dedicated bearer gets established as described in clause 5.4.3.	-	-	-	-
3	The SS sends a SIP 100 Trying	<	SIP 100 (Trying)	-	-
4	The SS (MCX server) responds with a SIP 180 (Ringing)	<	SIP 180 (Ringing)	-	-
5	The SS (MCX server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
6	Check: Does the UE (MCX client) send a SIP ACK to acknowledge the session establishment/modification?	>	SIP ACK	-	Р

#### 5.3.35.4 Specific message contents

All message contents are as specified in clause 5.5 with condition PRIVATE-CALL where applicable and in the test case calling the procedure, with the following clarifications:

None

# 5.3.36 UE initiated MCX functional alias status determination and subscription

#### 5.3.36.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

## 5.3.36.2 Void

#### 5.3.36.3 Procedure

# Table 5.3.36.3-1: MCX functional alias status determination and subscription

the	ake the UE (MCX client) request to determine e current status of a functional alias and later	U - S -	Message		
the		-			
no			-	-	-
	tification of status changes of a functional				
alia (N	as. OTE 1)				
	CEPTION: Step 2a1 describes behaviour that pends on the UE's RRC state.	-	-	-	-
	the UE is in RRC_IDLE state THEN the ocedure 'MCX CO communication' as	-	-	-	-
	scribed in clause 5.4.3 is started to establish RRC connection.				
3 Ch SL	eck: Does the UE (MCX client) send a SIP JBSCRIBE requesting the status of any	>	SIP SUBSCRIBE	-	Р
	isting functional aliases?				
4 Th (O	e SS (MCX server) responds with a SIP 200 K)	<	SIP 200 (OK)	-	-
	e SS (MCX server) sends a SIP NOTIFY with nctional alias information	<	SIP NOTIFY	-	-
	neck: Does the UE (MCX client) send a SIP 0 (OK)?	>	SIP 200 (OK)	-	Р
7 Th de	e procedure 'MCX communication release' as scribed in clause 5.4.14 is performed to ease the RRC connection.	-	-	-	-
-	This is expected to be done via a suitable impler	mentation	dependent MMI	1	

# 5.3.36.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure with the following clarifications:

Derivation Path: Table 5.5.2.14-	1			
Information Element	Value/remark	Comment	Reference	Condition
Expires				
value	"4294967295"	to receive the current status and later notification	TS 24.379 [9] clause 9A.2.1.3 TS 24.282 [87] clause 22.2.1.3	
Message-body				
MIME body part		MCPTT Info		MCPTT
MIME-part-body	MCData-Info as described in Table 5.3.36.4-2		TS 24.379 [9] clause 9A.2.1.3	
MIME body part		MCData Info		MCDATA
MIME-part-body	MCData-Info as described in Table 5.3.36.4-3		TS 24.282 [87] clause 22.2.1.3	

Derivation Path: Table 5.5.3.2.1-1						
Information Element	Value/remark	Comment	Reference	Condition		
mcpttinfo						
mcptt-Params						
mcptt-request-uri	px_MCPTT_ID_User_A		TS 24.379 [9] clause 9A.2.1.3			
anyExt						
request-type	"functional-alias-status- determination"		TS 24.379 [9] clause 9A.2.1.3			

# Table 5.3.36.4-2: MCPTT-Info in SIP SUBSCRIBE (Table 5.3.36.4-1)

# Table 5.3.36.4-3: MCData-Info in SIP SUBSCRIBE (Table 5.3.36.4-1)

Derivation Path: Table 5.5.3.2.1-3					
Information Element	Value/remark	Comment	Reference	Condition	
mcdatainfo					
mcdata-Params					
request-type	"functional-alias-status- determination"		TS 24.282 [87] clause 22.2.1.3		
mcdata-request-uri	px_MCData_ID_User_ A		TS 24.282 [87] clause 22.2.1.3		

### Table 5.3.36.4-4: SIP 200 (OK) (step 4, Table 5.3.36.3-1)

Derivation Path: Table 5.5.2.17.1.2-1, condition SUBSCRIBE-RSP

# Table 5.3.36.4-5: SIP NOTIFY (step 5, Table 5.3.36.3-1)

Information Element	Value/remark	Comment	Reference	Condition
Message-body				
MIME body part		PIDF		
MIME-part-body	PIDF for MCPTT as described in Table 5.5.3.5.2-1 (NOTE 1)		TS 24.379 [9] clause 9A.2.2.2.5	MCPTT
MIME-part-body	PIDF for MCData as described in Table 5.5.3.5.2-3 (NOTE 1)		TS 24.282 [87] clause 22.2.2. 2.5	MCDATA

# 5.3.37 UE initiated MCX functional alias status change

# 5.3.37.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

# 5.3.37.2 Void

#### 5.3.37.3 Procedure

# Table 5.3.37.3-1: MCX functional alias status change

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	Make the UE (MCX client) request to change the status of a functional alias to 'activated'. (NOTE 1)	-	-	-	-
-	EXCEPTION: Step 2a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-
2a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
3	Check: Does the UE (MCX client) send a SIP PUBLISH requesting the status change of a functional alias?	>	SIP PUBLISH	-	Р
4	The SS (MCX server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
5	The SS (MCX server) sends a SIP NOTIFY with functional alias information	<	SIP NOTIFY	-	-
6	Check: Does the UE (MCX client) send a SIP 200 (OK)?	>	SIP 200 (OK)	-	Р
7	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection.	-	-	-	-
NOTE	1: This is expected to be done via a suitable implei	mentation	dependent MMI		

# 5.3.37.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure with the following clarifications:

Derivation Path: Table 5.5.2.11-1, condition PRESENCE-EVENT						
Information Element	Value/remark	Comment	Reference	Condition		
Message-body						
MIME body part		MCPTT Info	TS 24.379 [9] clause 9A.2.1.2	MCPTT		
MIME-part-body	MCData-Info as described in Table 5.3.37.4-2					
MIME body part		MCData Info	TS 24.282 [87] clause 22.2.1.2	MCDATA		
MIME-part-body	MCData-Info as described in Table 5.3.37.4-3					
MIME body part		PIDF				
MIME-part-body	PIDF for MCPTT as described in Table 5.3.37.4-4		TS 24.379 [9] clause 9A.2.1.2	MCPTT		
MIME-part-body	PIDF for MCData as described in Table 5.3.37.4-5		TS 24.282 [87] clause 22.2.1.2	MCDATA		

# Table 5.3.37.4-1: SIP PUBLISH (step 3, Table 5.3.37.3-1)

Derivation Path: Table 5.5.3.2.1-1					
Information Element	Value/remark	Comment	Reference	Condition	
mcpttinfo					
mcptt-Params					
mcptt-request-uri	px_MCPTT_ID_User_A		TS 24.379 [9]		
			clause		
			9A.2.1.2		

#### Table 5.3.37.4-2: MCPTT-Info in SIP PUBLISH (Table 5.3.37.4-1)

#### Table 5.3.37.4-3: MCData-Info in SIP PUBLISH (Table 5.3.37.4-1)

Derivation Path: Table 5.5.3.2.1-3					
Information Element	Value/remark	Comment	Reference	Condition	
mcdata-info					
mcdata-Params					
mcdata-request-uri	px_MCData_ID_User_		TS 24.282 [87]		
	A		clause		
			22.2.1.2		

## Table 5.3.37.4-4: PIDF for MCPTT in SIP PUBLISH (Table 5.3.37.4-1)

Derivation Path: Table 5.5.3.5.1-1, condition FUNCTIONAL\_ALIAS\_STATUS\_CHANGE

# Table 5.3.37.4-5: PIDF for MCData in SIP PUBLISH (Table 5.3.37.4-1)

Derivation Path: Table 5.5.3.5.1-3, condition FUNCTIONAL\_ALIAS\_STATUS\_CHANGE

#### Table 5.3.37.4-6: SIP 200 (OK) (step 4, Table 5.3.37.3-1)

Derivation Path: Table 5.5.2.17.1.2-1, condition PUBLISH-RSP

# Table 5.3.37.4-7: SIP NOTIFY (step 5, Table 5.3.37.3-1)

Derivation Path: Table 5.5.2.8-1, condition PRESENCE-EVENT					
Information Element	Value/remark	Comment	Reference	Condition	
Message-body					
MIME body part		PIDF			
MIME-part-body	PIDF for MCPTT as described in Table 5.3.37.4-8		TS 24.379 [9] clause 9A.2.2.2.5	MCPTT	
MIME-part-body	PIDF for MCData as described in Table 5.3.37.4-9		TS 24.282 [87] clause 22.2.2. 2.5	MCDATA	

# Table 5.3.37.4-8: PIDF for MCPTT in SIP NOTIFY (Table 5.3.37.4-7)

Derivation Path: Table 5.5.3.5.2-1, condition FUNCTIONAL\_ALIAS\_ACTIVATED, NOTIFY\_FOR\_PUBLISH

## Table 5.3.37.4-9: PIDF for MCData in SIP NOTIFY (Table 5.3.37.4-7)

Derivation Path: Table 5.5.3.5.2-3, condition FUNCTIONAL\_ALIAS\_ACTIVATED, NOTIFY\_FOR\_PUBLISH

# 5.3A Generic test procedures for UE MCPTT operation

# 5.3A.1 MCPTT CO session establishment/modification without provisional responses other than 100 Trying

5.3A.1.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

- 5.3A.1.2 Void
- 5.3A.1.3 Procedure

#### Table 5.3A.1.3-1: MCPTT CO session establishment/modification without provisional responses other than 100 Trying

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
2	Check: Does the UE (MCPTT client) send a SIP INVITE requesting the establishment/modification of an MCPTT call?	>	SIP INVITE	-	Р
-	EXCEPTION: In case of session establishment in parallel to the steps below a dedicated bearer gets established as described in clause 5.4.3.	-	-	-	-
3	The SS sends a SIP 100 Trying	<	SIP 100 (Trying)	-	-
4	The SS (MCPTT server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
5	Check: Does the UE (MCPTT client) send a SIP ACK to acknowledge the session establishment/modification?	>	SIP ACK	-	Р
-	EXCEPTION: Steps 6a1 describes behaviour that depends on the test case requirements; the "lower case letter" identifies a step sequence that takes place if the UE requests implicit floor control in step 2 (i.e. the "mc_implicit_request" fmtp attribute included in the SDP offer and the SS responded with the "mc_implicit_request" fmtp attribute included and the "mc_granted" fmtp attribute not present in the SDP answer. (NOTE 1)	-	-	-	-
6a1	The SS (MCPTT server) sends a Floor Granted message.	<	Floor Granted	-	-
NOTE	<ul> <li>1: Possibilities in SDP-offer/answer depend on the t</li> <li>a. UE sends SDP offer with media description f</li> <li>b. UE sends SDP offer with media description f</li> <li>i. SDP answer from SS contains "m</li> <li>granted)</li> <li>ii. SDP answer from SS contains "m</li> <li>be explicitly granted at step 6a1)</li> <li>iii. SDP answer from SS contains no</li> <li>explicitly request the floor)</li> <li>c. UE sends SDP offer without media description</li> </ul>	for floor co for floor co ic_implicit_ ic_implicit i "mc_impli	ntrol but without implicit floor r ntrol and with implicit floor req request" and "mc_granted" (F request" and but no "mc_gran cit_request"and no "mc_grant	uest loor is imp ted" (Floor	needs to

#### 5.3A.1.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure with the following clarifications:

#### Table 5.3A.1.4-1: SIP INVITE (step 2, Table 5.3A.1.3-1)

Derivation Path: Table 5.5.2.5.1-1, condition MCPTT

#### Table 5.3A.1.4-2: SIP 200 (OK) (step 4, Table 5.3A.1.3-1)

Derivation Path: Table 5.5.2.17.1.2-1, condition INVITE-RSP and MCPTT

# 5.3A.2 Void

# 5.3A.3 MCPTT CO call establishment using a pre-established session

5.3A.3.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

A pre-established session is established.

5.3A.3.2 Void

#### 5.3A.3.3 Procedure

# Table 5.3A.3.3-1: MCPTT CO call establishment using a pre-established session

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
2	Check: Does the UE (MCPTT client) send a SIP REFER message to request the establishment of an MCPTT call using a pre- established session?	>	SIP REFER	-	Р
3	The SS (MCPTT server) responds with a SIP 200 (OK) message indicating that the MCPTT call has been established	<	SIP 200 (OK)	-	-
4	The SS sends a Connect message	<	Connect	-	-
5	Check: Does the UE (MCPTT client) send an Acknowledge message in response to the Connect message?	>	Acknowledge	-	Р

## 5.3A.3.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3A.4 MCPTT CO call release keeping the pre-established session

#### 5.3A.4.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established using a pre-established session.

5.3A.4.2 Void

5.3A.4.3 Procedure

#### Table 5.3A.4.3-1: MCPTT CO call release keeping the pre-established session

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCPTT client) send a SIP REFER message with method "BYE" to release the MCPTT session and keep the pre- established session?	>	SIP REFER	-	Р
2	The SS (MCPTT server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
3	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection keeping the dedicated bearer.	-	-	-	-

#### 5.3A.4.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

#### Table 5.3A.4.4-1: SIP REFER (step 1, Table 5.3A.4.3-1)

Derivation Path: Table 5.5.2.12-1, condition METHOD-BYE

#### Table 5.3A.4.4-2: SIP 200 (OK) (step 2, Table 5.3A.4.3-1)

Derivation Path: Table 5.5.2.17.1.2-1, condition REFER-RSP

# 5.3A.5 MCPTT CT call release keeping the pre-established session

5.3A.5.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established using a pre-established session.

### 5.3A.5.2 Void

#### 5.3A.5.3 Procedure

### Table 5.3A.5.3-1: MCPTT CT call release keeping the pre-established session

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message		
1	The SS (MCPTT server) releases the call by sending a Disconnect message	<	Disconnect	-	-
2	Check: Does the UE (MCPTT client) send an Acknowledge message to accept the release of the call?	>	Acknowledge	-	P
3	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection keeping the dedicated bearer.	-	-	-	-

#### 5.3A.5.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

#### Table 5.3A.5.4-1: Disconnect (step 1, Table 5.3A.5.3-1)

Derivation Path: Table 5.5.6.13-1, condition ACK

# 5.3A.6 MCPTT CO session modification

5.3A.6.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

#### 5.3A.6.2 Void

#### 5.3A.6.3 Procedure

#### Table 5.3A.6.3-1: MCPTT CO session modification

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCPTT client) send a SIP INVITE requesting the modification of an MCPTT call?	>	SIP re-INVITE	-	Р
2	The SS sends a SIP 100 Trying	<	SIP 100 (Trying)	-	-
3	The SS (MCPTT server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
4	Check: Does the UE (MCPTT client) send a SIP ACK to acknowledge the session modification?	>	SIP ACK	-	Р
-	EXCEPTION: Steps 5a1-5a2 describe behaviour that depends on whether the UE has implicitly requested a grant at step 1 which has not implicitly been granted at step 3. (NOTE 1)	-	-	-	-
5a1	IF the media description for media control in the 200 OK at step 3 contains fmtp parameter mc_implicit_request but no fmtp parameter mc_granted THEN the SS (MCPTT server) sends a Floor Granted message with request for acknowledgement.	<	Floor Granted	-	-
5a2	Check: Does the UE (MCPTT client) send a Floor Ack message?	>	Floor Ack	-	Р
NOTE	1: An implicit floor control may be requested in c but not in case of a downgrade or any other re		ograde to an emergency or immin	ent peril gro	oup call

#### 5.3A.6.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

#### Table 5.3A.6.4-1: SIP 200 (OK) (step 3, Table 5.3A.6.3-1)

Derivation Path: Table 5.5.2.17.1.2-1, condition INVITE-RSP

#### Table 5.3A.6.4-2: Floor Granted (step 5a1, Table 5.3A.6.3-1)

Derivation Path: Table 5.5.6.3-1, condition ACK

#### Table 5.3A.6.4-3: Floor Ack (Step 5a2, Table 5.3A.6.3-1)

Derivation Path: Table 5.5.6.11-1, condition UPLINK

# 5.3A.7 Void

# 5.3A.8 MCPTT CT Call establishment using a pre-established session

5.3A.8.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_IDLE state.

A pre-established session is established.

5.3A.8.2 Void

5.3A.8.3 Procedure

#### Table 5.3A.8.3-1: MCPTT CT Call establishment using a pre-established session

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	The procedure 'MCX CT communication' as described in clause 5.4.4 is started to establish an RRC connection.	-	-	-	-
2	SS initiates an on-demand pre-arranged group call with automatic commencement mode using a pre-established session by sending a Connect message	<	Connect	-	-
3	Check: Does the UE (MCPTT client) send an Acknowledge message to accept the incoming pre-arranged group call using a pre- established session?	>	Acknowledge	-	Р

#### 5.3A.8.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

### 5.3A.9 Void

# 5.3A.10 Void

# 5.3A.11 MCPTT Floor Request - Floor Granted

#### 5.3A.11.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

#### 5.3A.11.2 Void

#### 5.3A.11.3 Procedure

#### Table 5.3A.11.3-1: MCPTT Floor Request – Floor Granted

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCPTT client) send a Floor Request message?	>	Floor Request	-	Р
2	The SS (MCPTT server) sends a Floor Granted message with request for acknowledgement.	<	Floor Granted	-	-
3	Check: Does the UE (MCPTT client) send a Floor Ack message?	>	Floor Ack	-	Р
4	Check: Does the UE (MCPTT client) provide floor granted notification to the user? (NOTE 1)	-	-	-	Р
NOTE	1: This expected to be done via a suitable imple	mentation	n dependent MMI.		

#### 5.3A.11.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

### Table 5.3A.11.4-1: Floor Granted (Step 2, Table 5.3A.11.3-1)

Derivation Path: Table 5.5.6.3-1, condition ACK

#### Table 5.3A.11.4-2: Floor Ack (Step 3, Table 5.3A.11.3-1)

Derivation Path: Table 5.5.6.11-1, condition UPLINK

# 5.3A.12 MCPTT Floor Request – Floor Queue Position Info

5.3A.12.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

5.3A.12.2 Void

5.3A.12.3 Procedure

### Table 5.3A.12.3-1: MCPTT Floor Request – Floor Queue Position Info

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCPTT client) send a Floor Request message?	>	Floor Request	-	Р
2	The SS (MCPTT server) sends a Floor Queue Position Info message indicating that the Floor Request is queued.	<	Floor Queue Position Info	-	-

#### 5.3A.12.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3A.13 MCPTT Queuing Position Request

#### 5.3A.13.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

5.3A.13.2 Void

#### 5.3A.13.3 Procedure

#### Table 5.3A.13.3-1: MCPTT Queuing Position Request

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCPTT client) send a Floor Queue Position Request message?	>	Floor Queue Position Request	-	Р
2	The SS (MCPTT server) responds with a Floor Queue Position Info message.	<	Floor Queue Position Info	-	-

#### 5.3A.13.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3A.14 MCPTT Floor Request – Floor Deny

#### 5.3A.14.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

5.3A.14.2 Void

#### 5.3A.14.3 Procedure

#### Table 5.3A.14.3-1: MCPTT Floor Request – Floor Deny

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCPTT client) send a Floor Request message?	>	Floor Request	-	Р
2	The SS (MCPTT server) sends a Floor Deny message	<	Floor Deny	-	-
3	Check: Does the UE (MCPTT client) provide floor deny notification to the user? (NOTE 1)	-	-	-	Р
NOTE	1: This expected to be done via a suitable imple	mentatior	n dependent MMI.		

#### 5.3A.14.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3A.15 MCPTT Floor Release – Floor Idle

#### 5.3A.15.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

5.3A.15.2 Void

#### 5.3A.15.3 Procedure

### Table 5.3A.15.3-1: MCPTT Floor Release – Floor Idle

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCPTT client) send a Floor Release message?	>	Floor Release	-	Р
-	EXCEPTION: Step 2a1 describes behaviour that depends on the UE implementation; the "lower case letter" identifies a step sequence that take place if the UE requests an acknowledgement to the Floor Release message.	-	-	-	-
2a1	The SS (MCPTT server) sends a Floor Ack message.	<	Floor Ack	-	-
3	The SS (MCPTT server) sends a Floor Idle message.	<	Floor Idle	-	-

#### 5.3A.15.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

#### Table 5.3A.15.4-1: Floor Ack (Step 2a1, Table 5.3A.15.3-1)

Derivation Path: Table 5.5.11.3-1, condition DOWNLINK

# 5.3A.16 MCPTT Floor Release – Floor Taken

#### 5.3A.16.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

#### 5.3A.16.2 Void

#### 5.3A.16.3 Procedure

#### Table 5.3A.16.3-1: MCPTT Floor Release – Floor Taken

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCPTT client) send a Floor Release message?	>	Floor Release	-	Р
-	EXCEPTION: Step 2a1 describes behaviour that depends on the UE implementation; the "lower case letter" identifies a step sequence that take place if the UE requests an acknowledgement to the Floor Release message.	-	-	-	-
2a1	The SS (MCPTT server) sends a Floor Ack message.	<	Floor Ack	-	-
3	The SS (MCPTT server) sends a Floor Taken message.	<	Floor Taken	-	-

#### 5.3A.16.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

#### Table 5.3A.16.4-1: Floor Ack (Step 2, Table 5.3A.16.3-1)

Derivation Path: Table 5.5.11.3-1, condition DOWNLINK

# 5.3B Generic test procedures for UE MCVideo operation

# 5.3B.1 MCVideo CO session establishment/modification without provisional responses other than 100 Trying

#### 5.3B.1.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

#### 5.3B.1.2 Void

#### 5.3B.1.3 Procedure

# Table 5.3B.1.3-1: MCVideo CO session establishment/modification without provisional responses other than 100 Trying

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
2	Check: Does the UE (MCVideo client) send a SIP INVITE requesting the establishment/modification of an MCVideo call?	>	SIP INVITE	-	Р
-	EXCEPTION: In case of session establishment in parallel to the steps below a dedicated bearer gets established as described in clause 5.4.3.	-	-	-	-
3	The SS sends SIP 100 Trying	<	SIP 100 (Trying)	-	-
4	The SS (MCVideo server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
5	Check: Does the UE (MCVideo client) send a SIP ACK to acknowledge the session establishment/modification?	>	SIP ACK	-	Р
	EXCEPTION: Steps 6a1-6a2 describe behaviour that depends on the test case requirements; the "lower case letter" identifies a step sequence that takes place if the UE requests implicit transmission control in step 2 (i.e. the "mc_implicit_request" fmtp attribute included in the SDP offer and the SS responded with the "mc_implicit_request" fmtp attribute included and the "mc_granted" fmtp attribute not present in the SDP answer. (NOTE 1)				
6a1	The SS (MCVideo server) sends a Transmission Granted message with request for acknowledgement.	<	Transmission Granted	-	-
6a2	Check: Does the UE (MCVideo client) send a Transmission Control Ack message?	>	Transmission Control Ack	-	Р
NOTE	<ul> <li>1: Possibilities in SDP-offer/answer depend on the to a. UE sends SDP offer with media description f request</li> <li>b. UE sends SDP offer with media description f</li> <li>i. SDP answer from SS contains "m implicitly granted)</li> <li>ii. SDP answer from SS contains "m needs to be explicitly granted ar step 6</li> <li>iii. SDP answer from SS contains no explicitly request the transmission)</li> </ul>	for transmi for transmi c_implicit_ c_implicit Sa1)	ission control but without implici ission control and with implicit tr _request" and "mc_granted" (Tra request" and but no "mc_grante	ansmiss ansmissi ed" (Tran	ion request on is smission

c. UE sends SDP offer without media description for transmission control

#### 5.3B.1.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure with the following clarifications:

#### Table 5.3B.1.4-1: SIP INVITE (step 2, Table 5.3B.1.3-1)

Derivation Path: Table 5.5.2.5.1-1, condition MCVIDEO

#### Table 5.3B.1.4-2: SIP 200 (OK) (step 4, Table 5.3B.1.3-1)

Derivation Path: Table 5.5.2.17.1.2-1, condition INVITE-RSP and MCVIDEO

#### Table 5.3B.1.4-3: Transmission Granted (step 6a1, Table 5.3B.1.3-1)

Derivation Path: Table 5.5.11.2.1-1, condition ACK

#### Table 5.3B.1.4-4: Transmission Control Ack (step 6a2, Table 5.3B.1.3-1)

Derivation Path: Table 5.5.11.3.5-1, condition UPLINK

# 5.3B.2 MCVideo Transmission request – Transmission Granted

#### 5.3B.2.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

- 5.3B.2.2 Void
- 5.3B.2.3 Procedure

#### Table 5.3B.2.3-1: MCVideo Transmission Request – Transmission Granted

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCVideo client) send a Transmission Request message?	>	Transmission Request	-	Р
2	The SS (MCVideo server) sends a Transmission Granted message with request for acknowledgement.	<	Transmission Granted	-	-
3	Check: Does the UE (MCVideo client) send a Transmission Control Ack message?	>	Transmission Control Ack	-	Р
4	Check: Does the UE (MCVideo client) provide transmission granted notification to the user? (NOTE 1)	-	-	-	P

NOTE 1: This expected to be done via a suitable implementation dependent MMI

#### 5.3B.2.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

#### Table 5.3B.2.4-1: Transmission Granted (step 2, Table 5.3B.2.3-1)

Derivation Path: Table 5.5.11.2.1-1, condition ACK

#### Table 5.3B.2.4-2: Transmission Control Ack (step 3, Table 5.3B.2.3-1)

Derivation Path: Table 5.5.11.3.5-1, condition UPLINK

# 5.3B.3 MCVideo Media Transmission Notification and Request CT

### 5.3B.3.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

5.3B.3.2 Void

5.3B.3.3 Procedure

# Table 5.3B.3.3-1: MCVideo Media Transmission Notification and Request CT

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	The SS (MCVideo server) sends a Media Transmission Notification message.	<	Media Transmission Notification	-	-
2	Check: Does the UE (MCVideo client) provide media transmission notification to the user? (NOTE 1)	-	-	-	P
-	EXCEPTION: Steps 3a1 – 3a4a1 describe behaviour that depends on the requirements of test case calling the present procedure.	-	-	-	-
3a1	IF the test case specifies the Reception Mode field of the Media Transmission Notification message to be 1 (indicating manual reception mode) THEN make the UE (MCVideo client) request permission to receive media. (NOTE 1)	-	-	-	-
3a2	Check: Does the UE (MCVideo client) send a Receive Media Request message?	>	Receive Media Request	-	P
3a3	The SS (MCVideo server) sends a Receive Media Response message.	<	Receive Media Response	-	-
-	EXCEPTION: Step 3a4a1 describes behaviour that depends on the requirements of test case calling the present procedure.	-	-	-	-
3a4a 1	IF the test case specifies the Receive Media Response message to request an acknowledgement THEN Check: Does the UE (MCVideo client) send a Transmission Control Ack message?	>	Transmission Control Ack	-	Р
NOTE	1: This expected to be done via a suitable impler	mentatio	n dependent MMI.		

### 5.3B.3.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

# Table 5.3B.3.4-1: Transmission Control Ack (step 3a4a1, Table 5.3B.3.3-1)

Derivation Path: Table 5.5.11.3.5-1, condition UPLINK

# 5.3B.4 MCVideo Transmission Request - Queue Position Info

### 5.3B.4.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

5.3B.4.2 Void

#### 5.3B.4.3 Procedure

#### Table 5.3B.4.3-1: MCVideo Transmission Request – Queue Position Info

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCVideo client) send a Transmission Request message?	>	Transmission Request	-	Р
2	The SS (MCVidao server) sends a Queue Position Info message indicating that the Transmission Request is queued.	<	Queue Position Info	-	-

#### 5.3B.4.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3B.5 MCVideo Queue Position Request

#### 5.3B.5.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

5.3B.5.2 Void

#### 5.3B.5.3 Procedure

### Table 5.3B.5.3-1: MCVideo Queue Position Request

St	Procedure		Message Sequence		Verdict
		U - S	Message		
1	Check: Does the UE (MCVideo client) send a Queue Position Request message?	>	Queue Position Request	-	Р
2	The SS (MCVideo server) responds with a Queue Position Info message.	<	Queue Position Info	-	-
-	EXCEPTION: Step 3a1 describes behaviour that depends on the requirements of test case calling the present procedure.	-	-	-	-
3a1	IF the test case specifies the Queue Position Info message to request an acknowledgement THEN Check: Does the UE (MCVideo client) acknowledge receipt of the Queue Position Info message?	>	Transmission Control Ack	-	Р

#### 5.3B.5.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

#### Table 5.3B.5.4-1: Transmission Control Ack (step 3a1, Table 5.3B.5.3-1)

Derivation Path: Table 5.5.11.3.5-1, condition UPLINK

# 5.3B.6 MCVideo Transmission Request - Transmission Rejected

#### 5.3B.6.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

5.3B.6.2 Void

5.3B.6.3 Procedure

#### Table 5.3B.6.3-1: MCVideo Transmission Request – Transmission Rejected

St	Procedure	Message Sequence		TP	Verdict			
		U - S	Message					
1	Check: Does the UE (MCVideo client) send a Transmission Request message?	>	Transmission Request	-	Р			
2	The SS (MCVideo server) sends a Transmission Rejected message.	<	Transmission Rejected	-	-			
3	Check: Does the UE (MCVideo client) provide Transmission Rejected notification to the user? (NOTE 1)	-	-	-	Р			
NOTE	NOTE 1: This expected to be done via a suitable implementation dependent MMI.							

#### 5.3B.6.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

none

# 5.3B.7 MCVideo Transmission End Request CO

#### 5.3B.7.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

- 5.3B.7.2 Void
- 5.3B.7.3 Procedure

#### Table 5.3B.7.3-1: MCVideo transmission End Request CO

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCVideo client) send a Transmission End Request message?	>	Transmission End Request	-	Р
2	The SS (MCVideo server) responds with a Transmission End Response message with request for acknoledgement.	<	Transmission End Response	-	-
3	Check: Does the UE (MCVideo client) send a Transmission Control Ack message?	>	Transmission Control Ack	-	Р
4	The SS (MCVideo server) sends a Transmission Idle message.	<	Transmission Idle	-	-
NOTE	1: This expected to be done via a suitable imple	mentatior	n dependent MMI.		

#### 5.3B.7.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

#### Table 5.3B.7.4-1: Transmission End Request (Step 1, Table 5.3B.7.3-1)

Derivation Path: Table 5.5.11.3.1-1, condition UPLINK

#### Table 5.3B.7.4-2: Transmission End Response (Step 2, Table 5.3B.7.3-1)

Derivation Path: Table 5.5.11.3.2-1, condition DOWNLINK, ACK

#### Table 5.3B.7.4-3: Transmission Control Ack (step 3, Table 5.3B.7.3-1)

Derivation Path: Table 5.5.11.3.5-1, condition UPLINK

# 5.3B.8 MCVideo Media Reception End Request CO

5.3B.8.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

- 5.3B.8.2 Void
- 5.3B.8.3 Procedure

#### Table 5.3B.8.3-1: MCVideo Media Reception End Request CO

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCVideo client) send a	>	Media Reception End Request	-	Р
	Media Reception End Request message?				
2	The SS (MCVideo server) sends a Receive	<	Media Reception End Response	-	-
	Media Reception End Response message.				
3	The SS (MCVideo server) sends a	<	Transmission Idle	-	-
	Transmission Idle message.				

#### 5.3B.8.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

#### Table 5.3B.8.4-1: Media Reception End Request (Step 1, Table 5.3B.8.3-1)

Derivation Path: Table 5.5.11.3.3-1, condition UPLINK

#### Table 5.3B.8.4-2: Media Reception End Response (Step 2, Table 5.3B.8.3-1)

Derivation Path: Table 5.5.11.3.4-1, condition DOWNLINK

# 5.3B.9 MCVideo Transmission End Request CT

### 5.3B.9.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

5.3B.9.2 Void

5.3B.9.3 Procedure

# Table 5.3B.9.3-1: MCVideo Transmission End Request CT

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	The SS (MCVideo server) sends a Transmission End Request message.	<	Transmission End Request	-	-
2	Void	-	-	-	-
2A	Check: Does the UE (MCVideo client) respond with a Transmission End Response message?	>	Transmission End Response	-	Р
3	Void	-	-	-	-
ЗA	Check Does the UE (MCVideo client) notify the user that the permission to send RTP media is being revoked? (NOTE 1)	-	-	-	Р
4	The SS (MCVideo server) sends a Transmission Idle message.	<	Transmission Idle	-	-
NOTE	1: This expected to be done via a suitable impler	mentatio	n dependent MMI.		

# 5.3B.9.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

### Table 5.3B.9.4-1: Transmission End Request (Step 1, Table 5.3B.9.3-1)

Derivation Path: Table 5.5.11.3.1-1, condition DOWNLINK

# Table 5.3B.9.4-2: Transmission End Response (Step 2, Table 5.3B.9.3-1)

Derivation Path: Table 5.5.11.3.2-1, condition UPLINK

# 5.3B.10 MCVideo Media Reception End Request CT

5.3B.10.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

#### 5.3B.10.2 Void

#### 5.3B.10.3 Procedure

#### Table 5.3B.10.3-1: MCVideo Media Reception End Request CT

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	The SS (MCVideo server) sends a Media Reception End Request message.	<	Media Reception End Request	-	-
2	Void	-	-	-	-
2A	Check: Does the UE (MCVideo client) respond with a Media Reception End Response message?	>	Media Reception End Response	-	Р
3	Void	-	-	-	-
3A	Check: Does the UE (MCVideo client) notify the user that the permission to send RTP media is being revoked? (NOTE 1)	-	-	-	Р
4	The SS (MCVideo server) sends a Transmission Idle message.	<	Transmission Idle	-	-
NOTE	1: This expected to be done via a suitable impler	mentatior	n dependent MMI.		

#### 5.3B.10.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

#### Table 5.3B.10.4-1: Media Reception End Request (Step 1, Table 5.3B.10.3-1)

Derivation Path: Table 5.5.11.3.3-1, condition DOWNLINK

#### Table 5.3B.10.4-2: Media Reception End Response (Step 2, Table 5.3B.10.3-1)

Derivation Path: Table 5.5.11.3.4-1, condition UPLINK

# 5.3B.11 MCVideo CO session modification

#### 5.3B.11.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state and a call is established.

#### 5.3B.11.2 Void

#### 5.3B.11.3 Procedure

#### Table 5.3B.11.3-1: MCVideo CO session modification

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCVideo client) send a SIP INVITE requesting the modification of the call?	>	SIP re-INVITE	-	Р
2	The SS sends SIP 100 Trying	<	SIP 100 (Trying)	-	-
3	The SS (MCVideo server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
4	Check: Does the UE (MCVideo client) send a SIP ACK to acknowledge the session modification?	>	SIP ACK	-	Р
-	EXCEPTION: Steps 5a1-5a2 describe behaviour that depends on whether the UE has implicitly requested a grant at step 1 which has not implicitly been granted at step 3 (NOTE 1)	-	-	-	-
5a1	IF the media description for media control in the 200 OK contains fmtp parameter mc_implicit_request but no fmtp parameter mc_granted THEN the SS (MCVideo server) sends a Transmission Granted message with request for acknowledgement.	<	Transmission Granted	-	-
5a2	Check: Does the UE (MCVideo client) send a Transmission Control Ack message?	>	Transmission Control Ack	-	Р
NOTE	1: An implicit transmit media request may be req MCVideo group call but not in case of a down			cy or immine	ent peril

#### 5.3B.11.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

#### Table 5.3B.11.4-1: SIP 200 (OK) (step 3, Table 5.3B.11.3-1)

Derivation Path: Table 5.5.2.17.1.2-1, condition INVITE-RSP

#### Table 5.3B.11.4-2: Transmission Granted (step 5a1, Table 5.3B.11.3-1)

Derivation Path: Table 5.5.11.2.1-1, condition ACK

#### Table 5.3B.11.4-3: Transmission Control Ack (step 5a2, Table 5.3B.11.3-1)

Derivation Path: Table 5.5.11.3.5-1, condition UPLINK

# 5.3C Generic test procedures for UE MCData operation

# 5.3C.1 CO SDS or FD message transfer using signalling plane

5.3C.1.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

5.3C.1.2 Void

5.3C.1.3 Procedure

#### Table 5.3C.1.3-1: CO SDS or FD message transfer using signalling plane

St	Procedure		Message Sequence		Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
2	Check: Does the UE (MCData client) send a SIP MESSAGE request?	>	SIP MESSAGE	-	Р
3	The SS (MCData server) sends a SIP 202 (Accepted) response	<	SIP 202 (Accepted)	-	-
4	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection.	-	-	-	-

#### 5.3C.1.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3C.2 CO MCData Call Establishment

#### 5.3C.2.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_IDLE state.

#### 5.3C.2.2 Void

#### 5.3C.2.3 Procedure

Table 5.3C.2.3-1: CC	MCData Call Establishment
----------------------	---------------------------

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	The procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
2	Check: Does the UE (MCData client) send a SIP INVITE requesting the establishment of an MCData call?	>	SIP INVITE	-	Р
-	EXCEPTION: In parallel to the steps below a dedicated bearer gets established as described in clause 5.4.3.	-	-	-	-
3	The SS sends a SIP 100 Trying	<	SIP 100 (Trying)	-	-
4	The SS (MCData server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
5	Check: Does the UE (MCData client) send a SIP ACK to acknowledge the session establishment/modification?	>	SIP ACK	-	Р
6	The UE (MCData client) connects to the TCP server at the SS side to establish an MSRP connection. (NOTE 1)	-	-	-	-
7	Check: Does the UE (MCData client) send an empty MSRP SEND request to bind the TCP connection to the MSRP session?	>	MSRP SEND	-	Р
8	The SS (MCData server) sends an MSRP 200 (OK) response.	<	MSRP 200 (OK)	-	-
NOTE	1: According to TS 24.282 [87] clauses 9.2.3.4.2, 9 to "passive" (see table 5.5.3.1.2-3) ⇒ The UE's				tribute set

#### 5.3C.2.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

#### Table 5.3C.2.4-1: MSRP SEND (Step 7, Table 5.3C.2.3-1)

Derivation Path: Table 5.5.12.1.1-1, condition EMPTY\_SEND\_REQ

# 5.3C.3 CT MCData Call Establishment

5.3C.3.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_IDLE state.

#### 5.3C.3.2 Void

#### 5.3C.3.3 Procedure

### Table 5.3C.3.3-1: CT MCData Call Establishment

U - S         Message           1         The procedure 'MCX CT communication' as described in clause 5.4.4 is started to establish an RRC connection and a dedicated bearer.         -<	St	Procedure	Procedure Message Sequence		TP	Verdict
described in clause 5.4.4 is started to establish an RRC connection and a dedicated bearer.       -         2       The SS (MCX Server) sends a SIP INVITE requesting the establishment of an MCData call.       -         -       EXCEPTION: Step 3a1 describes behaviour that depends on the UE implementation; the "lower case letter" identifies a step sequence that take place if the UE responds to a SIP INVITE with a SIP 100 (Trying)       -       -         3a1       The UE (MCX client) sends a SIP 100 (Trying)      >       SIP 100 (Trying)       -         4       Check: Does the UE (MCX client) send a SIP      >       SIP 200 (OK)       -         5       The SS (MCX server) sends a SIP ACK       -       -       -         -       EXCEPTION: Step 5a1 - 6b3 describe       -       -       -         5       The SS (MCData client) has chosen in its SDP answer sent at step 4       -       -       -         6a1       IF the UE (MCData client) acts as passive endpoint the UE (MCData client) acts as passive       -       -       -         6a2       The SS sends an empty MSRP SEND request to bind the TCP sonnection to the MSRP session.       -       -       -         6a3       Check: Does the UE (MCData client) connects to the TCP server at the SS side to establish an MSRP connection       -       -       -         6b2       Check: Does the UE (MCData client) connec			U - S	Message		
an RRC connection and a dedicated bearer.       Image: Signed Signe	1		-	-	-	-
2       The SS (MCX Server) sends a SIP INVITE requesting the establishment of an MCData call.		described in clause 5.4.4 is started to establish				
requesting the establishment of an MCData call.       -       -         excePTION: Step 3a1 describes behaviour that depends on the UE implementation; the "lower case letter" identifies a step sequence that take place if the UE responds to a SIP INVITE with a SIP 100 (Trying)       -       -         3a1       The UE (MCX client) sends a SIP 100 (Trying)      >       SIP 100 (Trying)       -         4       Check: Does the UE (MCX client) send a SIP      >       SIP 200 (OK)       -       P         5       The SS (MCX server) sends a SIP ACK       <						
-       EXCEPTION: Step 3a1 describes behaviour that depends on the UE implementation; the "lower case letter" identifies a step sequence that take place if the UE responds to a SIP INVITE with a SIP 100 (Trying)       -	2	The SS (MCX Server) sends a SIP INVITE	<	SIP INVITE	-	-
depends on the UE implementation; the "lower case letter" identifies a step sequence that take place if the UE responds to a SIP INVITE with a						
case letter" identifies a step sequence that take place if the UE responds to a SIP INVITE with a SIP 100 (Trying)	-		-	-	-	-
place if the UE responds to a SIP INVITE with a SIP 100 (Trying)						
SIP 100 (Trying)      >       SIP 100 (Trying)       -         3a1       The UE (MCX client) sends a SIP 100 (Trying)      >       SIP 100 (Trying)       -         4       Check: Does the UE (MCX client) send a SIP      >       SIP 200 (OK)       -       P         5       The SS (MCX server) sends a SIP ACK       <						
3a1       The UE (MCX client) sends a SIP 100 (Trying)      >       SIP 100 (Trying)       -       -         4       Check: Does the UE (MCX client) send a SIP 200 (OK)?      >       SIP 200 (OK)       -       P         5       The SS (MCX server) sends a SIP ACK       <						
4       Check: Does the UE (MCX client) send a SIP 200 (OK)?      >       SIP 200 (OK)       -       P         5       The SS (MCX server) sends a SIP ACK       <						
200 (OK)?       SIP ACK       -         5       The SS (MCX server) sends a SIP ACK       -         -       EXCEPTION: Steps 6a1 - 6b3 describe behaviour that depends on which role of an endpoint the UE (MCData client) has chosen in its SDP answer sent at step 4       -       -         6a1       IF the UE (MCData client) acts as passive endpoint (NOTE 1) THEN the SS connects to the TCP server at the UE side to establish an MSRP connection       -       -       -         6a2       The SS sends an empty MSRP SEND request to bind the TCP connection to the MSRP session.       -       MSRP SEND       -       -         6a3       Check: Does the UE (MCData client) send an establish an MSRP connection      >       MSRP 200 (OK)       -       P         6b1       ELSE (NOTE 2) the UE (MCData client) connects to the TCP server at the SS side to establish an MSRP connection       -       -       -       -         6b2       Check: Does the UE (MCData client) send an empty MSRP SEND request to bind the TCP connection to the MSRP session?       -       -       -       -         6b3       The SS (MCData server) sends an MSRP 200 (OK) response.       -       MSRP 200 (OK)       -       -         NOTE 1:       The MCData client indicates to act as passive endpoint by setting the a=setup attribute of the SDP answer at step 4 to "passive" (according to RFC 4145 [119])       NOTE 2:       The MCData client indicates to act a	3a1	The UE (MCX client) sends a SIP 100 (Trying)	>		-	-
5       The SS (MCX server) sends a SIP ACK       <	4		>	SIP 200 (OK)	-	Р
-       EXCEPTION: Steps 6a1 - 6b3 describe behaviour that depends on which role of an endpoint the UE (MCData client) has chosen in its SDP answer sent at step 4       -       -       -       -         6a1       IF the UE (MCData client) acts as passive endpoint (NOTE 1) THEN the SS connects to the TCP server at the UE side to establish an MSRP connection       -       -       -       -       -         6a2       The SS sends an empty MSRP SEND request to bind the TCP connection to the MSRP session.       <						
behaviour that depends on which role of an endpoint the UE (MCData client) has chosen in its SDP answer sent at step 4-6a1IF the UE (MCData client) acts as passive endpoint (NOTE 1) THEN the SS connects to the TCP server at the UE side to establish an MSRP connection6a2The SS sends an empty MSRP SEND request to bind the TCP connection to the MSRP session6a3Check: Does the UE (MCData client) send an MSRP 200 (OK) response?>MSRP 200 (OK)-P6b1ELSE (NOTE 2) the UE (MCData client) connection6b2Check: Does the UE (MCData client) send an establish an MSRP connection6b1ELSE (NOTE 2) the UE (MCData client) connection6b2Check: Does the UE (MCData client) send an empty MSRP SEND request to bind the TCP connectionP6b2Check: Does the UE (MCData client) send an empty MSRP SEND request to bind the TCP connectionP6b3The SS (MCData server) sends an MSRP 200 (OK) responseMSRP 200 (OK)NOTE 1:The MCData client indicates to act as passive endpoint by setting the a=setup attribute of the SDP answer at step 4 to "passive" (according to RFC 4145 [119])NOTE 2:The MCData client indicates to act as active endpoint by setting the a=setup attribute of the SDP answer at	5		<	SIP ACK	-	-
endpoint the UE (MCData client) has chosen in its SDP answer sent at step 4       -       -         6a1       IF the UE (MCData client) acts as passive endpoint (NOTE 1) THEN the SS connects to the TCP server at the UE side to establish an MSRP connection       -       -         6a2       The SS sends an empty MSRP SEND request to bind the TCP connection to the MSRP session.       -       -         6a3       Check: Does the UE (MCData client) send an MSRP 200 (OK) response?       -       -         6b1       ELSE (NOTE 2) the UE (MCData client) connects to the TCP server at the SS side to establish an MSRP connection       -       -         6b2       Check: Does the UE (MCData client) send an empty MSRP SEND request to bind the TCP connection to the MSRP session?       -       -         6b3       The SS (MCData server) sends an MSRP 200 (OK) response.       -       -       MSRP 200 (OK)       -         NOTE 1:       The MCData client indicates to act as passive endpoint by setting the a=setup attribute of the SDP answer at step 4 to "passive" (according to RFC 4145 [119])       NOTE 2:       The MCData client indicates to act as active endpoint by setting the a=setup attribute of the SDP answer at	-		-	-	-	-
its SDP answer sent at step 4       -       -         6a1       IF the UE (MCData client) acts as passive endpoint (NOTE 1) THEN the SS connects to the TCP server at the UE side to establish an MSRP connection       -       -       -         6a2       The SS sends an empty MSRP SEND request to bind the TCP connection to the MSRP session.       <						
6a1       IF the UE (MCData client) acts as passive endpoint (NOTE 1) THEN the SS connects to the TCP server at the UE side to establish an MSRP connection       - <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td></td<>						
endpoint (NOTE 1) THEN the SS connects to the TCP server at the UE side to establish an MSRP connection       -         6a2       The SS sends an empty MSRP SEND request to bind the TCP connection to the MSRP session.       <						
TCP server at the UE side to establish an MSRP connectionMSRP Server at the UE side to establish an MSRP connection6a2The SS sends an empty MSRP SEND request to bind the TCP connection to the MSRP session.<	6a1		-	-	-	-
connectionMSRP SEND request to bind the TCP connection to the MSRP sessionMSRP SEND-6a3Check: Does the UE (MCData client) send an MSRP 200 (OK) response?>MSRP 200 (OK)-P6b1ELSE (NOTE 2) the UE (MCData client) connects to the TCP server at the SS side to establish an MSRP connection6b2Check: Does the UE (MCData client) send an empty MSRP SEND request to bind the TCP connection to the MSRP session?6b3The SS (MCData server) sends an MSRP 200 (OK) response>MSRP 200 (OK)NOTE 1:The MCData client indicates to act as passive endpoint by setting the a=setup attribute of the SDP answer at step 4 to "passive" (according to RFC 4145 [119])NOTE 2:The MCData client indicates to act as active endpoint by setting the a=setup attribute of the SDP answer at						
6a2       The SS sends an empty MSRP SEND request to bind the TCP connection to the MSRP session.       <						
bind the TCP connection to the MSRP session.       -         6a3       Check: Does the UE (MCData client) send an MSRP 200 (OK) response?       -         6b1       ELSE (NOTE 2) the UE (MCData client) connects to the TCP server at the SS side to establish an MSRP connection       -         6b2       Check: Does the UE (MCData client) send an empty MSRP SEND request to bind the TCP connection to the MSRP session?       -         6b3       The SS (MCData server) sends an MSRP 200 (OK)       -       P         6b3       The MCData client indicates to act as passive endpoint by setting the a=setup attribute of the SDP answer at step 4 to "passive" (according to RFC 4145 [119])       -       -         NOTE 2:       The MCData client indicates to act as active endpoint by setting the a=setup attribute of the SDP answer at step 4 to "passive" (according to RFC 4145 [119])       -       -						
6a3       Check: Does the UE (MCData client) send an MSRP 200 (OK) response?      >       MSRP 200 (OK)       -       P         6b1       ELSE (NOTE 2) the UE (MCData client) connects to the TCP server at the SS side to establish an MSRP connection       -       -       -       -         6b2       Check: Does the UE (MCData client) send an empty MSRP SEND request to bind the TCP connection to the MSRP session?      >       MSRP SEND       -       P         6b3       The SS (MCData server) sends an MSRP 200 (OK) response.      >       MSRP 200 (OK)       -       -         NOTE 1:       The MCData client indicates to act as passive endpoint by setting the a=setup attribute of the SDP answer at step 4 to "passive" (according to RFC 4145 [119])       NOTE 2:       The MCData client indicates to act as active endpoint by setting the a=setup attribute of the SDP answer at	6a2		<	MSRP SEND	-	-
MSRP 200 (OK) response?       -         6b1       ELSE (NOTE 2) the UE (MCData client) connects to the TCP server at the SS side to establish an MSRP connection       -       -         6b2       Check: Does the UE (MCData client) send an empty MSRP SEND request to bind the TCP connection to the MSRP session?       -       MSRP SEND       -         6b3       The SS (MCData server) sends an MSRP 200 (OK) response.       -       MSRP 200 (OK)       -       -         NOTE 1:       The MCData client indicates to act as passive endpoint by setting the a=setup attribute of the SDP answer at step 4 to "passive" (according to RFC 4145 [119])       NOTE 2:       The MCData client indicates to act as active endpoint by setting the a=setup attribute of the SDP answer at						
6b1       ELSE (NOTE 2) the UE (MCData client) connects to the TCP server at the SS side to establish an MSRP connection       -       P       -       -       P       -       -       -       P       -       -       -       -       P       -	6a3		>	MSRP 200 (OK)	-	Р
connects to the TCP server at the SS side to establish an MSRP connection       -       -       P         6b2       Check: Does the UE (MCData client) send an empty MSRP SEND request to bind the TCP connection to the MSRP session?      >       MSRP SEND       -       P         6b3       The SS (MCData server) sends an MSRP 200 (OK) response.        MSRP 200 (OK)       -       -       -         NOTE 1:       The MCData client indicates to act as passive endpoint by setting the a=setup attribute of the SDP answer at step 4 to "passive" (according to RFC 4145 [119])       NOTE 2:       The MCData client indicates to act as active endpoint by setting the a=setup attribute of the SDP answer at						
establish an MSRP connection      >       MSRP SEND      >       P         6b2       Check: Does the UE (MCData client) send an empty MSRP SEND request to bind the TCP connection to the MSRP session?      >       MSRP SEND        P         6b3       The SS (MCData server) sends an MSRP 200 (OK) response.        MSRP 200 (OK)           NOTE 1:       The MCData client indicates to act as passive endpoint by setting the a=setup attribute of the SDP answer at step 4 to "passive" (according to RFC 4145 [119])       NOTE 2:       The MCData client indicates to act as active endpoint by setting the a=setup attribute of the SDP answer at the subscription of the subscription of the SDP answer at the subscription of the s	6b1		-	-	-	-
6b2       Check: Does the UE (MCData client) send an empty MSRP SEND request to bind the TCP connection to the MSRP session?      >       MSRP SEND       -       P         6b3       The SS (MCData server) sends an MSRP 200 (OK) response.        MSRP 200 (OK)       -       -       -       -       -       P         NOTE 1:       The MCData client indicates to act as passive endpoint by setting the a=setup attribute of the SDP answer at step 4 to "passive" (according to RFC 4145 [119])       NOTE 2:       The MCData client indicates to act as active endpoint by setting the a=setup attribute of the SDP answer at a setup attribute of the SDP attribute of the						
empty MSRP SEND request to bind the TCP connection to the MSRP session?       -         6b3       The SS (MCData server) sends an MSRP 200 (OK) response.       <						_
connection to the MSRP session?	6b2		>	MSRP SEND	-	Р
6b3       The SS (MCData server) sends an MSRP 200       <						
(OK) response.       Image: Constraint of the sector of the						
<ul> <li>NOTE 1: The MCData client indicates to act as passive endpoint by setting the a=setup attribute of the SDP answer step 4 to "passive" (according to RFC 4145 [119])</li> <li>NOTE 2: The MCData client indicates to act as active endpoint by setting the a=setup attribute of the SDP answer at</li> </ul>	6b3		<	MSRP 200 (OK)	-	-
step 4 to "passive" (according to RFC 4145 [119]) NOTE 2: The MCData client indicates to act as active endpoint by setting the a=setup attribute of the SDP answer at						
NOTE 2: The MCData client indicates to act as active endpoint by setting the a=setup attribute of the SDP answer at	NOTE			setting the a=setup attribute	of the SDF	answer at
	NOTT					
step 4 to "active" (according to RFC 4145 [119])	NOTE			etting the a=setup attribute of	of the SDP a	inswer at
		step 4 to "active" (according to RFC 4145 [119])				

#### 5.3C.3.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

### Table 5.3C.3.4-1: MSRP SEND (Step 6a2, Table 5.3C.3.3-1)

Derivation Path: Table 5.5.12.2-1, condition EMPTY\_SEND\_REQ

### Table 5.3C.3.4-2: MSRP SEND (Step 6b2, Table 5.3C.3.3-1)

Derivation Path: Table 5.5.12.1.1-1, condition EMPTY\_SEND\_REQ

# 5.3C.4 CO MSRP message transfer

#### 5.3C.4.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state with an MSRP connection established.

5.3C.4.2 Void

5.3C.4.3 Procedure

### Table 5.3C.4.3-1: CO MSRP message transfer

St	Procedure		Message Sequence	TP	Verdict		
		U - S	Message				
-	EXCEPTION: Steps 1-2 are repeated until the UE (MCData client) indicates the end of the message by setting the continuation-flag to "\$" in the End-line of the MSRP SEND request at step 1	-	-	-	-		
1	Check: Does the UE (MCData client) send an MSRP SEND request?	>	MSRP SEND	-	Р		
2	The SS (MCData server) sends an MSRP 200 (OK) response.	<	MSRP 200 (OK)	-	-		
3	In case of chunking the SS reassembles the data contained in the bodies of the MSRP SEND requests. (NOTE 1)	-	-	-	-		
NOTE	1: In case of no chunking there is only one MSRP	SEND requ	uest which contains the entire	e data.			
	In case of chunking there are more than one MSRP SEND requests containing the chunks of data and the content type shall be the same for all MSRP SEND requests.						

#### 5.3C.4.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3C.5 CT MSRP message transfer

#### 5.3C.5.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state with an MSRP connection established.

#### 5.3C.5.2 Void

#### 5.3C.5.3 Procedure

#### Table 5.3C.5.3-1: CT MSRP message transfer

1 The		U - S	Magaaga		
1 The			Message		
	SS sends an MSRP SEND request taining the entire data. DTE 1)	<	MSRP SEND	-	-
	eck: Does the UE (MCData client) send an RP 200 (OK) response?	>	MSRP 200 (OK)	-	Р

### 5.3C.5.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3C.6 CO MCData call release

#### 5.3C.6.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state with an MSRP connection established.

#### 5.3C.6.2 Void

#### 5.3C.6.3 Procedure

### Table 5.3C.6.3-1: CO MCData call release

St	Procedure		Message Sequence	e TP Ve		
		U - S	Message			
1	Check: Does the UE (MCData client) send a SIP BYE request to terminate the MCData communication?	>	SIP BYE	-	Р	
2	The SS (MCData server) sends a SIP 200 (OK) response.	<	SIP 200 (OK)	-	-	
-	EXCEPTION: Steps 3a1 - 3b1 describe behaviour that depends on the endpoint role the UE (MCData client) has chosen at call establishment. (NOTE 1)	-	-	-	-	
3a1	IF the client is the active endpoint THEN the SS waits 3s for the client to close the MSRP TCP connection. (NOTE 2)	-	-	-	-	
3b1	ELSE the SS closes the MSRP TCP connection. (NOTE 3)	-	-	-	-	
4-5			-	-	-	
	<ol> <li>The endpoint role is negotiated in the SDP signal</li> <li>After the wait period the SS may stop the MSRF closed the connection.</li> </ol>					
	<ul> <li>NOTE 3: When the SS has the role of the active endpoint it means that the MCData client hosts the TCP server of the MSRP connection.</li> <li>NOTE 4: The RRC connection is kept to allow subsequent signalling using the control plane as e.g. an SDS</li> </ul>					
	NOTIFICATION in case of Standalone SDS.		,			

#### 5.3C.6.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3C.7 CT MCData call release

### 5.3C.7.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state with an MSRP connection established.

#### 5.3C.7.2 Void

#### 5.3C.7.3 Procedure

#### Table 5.3C.7.3-1: CT MCData call release

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	The SS (MCData server) sends a SIP BYE request to terminate the MCData communication.	<	SIP BYE	-	-
2	Check: Does the UE (MCData client) send a SIP 200 (OK) response?	>	SIP 200 (OK)	-	Р
-	EXCEPTION: Steps 3a1 - 3b1 describe behaviour that depends on the endpoint role the UE (MCData client) has chosen at call establishment. (NOTE 1)	-	-	-	-
3a1	IF the client is the active endpoint THEN the SS waits 3s for the client to close the MSRP TCP connection. (NOTE 2)	-	-	-	-
3b1	ELSE the SS closes the MSRP TCP connection. (NOTE 3)	-	-	-	-
4-5	Steps 1-2 of procedure 'MCX communication release' as described in clause 5.4.14 are performed to deactivate the dedicated bearer. (NOTE 4)	-	-	-	-
NOTE	<ol> <li>The endpoint role is negotiated in the SDP signal</li> <li>After the wait period the SS may stop the MSRF closed the connection</li> <li>When the SS has the role of the active endpoint</li> </ol>	P TCP serv	er independent from whether or	not the	UE has
	<ul> <li>4: The RRC connection is kept to allow subsequer NOTIFICATION in case of Standalone SDS.</li> </ul>				

#### 5.3C.7.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3C.8 Discovery of the absolute URI of the media storage function (one-toone communication)

#### 5.3C.8.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

#### 5.3C.8.2 Void

#### 5.3C.8.3 Procedure

### Table 5.3C.8.3-1: Discovery of the absolute URI of the media storage function (one-to-one)

St	St Procedure		Message Sequence		Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state and on the UE implementation.	-	-	-	-
1a1	IF the UE is in RRC_IDLE state and pc_MCData_MSFDiscoverySignalling THEN the procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
-	EXCEPTION: Steps 2a1 – 2b1 describe behaviour that depends on the UE implementation	-	-	-	-
2a1	IF pc_MCData_MSFDiscoverySignalling THEN Check: Does the UE (MCData client) send a SIP MESSAGE request to discover the absolute URI of the media storage function?	>	SIP MESSAGE	-	Р
2a2	The SS (MCData server) sends a SIP 200 (OK) response.	<	SIP 200 (OK)	-	-
2a3	The SS (MCData server) sends a SIP MESSAGE request containing the absolute URI of the media storage function in the <mcdata- controller-psi&gt; element of the mcdata-info.</mcdata- 	<	SIP MESSAGE	-	-
2a4	Check: Does the UE (MCData client) send a SIP 200 (OK) response?	>	SIP 200 (OK)	-	Р
2b1	ELSE the UE determines the value of the absolute URI associated with the media storage function of the MCData content server from the <mcdatacontentserveruri> element of the MCData user profile document</mcdatacontentserveruri>	-	-	-	-

#### 5.3C.8.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

#### Table 5.3C.8.4-1: SIP MESSAGE from the UE (step 2a1, Table 5.3C.8.3-1)

Derivation Path: Table 5.5.2.7.1-1, condition MCDATA_FD						
Information Element	Value/remark	Comment	Reference	Condition		
Message-body						
MIME body part		MCData-Info				
MIME-part-body	MCData-Info as described in Table 5.3C.8.4-2					

### Table 5.3C.8.4-2: MCDATA-Info from the UE (Table 5.3C.8.4-1)

Derivation Path: Table 5.5.3.2.1-3							
Information Element	Value/remark	Comment	Reference	Condition			
mcdata-info							
mcdata-Params							
request-type	"msf-disc-req"						

Derivation Path: Table 5.5.2.7.2-1	, condition MCDATA_FD			
Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
Request-URI	tsc_MCData_PublicSer viceId_A	According to TS 24.282 [87] clause 10.2.1.3.3 the participating function just forwards the SIP MESSAGE received from the controlling function to the client		
Accept-Contact				
ac-value[2]	not present			
P-Asserted-Identity				
name-addr	px_MCX_SIP_PublicUs erId_A_1	Public user ID of the calling MCData user (TS 24.282 [87] clause 10.2.1.3.4)		
Message-body				
MIME body part		MCData-Info		
MIME-part-body	MCData-Info as described in Table 5.3C.8.4-4			

#### Table 5.3C.8.4-3: SIP MESSAGE from the SS (step 2a3, Table 5.3C.8.3-1)

#### Table 5.3C.8.4-4: MCDATA-Info from the SS (Table 5.3C.8.4-3)

Derivation Path: Table 5.5.3.2.2-3						
Information Element	Value/remark	Comment	Reference	Condition		
mcdata-info						
mcdata-Params						
request-type	"msf-disc-res"					
mcdata-request-uri	not present					
mcdata-calling-user-id	not present					
mcdata-controller-psi	Encrypted <mcdata- controller-psi&gt; with mcdataURI set to tsc_MCData_MSF_URI</mcdata- 	Encrypted according to Table 5.5.3.2.2-3A				

# 5.3C.9 Discovery of the absolute URI of the media storage function (group communication)

5.3C.9.1 Initial conditions

Same as 5.3C.8.1.

- 5.3C.9.2 Void
- 5.3C.9.3 Procedure

Same as 5.3C.8.3.

5.3C.9.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

Derivation Path: Table 5.5.2.7.1-1	, condition MCDATA_FD			
Information Element	Value/remark	Comment	Reference	Condition
Message-body				
MIME body part		MCData-Info		
MIME-part-body	MCData-Info as described in Table 5.3C.9.4-2			

#### Table 5.3C.9.4-1: SIP MESSAGE from the UE (step 2a1, Table 5.3C.8.3-1)

#### Table 5.3C.9.4-2: MCDATA-Info from the UE (Table 5.3C.9.4-1)

Derivation Path: Table 5.5.3.2.1-3						
Information Element	Value/remark	Comment	Reference	Condition		
mcdata-info						
mcdata-Params						
request-type	"msf-disc-req"					
mcdata-calling-group-id	Encrypted <mcdata- calling-group-id&gt; with mcdataURI set to px_MCData_Group_A_ ID</mcdata- 	Encrypted according to Table 5.5.3.2.1-3A				

#### Table 5.3C.9.4-3: SIP MESSAGE from the SS (step 2a3, Table 5.3C.8.3-1)

Same as Table 5.3C.8.4-3

# 5.3C.10 FD file upload using HTTP

5.3C.10.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

#### 5.3C.10.2 Void

#### 5.3C.10.3 Procedure

### Table 5.3C.10.3-1: FD file upload using HTTP

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that	-	-	-	-
	depends on the UE's RRC state.				
1a1	IF the UE is in RRC_IDLE state THEN the	-	-	-	-
	procedure 'MCX CO communication' as				
	described in clause 5.4.3 is started to establish				
-	an RRC connection.				
2	Check: Does the UE (MCData client) send an	>	HTTP POST	-	Р
	HTTP POST request to upload a file to the media				
	storage function?				
3	The SS (MCData server) sends an HTTP 201	<	HTTP 201 Created	-	-
	Created response containing a Location header				
	field with a URL identifying the location of the resource where the file has been stored at the				
4	media storage function.		SIP MESSAGE		Р
4	Check: Does the UE (MCData client) send a SIP MESSAGE request containing an FD	>	SIP MESSAGE	-	Р
	SIGNALLING PAYLOAD with Payload content				
	type "FILEURL" and with the Payload data				
	containing the URL of the file?				
5	The SS (MCData server) sends a SIP 202	<	SIP 202 (Accepted)	-	-
Ŭ	(Accepted) response				
6	The procedure 'MCX communication release' as	-	-	-	-
-	described in clause 5.4.14 is performed to				
	release the RRC connection.				

#### 5.3C.10.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3C.11 FD file accept and download using HTTP

#### 5.3C.11.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

#### 5.3C.11.2 Void

#### 5.3C.11.3 Procedure

### Table 5.3C.11.3-1: FD file accept and download using HTTP

St	Procedure		Message Sequence	TP	Verdict	
		U - S	Message			
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-	
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-	
2	Check: Does the UE (MCData client) send a SIP MESSAGE request containing an FD NOTIFICATION with FD disposition notification type "FILE DOWNLOAD REQUEST ACCEPTED"?	>	SIP MESSAGE	-	Ρ	
3	The SS (MCData server) sends a SIP 202 (Accepted) response	<	SIP 202 (Accepted)	-	-	
4	Check: Does the UE (MCData client) send an HTTP GET request to download the file?	>	HTTP GET	-	Р	
5	SS (MCData server) sends an HTTP 200 OK response containing the requested file.	<	HTTP 200 OK	-	-	
-	EXCEPTION: Steps 6a1 describes behaviour that depends on the test case requirements; the "lower case letter" identifies a step sequence that takes place when the SS has included a FD disposition request of "FILE DOWNLOAD COMPLETED UPDATE" in the FD SIGNALLING PAYLOAD	-	-	-	-	
6a1	Check: Does the UE (MCData client) send a SIP MESSAGE request containing an FD NOTIFICATION with disposition notification type "FILE DOWNLOAD COMPLETED"?	>	SIP MESSAGE	-	Р	
6a2	The SS (MCData server) sends a SIP 202 (Accepted) response	<	SIP 202 (Accepted)	-	-	
7	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection.	-	-	-	-	

#### 5.3C.11.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3C.12 CO MCData call establishment using a pre-established session

### 5.3C.12.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

## 5.3C.12.2 Void

### 5.3C.12.3 Procedure

Table 5.3C.12.3-1: CO MCData Call Establish	ment
---	------

St	Procedure		Message Sequence		Verdict	
		U - S	Message			
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-	
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-	
2	Check: Does the UE (MCData client) send a SIP REFER message to request the establishment of an MCPTT call using a pre-established session?	>	SIP REFER	-	Р	
3	The SS (MCData server) responds with a SIP 200 (OK) message indicating that the MCPTT call has been established	<	SIP 200 (OK)	-	-	
4	The SS (MCX Server) sends a SIP re-INVITE to verify that the MCData call has been established.	<	SIP INVITE	-	-	
-	EXCEPTION: Step 5a1 describes behaviour that depends on the UE implementation; the "lower case letter" identifies a step sequence that take place if the UE responds to a SIP INVITE with a SIP 100 (Trying).	-	-	-	-	
5a1	The UE (MCX client) sends a SIP 100 (Trying)	>	SIP 100 (Trying)	-	-	
6	Check: Does the UE (MCX client) respond to the SIP re-INVITE with SIP 200 (OK)?	>	SIP 200 (OK)	-	Р	
7	The SS (MCX server) sends a SIP ACK in response to the SIP 200 (OK) message.	<	SIP ACK	-	-	
8	The UE (MCData client) connects to the TCP server at the SS side to establish an MSRP connection. (NOTE 1)	-	-	-	-	
9	Check: Does the UE (MCData client) send an empty MSRP SEND request to bind the TCP connection to the MSRP session?	>	MSRP SEND	-	Р	
10	The SS (MCData server) sends an MSRP 200 (OK) response.	<	MSRP 200 (OK)	-	-	
NOTE	1: According to TS 24.282 [87] clauses 9.2.3.4.2, 9 to "passive" (see table 5.5.3.1.2-3) ⇒ The UE's				tribute set	

### 5.3C.12.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
Request-URI	tsc_MCX_SessionID_B	session identity of the pre-established session	TS 24.282 [87] clause 9.2.5.2.2.1	
Message-body				
MIME body part	not present	SDP message		
MIME body part		MCData Info		
MIME-part-body	MCData-Info message as described in Table 5.3C.12.4-2			

#### Table 5.3C.12.4-1: SIP re-INVITE from the SS (step 4, Table 5.3C.12.3-1)

### Table 5.3C.12.4-2: MCData-Info (Table 5.3C.12.4-1)

Derivation Path: Table 5.5.3.2.2-3							
Information Element	Value/remark	Comment	Reference	Condition			
mcdata-info							
mcdata-Params							
mcdata-request-uri	not present						
mcdata-calling-user-id	not present						
anyExt							
mcdata-communication-state	"establish-success"		TS 24.282 [87] clause 9.2.5.1.2				

### Table 5.3C.12.4-3: SIP 200 (OK) from the UE (step 6, Table 5.3C.12.3-1)

Derivation Path: Table 5.5.2.17.1.1-1, condition INVITE-RSP, MCDATA_SDS							
Information Element	Value/remark	Comment	Reference	Condition			
Content-Type	not present						
Message-body	not present						

#### Table 5.3C.12.4-4: MSRP SEND (Step 9, Table 5.3C.12.3-1)

Derivation Path: Table 5.5.12.1.1-1, condition EMPTY\_SEND\_REQ

# 5.3C.13 MCData CO call release keeping the pre-established session

5.3C.13.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state with an MSRP connection established using a pre-established session.

# 5.3C.13.2 Void

### 5.3C.13.3 Procedure

## Table 5.3C.13.3-1: MCData CO call release keeping the pre-established session

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCData client) send a SIP REFER message with method "BYE" to release the MCData session and keep the pre- established session?	>	SIP REFER	-	Р
2	The SS (MCData server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
3	The SS (MCX Server) sends a SIP re-INVITE to verify the release of the MCData call.	<	SIP INVITE	-	-
-	EXCEPTION: Step 4a1 describes behaviour that depends on the UE implementation; the "lower case letter" identifies a step sequence that take place if the UE responds to a SIP INVITE with a SIP 100 (Trying).	-	-	-	-
4a1	The UE (MCX client) sends a SIP 100 (Trying)	>	SIP 100 (Trying)	-	-
5	Check: Does the UE (MCX client) respond to the SIP re-INVITE with SIP 200 (OK)?	>	SIP 200 (OK)	-	Р
6	The SS (MCX server) sends a SIP ACK in response to the SIP 200 (OK) message.	<	SIP ACK	-	-
-	EXCEPTION: Steps 7a1 - 7b1 describe behaviour that depends on the endpoint role the UE (MCData client) has chosen at call establishment. (NOTE 1)	-	-	-	-
7a1	IF the client is the active endpoint THEN the SS waits 3s for the client to close the MSRP TCP connection. (NOTE 2)	-	-	-	-
7b1	ELSE the SS closes the MSRP TCP connection. (NOTE 3)	-	-	-	-
NOTE	<ol> <li>The endpoint role is negotiated in the SDP sig 2: After the wait period the SS may stop the MSI closed the connection.</li> <li>When the SS has the role of the active endpoint MSRP connection.</li> </ol>	RP TCP s	server independent from whether of		

#### 5.3C.13.4 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

# Table 5.3C.13.4-1: SIP REFER (step 1, Table 5.3C.13.3-1)

Derivation Path: Table 5.5.2.12-1, condition METHOD-BYE

# Table 5.3C.13.4-2: SIP 200 (OK) (step 2, Table 5.3C.13.3-1)

Derivation Path: Table 5.5.2.17.1.2-1, condition REFER-RSP

Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
Request-URI	tsc_MCX_SessionID_B	session identity of the pre-established session	TS 24.282 [87] clause 9.2.5.4.2.1	
Message-body				
MIME body part	not present	SDP message		
MIME body part		MCData Info		
MIME-part-body	MCData-Info message as described in Table 5.3C.13.4-4			

### Table 5.3C.13.4-3: SIP re-INVITE from the SS (step 3, Table 5.3C.13.3-1)

Table 5.3C.13.4-4: MCData-Info (Table 5.3C.13.4-3)

Derivation Path: Table 5.5.3.2.2-3						
Information Element	Value/remark	Comment	Reference	Condition		
mcdata-info						
mcdata-Params						
mcdata-request-uri	not present					
mcdata-calling-user-id	not present					
anyExt						
mcdata-communication-state	"terminated"		TS 24.282 [87]			
			clause			
			9.2.5.4.2.1			

### Table 5.3C.13.4-5: SIP 200 (OK) from the UE (step 5, Table 5.3C.13.3-1)

Derivation Path: Table 5.5.2.17.1.1-1, condition INVITE-RSP, MCDATA_SDS							
Information Element	Value/remark	Comment	Reference	Condition			
Content-Type	not present						
Message-body	not present						

# 5.3C.14 Message Store Function Object Upload or Creation using HTTP

5.3C.14.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

#### 5.3C.14.2 Procedure

### Table 5.3C.14.2-1: Message Store Function Object Upload or Creation using HTTP

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
2	Check: Does the UE (MCData client) send an HTTP POST request to upload or create an object to the message store?	>	HTTP POST	-	Р
3	The SS (MCData server) sends an HTTP 201 Created response indicating the result of the upload or creation operation.	<	HTTP 201 Created	-	-
4	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection.	-	-	-	-

#### 5.3C.14.3 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3C.15 Message Store Function Delete using HTTP

### 5.3C.15.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

#### 5.3C.15.2 Procedure

#### Table 5.3C.15.2-1: Message Store Function Delete using HTTP

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
2	Check: Does the UE (MCData client) send an HTTP DELETE request to perform a deletion with the message store?	>	HTTP DELETE	-	Ρ
3	The SS (MCData server) sends an HTTP 204 (No Content) response indicating the result of the delete operation.	<	HTTP 204 (No Content)	-	-
4	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection.	-	-	-	-

#### 5.3C.15.3 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3C.16 Message Store Function Retrieve using HTTP

### 5.3C.16.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

#### 5.3C.16.2 Procedure

#### Table 5.3C.16.2-1: Message Store Function Retrieve using HTTP

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
2	Check: Does the UE (MCData client) send an HTTP GET request to retrieve an object in the message store?	>	HTTP GET	-	Р
3	The SS (MCData server) sends an HTTP 200 (OK) response indicating the result of the retrieval operation.	<	HTTP 200 (OK)	-	-
4	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection.	-	-	-	-

#### 5.3C.16.3 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3C.17 Message Store Function Post Request using HTTP

5.3C.17.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

#### 5.3C.17.2 Procedure

#### Table 5.3C.17.2-1: Message Store Function Retrieve using HTTP

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
2	Check: Does the UE (MCData client) send an HTTP POST request to the message store function?	>	HTTP POST	-	Ρ
3	The SS (MCData server) sends an HTTP 200 (OK) Created response.	<	HTTP 200 (OK)	-	-
4	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection.	-	-	-	-

#### 5.3C.17.3 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

# 5.3C.18 Message Store Function Put Request using HTTP

#### 5.3C.18.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

#### 5.3C.18.2 Procedure

#### Table 5.3C.18.2-1: Message Store Function Retrieve using HTTP

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the UE's RRC state.	-	-	-	-
1a1	IF the UE is in RRC_IDLE state THEN the procedure 'MCX CO communication' as described in clause 5.4.3 is started to establish an RRC connection.	-	-	-	-
2	Check: Does the UE (MCData client) send an HTTP PUT request to the message store function?	>	HTTP PUT	-	Р
3	The SS (MCData server) sends an HTTP 200 (OK) Created response.	<	HTTP 200 (OK)	-	-
4	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection.	-	-	-	-

#### 5.3C.18.3 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

#### 5.3C.19 Message Store Function Post Notification using HTTP

5.3C.19.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is either in RRC\_IDLE state or in RRC\_CONNECTED state.

5.3C.19.2 Procedure

#### Table 5.3C.19.2-1: Message Store Function Retrieve using HTTP

St	Procedure Message Sequence		TP	Verdict	
		U - S	Message		
1	The procedure 'MCX CT communication' as described in clause 5.4.4 is started to establish an RRC connection.	-	-	-	-
2	The SS (MCData server) sends an HTTP POST message about changes in the message store using the message store function.	<	HTTP POST	-	Ρ
3	Check: Does the UE (MCData client) respond to the HTTP POST with a HTTP 204 (No Content) message?	>	HTTP 204 (No Content)	-	-
4	The procedure 'MCX communication release' as described in clause 5.4.14 is performed to release the RRC connection.	-	-	-	-

#### 5.3C.19.3 Specific message contents

All message contents are as specified in clause 5.5 and in the test case calling the procedure, with the following clarifications:

None

#### 5.4 Generic test procedures for RRC/NAS signalling

#### 5.4.1 General

The purpose of the procedures specified in the following clauses is to facilitate test description by providing procedure sequences which can be referred from the relevant test cases specified e.g. in 3GPP TS 37.579-2 [2], 3GPP TS 37.579-6 [84], 3GPP TS 37.579-7 [85].

The intention is, wherever possible, that RRC/NAS signalling and initial conditions should not be provided in the test descriptions rather should be referred to the procedure steps described in the generic procedures below, whereas the MCS SIP signalling and initial conditions when relevant for the test purposes shall be explicitly provided in the test description itself.

Throughout the generic test procedures RRC/NAS behaviour is denoted as "SS" for the System Simulator simulating the NWK side of the communication, and "UE" for the Implementation Under Test (IUT), whereas the MCPTT/MCVideo/MCData relevant behaviour is denoted as "SS (MCPTT/MCVideo/MCData server)" and "UE (MCPTT/MCVideo/MCData client)"/"UE (MCPTT/MCVideo/MCData user)" respectively. ProSe related SS behaviour when the SS simulates a UE device is denoted e.g. as "SS-UE1".

Depending on the TS 37.579-5 [5] test model being used, the RRC/NAS signalling is:

- MCX EUTRA test model: normative.
- MCX NR5GC test model: normative.

- MCX IPCAN test model: informative, unless specifically specified otherwise elsewhere.

#### 5.4.1A UE APN/PDN support assumptions for E-UTRA/EPC

According to TS 23.280 [110] clause 5.2.7.0 an MC service UE shall use APNs for the SIP-1, HTTP-1 and CSC-1 reference points, which may be different or all the same. To limit the test specification complexity it is assumed that only one APN is used and therefore there is a single MCX PDN. In addition there might be an IMS PDN and an internet PDN so that three PDNs need to be taken into account:

- 1. MCX PDN with default EPS bearer using QCI=69
- NOTE 1: It should be noted that the core specs impose a requirement that the QCI value 8 or better shall be used for the EPS bearer that transports HTTP-1 reference point messaging. Using a single APN and having for the EPS bearer QCI=69 will satisfy this.

NOTE 2: Void.

- 2. Internet PDN with default EPS bearer using QCI=9
- 3. IMS PDN with default EPS bearer using QCI=5

This results in the need to handle up to three PDNs during MCX conformance tests.

NOTE 3: It should be noted that, handling IMS and MCX with one APN is theoretically possible but may have undesirable implications e.g. VoLTE signalling could delay MCX signalling therefore the assumption is that such implementations will be undesirable and unlikely.

Consequently, for IMS and MCX it should be assumed that the UE will do 2 different registrations, i.e. for each of them there will be a separate IP connection (different IP addresses at the UE and the SS).

Depending on UE configuration PDN connectivities for the up-to three PDNs may be established. There are two major scenarios:

- 1. The MCX PDN connectivity gets established automatically after switch-on during the initial registration procedure. In addition the UE may establish PDN connectivities to the IMS PDN and/or the internet PDN. The connectivity to these PDNs may be requested in any order. There can be 1, 2 or 3 PDNs.
- 2. The UE requests PDN connectivities for IMS and/or internet but not for MCX. If IMS and internet are requested, it may be in any order. Establishment of the MCX PDN connectivity is triggered after the initial registration in a separate procedure. There can be 2 or 3 PDNs in total.

To serve the above scenarios the following parameters are defined in TS 37.579-5 [5]:

- px\_MCX\_InitialRegistration\_TypeOfPDN1:
   First PDN registered during initial registration (either 'ims' or 'internet' or 'mcx')
- px\_MCX\_InitialRegistration\_TypeOfPDN2:
   Second PDN registered during initial registration; in addition to 'ims' or 'internet' or 'mcx' it may be 'none' to indicate that there is no second PDN connectivity requested by the UE during initial registration.
- px\_MCX\_InitialRegistration\_TypeOfPDN3: Third PDN registered during initial registration; in addition to 'ims' or 'internet' or 'mcx' it may be 'none' to indicate that there is no third PDN connectivity requested by the UE during initial registration.

The type of the parameters is a TTCN-3 enumerated type with values 'ims', 'internet', 'mcx' and 'none'.

In addition there is the parameter px\_AccessPointName in TS 36.523-3 [74] which is used as default APN, i.e. for a PDN for which the UE does not provide an APN (NOTE: Any, but only one, of the three PDNs can be the one with default APN).

Regarding the default EPS bearers for the respective mission critical services the following applies for MCX conformance tests:

- MCPTT:

A single dedicated EPS bearer with QCI=65 is used with packet filters for the audio stream and media plane control signalling (see also TS 23.379 [126] clause 5.7.3)

- MCVideo: A single dedicated EPS bearer with QCI=67 is used with packet filters for the audio and video streams and transmission control signalling (see also TS 23.281 [90] clause 5.5.3)
- MCData:
   A single dedicated EPS bearer with QCI=70 is used with packet filter for the TCP data stream (see also TS 23.282 [91] clause 5.8.3)

#### 5.4.1B UE PDU session support assumptions for NR/5GC

Similar assumptions are made for the PDU sessions of NR/5GC as for the PDNs of E-UTRA/EPC in clause 5.4.1A. At initial registration the UE may request up to three PDU sessions:

- 1. MCX PDU session with default QoS flow using 5QI=69 according to Table 5.7.4-1 in TS 23.501 [134]
- 2. Internet PDU session with default QoS flow using 5QI=9 (same value as for Config #1 of table 4.8.4-1 in TS 38.508-1 [132])
- 3. IMS PDU session with default QoS flow using 5QI=5 (same value as for Config #2 of table 4.8.4-1 in TS 38.508-1 [132])

At initial registration - before the UE goes back to idle mode - the UE may request - in any order - 0, 1, 2 or 3 of these PDU sessions. This shall be configured (re-)using px\_MCX\_InitialRegistration\_TypeOfPDN1, px\_MCX\_InitialRegistration\_TypeOfPDN2 and px\_MCX\_InitialRegistration\_TypeOfPDN3 as described in clause 5.4.1A. When none of the PIXITs addresses the MCX PDU session, establishment of the MCX PDU session needs to be triggered by the user.

The type of each PDU session shall be determined using pc\_APN\_ID\_Internet, pc\_APN\_ID\_IMS and pc\_APN\_ID\_MCX as specified in TS 38.508-2 [133].

The non-default QoS flows for MCX over NR/5GC are

- MCPTT:

Single non-default QoS flows with 5QI=65 according to Table 5.7.4-1 in TS 23.501 [134] with packet filters for the audio stream and media plane control signalling.

- MCVideo: Single non-default QoS flows with 5QI=67 according to Table 5.7.4-1 in TS 23.501 [134] with packet filters for the audio and video streams and transmission control signalling.
- MCData: Single non-default QoS flows with 5QI=70 according to Table 5.7.4-1 in TS 23.501 [134] with packet filter for the TCP data stream.

#### 5.4.2 Initial registration

#### 5.4.2.1 Generic procedure

#### 5.4.2.1.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is switched off.

#### Procedure

5.4.2.1.2

#### Table 5.4.2.1.2-1: Generic procedure for initial registration

St	Procedure	Message Sequence	
		U - S	Message
1	Switch the UE on.	-	-
-	EXCEPTION: steps 2a1 - 2b1 depend on the underlying network technology.	-	-
2a1	IF the underlying network technology is E-UTRA/EPC THEN the E-UTRA/EPC signalling as described in clause 5.4.2.2 is performed including procedure 'Initial MCX Authentication, Registration, Configuration and Subscription' as described in clause 5.3.2.	-	-
2b1	ELSE IF the underlying network technology is NR/5GC THEN the NR/5GC signalling as described in clause 5.4.2.3 is performed including procedure 'Initial MCX Authentication, Registration, Configuration and Subscription' as described in clause 5.3.2.	-	-
-	EXCEPTION: At the end of this procedure the UE is in RRC_IDLE state and the client is fully registered for the respective MC service.	-	-

#### 5.4.2.2 E-UTRA/EPC signalling

#### 5.4.2.2.1 Initial conditions

As specified in clause 5.4.2.1.1

#### 5.4.2.2.2 Definition of system information messages

The E-UTRA default system information messages as defined in TS 36.508 [6] are used.

5.4.2.2.3 Procedure

Table 5.4.2.2.3-1: E-UTRA/EPC signalling for UE registration

St	Procedure		Message Sequence		
		U - S	Message		
1	Void	-	-		
2	UE transmits an RRCConnectionRequest message.	>	RRC: RRCConnectionRequest		
3	SS transmits an RRCConnectionSetup message.	<	RRC: RRCConnectionSetup		
4	The UE transmits an <i>RRCConnectionSetupComplete</i> message to confirm the successful completion of the connection establishment and to initiate the Attach procedure by including the ATTACH REQUEST message. The PDN CONNECTIVITY REQUEST message is piggybacked in ATTACH REQUEST. (NOTE 1)	>	RRC: <i>RRCConnectionSetupComplete</i> NAS: ATTACH REQUEST NAS: PDN CONNECTIVITY REQUEST		
5	The SS transmits an AUTHENTICATION REQUEST message to initiate the EPS authentication and AKA	<	RRC: DLInformationTransfer NAS: AUTHENTICATION REQUEST		
	procedure.				
6	The UE transmits an AUTHENTICATION RESPONSE	>	RRC: ULInformationTransfer		
	message and establishes mutual authentication.		NAS: AUTHENTICATION RESPONSE		
7	The SS transmits a NAS SECURITY MODE	<	RRC: DLInformationTransfer		
	COMMAND message to activate NAS security.		NAS: SECURITY MODE COMMAND		
8	The UE transmits a NAS SECURITY MODE COMPLETE message and establishes the initial security configuration.	>	RRC: ULInformationTransfer NAS: SECURITY MODE COMPLETE		
-	EXCEPTION: Steps 9a1 to 9a2 describe behaviour that		-		
-	depends on UE configuration; the "lower case letter" identifies a step sequence that take place if the UE has ESM information which needs to be transferred.	-			
9a1	IF the UE sets the ESM information transfer flag in the	<	RRC: DLInformationTransfer		
	last PDN CONNECTIVITY REQUEST message THEN the SS transmits an ESM INFORMATION REQUEST message to initiate exchange of protocol configuration options and/or APN.		NAS: ESM INFORMATION REQUEST		
9a2	The UE transmits an ESM INFORMATION RESPONSE	>	RRC: ULInformationTransfer		
342	message to transfer protocol configuration options and/or APN.		NAS: ESM INFORMATION RESPONSE		
10	The SS transmits a <i>SecurityModeCommand</i> message to activate AS security.	<	RRC: SecurityModeCommand		
11	The UE transmits a SecurityModeComplete message and establishes the initial security configuration.	>	RRC: SecurityModeComplete		
12	The SS transmits a <i>UECapabilityEnquiry</i> message to initiate the UE radio access capability transfer procedure.	<	RRC: UECapabilityEnquiry		
13	The UE transmits a UECapabilityInformation message to transfer UE radio access capability.	>	RRC: UECapabilityInformation		
14	The SS transmits an <i>RRCConnectionReconfiguration</i> message to establish the default bearer with condition SRB2-DRB(1, 0) according to TS 36.508 [6] clause 4.8.2.2.1.1. This message includes the ATTACH ACCEPT message. The ACTIVATE DEFAULT EPS BEARER CONTEXT REQUEST message is piggybacked in ATTACH ACCEPT. (NOTE 1)	<	RRC: <i>RRCConnectionReconfiguration</i> NAS: ATTACH ACCEPT NAS: ACTIVATE DEFAULT EPS BEARER CONTEXT REQUEST		
15	The UE transmits an <i>RRCConnectionReconfigurationComplete</i> message to confirm the establishment of default bearer.	>	RRC: RRCConnectionReconfigurationComplet e		
-	EXCEPTION: In parallel to the event described in steps 16 and 16A below, if initiated by the UE the generic procedure for IP address allocation in the U-plane as defined in TS 36.508 [6] clause 4.5A.1 takes place.	-	-		
-	EXCEPTION: IF the UE is configured to register for MCX as first PDN during initial registration, THEN in parallel to the event described in steps 16 and 16A below the main procedure for Initial MCX Authentication, Registration, Configuration and Subscription described in Table 5.3.2.2.1-1 takes place.	-	-		

St	Procedure		Message Sequence		
		U - S	Message		
-	EXCEPTION: IF the UE is configured to register for IMS	-	-		
	as first PDN during initial registration, THEN in parallel				
	to the event described in steps 16 and 16A below the				
	generic procedure for IMS signalling in the U-plane				
	specified in TS 36.508 clause 4.5A.3 takes place if				
	requested by the UE				
16	This message includes the ATTACH COMPLETE	>	RRC: ULInformationTransfer		
	message. The ACTIVATE DEFAULT EPS BEARER		NAS: ATTACH COMPLETE		
	CONTEXT ACCEPT message is piggybacked in		NAS: ACTIVATE DEFAULT EPS		
	ATTACH COMPLETE.		BEARER CONTEXT ACCEPT		
-	EXCEPTION: Depending on the UE capability step 16A	-	-		
	may be performed 0, 1 or 2 times. (NOTE 1)				
16A	The E-UTRA/EPC signalling for establishment of an	-	-		
10/1	additional PDN connectivity according to table				
	5.4.2.2.3-2 takes place				
17	The SS transmits an RRCConnectionRelease	<	RRC: RRCConnectionRelease		
.,	message.	<b>N</b>	KKO. KKOOOMileciionikelease		
-	EXCEPTION: IF the UE is not configured to register for		-		
-	MCX during initial registration, THEN steps 18 to 27	-	[ <sup>-</sup>		
	take place.				
10					
18	Make the UE (MCX client) request service	-	-		
10	authorisation/configuration.		DDCCompositionBostupot		
19	The UE transmits an RRCConnectionRequest	>	RRCConnectionRequest		
	message.				
20	SS transmit an RRCConnectionSetup message.	<	RRC: RRCConnectionSetup		
21	The UE transmits an RRCConnectionSetupComplete	>	RRC: RRCConnectionSetupComplete		
	message to confirm the successful completion of the		NAS: SERVICE REQUEST		
	connection establishment and to initiate the session				
	management procedure by including the SERVICE				
	REQUEST message.				
22	The SS transmits a SecurityModeCommand message	<	RRC: SecurityModeCommand		
	to activate AS security.				
23	The UE transmits a SecurityModeComplete message	>	RRC: SecurityModeComplete		
	and establishes the initial security configuration.				
24	The SS configures a new data radio bearer, associated	<	RRC: RRCConnectionReconfiguration		
	with the default EPS bearer context.				
	The RRCConnectionReconfiguration message is using				
	condition SRB2-DRB(N, 0) with N being the number of				
	PDN connectivities established during initial registration				
	(steps 0 – 17).				
	The DRBs associated with the respective default EPS				
	bearer context obtained during the attach procedure are				
	established				
25	The UE transmits an	>	RRC:		
	RRCConnectionReconfigurationComplete message to		RRCConnectionReconfigurationComplete		
	confirm the establishment of the new radio bearer,		е		
	associated with the default EPS bearer context.				
26	The E-UTRA/EPC signalling for establishment of an	-	-		
	additional PDN connectivity according to table				
	5.4.2.2.3-2 takes place				
27	The SS transmits an RRCConnectionRelease	<	RRC: RRCConnectionRelease		
	message.				

St	Procedure	Message Sequence		
		U - S	Message	
1	The UE transmits a PDN CONNECTIVITY REQUEST	>	RRC: ULInformationTransfer	
	message to request an additional PDN.		NAS: PDN CONNECTIVITY REQUEST	
2	The SS configures a new data radio bearer, associated	<	RRC: RRCConnectionReconfiguration	
	with the additional default EPS bearer context.		NAS:	
	RRCConnectionReconfiguration message contains the		ACTIVATE DEFAULT EPS BEARER	
	ACTIVATE DEFAULT EPS BEARER CONTEXT		CONTEXT REQUEST	
	REQUEST message.			
3	The UE transmits an	>	RRC:	
	RRCConnectionReconfigurationComplete message to		RRCConnectionReconfigurationComplet	
	confirm the establishment of additional default bearer.		е	
-	EXCEPTION: In parallel to the event described in step	-	-	
	4 below, if initiated by the UE the generic procedure for			
	IP address allocation in the U-plane specified in			
	TS 36.508 clause 4.5A.1 takes place performing IP			
	address allocation in the U-plane.			
-	EXCEPTION: IF ADD_IMS THEN in parallel to the	-	-	
	event described in step 4 below the generic procedure			
	for IMS signalling in the U-plane specified in TS 36.508			
	clause 4.5A.3 takes place if requested by the UE			
-	EXCEPTION: IF ADD_MCX THEN in parallel to the	-	-	
	event described in step 4 below the main procedure for			
	Initial MCX Authentication, Registration, Configuration			
	and Subscription as specified in Table 5.3.2.2.1-1 takes			
4	The UE transmits an ACTIVATE DEFAULT EPS	>	RRC: ULInformationTransfer	
	BEARER CONTEXT ACCEPT message.		NAS: ACTIVATE DEFAULT EPS	
			BEARER CONTEXT ACCEPT	

#### Table 5.4.2.2.3-2: E-UTRA/EPC signalling for establishment of an additional PDN connectivity

Condition	Explanation
ADD_IMS	true if PDN CONNECTIVITY REQUEST is for IMS
ADD_MCX	true if PDN CONNECTIVITY REQUEST is for MCX

#### 5.4.2.2.4 Specific message contents

All specific E-UTRA/EPC signalling message contents shall be referred to TS 36.508 [6] clause 4.6 and 4.7.

#### 5.4.2.3 NR/5GC signalling

5.4.2.3.1 Initial conditions

As specified in clause 5.4.2.1.1

#### 5.4.2.3.2 Definition of system information messages

The NR/5GC default system information messages as defined in TS 38.508-1 [132] are used.

#### Procedure

5.4.2.3.3

Table 5.4.2.3.3-1: NR/5GC signalling for UE registration
--

St	Procedure	Message Sequence			
		U - S	Message		
1-14	Steps 2-15 of the registration procedure in TS 38.508-1	-	-		
	[132] Table 4.5.2.2-2 take place.				
	(NOTE 1, 2)				
-	EXCEPTION: Depending on the UE capability step 15	-	-		
	may be performed 0, 1, 2 or 3 times.				
	(NOTE 3)				
15	The NR/5GC signalling for establishment of a PDU	-	-		
	session according to table 5.4.2.3.3-3 takes place.				
	(NOTE 4)				
16	The SS transmits an RRCRelease message.	<	NR RRC: <i>RRCRelease</i>		
-	EXCEPTION: Step 17 describes behaviour that	-	-		
	depends on whether or not the MCX PDU session has				
	been established at step 15.				
17	IF the MCX PDU session has not been established yet	-	-		
	THEN the NR/5GC signalling for explicit establishment				
	of the MCX PDU session according to table 5.4.2.3.3-2				
	takes place.				
NOTE	1: When the UE supports S1 mode (as indicated in the 5				
	[132] Table 4.5.2.2-2 are performed to provide the UE	with secur	ity algorithms to be used for EPS NAS		
NOTE	even though this is not needed for MCX test cases.				
NOTE		e not perfo	ormed as there is no Test Mode or Test		
NOTE	Loop Function for MCX test cases.	<u> </u>			
NOTE	3: The assumptions for the PDU session support of an M				
NOTE	requirements in regard to the different PDU session ar				
NOTE	· · · · · · · · · · · · · · · · · · ·				
	REQUEST for the next PDU session in parallel to the signalling of the current PDU session establishment.				

#### Table 5.4.2.3.3-2: NR/5GC signalling for explicit establishment of the MCX PDU session

St	Procedure		Message Sequence
		U - S	Message
1	Make the UE (MCX client) request service authorisation/configuration.	-	-
2-7	Steps 2-6 of the RRC establishment procedure in TS 38.508-1 [132] Table 4.5.4.2-3 take place.	-	-
-	EXCEPTION: Steps 8a1 - 8b2 describe behaviour that depends on whether or not at least one PDU session has been established at step 15 of Table 5.4.2.3.3-1.	-	-
8a1	IF no PDU session has been established yet THEN the SS transmits a SERVICE ACCEPT message. (NOTE 1)	<	NR RRC: DLInformationTransfer 5GMM: SERVICE ACCEPT
8b1- 8b2	ELSE steps 7-8 of the RRC establishment procedure in TS 38.508-1 [132] Table 4.5.4.2-3 take place.	-	-
9	The NR/5GC signalling for establishment of a PDU session according to table 5.4.2.3.3-3 takes place	-	-
10	The SS transmits an RRCRelease message.	<	NR RRC: RRCRelease
NOTE	1: In this case there are no DRBs to be established by RI	RCReconf	ïguration.

St	Procedure		Message Sequence		
		U - S	Message		
1	The UE transmits a PDU SESSION ESTABLISHMENT	>	NR RRC: ULInformationTransfer		
	REQUEST message.		5GMM: UL NAS TRANSPORT		
			5GSM: PDU SESSION		
			ESTABLISHMENT REQUEST		
2	The SS transmits an RRCReconfiguration message	<	NR RRC: RRCReconfiguration		
	containing a PDU SESSION ESTABLISHMENT		5GMM: DL NAS TRANSPORT		
	ACCEPT message.		5GSM: PDU SESSION		
			ESTABLISHMENT ACCEPT		
3	The UE transmits an RRCReconfigurationComplete	>	NR RRC: RRCReconfigurationComplete		
	message.				
4	The generic procedure for IP address allocation in the	-	-		
	user plane specified in TS 38.508-1 [132] clause 4.5A.3				
	takes place.				
-	EXCEPTION: Steps 5a1 - 5b1 depend on the type of	-	-		
	PDU session indicated in the PDU SESSION				
	ESTABLISHMENT REQUEST at step 1.				
-	IF ADD_IMS THEN the generic procedure for IMS	-	-		
	signalling in the U-plane specified in TS 38.508-1 [132]				
	clause 4.5A.4 takes place.				
	ELSE IF ADD_MCX THEN the main procedure for	-	-		
	Initial MCX Authentication, Registration, Configuration				
	and Subscription as specified in Table 5.3.2.2.1-1 takes				
	place				

#### Table 5.4.2.3.3-3: NR/5GC signalling for establishment of a PDU session

Condition	Explanation
ADD_IMS	true if PDU SESSION ESTABLISHMENT REQUEST is for IMS
ADD_MCX	true if PDU SESSION ESTABLISHMENT REQUEST is for MCX

#### 5.4.2.3.4 Specific message contents

All specific NR/5GC signalling message contents shall be referred to TS 38.508-1 [132] clause 4.6 and 4.7 with the following clarifications:

- The SERVICE REQUEST message at step 5 of Table 5.4.2.3.3-2 is expected to have the service type IE set to "signalling".
- The PDU session type of the PDU SESSION ESTABLISHMENT REQUEST for the MCX PDU session at step 1 of Table 5.4.2.3.3-3 is expected to be '001'B, '010'B, '011'B (IPv4, IPv6, IPv4v6 but no 'Ethernet').
- The PDU SESSION ESTABLISHMENT ACCEPT for the MCX PDU session at step 2 of Table 5.4.2.3.3-3 applies reference QoS rule #10 of TS 38.508-1 [132] clause 4.8.2.1.
- At step 15 of the initial registration (Table 5.4.2.3.3-1) for the first PDU session establishment SRB2 is not established yet but gets established with the RRCReconfiguration (Table 5.4.2.3.3-3 step 2). The specific message content shown in table 5.4.2.3.4-1 accordingly.
- Due to legacy of EN-DC and E-UTRA/EPC the default DRB for IMS has DRB id 1. This is kept for MCX to allow common implementation in TTCN. The specific message content shown in table 5.4.2.3.4-1 accordingly.

Derivation path: TS 38.508-1 [132] Table 4.6.1-13	with condition NR					
Information Element	Value/Remark	Comment	Condition			
RRCReconfiguration ::= SEQUENCE {						
criticalExtensions CHOICE {						
<pre>rrcReconfiguration ::= SEQUENCE {</pre>						
radioBearerConfig	RadioBearerConfig with	NOTE 1, 3	FirstPDU			
	conditions SRB2 and DRBn					
	RadioBearerConfig with condition DRBn	NOTE 1, 3				
nonCriticalExtension SEQUENCE {						
masterCellGroup	CellGroupConfig with condition SRB2_DRBn	NOTE 2, 3	FirstPDU			
	CellGroupConfig with condition DRBn	NOTE 2, 3				
}						
}						
}						
}						
NOTE 1: RadioBearerConfig according to TS 38.5 NOTE 2: CellGroupConfig according to TS 38.508 NOTE 3: DRBn and SRB2_DRBn with						
n=1 if PDU SESSION ESTABLISHMENT REQUEST is for IMS n>1 else (n gets incremented for each non-IMS PDU session establishment)						

Condition Explanation	
FirstPDU	true for the first PDU session establishment at step 15 of Table 5.4.2.3.3-1

#### 5.4.3 MCX CO communication

#### 5.4.3.1 Generic procedure

#### 5.4.3.1.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_IDLE state.

#### 5.4.3.1.2 Procedure

#### Table 5.4.3.1.2-1: Generic procedure for MCX CO communication

St	Procedure	Message Sequence	
		U - S	Message
-	EXCEPTION: steps 1a1 - 1b1 depend on the	-	-
	underlying network technology.		
1a1	IF the underlying network technology is E-UTRA/EPC	-	-
	THEN the E-UTRA/EPC signalling as described in		
	clause 5.4.3.2 is performed.		
1b1	ELSE IF the underlying network technology is NR/5GC	-	-
	THEN the NR/5GC signalling as described in clause		
	5.4.3.3 is performed.		
-	EXCEPTION: At the end of this procedure the UE is in	-	-
	RRC_CONNECTED state.		

#### 5.4.3.2 E-UTRA/EPC signalling

#### 5.4.3.2.1 Initial conditions

As specified in clause 5.4.3.1.1 with the following clarifications:

- During the attach a default EPS bearer context #3 (QCI 69) according to table 6.6.1-1, TS 36.508 [6] is established for MCX and SIP signalling.
- NOTE 1: The assumptions for the PDN support, including the default EPS bearer context QCI requirements in regard to the different PDN are described in 5.4.1A.

#### 5.4.3.2.2 Definition of system information messages

The E-UTRA default system information messages as defined in TS 36.508 [6] are used.

#### 5.4.3.2.3 Procedure

#### Table 5.4.3.2.3-1: E-UTRA/EPC signalling for MCX CO communication

St	Procedure	Message Sequence	
		U - S	Message
1	Void	-	-
2	The UE transmits an RRCConnectionRequest message	>	RRCConnectionRequest
	with 'establishmentCause' set to 'mo-Data'.		
3	SS transmit an RRCConnectionSetup message.	<	RRC: RRCConnectionSetup
4	The UE transmits an RRCConnectionSetupComplete	>	RRC: RRCConnectionSetupComplete
	message to confirm the successful completion of the		NAS: SERVICE REQUEST
	connection establishment and to initiate the session		
	management procedure by including the SERVICE		
	REQUEST message.		
5	The SS transmits a SecurityModeCommand message	<	RRC: SecurityModeCommand
	to activate AS security.		
6	The UE transmits a SecurityModeComplete message	>	RRC: SecurityModeComplete
_	and establishes the initial security configuration.		
7	The SS configures a data radio bearer, associated with	<	RRC: RRCConnectionReconfiguration
	the default EPS bearer context.		
	The <i>RRCConnectionReconfiguration</i> message is using		
	condition SRB2-DRB(n, m) as specified in		
	TS 36.508 [6] clause 4.8.2.2.1, with		
	n=13 depending on the number of PDNs (see clause		
	5.4.1A)		
	m=01 depending on the use case:		
	IF the procedure is used for connection		
	establishment within a pre-established session		
	THEN m=1		
	ELSE m=0		
-	EXCEPTION: In parallel to the events described below,	-	-
	depending on the context in which the procedure is		
	used, the MCX client may start with user plane		
	signalling (NOTE 1).		
8	The UE transmits an	>	RRC:
	RRCConnectionReconfigurationComplete message to		RRCConnectionReconfigurationComplet
	confirm the establishment of the new data radio bearer,		е
	associated with the default EPS bearer context.		
9-15	Void.	-	-

Procedure	Message Sequence	
	U - S	Message
EXCEPTION: Steps 16a1-16a3 describe behaviour that depends on the context in which the procedure is used: The steps take place when the procedure is used for MCPTT or MCVideo call establishment, MCData communication establishment for using the media plane and establishment of a pre-established session.	-	-
<ul> <li>The SS configures a new RLC-UM data radio bearer, associated with the dedicated EPS bearer context.</li> <li>The RRCConnectionReconfiguration message contains an ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST message for a dedicated EPS bearer according to TS 36.508 [6] clause 6.6.2 with</li> <li>MCPTT using dedicated EPS bearer context #5 (QCI 65)</li> <li>MCVideo using dedicated EPS bearer context #10 (QCI 67)</li> <li>MCData using dedicated EPS bearer context #9 (OCI 70)</li> </ul>	<	RRC: <i>RRCConnectionReconfiguration</i> NAS: ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST
The UE transmits an <i>RRCConnectionReconfigurationComplete</i> message to confirm the establishment of the data radio bearer associated with the default EPS.	>	RRC: RRCConnectionReconfigurationComplet e
The UE transmits an ACTIVATE DEDICATED EPS BEARER CONTEXT ACCEPT message.	>	RRC: ULInformationTransfer NAS: ACTIVATE DEDICATED EPS BEARER CONTEXT ACCEPT
-	<ul> <li>EXCEPTION: Steps 16a1-16a3 describe behaviour that depends on the context in which the procedure is used: The steps take place when the procedure is used for MCPTT or MCVideo call establishment, MCData communication establishment for using the media plane and establishment of a pre-established session.</li> <li>The SS configures a new RLC-UM data radio bearer, associated with the dedicated EPS bearer context.</li> <li>The RRCConnectionReconfiguration message contains an ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST message for a dedicated EPS bearer according to TS 36.508 [6] clause 6.6.2 with</li> <li>MCPTT using dedicated EPS bearer context #5 (QCI 65)</li> <li>MCVideo using dedicated EPS bearer context #10 (QCI 67)</li> <li>MCData using dedicated EPS bearer context #9 (QCI 70)</li> <li>The UE transmits an <i>RRCConnectionReconfigurationComplete</i> message to confirm the establishment of the data radio bearer associated with the default EPS.</li> <li>The UE transmits an ACTIVATE DEDICATED EPS</li> </ul>	U - SEXCEPTION: Steps 16a1-16a3 describe behaviour that depends on the context in which the procedure is used: The steps take place when the procedure is used for MCPTT or MCVideo call establishment, MCData communication establishment for using the media plane and establishment of a pre-established sessionThe SS configures a new RLC-UM data radio bearer, associated with the dedicated EPS bearer context.<

#### 5.4.3.2.4 Specific message contents

All specific E-UTRA/EPC signalling message contents shall be referred to TS 36.508 [6] clauses 4.6 and 4.7.

#### 5.4.3.3 NR/5GC signalling

#### 5.4.3.3.1 Initial conditions

As specified in clause 5.4.3.1.1 with the following clarifications:

- An MCX PDU session with default QoS rule #10 (5QI 69) according to table 4.8.2.1-10 in TS 38.508-1 [132] is established for MCX and SIP signalling.
- NOTE 1: The assumptions for the PDU session support, including the default QoS flow 5QI requirements in regard to the different PDU session are described in 5.4.1B.

#### 5.4.3.3.2 Definition of system information messages

The NR/5GC default system information messages as defined in TS 38.508-1 [132] are used.

#### 5.4.3.3.3 Procedure

#### Table 5.4.3.3.3-1: NR/5GC signalling for MCX CO communication

St	Procedure	Message Sequence	
		U - S	Message
1-6	Steps 2-7 of the RRC establishment procedure in TS	-	-
	38.508-1 [132] Table 4.5.4.2-3 take place.		
-	EXCEPTION: In parallel to the events described below,	-	-
	depending on the context in which the procedure is		
	used, the MCX client may start with user plane		
	signalling (NOTE 1).		

St	Procedure	Message Sequence	
		U - S	Message
7	Step 8 of the RRC establishment procedure in TS 38.508-1 [132] Table 4.5.4.2-3 takes place: The UE transmits an <i>RRCReconfigurationComplete</i> message to confirm the establishment of the data radio bearers.	-	-
-	EXCEPTION: Steps 8a1-8a3 describe behaviour that depends on the context in which the procedure is used: The steps take place when the procedure is used for MCPTT or MCVideo call establishment, MCData communication establishment for using the media plane and establishment of a pre-established session.	-	-
8a1	The SS configures a new RLC-UM data radio bearer, associated with the QoS flow to be added to the MCX PDU session and transmits an RRCReconfiguration message containing a PDU SESSION MODIFICATION COMMAND accordingly.	<	NR RRC: <i>RRCReconfiguration</i> 5GMM: DL NAS TRANSPORT 5GSM: PDU SESSION MODIFICATION COMMAND
-	EXCEPTION: Depending upon UE implementation steps 8a2 and 8a3 can occur in any order.	-	-
8a2	The UE transmits an RRCReconfigurationComplete message to confirm the establishment of the data radio bearer associated with the added QoS flow.	>	NR RRC: RRCReconfigurationComplete
8a3 NOTE	The UE transmits a PDU SESSION MODIFICATION COMPLETE message.	>	NR RRC: ULInformationTransfer 5GMM: UL NAS TRANSPORT 5GSM: PDU SESSION MODIFICATION COMPLETE

#### 5.4.3.3.4 Specific message contents

All specific NR/5GC signalling message contents shall be referred to TS 38.508-1 [132] clause 4.6 and 4.7 7 with the following clarifications:

- The SERVICE REQUEST message at step 3 of Table 5.4.2.3.3-1 is expected to have the service type IE set to "data".
- The RRCReconfiguration message at step 8a1 adds a single RLC-UM non-default DRB (configuration DRB(0,1)) in RRC messages and information elements of TS 38.508-1 [132]).
- PDU SESSION MODIFICATION COMMAND message at step 8a1 adds a non-default QoS flow to the MCX PDU session as shown in Table 5.4.3.3.4-1.

Derivation Path: TS 38.508-1 [132] Table 4.7.2-2.					
Information Element	Value/remark	Comment	Condition		
PDU session ID	Same value as in PDU SESSION ESTABLISHMENT REQUEST message at establishment of the MCX PDU session				
Authorized QoS rules	Reference QoS rule #11 as defined in TS 38.508- 1 [132] Table 4.8.2.1-7 using condition MCPTT, MCVIDEO or MCDATA (NOTE 1)				
Authorized QoS flow descriptions	Reference QoS flow #10 as defined in TS 38.508- 1 [132] Table 4.8.2.3-5 using condition MCPTT, MCVIDEO or MCDATA (NOTE 1)				
NOTE 1: Depending on the MC service (condition MCPTT, MCVIDEO or MCDATA) the QoS flow uses MCPTT: QoS rule id=10, QFI=12 and 5QI = 65 MCVideo: QoS rule id=11, QFI=13 and 5QI = 67 MCData: QoS rule id=12, QFI=14 and 5QI = 70					

Table 5.4.3.3.4-1: PDU SESSION MODIFICATION COMMAND (step 8a1, Table 5.4.3.3.3-1)

#### 5.4.4 MCX CT communication

#### 5.4.4.1 Generic procedure

5.4.4.1.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_IDLE state.

#### 5.4.4.1.2 Procedure

#### Table 5.4.4.1.2-1: Generic procedure for MCX CT communication

St	Procedure		Message Sequence
		U - S	Message
-	EXCEPTION: steps 1a1 - 1b1 depend on the underlying network technology.	-	-
1a1	IF the underlying network technology is E-UTRA/EPC THEN the E-UTRA/EPC signalling as described in clause 5.4.4.2 is performed.	-	-
1b1	ELSE IF the underlying network technology is NR/5GC THEN the NR/5GC signalling as described in clause 5.4.4.3 is performed.	-	-
-	EXCEPTION: At the end of this procedure the UE is in RRC_CONNECTED state.	-	-

#### 5.4.4.2 E-UTRA/EPC signalling

#### 5.4.4.2.1 Initial conditions

As specified in clause 5.4.4.1.1 with the following clarifications:

- During the attach a default EPS bearer context #3 (QCI 69) according to table 6.6.1-1, TS 36.508 [6] is established for MCX and SIP signalling.
- NOTE 1: The assumptions for the PDN support, including the default EPS bearer context QCI requirements in regard to the different PDN are described in 5.4.1A.
- 5.4.4.2.2 Definition of system information messages

The E-UTRA default system information messages as defined in TS 36.508 [6] are used.

#### 5.4.4.2.3 Procedure

#### Table 5.4.4.2.3-1: E-UTRA/EPC signalling for MCX CT communication

St	Procedure	Message Sequence		
		U - S	Message	
1	SS sends a <i>Paging</i> message on the appropriate paging	<	RRC: Paging (PCCH)	
	block, and including the UE identity in one entry of the			
	IE pagingRecordLists.			
2	The UE transmits an <i>RRCConnectionRequest</i> message	>	RRCConnectionRequest	
	with 'establishmentCause' set to 'mt-Access'.			
3	SS transmit an RRCConnectionSetup message.	<	RRC: RRCConnectionSetup	
4	The UE transmits an RRCConnectionSetupComplete	>	RRC: RRCConnectionSetupComplete	
	message to confirm the successful completion of the		NAS: SERVICE REQUEST	
	connection establishment and to initiate the session			
	management procedure by including the SERVICE			
_	REQUEST message.		DDO: On a with Manda On an and	
5	The SS transmits a <i>SecurityModeCommand</i> message	<	RRC: SecurityModeCommand	
<u>^</u>	to activate AS security.		BBC: Sociurity Made Complete	
6	The UE transmits a SecurityModeComplete message	>	RRC: SecurityModeComplete	
7	and establishes the initial security configuration. The SS configures a data radio bearer, associated with		RRC: RRCConnectionReconfiguration	
/	the default EPS bearer context.	<		
	The RRCConnectionReconfiguration message is using			
	condition SRB2-DRB(n, m) as specified in			
	TS 36.508 [6] clause 4.8.2.2.1, with			
	n=13 depending on the number of PDNs (see clause			
	5.4.1A)			
	m=01 depending on the use case:			
	IF the procedure is used for connection establishment			
	within a pre-established session			
	THEN m=1			
<u> </u>	ELSE m=0		DDC:	
8	The UE transmits an	>	RRC:	
	RRCConnectionReconfigurationComplete message to		RRCConnectionReconfigurationComplet	
	confirm the establishment of the new data radio bearer, associated with the default EPS bearer context.		e	
9-16	Void.	-	-	
3-10		-		

St	St Procedure Message Sequer		Message Sequence
		U - S	Message
-	EXCEPTION: Steps 17a1-17a3 describe behaviour that depends on the context in which the procedure is used: The steps take place when the procedure is used for MCPTT or MCVideo call establishment and MCData communication establishment for using the media plane.	-	-
-	EXCEPTION: In parallel to the events described below there is SIP signalling for the on-demand call or communication establishment.	-	-
17a1	<ul> <li>The SS configures a new RLC-UM data radio bearer, associated with the dedicated EPS bearer context.</li> <li>The RRCConnectionReconfiguration message contains an ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST message for a dedicated EPS bearer according to TS 36.508 [6] clause 6.6.2 with <ul> <li>MCPTT using dedicated EPS bearer context #5 (QCI 65)</li> <li>MCVideo using dedicated EPS bearer context #10 (QCI 67)</li> <li>MCData using dedicated EPS bearer context #9 (QCI 70)</li> </ul> </li> </ul>	<	RRC: <i>RRCConnectionReconfiguration</i> NAS: ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST
17a2	The UE transmits an <i>RRCConnectionReconfigurationComplete</i> message to confirm the establishment of the data radio bearer associated with the default EPS.	>	RRC: RRCConnectionReconfigurationComplet e
17a3	The UE transmits an ACTIVATE DEDICATED EPS BEARER CONTEXT ACCEPT message.	>	RRC: ULInformationTransfer NAS: ACTIVATE DEDICATED EPS BEARER CONTEXT ACCEPT

#### 5.4.4.2.4 Specific message contents

All specific E-UTRA/EPC signalling message contents shall be referred to TS 36.508 [6] clause 4.6 and 4.7.

#### 5.4.4.3 NR/5GC signalling

#### 5.4.4.3.1 Initial conditions

As specified in clause 5.4.4.1.1 with the following clarifications:

- An MCX PDU session with default QoS rule #10 (5QI 69) according to table 4.8.2.1-10 in TS 38.508-1 [132] is established for MCX and SIP signalling.
- NOTE 1: The assumptions for the PDU session support, including the default QoS flow 5QI requirements in regard to the different PDU session are described in 5.4.1B.

#### 5.4.4.3.2 Definition of system information messages

The NR/5GC default system information messages as defined in TS 38.508-1 [132] are used.

#### 5.4.4.3.3 Procedure

#### Table 5.4.3.3.3-1: NR/5GC signalling for MCX CO communication

St	Procedure	Message Sequence	
		U - S	Message
1	The SS transmits a Paging message.	<	NR RRC: Paging
2-8	Steps 2-8 of the RRC establishment procedure in TS	-	-
	38.508-1 [132] Table 4.5.4.2-3 take place.		

St	Procedure		Message Sequence
		U - S	Message
-	EXCEPTION: Steps 9a1-9a3 describe behaviour that depends on the context in which the procedure is used: The steps take place when the procedure is used for MCPTT or MCVideo call establishment, MCData communication establishment for using the media plane and establishment of a pre-established session.	-	-
9a1	The SS configures a new RLC-UM data radio bearer, associated with the QoS flow to be added to the MCX PDU session and transmits an RRCReconfiguration message containing a PDU SESSION MODIFICATION COMMAND accordingly.	<	NR RRC: <i>RRCReconfiguration</i> 5GMM: DL NAS TRANSPORT 5GSM: PDU SESSION MODIFICATION COMMAND
-	EXCEPTION: Depending upon UE implementation steps 8a2 and 8a3 can occur in any order.	-	-
9a2	The UE transmits an RRCReconfigurationComplete message to confirm the establishment of the data radio bearer associated with the added QoS flow.	>	NR RRC: RRCReconfigurationComplete
9a3	The UE transmits a PDU SESSION MODIFICATION COMPLETE message.	-^	NR RRC: ULInformationTransfer 5GMM: UL NAS TRANSPORT 5GSM: PDU SESSION MODIFICATION COMPLETE

#### 5.4.4.3.4 Specific message contents

All specific NR/5GC signalling message contents shall be referred to TS 38.508-1 [132] clause 4.6 and 4.7 7 with the following clarifications:

- The SERVICE REQUEST message at step 3 of Table 5.4.2.3.3-1 is expected to have the service type IE set to "mobile terminated services".
- The RRCReconfiguration message at step 9a1 adds a single RLC-UM non-default DRB (configuration DRB(0,1)) in RRC messages and information elements of TS 38.508-1 [132]).
- PDU SESSION MODIFICATION COMMAND message at step 8a1 adds a non-default QoS flow to the MCX PDU session as shown in Table 5.4.3.3.4-1.

#### Table 5.4.3.3.4-1: PDU SESSION MODIFICATION COMMAND (step 8a1, Table 5.4.3.3.3-1)

Derivation Path: TS 38.508-1 [132] Table 4.7.2-2.				
Information Element	Value/remark	Comment	Condition	
PDU session ID	Same value as in PDU SESSION ESTABLISHMENT REQUEST message at			
	establishment of the MCX PDU session			
Authorized QoS rules	Reference QoS rule #11 as defined in TS 38.508- 1 [132] Table 4.8.2.1-7 using condition MCPTT, MCVIDEO or MCDATA (NOTE 1)			
Authorized QoS flow descriptions	Reference QoS flow #10 as defined in TS 38.508- 1 [132] Table 4.8.2.3-5 using condition MCPTT, MCVIDEO or MCDATA (NOTE 1)			
NOTE 1: Depending on the MC service (condition MCPTT, MCVIDEO or MCDATA) the QoS flow uses MCPTT: QoS rule id=10, QFI=12 and 5QI = 65 MCVideo: QoS rule id=11, QFI=13 and 5QI = 67 MCData: QoS rule id=12, QFI=14 and 5QI = 70				

# 5.4.5 MCX CO communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment

#### 5.4.5.1 Initial conditions

The procedure requires an off-network environment according to clause 5.2.3.

#### System Simulator:

- SS-UE1 (MCX client).
  - For the underlying "transport bearer" over which the SS and the UE will communicate, the SS is behaving as SS-UE1 as defined in TS 36.508 [6], configured for and operating as ProSe Direct Communication transmitting and receiving device.
- GNSS simulator configured to simulate a location in the centre of Geographical area #1 and providing timing reference as defined in TS 36.508 [6] Table 4.11.2-2 scenario #1, for the assistance of E-UTRAN off-network testing.
- NOTE: For operation in off-network environment, it needs to be ensured that after the UE is powered up it considers the Geographical area #1 as being one of the geographical areas set in the USIM for operation when UE is "not served by E-UTRAN".

#### IUT:

- UE (MCX client):
  - The test USIM set as defined in clause 5.5.10 is inserted.
  - Detailed initial conditions for the UE (MCX client) shall be specified in the TC referring to the present procedure.
- UE state:
  - The UE is in state Switched OFF (state 1) according to TS 36.508 [6].

#### 5.4.5.2 Definition of system information messages

N/a (out of E-UTRA coverage)

#### 5.4.5.3 Procedure

### Table 5.4.5.3-1: ProSe direct communication one-to-one out of E-UTRA coverage signalling for MCX CO communication-establishment

St	Procedure	Message Sequence	
		U - S	Message
1	Power up the UE.	-	-
2	Wait for 15 sec to allow the UE to establish that it is out	-	-
	of coverage and initiate scanning the frequency pre-set		
	for ProSe communication for any activities.		
3	Make the UE initiate one-to-one ProSe direct	-	-
	communication with the remote UE preconfigured		
	(ProSe Layer-2 Group ID).		
4	UE sends a DIRECT_COMMUNICATION_REQUEST message, IP Address Config IE set to "address	>	DIRECT_COMMUNICATION_REQUES
	allocation not supported".		1
5	SS-UE1 sends a	<	DIRECT_SECURITY_MODE_COMMAN
5	DIRECT_SECURITY_MODE_COMMAND message.	<	D
6	UE sends a DIRECT_SECURITY_MODE_COMPLETE	>	DIRECT_SECURITY_MODE_COMPLET
Ŭ	message ciphered and integrity protected with the new	-	
	security context.		-
7	SS-UE1 sends a	<	DIRECT_COMMUNICATION_ACCEPT
	DIRECT_COMMUNICATION_ACCEPT message.		
8	EXCEPTION: After the communication is established,	-	-
	an IP address configuration procedure is performed		
	depending on what the UE has indicated in the IP		
	Address Config IE (if it is not "address allocation not		
	supported") in the		
	DIRECT_COMMUNICATION_REQUEST message,		
	and, the SS-UE1 itself indicating "address allocation not		
	supported" in the DIRECT_COMMUNICATION_ACCEPT message.		
<u> </u>	EXCEPTION: Steps 9a1 to 9a2 describe behaviour that	-	-
_	depends on UE implementation; the "lower case letter"	-	
	identifies a step sequence that depends on the UE		
	implementation of keepalive procedure.		
9a1	UE sends a DIRECT_COMMUNICATION_KEEPALIVE	>	DIRECT_COMMUNICATION_KEEPALI
	message.		VE
9a2	SS-UE1 sends a	<	DIRECT_COMMUNICATION_KEEPALI
	DIRECT_COMMUNICATION_KEEPALIVE_ACK		VE_ACK
	message.		

#### 5.4.5.4 Specific message contents

#### Table 5.4.5.4-1: DIRECT\_COMMUNICATION\_ACCEPT (step 7 Table 5.4.5.3-1)

Derivation path: 36.508 [6], Table 4.7F.3-6			
Information Element	Value/remark	Comment	Condition
IP Address Config	'0011'B	address allocation not supported	
Link Local IPv6 Address	If the UE indicated 'address allocation not supported' in the IP Address Config IE in the DIRECT_COMMUNICAT ION_REQUEST message then a link-local IPv6 address formed locally	128-bit IPv6 address	

Derivation path: 36.508 [6], Table 4.7F.3-7			
Information Element	Value/remark	Comment	Condition
UE Security Capabilities	Set to the UE Security		
	Capabilities received in		
	the		
	DIRECT_COMMUNICAT		
	ION_REQUEST		
	message		
Chosen Algorithms	One of the non-null		
	algorithms provided in		
	UE Security Capabilities		
	(i.e. different to EIA0 (null		
	integrity protection		
	algorithm)/EEA0 (null		
	ciphering algorithm))		
MSB of K <sub>D</sub> ID	The MSB of KD ID of the		
	new KD		
K <sub>D</sub> Freshness	Not included		
GPI	Not included		
User Info {			
Type of User Info	IMSI		
Odd/even indication	Reflecting the number of		
	digits in the IMSI		
Identity digits	A value different to the		
- 	IMSI of the UE		
}			

Table 5.4.5.4-2: DIRECT\_SECURITY\_MODE\_COMMAND (step 5, Table 5.4.5.3-1)

#### Table 5.4.5.4-3: DIRECT\_SECURITY\_MODE\_COMPLETE (step 6, Table 5.4.5.3-1)

Derivation path: 36.508 [6], Table 4.7F.3-8			
Information Element	Value/remark	Comment	Condition
LSB of KD ID	Not included		

#### Table 5.4.5.4-4: DIRECT\_COMMUNICATION\_KEEPALIVE (step 9a1, Table 5.4.5.3-1)

Derivation path: 36.508 [6], Table 4.7F.3-9			
Information Element	Value/remark	Comment	Condition
Keepalive Counter	0		
Maximum Inactivity Period	Any allowed value		

# 5.4.6 MCX CT communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment

#### 5.4.6.1 Initial conditions

The procedure requires an off-network environment according to clause 5.2.3.

System Simulator:

- SS-UE1 (MCX client).
  - For the underlying "transport bearer" over which the SS and the UE will communicate, the SS is behaving as SS-UE1 as defined in TS 36.508 [6], configured for and operating as ProSe Direct Communication transmitting and receiving device.
- GNSS simulator configured to simulate a location in the centre of Geographical area #1 and providing timing reference as defined in TS 36.508 [6] Table 4.11.2-2 scenario #1, for the assistance of E-UTRAN off-network testing.

NOTE: For operation in off-network environment, it needs to be ensured that after the UE is powered up it considers the Geographical area #1 as being one of the geographical areas set in the USIM for operation when UE is "not served by E-UTRAN".

#### IUT:

- UE (MCX client)
  - The test USIM set as defined in clause 5.5.10 is inserted.
  - Detailed initial conditions for the UE (MCX client) shall be specified in the TC referring to the present procedure.

UE state:

- The UE is in state Switched OFF (state 1) according to TS 36.508 [6].

#### 5.4.6.2 Definition of system information messages

N/a (out of E-UTRA coverage).

#### 5.4.6.3 Procedure

### Table 5.4.6.3-1: ProSe direct communication one-to-one out of E-UTRA coverage signalling for MCX CT communication-establishment

St	Procedure	Message Sequence		
		U - S	Message	
1	Power up the UE.	-	-	
2	Wait for 15 sec to allow the UE to establish that it is out of coverage and initiate scanning the frequency pre-set for ProSe communication for any activities.	-	-	
3	SS-UE1 sends a DIRECT_COMMUNICATION_REQUEST message, IP Address Config IE set to "address allocation not supported".	<	DIRECT_COMMUNICATION_REQUES T	
4	UE sends a DIRECT_SECURITY_MODE_COMMAND message uncyphered but integrity protected with the new security context.	>	DIRECT_SECURITY_MODE_COMMAN D	
5	SS-UE1 sends a DIRECT_SECURITY_MODE_COMPLETE message ciphered and integrity protected with the new security context.	<	DIRECT_SECURITY_MODE_COMPLET E	
6	UE sends a DIRECT_COMMUNICATION_ACCEPT message.	>	DIRECT_COMMUNICATION_ACCEPT	
7	EXCEPTION: After the communication is established, an IP address configuration procedure is performed depending on what the UE has indicated in the IP Address Config IE (if it is not "address allocation not supported") in the DIRECT_COMMUNICATION_REQUEST message, and, the SS-UE1 itself indicating "address allocation not supported" in the DIRECT_COMMUNICATION_ACCEPT message.	-	-	
8	SS-UE1 sends a DIRECT_COMMUNICATION_KEEPALIVE message with a Keepalive Counter IE that contains the value of the keepalive counter for this link=0, and a Maximum Inactivity Period IE.	<b>~</b>	DIRECT_COMMUNICATION_KEEPALI VE	
9	UE sends a DIRECT_COMMUNICATION_KEEPALIVE_ACK message including the Keepalive Counter IE set to the same value as that received in the DIRECT_COMMUNICATION_KEEPALIVE message.	>	DIRECT_COMMUNICATION_KEEPALI VE_ACK	

#### 5.4.6.4 Specific message contents

#### Table 5.4.6.4-1: DIRECT\_COMMUNICATION\_REQUEST (step 3, Table 5.4.6.3-1)

Derivation path: 36.508 [6], Table 4.7F.3-5		-	-
Information Element	Value/remark	Comment	Condition
User Info {			
Type of User Info	IMSI		
Odd/even indication	Reflecting the number of digits in the IMSI		
Identity digits	A value different to the IMSI of the UE		
}			
IP Address Config	'0011'B	address allocation not supported	
Maximum Inactivity Period	'10 0000 0000'B	512 sec, randomly chosen to allow sufficient time for a TC which uses this procedure to be completed without need to repeat the keepalive procedure	
Nonce_1			
UE Security Capabilities	01111111 01111111	All but null algorithms supported	
MSB of K <sub>D-sess</sub> ID	the 8 most significant bits of the KD-sess ID		
K <sub>D</sub> ID	Not present		
Signature	the ECCSI signature calculated with the User Info and Nonce_1 as specified in 3GPP TS 33.303 [67]		
Link Local IPv6 Address	a link-local IPv6 address formed locally		

#### Table 5.4.6.4-2: DIRECT\_SECURITY\_MODE\_COMMAND (step 4 Table 5.4.6.3-1)

Derivation path: 36.508 [6], Table 4.7F.3-7			
Information Element	Value/remark	Comment	Condition
MSB of K <sub>D</sub> ID	Any allowed value		
K <sub>D</sub> Freshness	Not included		
GPI	Not included		
Signature	The ECCSI signature calculated with the User Info and Nonce_1 as specified in 3GPP TS 33.303 [67]		
Encrypted Payload	The SAKKE payload generated as specified in 3GPP TS 33.303 [67].		

#### Table 5.4.6.4-3: DIRECT\_SECURITY\_MODE\_COMPLETE (step 5, Table 5.4.6.3-1)

Derivation path: 36.508 [6], Table 4.7F.3-8			
Information Element	Value/remark	Comment	Condition
LSB of KD ID	16 least significant bits of KD ID		

Derivation path: 36.508 [6], Table 4.7F.3-9			
Information Element	Value/remark	Comment	Condition
Keepalive Counter	0		
Maximum Inactivity Period	'10 0000 0000'B	512 sec, randomly chosen to allow sufficient time for a TC which uses this procedure to be completed without need to repeat the keepalive procedure	

#### Table 5.4.6.4-4: DIRECT\_COMMUNICATION\_KEEPALIVE (step 8, Table 5.4.6.3-1)

# 5.4.7 MCX communication over ProSe direct one-to-one communication out of E-UTRA coverage - release by the SS

#### 5.4.7.1 Initial conditions

The procedure requires an off-network environment according to clause 5.2.3.

#### System Simulator:

- SS-UE1 (MCX client).
  - Same as those defined in the 'MCX CO communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment', as described in clause 5.4.5, or, the 'MCX CT communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment', as described in clause 5.4.6.

#### IUT:

- UE (MCX client)

ProSe related configuration

- Same as those defined in the 'MCX CO communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment', as described in clause 5.4.5, or, the 'MCX CT communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment', as described in clause 5.4.6.

#### UE state

 The UE has established ProSe direct communication one-to-one out of E-UTRA coverage using the 'MCX CO communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment', as described in clause 5.4.5, or, the 'MCX CT communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment', as described in clause 5.4.6.

#### 5.4.7.2 Definition of system information messages

N/a (out of E-UTRA coverage).

#### 5.4.7.3 Procedure

### Table 5.4.7.3-1: ProSe direct communication one-to-one out of E-UTRA coverage signalling for MCX communication - release by the SS

St	Procedure	Message Sequence		
		U - S	Message	
1	SS-UE1 sends a DIRECT_COMMUNICATION_RELEASE message with a Release Reason IE indicating 'Direct Communication to peer UE no longer needed'.	<	DIRECT_COMMUNICATION_RELEASE	
2	UE sends a DIRECT_COMMUNICATION_RELEASE_ACCEPT message.	>	DIRECT_COMMUNICATION_RELEASE _ACCEPT	

#### 5.4.7.4 Specific message contents

#### Table 5.4.7.4-1: DIRECT\_COMMUNICATION\_RELEASE (step 1, Table 5.4.7.3-1)

Derivation path: 36.508 [6], Table 4.7F.3-11			
Information Element	Value/remark	Comment	Condition
Release Reason	'0001'B	Direct communication to the peer UE no longer needed	

# 5.4.8 MCX communication over ProSe direct one-to-one communication out of E-UTRA coverage - release by the UE

#### 5.4.8.1 Initial conditions

The procedure requires an off-network environment according to clause 5.2.3.

System Simulator:

- SS-UE1 (MCX client).
  - Same as those defined in the 'MCX CO communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment', as described in clause 5.4.5, or, the 'MCX CT communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment', as described in clause 5.4.6.

IUT:

- UE (MCX client)

ProSe related configuration

- Same as those defined in the 'MCX CO communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment', as described in clause 5.4.5, or, the 'MCX CT communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment', as described in clause 5.4.6.

UE state

 The UE has established ProSe direct communication one-to-one out of E-UTRA coverage using the 'MCX CO communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment', as described in clause 5.4.5, or, the 'MCX CT communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment', as described in clause 5.4.6.

#### 5.4.8.2 Definition of system information messages

N/a (out of E-UTRA coverage).

#### 5.4.8.3 Procedure

### Table 5.4.8.3-1: ProSe direct communication one-to-one out of E-UTRA coverage signalling for MCX communication - release by the UE

St	Procedure	Message Sequence		
		U - S	Message	
1	UE sends a DIRECT_COMMUNICATION_RELEASE message with a Release Reason IE indicating 'Direct Communication to peer UE no longer needed'.	>	DIRECT_COMMUNICATION_RELEASE	
2	SS-UE1 sends a DIRECT_COMMUNICATION_RELEASE_ACCEPT message.	<	DIRECT_COMMUNICATION_RELEASE _ACCEPT	

#### 5.4.8.4 Specific message contents

#### Table 5.4.8.4-1: DIRECT\_COMMUNICATION\_RELEASE (step 1, Table 5.4.8.3-1)

Derivation path: 36.508 [6], Table 4.7F.3-11			
Information Element	Value/remark	Comment	Condition
Release Reason	'0001'B	Direct communication to the peer UE no longer needed	

#### 5.4.9 MCX communication in E-UTRA / Change of cells

#### 5.4.9.1 Initial conditions

The procedure requires a multi-cell configuration according to clause 5.2.2.2.2 with 3 cells:

- Cell 1, Cell 2 and Cell 4, all operating on the same frequency

NOTE 1: The procedure only requires at maximum 2 cells to be active at any one instance.

- Cells 1 and 2 are on the same PLMN1, whereas Cell 4 is on a different PLMN2
- The UE is allowed to operate on both PLMN1 and PLMN2. PLMN1 is set as HPLMN and PLMN2 is set as VPLMN in Table 5.5.8.1-1 (MCX Initial UE Configuration Defaults).
  - NOTE 2: The assumptions for the PDN support of a MCX capable UE, including the default EPS bearer context QCI requirements in regard to the different PDN are described in 5.4.1A.

#### 5.4.9.2 Definition of system information messages

The E-UTRA default system information messages as defined in TS 36.508 [6] are used.

#### 5.4.9.3 Procedure

Table 5.4.9.3-1 illustrates the downlink power levels and other changing parameters to be applied for the cells at various time instants of the test execution. Row marked "T0" denotes the initial conditions after preamble, while columns marked "T1" ... "Tn" are to be applied subsequently. The exact instants on which these values shall be applied are described elsewhere in the present clause.

	Parameter	Unit	Cell 1	Cell 2	Cell 4
TO	Cell-specific RS EPRE	dBm/15k Hz	-79	"Off"	"Off"
T1	Cell-specific RS EPRE	dBm/15k Hz	"Off"	-79	"Off"
T2	Cell-specific RS EPRE	dBm/15k Hz	"Off"	"Off"	-79

 Table 5.4.9.3-1: Time instances of cell power level and parameter changes

#### Table 5.4.9.3-2: E-UTRA/EPC signalling for UE changing cells

St	Procedure		Message Sequence
		U - S	Message
1	The SS configures:	-	-
	Cell 1 and Cell 2 parameters according to the row "T1"		
	in table 5.4.9.3-1 in order to simulate needs for cell		
	reselection to Cell2.		
2	Wait for 5 sec to allow the UE to adjust to cell changes.	-	-
	NOTE 1.		
3	The SS configures:	-	-
	Cell 2 and Cell 4 parameters according to the row "T2"		
	in table 5.4.9.3-1 in order to simulate needs for cell		
	reselection to Cell4.		
4	The Generic test procedure for 'Tracking area updating	-	-
	procedure' defined in TS 36.508 [6] clause 4.5A.2 takes		
	place.		
	NOTE 2.		
NOTE		hitting MC>	<pre>&lt; protocol relevant data earlier. What may</pre>
	be transmitted is specified in the TCs.		
NOTE	2: The UE may start transmitting MCX protocol relevant of		
	UPDATE ACCEPT message. If this happens the SS sl		
	for 'Tracking area updating procedure' and shall contin	ue with the	e rest of the messages exchange defined
	in the test case.		
L			

5.4.9.4 Specific message contents

None

# 5.4.10 MCX CT communication over ProSe direct one-to-many communication out of E-UTRA coverage / Announcing/Discoveree procedure for group member discovery

#### 5.4.10.1 Initial conditions

The procedure requires an off-network environment according to clause 5.2.3.

#### System Simulator:

- SS-UE1 (MCX client).
  - For the underlying "transport bearer" over which the SS and the UE will communicate, the SS is behaving as SS-UE1 as defined in TS 36.508 [6], configured for and operating as ProSe Direct Communication transmitting and receiving device.
- GNSS simulator configured to simulate a location in the centre of Geographical area #1 and providing timing reference as defined in TS 36.508 [6] Table 4.11.2-2 scenario #1, for the assistance of E-UTRAN off-network testing.
- NOTE: For operation in off-network environment, it needs to be ensured that after the UE is powered up it considers the Geographical area #1 as being one of the geographical areas set in the USIM for operation when UE is "not served by E-UTRAN".

IUT:

- UE (MCX client)
  - The test USIM set as defined in clause 5.5.10 is inserted.
  - Detailed initial conditions for the UE (MCX client) shall be specified in the TC referring to the present procedure.

#### UE state:

- The UE is in state Switched OFF (state 1) according to TS 36.508 [6].

#### 5.4.10.2 Definition of system information messages

N/a (out of E-UTRA coverage)

#### 5.4.10.3 Procedure

 Table 5.4.10.3-1: ProSe Direct Discovery for public safety use / Announcing/Discoveree procedure for group member discovery for MCX off-network CT group calls

St	Procedure	1	Message Sequence	
		U - S	Message	
1	Power up the UE.	-	-	
2	Wait for 60 sec to allow the UE to determine that it is in the	-	-	
	Geographical area #1 set in the USIM for operation when UE is			
	"not served by E-UTRAN and acquire reference timing.			
-	EXCEPTION: Steps 3a1-3b3b1 describe events which depend on	-	-	
	the UE capabilities; the "lower case letter" identifies a step			
	sequence that takes place if the UE is capable or not of Announcing for group member discovery.			
3a1	IF pc_ProSeAnnForGroupMemberDiscovery (TS 36.523-2 [75])		-	
541	THEN Force the UE upper layer application corresponding to	_	_	
	ProSe Application ID px_ProSeAnnApplicationIdentity2			
	(TS 36.523-3 [74]) to initiate continuous announcing its availability			
	in a discovery group.			
	NOTE 1.			
3a2	The UE transmits in the next transmission period a	>	PC5_DISCOVERY	
	PC5_DISCOVERY message for Group Member Discovery			
	Announcement applying DUIK, DUSK, and DUCK with the			
	associated Encrypted Bitmask, along with the UTC-based counter			
064	to the PC5_DISCOVERY message.			
3b1	ELSE SS sets WaitForMessageCounter=1 EXCEPTION: Steps 3b2-3b3b1 are repeated until the event	-	-	
-	described in step 3b3a1 takes place OR	-	-	
	WaitForMessageCounter=11.			
3b2	SS-UE1 transmits in the next transmission period a	<	PC5_DISCOVERY	
002	PC5_DISCOVERY message for Group Member Discovery			
	Solicitation applying DUIK, DUSK, and DUCK with the associated			
	Encrypted Bitmask, along with the UTC-based counter to the			
	PC5_DISCOVERY message.			
	WaitForMessageCounter=WaitForMessageCounter+1			
-	EXCEPTION: Steps 3b3a1-3b3b1 describe events which depend	-	-	
	on the UE behaviour; the "lower case letter" identifies a step			
	sequence that take place if the UE transmit or not in the next			
3b3a1	transmission period a PC5_DISCOVERY message. The UE transmits in the next transmission period a		PC5_DISCOVERY	
303a I	PC5_DISCOVERY message for Group Member Discovery	>	PC5_DISCOVERT	
	Response applying DUIK, DUSK, and DUCK with the associated			
	Encrypted Bitmask, along with the UTC-based counter to the			
	PC5_DISCOVERY message and including the target Discovery			
	Group ID of the discovery group to be discovered in step 3b2.			
3b3b1	The WaitForMessageCounter=11.	-	-	
-	EXCEPTION: Steps 4 and 5 may be repeated multiple times	-	-	
	depending on the MCX procedure taking place.			
-	EXCEPTION: Step 4 is repeated until the MCX protocol data unit	-	-	
	provided by the higher layers is transmitted in full.			
	NOTE 2.			
4	SS-UE1 sends sidelink communication over the PC5 interface in the next transmission period using the timing reference provided	<	STCH PDCP SDU packet	
	by the GNSS simulator (same to be used by the UE).			
	NOTE 3.			
-	EXCEPTION: Step 5 is repeated until the MCX protocol data unit	-	-	
	provided by the higher layers is transmitted in full.			
	NOTE 4.			
5	The UE sends sidelink communication over the PC5 interface in	>	STCH PDCP SDU packet	
	the next transmission period using the timing reference provided			
	by the GNSS simulator (same to be used by the SS-UE1).			
	NOTE 3.			
	: UEs which are capable of Announcing for group member discovery			
	: The SS-UE1 may need to send more than one MCX protocol data	unit in sequ	ience with no response	
NOTE 2				
	expected between them from the UE.	viontion in -	ofined in the test sees weig -	
	: What MCX protocol data units are included in the sidelink commun	nication is de	efined in the test case using	
NOTE 3			-	

5.4.10.4 Specific message contents

#### Table 5.4.10.4-1: PC5\_DISCOVERY (step 3a2 Table 5.4.10.3-1)

Derivation path: 36.508 [6], Table 4.7F.1-5A

#### Table 5.4.10.4-2: PC5\_DISCOVERY (step 3b2 Table 5.4.10.3-1)

Derivation path: 36.508 [6], Table 4.7F.1-5B

#### Table 5.4.10.4-3: PC5\_DISCOVERY (step 3b3a1 Table 5.4.10.3-1)

Derivation path: 36.508 [6], Table 4.7F.1-5C

#### 5.4.11 MCX CO communication over ProSe direct one-to-many communication out of E-UTRA coverage / Monitoring/Discoverer procedure for group member discovery / One-to-many communication

#### 5.4.11.1 Initial conditions

The procedure requires an off-network environment according to clause 5.2.3.

System Simulator:

- SS-UE1 (MCX client).
  - For the underlying "transport bearer" over which the SS and the UE will communicate, the SS is behaving as SS-UE1 as defined in TS 36.508 [6], configured for and operating as ProSe Direct Communication transmitting and receiving device.
- GNSS simulator configured to simulate a location in the centre of Geographical area #1 and providing timing reference as defined in TS 36.508 [6] Table 4.11.2-2 scenario #1, for the assistance of E-UTRAN off-network testing.
- NOTE: For operation in off-network environment, it needs to be ensured that after the UE is powered up it considers the Geographical area #1 as being one of the geographical areas set in the USIM for operation when UE is "not served by E-UTRAN".

IUT:

- UE (MCX client)
  - The test USIM set as defined in clause 5.5.10 is inserted.
  - Detailed initial conditions for the UE (MCX client) shall be specified in the TC referring to the present procedure.

UE state:

- The UE is in state Switched OFF (state 1) according to TS 36.508 [6].

#### 5.4.11.2 Definition of system information messages

N/a (out of E-UTRA coverage)

#### 5.4.11.3 Procedure

## Table 5.4.11.3-1: ProSe Direct Discovery for public safety use / Monitoring/Discoverer procedure for group member discovery for MCX off-network CO group calls

St	Procedure		Message Sequence
		U - S	Message
1	Power up the UE.	-	-
2	Wait for 60 sec to allow the UE to determine that it is in the Geographical area #1 set in the USIM for operation when UE is "not served by E-UTRAN and acquire reference timing.	-	-
-	EXCEPTION: Steps 3a1-3b3 describe events which depend on the UE capabilities; the "lower case letter" identifies a step sequence that takes place if the UE is capable or not of Monitoring for group member discovery.	-	-
3a1	IF pc_ProSeMonForGroupMemberDiscovery (TS 36.523-2 [75]) THEN the SS-UE1 starts continuously transmitting in the relevant transmission periods a PC5_DISCOVERY message for Group Member Discovery Announcement applying DUIK, DUSK, and DUCK with the associated Encrypted Bitmask, along with the UTC-based counter to the PC5_DISCOVERY message.	<	PC5_DISCOVERY
3b1	ELSE Force the UE upper layer application corresponding to ProSe Application ID px_ProSeAnnApplicationIdentity2 (TS 36.523-3 [74]) to solicit proximity of other UEs in a discovery group. NOTE 1.	-	-
3b2	The UE transmits in the next transmission period a PC5_DISCOVERY message for Group Member Discovery Solicitation applying DUIK, DUSK, and DUCK with the associated Encrypted Bitmask, along with the UTC-based counter to the PC5_DISCOVERY message.	>	PC5_DISCOVERY
3b3	SS-UE1 transmits a PC5_DISCOVERY message for Group Member Discovery Response applying DUIK, DUSK, and DUCK with the associated Encrypted Bitmask, along with the UTC-based counter to the PC5_DISCOVERY message and including the target Discovery Group ID of the discovery group to be discovered in step 2b2.	<	PC5_DISCOVERY
-	EXCEPTION: Steps 4 and 5 may be repeated multiple times depending on the MCX procedure taking place.	-	-
-	EXCEPTION: Step 4 is repeated until the MCX protocol data unit provided by the higher layers is transmitted in full. NOTE 2.	-	-
4	The UE sends sidelink communication over the PC5 interface in the next transmission period using the timing reference provided by the GNSS simulator (same to be used by the SS-UE1). NOTE 3.	>	STCH PDCP SDU packet
-	EXCEPTION: Step 5 is repeated until the MCX protocol data unit provided by the higher layers is transmitted in full. NOTE 4.	-	-
5	SS-UE1 sends sidelink communication over the PC5 interface in the next transmission period using the timing reference provided by the GNSS simulator (same to be used by the UE). NOTE 3.	<	STCH PDCP SDU packet

St	Procedure	Message Sequence		
		U - S	Message	
NOTE	1: UEs which are not capable of Monitoring for group me automatically.	up member discovery may start Discoverer procedure		
NOTE	2: The UE may need to send more than one MCX protocol data unit in sequence with no response expected between them from the SS-UE1.			
NOTE	3: Which MCX protocol data units are included in the sidelink communication is defined in the test case using the present procedure.			
NOTE	4: The SS-UE1 may need to send more than one MCX p expected between them from the UE.	otocol dat	a unit in sequence with no response	

#### 5.4.11.4 Specific message contents

#### Table 5.4.11.4-1: PC5\_DISCOVERY (step 3a1 Table 5.4.11.3-1)

Derivation path: 36.508 [6], Table 4.7F.1-5A

#### Table 5.4.11.4-2: PC5\_DISCOVERY (step 3b2 Table 5.4.11.3-1)

Derivation path: 36.508 [6], Table 4.7F.1-5B

#### Table 5.4.11.4-3: PC5\_DISCOVERY (step 3b3 Table 5.4.11.3-1)

Derivation path: 36.508 [6], Table 4.7F.1-5C

#### 5.4.12 MCX communication over MBMS

#### 5.4.12.1 Initial conditions

Unless specified otherwise in the test case the single cell configuration with MBMS according to clause 5.2.2.2.3 is used.

In addition:

- MBSFNAreaConfiguration as defined in TS 36.508[6] table 4.6.1-4A is transmitted on MCCH

#### 5.4.12.2 Definition of system information messages

The E-UTRA default system information messages as defined in TS 36.508 [6] are used. System information combination 15 as defined in TS 36.508[6] clause 4.4.3.1 is used in the E-UTRA cell.

#### 5.4.12.3 Procedure

#### Table 5.4.12.3-1: MCX communication over MBMS

St	Procedure		Message Sequence
		U - S	Message
1	SS transmits MBSFNAreaConfiguration message	<	MBSFNAreaConfiguration
2	Wait for a period equal to the MCCH modification period for the UE to receive <i>MBSFNAreaConfiguration</i> message.	-	-
-	EXCEPTION: Step 3 is repeated continuously to carry the relevant MCX protocol data units provided by the higher layers.	-	-
3	The SS transmits 1 MBMS Packet on the MTCH in the next MCH Scheduling Period.	<	MBMS Packet
	NOTE: Which MCX protocol data units are sent and at which time is defined in the test case using the present procedure.		

#### 5.4.12.4 Specific message contents

None

- 5.4.13 Void
- 5.4.14 MCX communication release
- 5.4.14.1 Generic procedure
- 5.4.14.1.1 Initial conditions

The procedure can be used in any test configuration for on-network UE testing described in clause 5.2.2.

The UE is in RRC\_CONNECTED state.

#### 5.4.14.1.2 Procedure

St	Procedure		Message Sequence
		U - S	Message
1	The SS waits 2 seconds (NOTE 1)	-	-
-	EXCEPTION: steps 2a1 - 2b1 depend on the	-	-
	underlying network technology.		
2a1	IF the underlying network technology is E-UTRA/EPC	-	-
	AND a dedicated bearer is activated AND no pre-		
	established session is established THEN the E-		
	UTRA/EPC signalling as described in clause 5.4.14.2		
	(table 5.4.14.2.3-1) is performed to deactivate the		
	dedicated bearer.		
2b1	ELSE IF the underlying network technology is NR/5GC	-	-
	AND a non-default QoS flow is established AND no pre-		
	established session is established THEN the NR/5GC		
	signalling as described in clause 5.4.14.3 (table		
	5.4.14.3.3-1) is performed.		
-	EXCEPTION: steps 3a1 - 3b1 depend on the	-	-
	underlying network technology.		
3a1	IF the underlying network technology is E-UTRA/EPC	-	-
	THEN the E-UTRA/EPC signalling as described in		
	clause 5.4.14.2 (table 5.4.14.2.3-2) is performed to		
	release the RRC connection.		
3b1	IF the underlying network technology is NR/5GC THEN	-	-
	the NR/5GC signalling as described in clause 5.4.14.3		
	(table 5.4.14.3.3-2) is performed to release the RRC		
	connection.		
-	EXCEPTION: At the end of this procedure the UE is in	-	-
	RRC_IDLE state.		
NOTE	1: The specified wait period of 2s shall ensure that lower	layer signa	alling (TCP) is finished.

#### 5.4.14.2 E-UTRA/EPC signalling

#### 5.4.14.2.1 Initial conditions

As specified in clause 5.4.14.1.1.

#### 5.4.14.2.2 Definition of system information messages

The E-UTRA default system information messages as defined in TS 36.508 [6] are used.

#### 5.4.14.2.3 Procedure

#### Table 5.4.14.2.3-1: E-UTRA/EPC signalling for deactivation of the dedicated bearer

St	Procedure	Message Sequence		
		U - S	Message	
1	The SS transmits an <i>RRCConnectionReconfiguration</i> message to deactivate the dedicated EPS bearer.	<	RRC: RRCConnectionReconfiguration NAS: DEACTIVATE EPS BEARER CONTEXT REQUEST	
-	EXCEPTION: Steps 2 and 3 may happen in any order	-	-	
2	The UE transmits an <i>RRCConnectionReconfigurationComplete</i> message to confirm the RRCConnectionReconfiguration message.	>	RRC: RRCConnectionReconfigurationComplet e	
3	The UE transmits an ULInformationTransfer message to accept deactivation of the dedicated EPS bearer.	>	RRC: ULInformationTransfer NAS: DEACTIVATE EPS BEARER CONTEXT ACCEPT	

St	Procedure	Message Sequence	
		U - S	Message
1	The SS transmits an <i>RRCConnectionRelease</i> message to release the RRC connection	<	RRC: RRCConnectionRelease

#### Table 5.4.14.2.3-2: E-UTRA/EPC signalling for RRC connection release

#### 5.4.14.2.4 Specific message contents

All specific E-UTRA/EPC signalling message contents shall be referred to TS 36.508 [6] clause 4.6 and 4.7 with the following clarifications:

#### Table 5.4.14.2.4-1: DEACTIVATE EPS BEARER CONTEXT REQUEST (step 1, Table 5.4.14.2.3-1)

Derivation path: TS 36.508 [6] Table 4.7.3-12 with condition NETWORK-INITIATED			
Information Element	Value/Remark	Comment	Condition
EPS bearer identity	EPS bearer identity	Same value as in the activation message.	
ESM cause	00100100	regular deactivation	

#### Table 5.4.14.2.4-2: DEACTIVATE EPS BEARER CONTEXT ACCEPT (step 3, Table 5.4.14.2.3-1)

Derivation Path: TS 36.508 [6] Table 4.7.3-11			
Information Element	Value/remark	Comment	Condition
EPS bearer identity	EPS bearer identity	The same value as the value set in DEACTIVATE EPS BEARER CONTEXT REQUEST message.	
Procedure transaction identity	0	No procedure transaction identity assigned	

#### 5.4.14.3 NR/5GC signalling

#### 5.4.14.3.1 Initial conditions

As specified in clause 5.4.14.1.1.

#### 5.4.14.3.2 Definition of system information messages

The NR/5GC default system information messages as defined in TS 38.508-1 [132] are used.

#### 5.4.14.3.3 Procedure

#### Table 5.4.14.3.3-1: NR/5GC signalling to remove a QoS flow from a PDU session

St	Procedure	Message Sequence	
		U - S	Message
1	The SS transmits an <i>RRCReconfiguration</i> message containing a PDU SESSION MODIFICATION COMMAND message.	<	NR RRC: <i>RRCReconfiguration</i> 5GMM: DL NAS TRANSPORT 5GSM: PDU SESSION MODIFICATION COMMAND
-	EXCEPTION: Steps 2 and 3 may happen in any order.	-	-
2	The UE transmits an <i>RRCReconfigurationComplete</i> message.	>	NR RRC: RRCReconfigurationComplete

St	Procedure	Message Sequence	
		U - S	Message
3	The UE transmit a PDU SESSION MODIFICATION COMPLETE message.	>	NR RRC: ULInformationTransfer 5GMM: UL NAS TRANSPORT 5GSM: PDU SESSION MODIFICATION COMPLETE

#### Table 5.4.14.3.3-2: NR/5GC signalling for RRC connection release

St	Procedure	Message Sequence	
		U - S	Message
1	The SS transmits an <i>RRCRelease</i> message to release the RRC connection	<	NR RRC: RRCRelease

#### 5.4.14.3.4 Specific message contents

All specific NR/5GC signalling message contents shall be referred to TS 38.508-1 [132] clause 4.6 and 4.7 with the following clarifications:

#### Table 5.4.14.3.4-1: RRCReconfiguration (step 1, Table 5.4.14.3.3-1)

Derivation Path: TS 38.508-1 [132] Table 4.6.1-13.			
Information Element	Value/remark	Comment	Condition
RRCReconfiguration ::= SEQUENCE {			
criticalExtensions CHOICE {			
rrcReconfiguration SEQUENCE {			
radioBearerConfig SEQUENCE {			
drb-ToReleaseList SEQUENCE OF DRB-Identity			
DRB-Identity[1]	DRB-Identity linked to the MCX non-default QoS flow		
}			
}			
nonCriticalExtension SEQUENCE {			
masterCellGroup SEQUENCE {			
rlc-BearerToReleaseList SEQUENCE OF LogicalChannelIdentity {			
LogicalChannelIdentity[1]	Same value as DRB- Identity[1] above	entry 1	
}			
}			
}			
}			
}			
}			

Derivation Path: TS 38.508-1 [132] Table 4.7.2-9			
Information Element	Value/remark	Comment	Condition
PDU session ID	Same value as sent in PDU SESSION ESTABLISHMENT REQUEST message.		
Authorized QoS rules			
QoS rule[1]			
QoS rule identifier	'00001010'B	QoS rule id 10 (NOTE 1)	MCPTT
	'00001011'B	QoS rule id 11 (NOTE 1)	MCVIDEO
	'00001100'B	QoS rule id 12 (NOTE 1)	MCDATA
Rule operation code	'010'B	Delete existing QoS rule	
Authorized QoS flow descriptions			
QoS flow descriptions[1]			
QFI	'001100'B	QFI 12 (NOTE 2)	MCPTT
	'001101'B	QFI 13 (NOTE 2)	MCVIDEO
	'001110'B	QFI 14 (NOTE 2)	MCDATA
Operation code	'010'B	Delete existing QoS flow	
NOTE 1According to reference QoS rule #11 inNOTE 2According to reference QoS flow #10 in			

### Table 5.4.14.3.4-2: PDU SESSION MODIFICATION COMMAND (step 1, Table 5.4.14.3.3-1)

# 5.5 Default message and other information elements content

## 5.5.1 General

The following conditions apply throughout clause 5.5:

Table 5.5.1-1: Conditions

Condition Explanation
-----------------------

ON-NETWORK	Message/IE sent only in on-network scenario.
OFF-NETWORK	Message/IE sent only in off-network scenario.
PRIVATE-CALL	Message/IE sent only as part of a Private call handling.
GROUP-CALL	Message/IE sent only as part of a Group call handling.
BROADCAST-CALL	Message/IE sent only as part of a Broadcast group call handling.
EMERGENCY-CALL	Message/IE sent only as part of an Emergency call handling.
IMMPERIL-CALL	Message/IE sent only as part of an Immanent Peril call handling.
CHAT-GROUP-CALL	Message/IE sent only as part of a Chat group call scenario.
AMBIENT-LISTENING	Message/IE sent only as part of an ambient listening call
FIRST-TO-ANSWER	Message/IE sent only as part of a first-to-answer call
CONFIG	Message/IE sent only in configuration/authentication/authorisation scenario.
GROUPCONFIG	Message/IE sent only in group configuration scenario.
GROUPKEY	Message/IE sent only in group key material retrieval scenario.
SERVICE_AUTH	Message/IE for service authorisation
PRESENCE-EVENT	Message/IE for presence even package
POC-SETTINGS-EVENT	Message/IE for poc-settings even package
AFFILIATION	Message/IE for affiliation
LOCATION-INFO	Message containing location info
UDP	UE uses UDP for sending a request (this implies UDP to be used for a
	corresponding response)
TCP	UE uses TCP for sending a request (this implies TCP to be used for a
	corresponding response)
MO_CALL	Call (dialog) has been initiated by the UE (mobile originated call)
MT_CALL	Call (dialog) has been initiated by the SS (mobile terminated call)
MCPTT	MCPTT specific message content
MCVIDEO	MCVideo specific message content
MCDATA	MCData specific message content

# 5.5.2 Default SIP message and other information elements

## 5.5.2.1 SIP ACK

## 5.5.2.1.1 SIP ACK from the UE

#### Table 5.5.2.1.1-1: SIP ACK from the UE

Derivation Path: TS 24.229 [16 Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22]	
Method	"ACK"			
Request-URI	same URI as the SS has sent earlier in the Contact header of a response within the same dialog			
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
sent-protocol	"SIP/2.0/UDP" "SIP/2.0/TCP"			UDP TCP
sent-by	Same value as in INVITE message			
via-branch	Value starting with 'z9hG4bK'			
Route			RFC 3261 [22]	
route-param list	URIs of the Record- Route header sent to the UE in the response which has established the dialog, in reverse order			
From			RFC 3261 [22]	
addr-spec	same value as in the INVITE message	Local URI of the dialog (from the UE's point of view)		
tag	same value as in the INVITE	Local tag of the dialog ID (from the UE's point of view)		
То			RFC 3261 [22]	
addr-spec	same value as in the INVITE	Remote URI of the dialog (from the UE's point of view)		
tag	same tag as in the To- header of the response which has established the dialog	Remote tag of the dialog ID (from the UE's point of view)		
Call-ID	¥		RFC 3261 [22]	
callid	same value as in INVITE message			
Cseq			RFC 3261 [22]	
value	same value as in INVITE message			
method	"ACK"			
Max-Forwards			RFC 3261 [22]	
value	any allowed value	Non-zero value		
Content-Length	if present		RFC 3261 [22]	
value	"0"	No message body included		

## 5.5.2.1.2 SIP ACK from the SS

Derivation Path: TS 24.229 [16] Information Element	I, clause A.2.1.4.2, A.2.2.4.2 Value/remark	Comment	Reference	Condition
	value/remark	Comment		Condition
Request-Line Method	"ACK"		RFC 3261 [22]	
Request-URI	same URI as the UE has sent earlier in the Contact header of a response within the same dialog	Contact URI of the UE ("callee")		
	same value as in the INVITE			NON-2XX
SIP-Version	"SIP/2.0"			
Via	same as in the INVITE but with updated via- branches in case of an ACK for 2xx response	see Table 5.5.2.5.2-1	RFC 3261 [22]	
	same as in the INVITE (with the same via- branches)			NON-2XX
Route	not present		RFC 3261 [22]	
From			RFC 3261 [22]	
addr-spec	same URI as in the From-header of the INVITE	remote URI of the dialog (from the UE's point of view)		
tag	same tag as in the From-header of the INVITE	remote tag of the dialog (from the UE's point of view)		
То			RFC 3261 [22]	
addr-spec	same URI as in the To- header of the INVITE	local URI of the dialog (from the UE's point of view)		
tag	same tag as in the To- header of the response which has established the dialog	local tag of the dialog (from the UE's point of view)		
Call-ID			RFC 3261 [22]	
callid	Same value as in INVITE	Call-Id of the dialog		
Cseq			RFC 3261 [22]	
value	Same value as in INVITE			
method	"ACK"			
Max-Forwards			RFC 3261 [22]	
value	"68"	The recommended initial value is 70 in RFC 3261. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UE		
Content-Length			RFC 3261 [22]	
value	"0"	No message body included		

#### Table 5.5.2.1.2-1: SIP ACK from the SS

Condition	Explanation
NON-2XX	ACK for non-2xx response
NOTE: For further conditions see table 5.5.1	-1

## 5.5.2.2 SIP BYE

5.5.2.2.1 SIP BYE from the UE

Table 5.5.2.2.1-1: SIP BYE from the UE

Information Element	Value/remark	Comment	Reference	Condition
Request-Line	"BYE"		RFC 3261 [22]	
Method Request LIRI	same URI as the SS	Contact URI of the	<u> </u>	
Request-URI	has sent earlier in the			
		recipient of the BYE		
	Contact header of a			
	message within the			
	same dialog			
SIP-Version	"SIP/2.0"		DE0 0004 (001	
Via			RFC 3261 [22]	
sent-protocol	"SIP/2.0/UDP"			UDP
	"SIP/2.0/TCP"			TCP
sent-by	same value as in			
	INVITE message			
sent-by				MT_CALL
host	IP address or FQDN	Either the UE's IP		
		address or its home		
		domain name		
port	protected server port of	as assigned during		
	the UE	registration		
via-branch	Value starting with	-		
	'z9hG4bK'			
Route			RFC 3261 [22]	
route-param list	URIs of the Record-			
F	Route header sent to			
	the UE in the response			
	which has established			
	the dialog, in reverse			
	order			
	URIs of the Record-			MT_CALL
	Route header sent to			WIT_CALL
	the UE in the INVITE			
From			RFC 3261 [22]	
addr-spec	Same URI of the UE as	Local URI of the dialog	11 0 3201 [22]	
adur-spec	used earlier in the	(from the UE's point of		
	dialog	view)		
tog	Same tag of the UE as	Local tag of the dialog		
tag	used earlier in the	ID (from the UE's point		
	dialog	of view)		
То	ulaiog	Of view)	RFC 3261 [22]	
-	Same URI of the SS as	Remote URI of the	KFC 3201 [22]	
addr-spec				
	used earlier in the	dialog (from the UE's		
100	dialogURI	point of view)		
tag	Same tag of the SS as	Remote tag of the		
	used earlier in the	dialog ID (from the UE's		
	dialog	point of view)		
			RFC 3261 [22]	
callid	same value as in			
	INVITE message	ļ		
CSeq			RFC 3261 [22]	
value	value of CSeq sent by			
	the endpoint within its			
	previous request in the			
	same dialog but			
	increased by one			
method	"BYE"			
Require			RFC 3261 [22]	
			RFC 3329 [53]	
option-tag	"sec-agree"		· · ·	
Proxy-Require			RFC 3261 [22]	
			RFC 3329 [53]	
option-tag	"sec-agree"			
Security-Verify	sec-ayiee	1	RFC 3329 [53]	
	nome velue of Constitut	1	1120 3323 [33]	
sec-mechanism	same value as Security -Server header sent by			
	-Server neader sent by	1	1	

Max-Forwards			RFC 3261[22]
value	any allowed value	Non-zero value	
P-Access-Network-Info			RFC 7315 [52] RFC 7913 [51]
access-net-spec	Access network technology and, if applicable, the cell ID		
Content-Length	if present		RFC 3261 [22]
value	"0"	No message body included	

## 5.5.2.2.2 SIP BYE from the SS

Derivation Path: TS 24.229 [16 Information Element	J, clause A.2.1.4.3, A.2.2.4.3 Value/remark	Comment	Reference	Condition
Request-Line	Value/remark	Comment	RFC 3261 [22]	Condition
Method	"BYE"		KFC 3201 [22]	
Request-URI	same URI as the UE has sent earlier in the Contact header of a response within the same dialog	Contact URI of the UE ("callee")		
SIP-Version	"SIP/2.0"			
Via	same as specified for INVITE sent by the SS in Table 5.5.2.5.2-1 with updated via- branches		RFC 3261 [22]	
Route	Not present		RFC 3261 [22]	
From			RFC 3261 [22]	
addr-spec	Same URI of the SS as used earlier in the dialog	Remote URI of the dialog (from the UE's point of view)		
tag	Same tag of the SS as used earlier in the dialog	Remote tag of the dialog (from the UE's point of view)		
То			RFC 3261 [22]	
addr-spec	Same URI of the UE as used earlier in the dialog	Local URI of the dialog (from the UE's point of view)		
tag	Same tag of the UE as used earlier in the dialog	Local tag of the dialog (from the UE's point of view)		
Call-ID		- /	RFC 3261 [22]	
callid	same value as in INVITE message			
CSeq			RFC 3261 [22]	
value	value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one			
method	"BYE"			
Max-Forwards			RFC 3261[22]	
value	"68"	The recommended initial value is 70 in RFC 3261. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UE		
Content-Length			RFC 3261 [22]	
value	"0"	No message body included		

#### Table 5.5.2.2-1: SIP BYE from the SS

## 5.5.2.3 SIP CANCEL

This message is sent by the SS.

### Table 5.5.2.3-1: SIP CANCEL

Derivation Path: TS 24.229 [16]	Value/remark	Comment	Reference	Condition
	value/remark	Comment		Condition
Request-Line			RFC 3261 [22]	
Method	"CANCEL"			
Request-URI	same value as in the INVITE being cancelled			
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
via-parm	same value as in the INVITE being cancelled			
From			RFC 3261 [22]	
addr-spec	same value as in the INVITE being cancelled			
tag	same value as in the INVITE being cancelled			
То			RFC 3261 [22]	
addr-spec	same value as in the INVITE being cancelled			
Call-ID			RFC 3261 [22]	
Callid	same value as in the INVITE being cancelled			
CSeq			RFC 3261 [22]	
value	same value as in the INVITE being cancelled			
Method	"CANCEL"			
Content-Length			RFC 3261 [22]	
value	"0"	No message body included		

## 5.5.2.4 SIP INFO

This message is sent by the SS.

Table 5.5.2.4-1: SIP INFO

Information Element	, clause A.2.1.4.6, A.2.2.4.6 Value/remark	Comment	Reference	Condition
Request-Line	Value/remark	Comment	Reference	Condition
Method	"INFO"			
Request-URI	same URI as the UE has sent earlier in the Contact header of a response within the same dialog			
SIP-Version	"SIP/2.0"			
Via	same as specified for INVITE sent by the SS in Table 5.5.2.5.2-1 with updated via- branches		RFC 3261 [22] RFC 3581 [55]	
From			RFC 3261 [22]	
addr-spec	Same URI of the SS as used earlier in the dialog	Remote URI of the dialog (from the UE's point of view)		
tag	Same tag of the SS as used earlier in the dialog	Remote tag of the dialog (from the UE's point of view)		
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec	Same URI of the UE as used earlier in the dialog	Local URI of the dialog (from the UE's point of view)		
tag	Same tag of the UE as used earlier in the dialog	Local tag of the dialog (from the UE's point of view)		
Call-ID			RFC 3261 [22]	
Callid	Same value as used in the INVITE initiating the dialog			
CSeq			RFC 3261 [22]	
value	value of CSeq sent by the SS within its previous request in the same dialog but increased by one			
Method	"INFO"			
Max-Forwards			RFC 3261 [22]	
value	"68"	The recommended initial value is 70 in RFC 3261. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UE.		
Info-Package			RFC 6086 [131]	
name	"g.3gpp.mcptt-info" "g.3gpp.mcvideo-info" "g.3gpp.mcdata-info"			MCPTT MCVIDEO MCDATA
params	not present			
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"			
Content-Length value	length of message body		RFC 3261 [22]	
Message Body				
MIME body part		MCPTT/MCVideo/MCD ata Info		

MIME-Content-Type	"application/vnd.3gpp. mcptt-info+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-info+xml"			MCVIDEO
	"application/vnd.3gpp. mcdata-info+xml"			MCDATA
Content-ID	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	MCPTT-Info as described in Table 5.5.3.2.2-1		TS 24.379 [9] clause F.1	MCPTT
	MCVideo-Info as described in Table 5.5.3.2.2-2		TS 24.281 [86] clause F.1	MCVIDEO
	MCData-Info as described in Table 5.5.3.2.2-3		TS 24.282 [87] clause D.1.2	MCDATA
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-2		TS 24.379 [9]	

## 5.5.2.5 SIP INVITE

5.5.2.5.1 SIP INVITE from the UE

Table 5.5.2.5.1-1: SIP INVITE from the UE

MT\_CALL

RFC 3261 [22]

Derivation Path: TS 24.229 [16], c				
Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22] RFC 5031 [54]	
Method	"INVITE"			
Request-URI	tsc_MCPTT_PublicServ iceId_A	The public service identity identifying the participating MCPTT function serving the MCPTT user		MCPTT AND NOT re_INVITE
	tsc_MCVideo_PublicSe rviceId_A	The public service identity identifying the participating MCVideo function serving the MCVideo user		MCVIDEO AND NOT re_INVITE
	tsc_MCData_PublicSer viceId_A	The public service identity identifying the participating MCData function serving the MCData user		MCDATA AND NOT re_INVITE
Request-URI	same URI as the SS has sent earlier in the Contact header of a message within the same dialog	Contact URI of the recipient of the BYE		re_INVITE
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"	UE accesses the server via UDP		UDP
	"SIP/2.0/TCP"	UE accesses the server via TCP		ТСР
sent-by				
host	IP address or FQDN	Either the UE's IP address or its home domain name		
port	protected server port of the UE	as assigned during registration		
via-branch	Value starting with 'z9hG4bK'			
Route			RFC 3261 [22]	
addr-spec[1]	SIP URI			
user-info and host	P-CSCF address of the SS	P-CSCF address as assigned to the UE via NAS signalling or P- CSCF discovery		
port	protected server port of the SS	as assigned during registration		
uri-parameters	"lr"			
addr-spec[2]	SIP URI			
user-info and host	"scscf.3gpp.org"	same value as in the Service-Route header field of the 200 OK response to REGISTER		
port	not present			
uri-parameters	"lr"			
Route			RFC 3261 [22]	re_INVITE
route-param list	URIs of the Record-		····[]	<u> </u>

Route header sent to the UE in the response which has established the dialog, in reverse

URIs of the Record-

Route header sent to the UE in the INVITE

order

From

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
	value/remark	Comment	Reierence	Condition
addr-spec	Default zuhlig und zich			
user-info and host	Default public user id			
	(px_MCX_SIP_PublicU			
	serId_A_1)			
port	not present			
tag	any value			
From			RFC 3261 [22]	re_INVITE
addr-spec	Same URI of the UE as	Local URI of the dialog		
	used earlier in the	(from the UE's point of		
	dialog	view)		
tag	Same tag of the UE as	Local tag of the dialog		
	used earlier in the	ID (from the UE's point		
	dialog	of view)		
То		· · ·	RFC 3261 [22]	
			RFC 5031 [54]	
addr-spec				
user-info and host	Same URI as Request-			
	URI			
port	not present		1	1
tag	not present			
То	not present		RFC 3261 [22]	re_INVITE
-	Same URI of the SS as	Remote URI of the	NEC 3201 [22]	
addr-spec				
	used earlier in the	dialog (from the UE's		
	dialogURI	point of view)		
tag	Same tag of the SS as	Remote tag of the		
	used earlier in the	dialog ID (from the UE's		
	dialog	point of view)		
Call-ID			RFC 3261 [22]	
callid	any allowed value			
callid	same value as in			re_INVITE
	INVITE creating the			
	dialog			
CSeq			RFC 3261 [22]	
value	any allowed value			
value	value of CSeq sent by			re_INVITE
	the endpoint within its			
	previous request in the			
	same dialog but			
	increased by one			
method	"INVITE"			
Supported			RFC 3261 [22]	1
option-tag	"timer"			
Session-Expires			RFC 4028 [30]	
			NEC 4020 [30]	
delta-seconds	any allowed value			
Require			RFC 3261 [22]	
			RFC 3312 [56]	
			RFC 3329 [53]	
option-tag	"sec-agree"			
Proxy-Require			RFC 3261 [22]	
			RFC 3329 [53]	
option-tag	"sec-agree"			
Security-Verify			RFC 3329 [53]	
		1		
sec-mechanism	same value as Security			
sec-mechanism				
sec-mechanism	-Server header sent by			
sec-mechanism Contact			RFC 3261 [22	

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
addr-spec	SIP URI			
user-info and host	IP address or FQDN			
port	protected server port of	as assigned during		
F • · ·	UE	registration		
feature-param	"+g.3gpp.mcptt"	This media feature tag		MCPTT
	· 9.09PP	when used in a SIP		
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports Mission		
		Critical Push To Talk		
		(MCPTT)		
		communication.		
	"+g.3gpp.mcvideo"	This media feature tag		MCVIDEO
		when used in a SIP		
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports Mission		
		Critical Video		
		(MCVideo)		
		communication.		
	"+g.3gpp.mcdata.sds"	This media feature tag		MCDATA_
		when used in a SIP		SDS
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports mission critical		
		data (MCData)		
		service.communication.		MODATA
	"+g.3gpp.mcdata.fd"	This media feature tag		MCDATA_
		when used in a SIP		FD
		request or a SIP		
		response indicates that the function sending		
		the SIP message		
		supports mission critical		
		data (MCData)		
		service.communication.		
	"+g.3gpp.mcdata.ipcon	This media feature tag	TS 24.282 [87]	MCDATA
	n"	when used in a SIP	clause 20.2.1	PCONN
		request or a SIP	5.0000 20.2.1	
		response indicates that		
		the function sending		
		the SIP message		
		supports mission critical		
		data (MCData)		
		service.communication.		
feature-param	"+g.3gpp.icsi-	This URN indicates that		MCPTT
	ref=urn:urn-7:3gpp-	the device has the		
	service.ims.icsi.mcptt"	capabilities to support		
	F F	the mission critical push		
		to talk (MCPTT)		
		service.		
	"+g.3gpp.icsi-	This URN indicates that		MCVIDEO
	ref=urn:urn-7:3gpp-	the device has the		
	service.ims.icsi.mcvide	capabilities to support		
	O"	the Mission Critical		
		Video (MCVideo)		
		communication.		

Derivation Path: TS 24.229 [16], Information Element	clause A.2.1.4.7, A.2.2.4.7 Value/remark	Comment	Reference	Condition
	"+g.3gpp.icsi-	This URN indicates that	Noterenice	MCDATA
	ref=urn:urn-7:3gpp-	the device has the		SDS
	service.ims.icsi.mcdata.	capabilities to support		
	sds"	the mission critical data (MCData) service.		
	"+g.3gpp.icsi-	This URN indicates that		MCDATA_
	ref=urn:urn-7:3gpp-	the device has the		FD –
	service.ims.icsi.mcdata.	capabilities to support		
	fd"	the mission critical data		
		(MCData) service.	70 0 / 000 /071	
	"+g.3gpp.icsi-	This URN indicates that	TS 24.282 [87]	MCDATA_I
	ref=urn:urn-7:3gpp- service.ims.icsi.mcdata.	the device has the	clause 20.2.1	PCONN
	ipconn"	capabilities to support the mission critical data		
		(MCData) service.		
feature-param	"audio"	This feature tag		MCPTT
		indicates that the device supports audio		OR MCVIDEO
		as a streaming media		NICVIDEO
		type.		
feature-param	"video"	This feature tag		MCVIDEO
•		indicates that the		
		device supports video		
		as a streaming media		
faratura a a		type.		
feature-param	"text"	This feature tag		MCDATA_
		indicates that the device supports text as		SDS, MCDATA
		a streaming media		FD
		type.		
Max-Forwards		· · · ·	RFC 3261 [22]	
value	any allowed value	Non-zero value		
P-Access-Network-Info			RFC 7315 [52]	
access-net-specs	Access network			
	technology and, if			
Accort	applicable, the cell ID		DEC 0004 [00]	
Accept media-range[1]	"application/sdp"		RFC 3261 [22]	
media-range[2]	"application/vnd.3gpp.			MCPTT
	mcptt-info+xml"			
	application/vnd.3gpp.m cvideo-info+xml			MCVIDEO
	"application/vnd.3gpp.			MCDATA
	mcdata-info+xml"			
P-Preferred-Service	-	1	RFC 6050 [31]	
Samiaa ID				
Service-ID	"urn:urn-7:3gpp-			MCPTT
Service-ID	service.ims.icsi.mcptt"			
Service-ID	service.ims.icsi.mcptt" "urn:urn-7:3gpp-			MCPTT MCVIDEO
Service-ID	service.ims.icsi.mcptt" "urn:urn-7:3gpp- service.ims.icsi.mcvide			
Service-ID	service.ims.icsi.mcptt" "urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO
Service-ID	service.ims.icsi.mcptt" "urn:urn-7:3gpp- service.ims.icsi.mcvide			
Service-ID	service.ims.icsi.mcptt" "urn:urn-7:3gpp- service.ims.icsi.mcvide o" "urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			MCVIDEO MCDATA_
Service-ID	service.ims.icsi.mcptt" "urn:urn-7:3gpp- service.ims.icsi.mcvide o" "urn:urn-7:3gpp- service.ims.icsi.mcdata. sds" "urn:urn-7:3gpp-			MCVIDEO MCDATA_ SDS MCDATA_
Service-ID	service.ims.icsi.mcptt" "urn:urn-7:3gpp- service.ims.icsi.mcvide o" "urn:urn-7:3gpp- service.ims.icsi.mcdata. sds" "urn:urn-7:3gpp- service.ims.icsi.mcdata.			MCVIDEO MCDATA_ SDS
Service-ID	service.ims.icsi.mcptt" "urn:urn-7:3gpp- service.ims.icsi.mcvide o" "urn:urn-7:3gpp- service.ims.icsi.mcdata. sds" "urn:urn-7:3gpp- service.ims.icsi.mcdata. fd"			MCVIDEO MCDATA_ SDS MCDATA_ FD
Service-ID	service.ims.icsi.mcptt" "urn:urn-7:3gpp- service.ims.icsi.mcvide o" "urn:urn-7:3gpp- service.ims.icsi.mcdata. sds" "urn:urn-7:3gpp- service.ims.icsi.mcdata. fd" "urn:urn-7:3gpp-		TS 24.282 [87]	MCVIDEO MCDATA_ SDS MCDATA_ FD MCDATA_I
Service-ID	service.ims.icsi.mcptt" "urn:urn-7:3gpp- service.ims.icsi.mcvide o" "urn:urn-7:3gpp- service.ims.icsi.mcdata. sds" "urn:urn-7:3gpp- service.ims.icsi.mcdata. fd" "urn:urn-7:3gpp- service.ims.icsi.mcdata.			MCVIDEO MCDATA_ SDS MCDATA_ FD
	service.ims.icsi.mcptt" "urn:urn-7:3gpp- service.ims.icsi.mcvide o" "urn:urn-7:3gpp- service.ims.icsi.mcdata. sds" "urn:urn-7:3gpp- service.ims.icsi.mcdata. fd" "urn:urn-7:3gpp- service.ims.icsi.mcdata. ipconn"		TS 24.282 [87] clause 20.2.1	MCVIDEO MCDATA_ SDS MCDATA_ FD MCDATA_I
P-Preferred-Identity	service.ims.icsi.mcptt" "urn:urn-7:3gpp- service.ims.icsi.mcvide o" "urn:urn-7:3gpp- service.ims.icsi.mcdata. sds" "urn:urn-7:3gpp- service.ims.icsi.mcdata. fd" "urn:urn-7:3gpp- service.ims.icsi.mcdata. ipconn" if present		TS 24.282 [87]	MCVIDEO MCDATA_ SDS MCDATA_ FD MCDATA_I
	service.ims.icsi.mcptt" "urn:urn-7:3gpp- service.ims.icsi.mcvide o" "urn:urn-7:3gpp- service.ims.icsi.mcdata. sds" "urn:urn-7:3gpp- service.ims.icsi.mcdata. fd" "urn:urn-7:3gpp- service.ims.icsi.mcdata. ipconn"		TS 24.282 [87] clause 20.2.1	MCVIDEO MCDATA_ SDS MCDATA_ FD MCDATA_I
P-Preferred-Identity	service.ims.icsi.mcptt" "urn:urn-7:3gpp- service.ims.icsi.mcvide o" "urn:urn-7:3gpp- service.ims.icsi.mcdata. sds" "urn:urn-7:3gpp- service.ims.icsi.mcdata. fd" "urn:urn-7:3gpp- service.ims.icsi.mcdata. ipconn" if present same URI as in From-		TS 24.282 [87] clause 20.2.1	MCVIDEO MCDATA_ SDS MCDATA_ FD MCDATA_I

Information Flowart	Value/remark	<b>C</b>
Derivation Path: TS 24.229 [16], c	lause A.2.1.4.7, A.2.2.4.7	

feature-param     **g.3gpp.tcsi- ref-umum-7:3gpp- service.ims.icsi.mcpt*     MCVIDE       **g.3gpp.tcsi- referumum-7:3gpp- service.ims.icsi.mcdata. sds*     MCDAT/ service.ims.icsi.mcdata. sds*     MCDAT/ service.ims.icsi.mcdata. sds*       **g.3gpp.icsi- referumum-7:3gpp- service.ims.icsi.mcdata. sds*     MCDAT/ service.ims.icsi.mcdata. sds*     MCDAT/ service.ims.icsi.mcdata. sds*       **g.3gpp.icsi- referum.um-7:3gpp- service.ims.icsi.mcdata. ipcon*     TS 24.282 [87] clause 20.2.1     MCDAT/ PCONN       *eq.param     *require*     MCDAT/ service.ims.icsi.mcdata. igcon*     MCDAT/ referum.um-7:3gpp- service.ims.icsi.mcdata. igcon*       *eq.param     *require*     MCDAT/ service.ims.icsi.mcdata. igcon*     MCDAT/ referum.um-7:3gpp- service.ims.icsi.mcdata. igcon*       req.param     *require*     MCVIDE       *explicit/ feature-param     *sg.3gpp.mcvideo*     MCVIDE       *explicit/ *eq.3gpp.mcvideo*     MCVIDE       *explicit/ *eq.3gpp.mcvideo*     MCVIDE       *explicit/ *eq.3gpp.mcvideo*     MCVIDE       *explicit/ *eq.3gpp.mcvideo*     MCVIDE       *explicit/ *eq.3gpp.mcvideo*     MCVIDE       *eq.3gpp.mcvideo*     MCVIDE       *explicit/ *eq.3gpp.mcvideo*     MCVIDE       *explicit/ *eq.3gpp.mcvideo*     MCVIDE       *explicit/ *eq.3gpp.mcvideo*     MCVIDE       *explicit/ *eq.3gpp.mcvideo*     MCVIDE       *explicit/ *explicit/ *explicit/ *explicit/			Comment	Reference	Condition
ref=um:um-7:3gpp- service.ims.ics.imcvite         MCVIDE           o"         "+g.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcvite         MCDAT/ SDS           i"+g.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. sds"         MCDAT/ SDS         MCDAT/ SDS           i"+g.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. ipconn*         MCDAT/ FD         MCDAT/ SDS           req-param         "require"         MCDAT/ Fd=um:um-7:3gpp- service.ims.icsi.mcdata. ipconn*         MCDAT/ FD           req-param         "require"         Implement feature-param         MCDAT/ Fd=um:um-7:3gpp- service.ims.icsi.mcdata. ipconn*         MCDAT/ FD           req-param         "require"         Implement feature-param         MCDAT/ Fd=um- req-param         MCDAT/ Fd=um- req.japp.mcvideo"         Implement feature-param         MCDAT/ FD           req-param         "require"         Implement feature-param         Implement feature-param         MCDAT/ FD           req-param         "require"         Implement feature-param		"+a 3app icsi-			
service.ims.icsi.mcptt*         MCVIDE           **q.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcvide o*         MCVIDE           **q.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. sds*         MCDAT/ SDS           **q.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. df*         MCDAT/ SDS           **q.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. df*         MCDAT/ FD           ref=um:um-7:3gpp- service.ims.icsi.mcdata. df*         MCDAT/ FD           **q.3gpp.icsi- ref=param         TS 24.282 [87] Clause 20.2.1         MCDAT/ FD           req-param         *require*         MCDAT/ FD           explicit-param         *explicit*         MCDAT/ FD           feature-param         *require*         MCDAT/ FD           *q.3gpp.mcvideo*         MCVIDE           **g.3gpp.mcvideo*         MCVIDE           **g.3gpp.mcvideo*         MCVIDE           **g.3gpp.mcdata.sds*         SDS           **g.3gpp.mcdata.sds*         SDS           **g.3gpp.mcdata.sds*         SDS           **g.3gpp.mcdata.sds*         SDS           **g.3gpp.mcdata.sds*         SDS           **g.3gpp.mcdata.sds*         SDS           *fec.3373[34]         re_INVIT           answer-mode         not present         RFC 5373 [34]           An					
*+q.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcvide 0"         MCVIDE           *+q.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. sds"         MCDAT/ SDS           *+q.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. id"         MCDAT/ FD           *+q.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. ipcon"         TS 24.282 [87] clause 20.2.1         MCDAT/ PCONN           req-param         *require"         MCDAT/ *q.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. ipcon"         TS 24.282 [87] clause 20.2.1         MCDAT/ PCONN           req-param         *require"         MCDAT/ *q.3gpp.mcvideo"         MCDAT/ PCONN           *explicit-param         *require"         MCDAT/ *g.3gpp.mcvideo"         MCDAT/ PCONN           *fg.3gpp.icsi- req-param         *require"         MCDAT/ MCDAT/ *g.3gpp.mcvideo"         MCDAT/ MCDAT/ SDS           *fg.3gpp.mcvideo"         *require"         MCDAT/ MCDAT/ SDS         MCDAT/ PCONN           *fg.3gpp.mcvideo"         *require"         MCDAT/ MCDAT/ SDS         MCDAT/ PCONN           *fg.3gpp.mcvideo"         *require"         MCDAT/ MCDAT/ SDS         MCDAT/ PCONN           *fg.3gpp.mcvideo"         *require"         MCDAT/ SDS         MCDAT/ PCONN           *fg.3gpp.mcvideo"         *require"         MCDAT/ CALS         MCDAT/ PCONN           rexplicit/ answer-mode-value         *req.3gpp					
ref=umum-7:3gpp- service.ims.icsi.mcvide o"         MCDAT/ SDS           *+g.3gpp.icsi- ref=umum-7:3gpp- service.ims.icsi.mcdata. sds"         MCDAT/ SDS           *+g.3gpp.icsi- ref=umum-7:3gpp- service.ims.icsi.mcdata. ipcon"         MCDAT/ FD           *explicit-param         *explicit- reg.param         MCDAT/ reg.gpp.ncdata.sds"           *explicit-param         *explicit"         MCDAT/ FD           *explicit-param         *explicit"         MCDAT/ FD           *explicit-param         *explicit"         MCDAT/ FD           *explicit-param         *explicit"         MCPTT           *explicit-param         *explicit"         MCDAT/ FD           *explicit-param         *explicit"         MCPTT           *explicit-param         *explicit"         MCPTT           *explicit-param         *explicit"         MCDAT/ FD           *explicit-param         *explicit"         MCPTT           *explicit-param         *explicit"         MCDAT/ FD           *explicit-param         *explicit"         MCDAT/ FD           *explicit-param         *explicit"         MCDAT/ FD           *explicit-param         *explicit"         MCDAT/ FD           req.param         *fe.3gpp.mcdata.fcon         TS 24.282 [87] MCDAT/ FD           req.param					MCVIDEO
service.ims.icsi.mcvide         -         -           *tg.3gpp.icsi- ref=um:um-7:3gp- service.ims.icsi.mcdata.         MCDAT/ SDS         SDS           *tg.3gpp.icsi- ref=um:um-7:3gp- service.ims.icsi.mcdata.         MCDAT/ FD         MCDAT/ SDS           *tg.3gp.icsi- ref=um:um-7:3gp- service.ims.icsi.mcdata.         MCDAT/ FD         MCDAT/ FD           *tg.3gp.icsi- ref=um:um-7:3gp- service.ims.icsi.mcdata.         TS 24.282 [87]         MCDAT/ PCONN           *tg.3gpp.icsi- ref=um:um-7:3gp- service.ims.icsi.mcdata.         TS 24.282 [87]         MCDAT/ PCONN           *tg.3gpp.mcptt*         -         -         -           feature-param         *tg.3gpp.mcdta.sds*         -         -         -           *tg.3gpp.mcdata.sds*         -         MCDAT/ SDS         -         -           *tg.3gpp.mcdata.sds*         -         -         MCDAT/ SDS         -           *tg.3gpp.mcdata.sds*         -         -         -         -           *tg.3gpp.mcdata.sds*         -         -         -         -         -           *tg.3gp.mcdata.sds*         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         - <t< td=""><td></td><td></td><td></td><td></td><td></td></t<>					
"+g-3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. sds"         MCDAT/ SDS           "+g-3gp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. td"         TS 24.282 [87]         MCDAT/ FD           "+g-3gp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. ipconn"         TS 24.282 [87]         MCDAT/ PCONN           require"         acvalue[2]         TS 24.282 [87]         MCDAT/ PCONN           require"         acvalue[2]         MCDAT/ ref=um:um-7:3gpp- service.ims.icsi.mcdata. ipconn"         MCDAT/ require"           feature-param         "explicit"         MCVDE           acvalue[2]         "+g.3gpp.mcvideo"         MCVDE           "+g.3gpp.mcvideo"         MCVDE           "+g.3gpp.mcdata.sds"         SDS           "+g.3gpp.mcdata.sds"         SDS           "+g.3gpp.mcdata.ipcon n"         TS 24.282 [87]         MCDAT/ MCDAT/           req.param         "require"         SDS           "+g.3gpp.mcdata.ipcon n"         TS 24.282 [87]         MCDAT/ PCONN           req.param         "require"         MCDAT/ SDS           answer-Mode         not present         RFC 5373 [34]         re_INVTI RFC 8101 [45]           answer-mode-value         "Manual"         RFC 4112 [40]         CV-CALI RFC 8101 [45]           r-value         value of the <resource- resource-priority- element contai</resource- 					
ref=um:um-7:3gpp- service.ims.icsi.mcdata. sds"     SDS       "+g.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. fd"     MCDAT/ FD       "eq.param     "reguine"       explicit-param     "explicit"       "eq.param     "eq.jagp.mcvideo"       "eq.param     "eq.jagp.mcvideo"       "explicit"     MCDAT/ ref=um:um-7:3gpp- service.ims.icsi.mcdata. ipconn"       feq-param     "explicit"       explicit-param     "explicit"       feature-param     "eq.jagp.mcvideo"       "+g.3gpp.mcvideo"     MCPTT       "+g.3gpp.mcvideo"     MCCDAT/ MCVDE       "+g.3gpp.mcvideo"     MCDAT/ PD       "+g.3gpp.mcvideo"     MCDAT/ MCVDE       "+g.3gpp.mcvideo"     MCDAT/ PD       "+g.3gpp.mcvideo"     MCDAT/ PD       "+g.3gpp.mcvideo"     MCDAT/ PD       "+g.3gpp.mcvideo"     MCDAT/ PD       "+g.3gpp.mcdata.sds"     SDS       "+g.3gpp.mcdata.sds"     SDS       "+g.3gpp.mcdata.ipcon n"     TS 24.282 [87]       Rec 5373 [34]     real. PC 373 [34]       req-param     "require"       answer-Mode     not present       Answer-Mode     not present       Answer-Mode     Natual"       answer-mode-value     "Auto"       answer-mode-value     "Auto"       namespace     <					
service.ims.icsi.mcdata. sds"         MCDAT/ Fp.           "+q.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. id"         TS 24.282 [87] clause 20.2.1         MCDAT/ FD           "+q.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. ipconn"         TS 24.282 [87] clause 20.2.1         MCDAT/ PCONN           req.param         "require"             ac-value[2]         "+g.3gpp.mcvideo"             feature-param         "*eg.3gpp.mcvideo"         MCDAT/ MCVIDE         MCDAT/ PCONN           "+g.3gpp.mcvideo"         MCDAT/ MCVIDE         MCDAT/ MCVIDE         MCDAT/ MCVIDE           "+g.3gpp.mcvideo"         MCDAT/ MCDAT/ PD         MCDAT/ MCDAT/ PD         MCDAT/ PCONN           req.param         "require"         SDS         SDS           "+g.3gpp.mcdata.id"         SDS         SDS         SDS           "+g.3gpp.mcdata.id"         FD         MCDAT/ PCONN         SDS           "req.param         "require"         SDS         SDS           "+g.3gpp.mcdata.id"         FD         SDS         SDS           "sexplicit"         PCONN         SCS         SCS         SCS           "req.param         "require"         SCS         SCS         SCS         SCS         SCS         SCS		"+g.3gpp.icsi-			MCDATA_
sds"         MCDAT/ "+g.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. fd"         MCDAT/ FD           req.param         "*g.3gp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. ipconn"         TS 24.282 [87] clause 20.2.1         MCDAT/ PCONN           req.param         "require"         -         -           explicit-param         "explicit"         -         -           feature-param         "explicit"         -         MCPTT           feature-param         "t-g.3gpp.mcvideo"         MCVDAT         MCVDT           "t-g.3gpp.mcvideo"         MCVDT         -         -           "t-g.3gpp.mcvideo"         MCVDAT         SDS         -           "t-g.3gpp.mcvideo"         MCVDAT         SDS         -           "t-g.3gpp.mcvideo"         MCDAT         -         -           "t-g.3gpp.mcvideo"         MCVDAT         SDS         -           "t-g.3gpp.mcvideo"         MCDAT         -         -           "t-g.3gpp.mcvideo"         -         -         -         -           "t-g.3gpp.mcvideo"         -         -         -         -         -           "t-g.3gpp.mcvideo"         -         -         -         -         -         -         -         -         -					SDS
"+g.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. Id"         TS 24.282 [87]         MCDAT/ FD           "+g.3gpp.icsi- ref=um:um-7:3gpp- service.ims.icsi.mcdata. ipconn"         TS 24.282 [87]         MCDAT/ PCONN           req-param         "require"         -         -           ac-value[2]         "*g.3gpp.mcptt"         -         -           feature-param         "explicit"         -         -         -           ac-value[2]         "*g.3gpp.mcvideo"         MCDAT/ PCONN         MCPTT           "*g.3gpp.mcvideo"         MCDAT/ PCONN         MCDAT/ PCONN         -           "*g.3gpp.mcvideo"         MCDAT/ PCONN         MCDAT/ PCONN         -           "*g.3gpp.mcvideo"         MCDAT/ PCONN         -         -           "*g.3gpp.mcvideo"         MCDAT/ PCONN         -         -           "*g.3gpp.mcvideo"         MCDAT/ PCONN         -         -           "*g.3gpp.mcdata.ipcon n"         TS 24.282 [87]         MCDAT/ PCONN         -           req-param         "require"         -         -         -           explicit-param         "require"         -         -         -           Answer-Mode         not present         RFC 5373 [34]         re_INVIT           Answer-Mode <td< td=""><td></td><td></td><td></td><td></td><td></td></td<>					
ref=urinum-7:3gpp- service.ims.icsl.mcdata. [d']     FD       id']     "+g.3gpp.icsi- ref=urinum-7:3gpp- service.ims.icsl.mcdata. ipconn"     TS 24.282 [87] clause 20.2.1     MCDAT/ PCONN       req-param     "require"     Image: Clause 20.2.1     PCONN       req-param     "require"     Image: Clause 20.2.1     Image: Clause 20.2.1       feature-param     "require"     Image: Clause 20.2.1     Image: Clause 20.2.1       feature-param     "require"     Image: Clause 20.2.1     Image: Clause 20.2.1       feature-param     "req.3gpp.mcvideo"     Image: Clause 20.2.1     Image: Clause 20.2.1       red-param     "*g.3gpp.mcvideo"     Image: Clause 20.2.1     Image: Clause 20.2.1       red-param     "*g.3gpp.mcvideo"     Image: Clause 20.2.1     Image: Clause 20.2.1       red-param     "*g.3gpp.mcvideo"     Image: Clause 20.2.1     Image: Clause 20.2.1       red-param     "require"     Image: Clause 20.2.1     Image: Clause 20.2.1       req-param     "require"     Im					
service.ims.icsi.mcdata. fd"     TS 24.282 [87] clause 20.2.1     MCDAT/ PCONN       req-param     "require"     -       explicit-param     "explicit"     -       ac-value[2]     -     -       feature-param     "+g.3gpp.mcvideo"     MCPTT       "+g.3gpp.mcvideo"     MCVIDE     -       "+g.3gpp.mcvideo"     MCVIDE     SDS       "+g.3gpp.mcdata.sds"     MCDAT/ MCVIDE     -       "+g.3gpp.mcdata.sds"     MCDAT/ SDS     SDS       "+g.3gpp.mcdata.ipcon n"     TS 24.282 [87] Clause 20.2.1     MCDAT/ PCONN       "+g.3gpp.mcdata.ipcon n"     TS 24.282 [87] Clause 20.2.1     MCDAT/ PCONN       req-param     "require"     -     -       *+g.3gpp.mcdata.ipcon n"     TS 24.282 [87] Clause 20.2.1     MCDAT/ PCONN       req-param     "require"     -     -       answer-Mode     not present     -     -       Answer-Mode     not present     RFC 5373 [34]     re_INVIT       Answer-Mode     Not present     -     -       Anser-Prio					
fd"     TS 24.282 [87]     MCDAT/ Fd=um:um-7:3gpp- service.ims.icsi.mcdata. ipconn"     TS 24.282 [87]     MCDAT/ FCONN       req-param     "require"     -     -       ac-value[2]     -     -     -       feature-param     "explicit"     -     -       *q.3gpp.mcvideo"     -     MCPTT     MCDAT/ Fdause 20.2.1       feature-param     "+q.3gpp.mcvideo"     MCDAT/ SDS       *q.3gpp.mcvideo"     -     MCDAT/ SDS       *q.3gpp.mcvideo"     MCDAT/ SDS       *q.3gpp.mcvideo"     MCDAT/ SDS       *q.3gpp.mcvideo"     MCDAT/ SDS       *q.3gpp.mcvideo"     MCDAT/ SDS       *q.3gpp.mcvideo"     MCDAT/ SDS       *q.3gpp.mcvidata.idd"     MCDAT/ SDS       *q.3gpp.mcdata.ipcon n"     TS 24.282 [87]       Priv-Answer-Mode     not present       Answer-Mode     not present       Answer-Mode     Not present       Answer-Mode     RFC 5373 [34]       answer-mode-value     "Manual"       Resource-Priority     MANUAL       Resource-Priority     As configured in Table 5.58.81 for MCVIdeo       r-value     value of the <resource- priority-namespace&gt;       element contained in the <convergency- resource-priority- element contained in the <convergency- resource-priority- element of the MCX service configuration</convergency- </convergency- </resource- 					FD
*+g.3gpp.icsi- ref=urr.urr.7:3gpp- service.ims.icsi.mcdata. ipconn"     TS 24.282 [87] clause 20.2.1     MCDAT/ PCONN       req-param     "require"        explicit-param     "require"        ac-value[2]     **g.3gpp.mcvideo"     MCVIDE       "+g.3gpp.mcvideo"     MCVIDE       **g.3gpp.mcvideo"     MCDAT/ MCVIDE       **g.3gpp.mcvideo"     MCVIDE       **g.3gpp.mcdata.sds"     MCDAT/ SDD       **g.3gpp.mcdata.ipcon n**g.3gpp.mcdata.ipcon n**g.3gpp.mcdata.ipcon n*explicit-param     TS 24.282 [87] (Clause 20.2.1     MCDAT/ FD       Priv-Answer-Mode     not present     MCDAT/ SDD     MCDAT/ SDD       Answer-Mode     not present     RFC 5373 [34]     re_INVIT       Answer-mode-value     "Auto"     RFC 5373 [34]     EMERGI CY-CALI       answer-mode-value     "Auto"     RFC 412 [40] RFC 7134 [57]     MANUAI       Resource-Priority     Value of the <resource- priority-namespace&gt;     As configured in Table 5.58.8-1 for MCPTT and in Table 5.58.8-1 for MCVIdeo     CY-CALI       namespace     value of the <resource- priority-namespace&gt;     As configured in Table 5.58.8-1 for MCVIdeo     CY-CALI</resource- </resource- 					
ref-urr.urr7:3gp- service.ims.icsi.mcdata. ipconn"     clause 20.2.1     PCONN       req-param     "require"				TC 24 202 [07]	
service.ims.icsi.mcdata. ipconn"		+9.39pp.icsi-			
ipconn"     ipconn"       req-param     "require"       explicit-param     "explicit"       ac-value[2]     image: constraint of the second se				Ciause 20.2.1	1 CONN
req-param       "require"          explicit-param       "explicit"          ac-value[2]       **g.3gpp.mcvideo"       MCVIDe         feature-param       "+g.3gpp.mcvideo"       MCDAT/         "+g.3gpp.mcdata.sds"       MCDAT/       SDS         "+g.3gpp.mcdata.ipcon       TS 24.282 [87]       MCDAT/         "explicit-param       "require"           "req-param       "require"           "*g.3gpp.mcdata.ipcon       TS 24.282 [87]       MCDAT/         n"       require"           explicit-param       "require"           explicit-param       "require"           answer-Mode       not present           Answer-Mode       not present           Answer-Mode       "Auto"           answer-mode-value       "Manual"        MANUAI         Resource-Priority       Value of the <resource-priority-amespace-priority-amespace-priority-resource-priority-resource-priority-resource-priority-resource-priority-resource-priority-resource-priority-resource-priority-resource-priority-resource-priority-resource-priority-selement <emergency-resource-priority-resource-priority-selement="" con<="" contained="" in="" mcx="" of="" service="" td="" the=""><td></td><td></td><td></td><td></td><td></td></resource-priority-amespace-priority-amespace-priority-resource-priority-resource-priority-resource-priority-resource-priority-resource-priority-resource-priority-resource-priority-resource-priority-resource-priority-resource-priority-selement>					
explicit-param       "explicit"       Image: constraint of the set of th	reg-param			1	
ac-value[2]     "+g.3gpp.mcptt"     MCPTT       feature-param     "+g.3gpp.mcvideo"     MCVDAT/ SDS       "+g.3gpp.mcdata.sds"     MCDAT/ SDS       "+g.3gpp.mcdata.ipcon     TS 24.282 [87] clause 20.2.1     MCDAT/ PCONN       "+g.3gpp.mcdata.ipcon     TS 24.282 [87] clause 20.2.1     MCDAT/ PCONN       "+g.3gpp.mcdata.ipcon     TS 24.283 [87] clause 20.2.1     MCDAT/ PCONN       "+g.3gpp.mcdata.ipcon     TS 24.283 [87] clause 20.2.1     MCDAT/ PCONN       "explicit-param     "require"     PCONN       explicit-param     "require"     PCONN       answer-Mode     not present     RFC 5373 [34]       Answer-Mode     Nato"     RFC 7134 [57]       answer-mode-value     "Manual"     RFC 7134 [57]       r-value     Value of the <resource- priority-namespace&gt; element contained in the <comergency- resource-priority&gt; element contained in the <connetwork> element of the MCX service configuration     As configured in Table 5.5.8.4-1 for MCVIdeo</connetwork></comergency- </resource- 				1	
feature-param       "+g.3gpp.mcptt"       MCPTT         "+g.3gpp.mcvideo"       MCDAT/ SDS         "+g.3gpp.mcdata.sds"       MCDAT/ SDS         "+g.3gpp.mcdata.ipcon n"       TS 24.282 [87] Clause 20.2.1       MCDAT/ FD         "+g.3gpp.mcdata.ipcon n"       TS 24.282 [87] Clause 20.2.1       MCDAT/ PCONN         req.param       "require"       Image: Clause 20.2.1       PCONN         Priv-Answer-Mode       not present       RFC 5373 [34]       re_INVIT         Answer-Mode       not present       RFC 5373 [34]       re_INVIT         Answer-Mode       not present       RFC 5373 [34]       MANUAI         answer-mode-value       "Auto"       MANUAI       EMERGI         answer-mode-value       "Manual"       RFC 4412 [40]       EMERGI         r-value       Value of the <resource- priority-namespace&gt; element contained in the <emergency- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration       As configured in Table 5.5.8.4-1 for MCVIdeo       CY-CALI</onnetwork></emergency- </resource- 					
"+g.3gpp.mcvideo"       MCVIDE         "+g.3gpp.mcdata.sds"       MCDAT/ SDS         "+g.3gpp.mcdata.ipcon n"       TS 24.282 [87] clause 20.2.1       MCDAT/ FD         "+g.3gpp.mcdata.ipcon n"       TS 24.282 [87] clause 20.2.1       MCDAT/ FD         Priv-Answer-Mode       not present       Priv-Answer-Mode       Priv-Answer-Mode         Answer-Mode       not present       RFC 5373 [34]       re_INVIT         Answer-Mode       mot present       RFC 4412 [40]       EMERGI CY-CALI         r-value       "Manual"       As configured in Table       CY-CALI         r-value       value of the <resource- priority-namespace&gt; element contained in the <onnetwork> element contained in the <onnetwork> element of the MCX service configuration       As configured in Table       FO ALL</onnetwork></onnetwork></resource- 		"+g.3gpp.mcptt"			MCPTT
"+g.3gpp.mcdata.sds"     MCDAT/ SDS       "+g.3gpp.mcdata.fd"     MCDAT/ FD       "+g.3gpp.mcdata.ipcon n"     TS 24.282 [87] clause 20.2.1     MCDAT/ PCONN       req-param     "require"     PCONN       explicit-param     "explicit"     PCONN       Answer-Mode     not present     PCONN       Answer-Mode     not present     PCONN       Answer-Mode     Not present     PCONN       answer-mode-value     "Auto"     MANUAI       Resource-Priority     "Manual"     MANUAI       r-value     value of the <resource- priority-namespace&gt; element contained in the <emergency- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration     As configured in Table 5.5.8.4-1 for MCPTT and in Table 5.5.8.5.1 for MCVideo</onnetwork></emergency- </resource- 		"+g.3gpp.mcvideo"			MCVIDEO
"+g.3gpp.mcdata.fd"     SDS       "+g.3gpp.mcdata.ipcon n"     TS 24.282 [87] (clause 20.2.1       req.param     "require"       explicit-param     "explicit"       Priv-Answer-Mode     not present       Answer-Mode     not present       answer-mode-value     "Auto"       answer-mode-value     "Manual"       Resource-Priority     "Manual"       Rec 4412 [40] r-value     RFC 4412 [40] (CY-CALI or priority-namespace> element contained in the <emergency- element contained in the <onnetwork> element of the MCX service configuration</onnetwork></emergency- 					MCDATA_
req-param     FD       "+g.3gpp.mcdata.ipcon n"     TS 24.282 [87]     MCDAT/ PCONN       require"     Image: Construct of the second of the se		5 511			
"+g.3gpp.mcdata.ipcon n"     TS 24.282 [87] clause 20.2.1     MCDAT/ PCONN       req-param     "require"        explicit-param     "explicit"        Priv-Answer-Mode     not present        Answer-Mode     not present        answer-mode-value     "Auto"        answer-mode-value     "Manual"        Resource-Priority     "Manual"        r-value     value of the <resource-priority- element contained in the <omergency- resource-priority&gt;     As configured in Table 5.5.8.4-1 for MCPTT and in Table 5.5.8.51 for MCVIdeo     CY-CALI or</omergency- </resource-priority- 		"+g.3gpp.mcdata.fd"			MCDATA_
n°     n°     clause 20.2.1     PCONN       req-param     "require"     explicit-param     "explicit"       Priv-Answer-Mode     not present     Answer-Mode     RFC 5373 [34]     re_INVIT       Answer-Mode     not present     RFC 5373 [34]     re_INVIT       Answer-Mode     mot present     RFC 5373 [34]     re_INVIT       answer-mode-value     "Auto"     RFC 5373 [34]     EMERGI       answer-mode-value     "Manual"     MANUAI     MANUAI       Resource-Priority     "Manual"     RFC 4412 [40]     EMERGI       r-value     "Manual"     RFC 8101 [45]     or       namespace     value of the <resource-priority-namespace>element contained in the <emergency-resource-priority>element octained in the <onnetwork>element ontained in the <constant< td="">     As configured in Table 5.5.8.51       for MCVIdeo     service configuration     and in Table 5.5.8.51     For MCVIdeo</constant<></onnetwork></emergency-resource-priority></resource-priority-namespace>					
req-param       "require"					MCDATA_I
explicit-param       "explicit"       Image: constraint of the second se				clause 20.2.1	PCONN
Priv-Answer-Mode       not present       RFC 5373 [34]       re_INVIT         Answer-Mode       not present       RFC 5373 [34]       re_INVIT         Answer-Mode       "Auto"       RFC 5373 [34]       RFC 5373 [34]         answer-mode-value       "Auto"       MANUAI         Resource-Priority       "Manual"       MANUAI         Resource-Priority       RFC 4412 [40]       EMERGI CY-CALI RFC 8101 [45]         r-value       value of the <resource-priority-namespace> element contained in the <emergency-resource-priority> element contained in the <onnetwork> element of the MCX service configuration       As configured in Table</onnetwork></emergency-resource-priority></resource-priority-namespace>					
Answer-Mode       not present       RFC 5373 [34]       re_INVIT         Answer-Mode       RFC 5373 [34]       re_INVIT         answer-mode-value       "Auto"       RFC 5373 [34]       MANUAI         answer-mode-value       "Manual"       MANUAI         Resource-Priority       "Manual"       RFC 4412 [40]       EMERGI         r-value       value of the <resource-priority-namespace>       RFC 8101 [45]       IMMPER         namespace       value of the <resource-priority-namespace>       As configured in Table       CY-CALI         namespace       value of the <resource-priority>       As configured in Table       CY-CALI         for MCVIdeo       element contained in the <onnetwork>       for MCVIdeo       For MCVIdeo</onnetwork></resource-priority></resource-priority-namespace></resource-priority-namespace>					
Answer-Mode       RFC 5373 [34]         answer-mode-value       "Auto"         answer-mode-value       "Manual"         Resource-Priority       MANUAI         Resource-Priority       RFC 4412 [40]         r-value       RFC 8101 [45]         r-value       Value of the <resource-priority-namespace>         element contained in the <emergency-resource-priority>       As configured in Table 5.5.8.8-1 for MCPTT and in Table 5.5.8.8-1 for MCVIdeo         for MCVIdeo       the <connetwork>         element of the MCX service configuration       element of the MCX</connetwork></emergency-resource-priority></resource-priority-namespace>					
answer-mode-value     "Auto"       answer-mode-value     "Manual"       Resource-Priority     "Manual"       Resource-Priority     RFC 4412 [40] RFC 7134 [57] RFC 8101 [45]       r-value     RFC 4412 [40] RFC 8101 [45]       namespace     value of the <resource- priority-namespace&gt; element contained in the <emergency- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration</onnetwork></emergency- </resource- 		not present			re_INVITE
answer-mode-value       "Manual"       MANUAl         Resource-Priority       RFC 4412 [40]       EMERGI         RFC 7134 [57]       CY-CALI       or         IMMPER       IMMPER       -CALL         r-value       element contained in       the <resource-priority>         element contained in       the <centregency-resource-priority>       As configured in Table         or MCVIdeo       S.8.8-1       for MCVIdeo</centregency-resource-priority></resource-priority>		"A		RFC 5373 [34]	
Resource-PriorityRFC 4412 [40] RFC 7134 [57] RFC 8101 [45]EMERGI CY-CALI or IMMPER -CALLr-valuevalue of the <resource- </resource-  priority-namespace> element contained in the <emergency- </emergency-  resource-priority> element contained in the <onnetwork> element of the MCX service configurationAs configured in Table 5.5.8.4-1 for MCPTT and in Table 5.5.8.8-1 for MCVIdeoEMERGI CY-CALI</onnetwork>					
r-value       RFC 7134 [57] RFC 8101 [45]       CY-CALL or IMMPER -CALL         namespace       value of the <resource- priority-namespace&gt; element contained in the <emergency- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration       As configured in Table 5.5.8.4-1 for MCPTT and in Table 5.5.8.8-1 for MCVIdeo       EMERGI CY-CALI</onnetwork></emergency- </resource- 		Manual			
r-value       RFC 8101 [45]       or IMMPER -CALL         r-value       value of the <resource- priority-namespace&gt; element contained in the <emergency- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration       As configured in Table 5.5.8.4-1 for MCPTT and in Table 5.5.8.8-1 for MCVIdeo       EMERGI CY-CALI</onnetwork></emergency- </resource- 	Resource-Friority				
r-value       IMMPER         r-value       EMERGI         namespace       value of the <resource- </resource-  priority-namespace> element contained in the <emergency- </emergency-  resource-priority> element contained in the <onnetwork> element of the MCX service configuration       As configured in Table 5.5.8.4-1 for MCPTT and in Table 5.5.8.8-1 for MCVIdeo</onnetwork>					
r-value       -CALL         r-value       EMERGI CY-CALI         namespace       value of the <resource- priority-namespace&gt; element contained in the <emergency- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration       As configured in Table 5.5.8.4-1 for MCPTT and in Table 5.5.8.8-1 for MCVIdeo</onnetwork></emergency- </resource- 					IMMPERIL
r-value       EMERGI CY-CALI         namespace       value of the <resource- priority-namespace&gt; element contained in the <emergency- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration       As configured in Table 5.5.8.4-1 for MCPTT and in Table 5.5.8.8-1 for MCVIdeo</onnetwork></emergency- </resource- 					
namespace       value of the <resource- priority-namespace&gt; element contained in the <emergency- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration       As configured in Table 5.5.8.4-1 for MCPTT and in Table 5.5.8.8-1 for MCVIdeo       CY-CALI CY-CALI</onnetwork></emergency- </resource- 	r-value				EMERGEN
namespace       value of the <resource- priority-namespace&gt; element contained in the <emergency- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration       As configured in Table 5.5.8.4-1 for MCPTT and in Table 5.5.8.8-1 for MCVIdeo</onnetwork></emergency- </resource- 					CY-CALL
priority-namespace>       5.5.8.4-1 for MCPTT         element contained in       and in Table 5.5.8.1         the <emergency-< td="">       for MCVIdeo         resource-priority&gt;       element contained in         the <onnetwork>       element of the MCX         service configuration       service configuration</onnetwork></emergency-<>	namespace	value of the <resource-< td=""><td>As configured in Table</td><td></td><td></td></resource-<>	As configured in Table		
element contained in the <emergency- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration</onnetwork></emergency- 					
resource-priority> element contained in the <onnetwork> element of the MCX service configuration</onnetwork>		element contained in	and in Table 5.5.8.8-1		
element contained in the <onnetwork> element of the MCX service configuration</onnetwork>			for MCVIdeo		
the <onnetwork> element of the MCX service configuration</onnetwork>					
element of the MCX service configuration					
service configuration					
	r priority	documents	An configurad in Table		
r-priority value of the <resource- priority-priority&gt; 5.5.8.4-1 for MCPTT</resource- 	т-рнонку				
priority-priority> 5.5.8.4-1 for MCPTT element contained in and in Table 5.5.8.8-1					
the <emergency-< td=""><td></td><td></td><td></td><td></td><td></td></emergency-<>					
resource-priority>					
element contained in					
the <onnetwork></onnetwork>					
element of the MCX					
		service configuration			
		document			

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
r-value				IMMPERIL -CALL
namespace	value of the <resource- priority-namespace&gt; element contained in the <imminent-peril- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration documents</onnetwork></imminent-peril- </resource- 	As configured in Table 5.5.8.4-1 for MCPTT and in Table 5.5.8.8-1 for MCVIdeo		
r-priority	value of the <resource- priority-priority&gt; element contained in the <imminent-peril- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration document</onnetwork></imminent-peril- </resource- 	As configured in Table 5.5.8.4-1 for MCPTT and in Table 5.5.8.8-1 for MCVIdeo		
Content-Type			RFC 5621 [58]	
media-type Content-Length	"multipart/mixed" present in case of TCP and when there is a message body (atherwise actional)		RFC 3261 [22]	
value	(otherwise optional) any value	length of message- body		
Message-body			RFC 3261 [22]	
MIME body part		SDP message		
MIME-part-headers				
Content-Type	"application/sdp"		RFC 4566 [27]	
MIME-part-body	SDP Message as described in Table 5.5.3.1.1-1 SDP Message as			MCPTT MCVIDEO
	described in Table 5.5.3.1.1-2 SDP Message as described in Table 5.5.3.1.1-3			MCDATA
MIME body part	0.0.0.1.1-0	MCPTT Info/MCVideo/MCData		
MIME-part-headers				1
Content-Type	"application/vnd.3gpp. mcptt-info+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-info+xml" "application/vnd.3gpp.			MCVIDEO MCDATA
	mcdata-info+xml"			
Content-ID	any value	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	MCPTT-Info as described in Table 5.5.3.2.1-1		TS 24.379 [9] clause F.1	MCPTT
	MCVideo-Info as described in Table 5.5.3.2.1-2		TS 24.281 [86] clause F.1	MCVIDEO

TS 24.379 [9]

Derivation Path: TS 24.229 [16], clause A.2.1.4.7, A.2.2.4.7 Information Element Value/remark Comment Reference Condition MCData-Info as TS 24.282 [87] MCDATA described in Table clause D.1 5.5.3.2.1-3 MIME body part **Resource list** RFC 5366 [35] PRIVATE-CALL OR MCD\_1to1 MIME-part-headers Content-Type application/resourcelists+xml" Content-ID Unique URL identifying TS 24.379 [9] any value the Resource-lists XML clause 6.6.3.1 MIME body; used as reference in the signature MIME body As described in Table MCPTT MIME-part-body 5.5.3.3.1-1 As described in Table **MCVIDEO** 5.5.3.3.1-2 As described in Table MCDATA 5.5.3.3.1-3 (EMERGE MIME body part Location info NCY-CALL AND ALERT\_IN D) OR LÓCATIO N-INFO MIME-part-headers This MIME part shall be MCPTT Content-Type "application/vnd.3gpp. included if the MCPTTmcptt-location-Info 'alert-ind' element info+xml" sent in the MCPTT-Info is set to true. This MIME part shall be **MCVIDEO** "application/vnd.3gpp. mcvideo-locationincluded if the MCVideo-Info 'alert-ind' info+xml" element sent in the MCVideo-Info is set to true. Content-ID Unique URL identifying TS 24.379 [9] any value the Location-info XML clause 6.6.3.1 MIME body; used as reference in the signature MIME body Location-info as TS 24.379 [9] MCPTT MIME-part-body described in Table clause F.3 5.5.3.4.1-1 **MCVIDEO** Location-info as TS 24.281 [86] described in Table clause F.3 5.5.3.4.1-2 MIME body part Signature MIME-part-headers "application/vnd.3gpp. TS 24.379 [9] Content-Type

mcptt-signed+xml" Signatures for XML

MIME bodies as described in Table 5.5.13.1-1

MIME-part-body

Condition	Explanation
MANUAL	Call establishment with manual commencement mode
MCD_1to1	A one-to-one MCData call
MCDATA_SDS	INVITE to setup SDS session
MCDATA_FD	INVITE to setup FD session using media plane
MCDATA_IPCONN	INVITE to setup IP connectivity
re_INVITE	INVITE within a dialog
ALERT_IND	MCPTT emergency alert is required as specified for the test case or automatically initiated by the client for an emergency call (in case of condition EMERGENCY-CALL when pc_MCX_EmergencyIndWithAlertInd=true); ⇒ <alert-ind> is set to true in the mcptt-info.</alert-ind>
NOTE: For further conditions see table	5.5.1-1

5.5.2.5.2 SIP INVITE from the SS

Table 5.5.2.5.2-1: SIP INVITE from the SS

Information Element	, clause A.2.1.4.7, A.2.2.4.7 Value/remark	Comment	Reference	Condition
Request-Line	Value/Terriark	Comment	RFC 3261 [22]	Condition
			RFC 5031 [54]	
Method	"INVITE"			
Request-URI	SIP URI of the UE's			
	contact address as			
	provided in the Contact-			
	header of the			
	REGISTER message			
Request-URI	same URI as the UE	Contact URI of the UE		re_INVITE
	has sent earlier in the			
	Contact header of a			
	response within the			
	same dialog			
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
			RFC 3581 [55]	
sent-protocol[1]	"SIP/2.0/TCP"			
sent-by[1]		Address of the P-CSCF		
		that communicates with		
host	P-CSCF address of the	the called party P-CSCF address as		
nost	SS	assigned to the UE via		
		NAS signalling or P-		
		CSCF discovery		
port	protected server port of	as assigned during		
pon	the SS	registration		
via-branch[1]	Value assigned by the			
	SS starting with			
	'z9hG4bK'			
sent-protocol[2]	"SIP/2.0/UDP"			
sent-by[2]		Address of the other		
		endpoint		
host	Same host name as in			
	Contact-header			
port	Same port number as			
	in Contact-header			
via-branch[2]	Value assigned by the			
	SS starting with			
	'z9hG4bK'			
Record-Route		Record-Route	RFC 3261 [22]	
		corresponding to the Via header		
addr-spec[1]	SIP URI	SIP URI corresponding		
addi-spec[1]	SIP URI	to first entry of Via		
		header		
user-info and host	P-CSCF address of the	P-CSCF address as		
	SS	assigned to the UE via		
	00	NAS signalling or P-		
		CSCF discovery		
port	protected server port of	as assigned during		
-	the SS	registration		
uri-parameters	"lr"			
addr-spec[2]	SIP URI			
user-info and host	"term@scscf1.3gpp.org			
	"			
port	not present			
uri-parameters	"lr"			
addr-spec[3]	SIP URI			
user-info and host	"orig@scscf2.3gpp.org"			
port	not present			
uri-parameters	"lr"			
addr-spec[4]	SIP URI			
user-info and host	"pcscf2.3gpp.org"			
port	not present			
uri-parameters	"Ir"	1		

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Record-Route	same as in the 180, 183 or 200 response	Comment	RFC 3261 [22]	re_INVITE AND
	sent to the UE during MO call establishment in reverse order			MO_CALL
From			RFC 3261 [22]	
addr-spec				
user-info and host	tsc_MCPTT_PublicServ iceId_A	SIP URI of the calling UE		MCPTT
	tsc_MCVideo_PublicSe rviceId_A	SIP URI of the calling UE		MCVIDEO
	tsc_MCData_PublicSer viceId_A	SIP URI of the calling UE		MCDATA
port tag	not present Value assigned by the SS			
From			RFC 3261 [22]	re_INVITE
addr-spec	Same URI of the SS as used earlier in the dialog	Remote URI of the dialog (from the UE's point of view)		
tag	Same tag of the SS as used earlier in the dialog	Remote tag of the dialog (from the UE's point of view)		
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec				
user-info and host	px_MCX_SIP_PublicUs erId_A_1	Default public user ID (IMPU) as stored in the UICC		
port	not present			
tag	not present		DE0 0004 (001	
To	Same URI of the UE as	Local URI of the dialog	RFC 3261 [22]	re_INVITE
addr-spec	used earlier in the dialog	(from the UE's point of view)		
tag	Same tag of the UE as used earlier in the dialog	Local tag of the dialog (from the UE's point of view)		
Call-ID			RFC 3261 [22]	
callid	Value assigned by the SS			
Call-ID			RFC 3261 [22]	re_INVITE
callid	same value as in INVITE creating the dialog			
CSeq	¥		RFC 3261 [22]	
value	Value assigned by the SS			
value	value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one			re_INVITE
method	"INVITE"			
Supported	<b>#400</b>		RFC 3261 [22]	
option-tag	"100rel"	This option tag indicates that the UA can send or receive reliable provisional		
		responses.		
option-tag	"timer"			
option-tag option-tag	"tdialog" "norefersub"			
P-Called-Party-ID	noreieraub		RFC 7315 [52]	

Derivation Path: TS 24.229 [16], Information Element	Value/remark	Comment	Reference	Condition
called-pty-id-spec	Same public user ID as			
<u> </u>	used in the To-header		550 (000 1001	
Session-Expires			RFC 4028 [30]	-
generic-param	"1800"	The recommended initial value is 1800 in RFC 4028 [30].		
P-Early-Media			RFC 5009 [60]	
em-parm	"inactive"			
Require			RFC 3261 [22] RFC 3312 [56] RFC 3329 [53]	
option-tag	"sec-agree"			
Proxy-Require			RFC 3261 [22] RFC 3329 [53]	
option-tag	"sec-agree"			
P-Asserted-Identity			RFC 3325 [32]	ļ
addr-spec user-info and host	same URI as in From-			
	header			
port	not present			
Contact			RFC 3261 [22] RFC 3840 [33]	
addr-spec	SIP URI		NEC 3040 [33]	
user-info and host	tsc_MCPTT_SessionId			MCPTT
	tsc_MCVideo_SessionI			MCVIDEO
	tsc_MCData_SessionId			MCDATA
port	Value assigned by the SS			
feature-param	"+g.3gpp.mcptt"	This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Push To Talk (MCPTT) communication.	RFC 3840 [33] clause 9	MCPTT
	"+g.3gpp.mcvideo"	This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Video (MCVideo) communication.	RFC 3840 [33] clause 9	MCVIDEO
	"+g.3gpp.mcdata.sds"	This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Data (MCData) communication.	RFC 3840 [33] clause 9	MCDATA_ SDS

Derivation Path: TS 24.229 [16], 0		-	_	_
Information Element	Value/remark	Comment	Reference	Condition
	"+g.3gpp.mcdata.fd"	This media feature tag when used in a SIP request or a SIP	RFC 3840 [33] clause 9	MCDATA_ FD
		response indicates that the function sending the SIP message supports Mission Critical Data (MCData) communication.		
	"+g.3gpp.mcdata.ipcon n"	This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Data (MCData) communication.	RFC 3840 [33] clause 9	MCDATA_I PCONN
feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcptt"	This URN indicates that the device has the capabilities to support the mission critical push to talk (MCPTT) service.	RFC 3840 [33] clause 9	MCPTT
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o"	This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.	RFC 3840 [33] clause 9	MCVIDEO
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"	This URN indicates that the device has the capabilities to support the mission critical data (MCData) SDS service.	RFC 3840 [33] clause 9	MCDATA_ SDS
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. fd"	This URN indicates that the device has the capabilities to support the mission critical data (MCData) FD service.	RFC 3840 [33] clause 9	MCDATA_ FD
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. ipconn"	This URN indicates that the device has the capabilities to support the mission critical data (MCData) FD service.	clause 9	MCDATA_I PCONN
feature-param	"audio"	This feature tag indicates that the device supports audio as a streaming media type.	RFC 3840 [33] clause 10.1	MCPTT OR MCVIDEO
feature-param	"video"	This feature tag indicates that the device supports video as a streaming media type.		MCVIDEO
feature-param	"text"	This feature tag indicates that the device supports text as a streaming media type.		MCDATA_ SDS, MCDATA_ FD
feature-param	"isfocus"			
Max-Forwards			RFC 3261 [22]	<u> </u>

Derivation Path: TS 24.229 [16]		<b>A</b>		•
Information Element	Value/remark	Comment	Reference	Condition
value	"68"	The recommended		
		initial value is 70 in		
		RFC 3261 [22].		
		Assuming 2 hops as		
		according to the Via		
		header this results in a		
		value of 68 in the		
		message sent to the		
•		UE		
Accept			RFC 3261 [22]	
media-range[1]	"application/sdp"			
media-range[2]	"application/vnd.3gpp.			MCPTT
	mcptt-info+xml"			
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml"			
	"application/vnd.3gpp.			MCDATA
	mcdata-info+xml"			
Accept-Contact			RFC 3841 [29]	
ac-value[1]				
feature-param	"+g.3gpp.icsi-			MCPTT
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcvide			
	o"			
	"+g.3gpp.icsi-			MCDATA_
	ref=urn:urn-7:3gpp-			SDS
	service.ims.icsi.mcdata.			
	sds"			
	"+g.3gpp.icsi-			MCDATA_
	ref=urn:urn-7:3gpp-			FD
	service.ims.icsi.mcdata.			
	fd"			
	"+g.3gpp.icsi-			MCDATA_I
	ref=urn:urn-7:3gpp-			PCONN
	service.ims.icsi.mcdata.			
	ipconn"			
req-param	"require"			
explicit-param	"explicit"			
ac-value[2]				
feature-param	"+g.3gpp.mcptt"			MCPTT
·	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA_
	5 - 5F F 5 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6 - 6			SDS
	"+g.3gpp.mcdata.fd"			MCDATA_
	5 - 5FF 500000			FD
	"+g.3gpp.mcdata.ipcon			MCDATA_I
	n"			PCONN
req-param	"require"			
explicit-param	"explicit"			
Answer-Mode	not present		RFC 5373 [34]	re_INVITE
			TS 24.379 [9]	OR FIRST-
			clause	TO-
			6.3.2.2.6.3	ANSWER
Answer-Mode			RFC 5373 [34]	
answer-mode-value	"Auto"			
answer-mode-value	"Manual"			MANUAL
Priv-Answer-Mode	ivialiual			FIRST-TO-
LUA-AU2MGL-MODE				
		Į		ANSWER
	<b>UN 4</b>			
answer-mode-value	"Manual"			
Content-Type			RFC 5621 [58]	
	"Manual" "multipart/mixed"		RFC 5621 [58]	

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Value	length of message-			
Maaaaya badu	body		DEC 2204 [22]	
Message-body MIME body part		SDP message	RFC 3261 [22]	
MIME body part MIME-part-headers		SDF message		
MIME-Content-Type	"application/sdp"			
MIME-part-body	SDP Message as		RFC 4566 [27]	MCPTT
	described in Table 5.5.3.1.2-1		DE0 (500 (07)	100/00550
	SDP Message as described in Table 5.5.3.1.2-2		RFC 4566 [27]	MCVIDEO
	SDP Message as described in Table 5.5.3.1.2-3		RFC 4566 [27]	MCDATA
MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-headers				
MIME-Content-Type	"application/vnd.3gpp. mcptt-info+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-info+xml"			MCVIDEC
	"application/vnd.3gpp. mcdata-info+xml"			MCDATA
Content-ID	Unique id in format of a	Unique URL identifying	TS 24.379 [9]	
	Message-ID assigned by the SS	the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the	clause 6.6.3.1	
		signature MIME body		
MIME-part-body	MCPTT-Info as described in Table 5.5.3.2.2-1			MCPTT
	MCVideo-Info as described in Table 5.5.3.2.2-2			MCVIDEC
	As described in Table 5.5.3.2.2-3			MCDATA
MIME body part	0.0.0.2.2.0	Location info		LOCATIO N-INFO
MIME-part-headers				
MIME-Content-Type	"application/vnd.3gpp. mcptt-location- info+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-location- info+xml"			MCVIDEC
Content-ID	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the Location-info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Location-info as described in Table 5.5.3.4.2-1		TS 24.379 [9] clause F.3	MCPTT
	Location-info as described in Table 5.5.3.4.2-2		TS 24.281 [86] clause F.3	MCVIDEC
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	

Derivation Path: TS 24.229 [16], clause A.2.1.4.7, A.2.2.4.7

Information Element	Value/remark	Comment	Reference	Condition
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-2		TS 24.379 [9]	

Condition	Explanation
MANUAL	Call establishment with manual commencement mode
re_INVITE	INVITE within a dialog
MCD_1to1	A one-to-one MCData call
MCDATA_SDS	INVITE to setup SDS session
MCDATA_FD	INVITE to setup FD session using media plane
MCDATA_IPCONN	INVITE to setup IP connectivity
For further conditions see table 5.5.1-1	

- 5.5.2.6 Void
- 5.5.2.7 SIP MESSAGE
- 5.5.2.7.1 SIP MESSAGE from the UE

Table 5.5.2.7.1-1: SIP MESSAGE from the UE

Derivation Path: TS 24,229 [16], clause A.2.1.4.7a, A.2.2.4.7a

Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22]	
Method	"MESSAGE"		RFC 5031 [54]	
Request-URI	tsc_MCPTT_PublicServ iceId_A	The public service identity identifying the originating participating MCPTT function serving the MCPTT user		MCPTT
	tsc_MCVideo_PublicSe rviceId_A	The public service identity identifying the originating participating MCVideo function serving the MCVideo user		MCVIDEO
	tsc_MCData_PublicSer viceId_A	The public service identity identifying the originating participating MCData function serving the MCData user		MCDATA
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"			UDP
	"SIP/2.0/TCP"			TCP
sent-by				
host	IP address or FQDN	Either the UE's IP address or its home domain name		
port	protected server port of the UE	as assigned during registration		
via-branch	Value starting with 'z9hG4bK'			
From			RFC 3261 [22]	
addr-spec user-info and host	Default public user id (px_MCX_SIP_PublicU serId_A_1)	The URI of the UE		
port	not present			
tag	any allowed value			
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec				
user-info and host	tsc_MCPTT_PublicServ iceld_A	The URI of the SS		MCPTT
	tsc_MCVideo_PublicSe rviceId_A	The URI of the SS		MCVIDEO
	tsc_MCData_PublicSer viceId_A	The URI of the SS		MCDATA
port tag	not present			
tag Call-ID	not present		RFC 3261 [22]	
callid	any allowed value			<u> </u>
Cseq			RFC 3261 [22]	
value	any allowed value			
method	"MESSAGE"			
Max-Forwards			RFC 3261 [22]	
value	any allowed value	Non-zero value		
P-Access-Network-Info			RFC 7315 [52]	
access-net-spec	Access network technology and, if applicable, the cell ID			

Route	same as specified for		RFC 3261 [22]	
Roule	INVITE sent by the UE in Table 5.5.2.5.1-1		KFC 3201 [22]	
Accept-Contact			RFC 3841 [29]	
ac-value[1]			1110 3041 [23]	
feature-param	"+g.3gpp.icsi-			MCPTT
	ref=urn:urn-7:3gpp- service.ims.icsi.mcptt"			
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata "			MCDATA
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			MCDATA_ SDS
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. fd"			MCDATA_ FD
req-param	"require"			
explicit-param	"explicit"			
ac-value[2]				MCDATA_ SDS, MCDATA_
feature-param	"+g.3gpp.mcdata.sds"			FD MCDATA_ SDS
	"+g.3gpp.mcdata.fd"			MCDATA_ FD
req-param	"require"			
explicit-param	"explicit"			
P-Preferred-Service			RFC 6050 [31]	
Service-ID	"urn:urn-7:3gpp- service.ims.icsi.mcptt"			MCPTT
	"urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO
	"urn:urn-7:3gpp- service.ims.icsi.mcdata "			MCDATA
	"urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			MCDATA_ SDS
	"urn:urn-7:3gpp- service.ims.icsi.mcdata. fd"			MCDATA_ FD
P-Preferred-Identity	if present		RFC 3325 [32]	
PPreferredID-value	same URI as in From- header			
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"			
Content-Length	present in case of TCP and when there is a message body (otherwise optional)		RFC 3261 [22]	
value	any value	length of message- body		
Message-body			RFC 3261 [22]	
		MCPTT/MCVideo/MCD		

MIME-Content-Type	"application/vnd.3gpp. mcptt-info+xml"			MCPTT
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml" "application/vnd.3gpp.			MCDATA
	mcdata-info+xml"			MODATA
Content-ID	any value	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the	TS 24.379 [9] clause 6.6.3.1	
		signature MIME body		
MIME-part-body	MCPTT-Info as described in Table 5.5.3.2.1-1		TS 24.379 [9] clause F.1	MCPTT
	MCVideo-Info as described in Table 5.5.3.2.1-2		TS 24.281 [86] clause F.1	MCVIDEO
	MCData-Info as described in Table 5.5.3.2.1-3			MCDATA
MIME body part		Affiliation-Command		AFFILIATI ON
MIME-part-headers				
MIME-Content-Type	"application/vnd.3gpp. mcptt-affiliation- command+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-affiliation- command+xml"			MCVIDEO
	"application/vnd.3gpp. mcdata-affiliation- command+xml"			MCDATA
Content-ID	any value	Unique URL identifying the affiliation-command XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	MCPTT-Affiliation- Command as described in Table 5.5.3.7-1		TS 24.379 [9] clause F.4	MCPTT
	MCVideo-Affiliation- Command as described in Table 5.5.3.7-2		TS 24.281 [86] clause F.4	MCVIDEO
	MCData-Affiliation- Command as described in Table 5.5.3.7-3		TS 24.282 [87] clause D.3	MCDATA
MIME body part		Resource lists	RFC 5366 [35]	RESOURC E_LISTS
MIME-part-headers				
MIME-Content-Type	"application/resource- lists+xml"			
Content-ID	any value	Unique URL identifying the Resource-lists XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Resource-lists as described in Table 5.5.3.3.1-1			MCPTT
	Resource-lists as described in Table 5.5.3.3.1-2			MCVIDEO
	Resource-lists as described in Table 5.5.3.3.1-3			MCDATA

MIME body part		Location info	TS 24.379 [9]	
MIME-part-headers			clause F.3	N-INFO
Content-Type	"application/vnd.3gpp. mcptt-location- info+xml"	This MIME part shall be included if the MCPTT- Info 'alert-ind' element sent in the MCPTT-Info is set to true.		MCPTT
	"application/vnd.3gpp. mcvideo-location- info+xml"			MCVIDEO
	"application/vnd.3gpp. mcdata-location- info+xml"			MCDATA
Content-ID	any value	Unique URL identifying the Location-info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Location-info as described in Table 5.5.3.4.1-1			MCPTT
	Location-info as described in Table 5.5.3.4.1-2			MCVIDEO
	Location-info as described in Table 5.5.3.4.1-3			MCDATA
MIME body part		MIKEY message		MIKEY
MIME-part-headers				
Content-Type	"application/mikey"			
MIME-part-body	As described in Table 5.5.9.1-2A	MIKEY message, containing the PSK	TS 33.180 [30] TS 24.282 [87]	
MIME body part		MCData Data signalling message		MCDATA_ SIGNALLI NG
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcdata-signalling"			
MIME-part-body	SIGNALLING_PAYLOA D as described in Table 5.5.3.8.1-1		TS 24.282 [87]	
MIME body part		MCData Data message		MCDATA_ PAYLOAD
MIME-part-headers				
Content-Type	application/vnd.3gpp.m cdata-payload			
MIME-part-body	DATA_PAYLOAD as described in Table 5.5.3.9.1-1		TS 24.282 [87]	
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-1		TS 24.379 [9]	

Condition	Explanation
RESOURCE_LISTS	Message-body contains Resource lists
MIKEY	Message-body contains MIKEY message (e.g. for MCData 1-to-1 communication)
MCDATA_SIGNALLING	Message-body contains MCData Data signalling message
MCDATA_PAYLOAD	Message-body contains MCData Data message (DATA PAYLOAD)
MCDATA_SDS	SDS message or SDS disposition notification
MCDATA_FD	FD message or FD disposition notification
For further conditions see table 5.5.1-1	

5.5.2.7.2 SIP MESSAGE from the SS

#### Table 5.5.2.7.2-1: SIP MESSAGE from the SS

Information Element	, clause A.2.1.4.7a, A.2.2.4.7 Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22]	<b>_</b> _
			RFC 5031 [54]	
Method	"MESSAGE"			
Request-URI	Public user id associated to the MC service id	px_MCX_SIP_PublicUs erId_A_1 (in general)		
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22] RFC 3581 [55]	
sent-protocol[1]	"SIP/2.0/TCP"			
sent-by[1]		Address of the P-CSCF that communicates with the called party		
host	P-CSCF address of the SS	P-CSCF address as assigned to the UE via NAS signalling or P- CSCF discovery		
port	protected server port of the SS	as assigned during registration		
via-branch[1]	Value assigned by the SS starting with 'z9hG4bK'			
sent-protocol[2]	"SIP/2.0/UDP"			
sent-by[2]				
host	"scscf.3gpp.org"			
port	Value assigned by the SS	Caller's port number		
via-branch[2]	Value assigned by the SS starting with 'z9hG4bK'			
sent-protocol[3]	"SIP/2.0/UDP"			
sent-by[3]				
host	host name of the MC server			
port	not present			
via-branch[3]	Value assigned by the SS starting with 'z9hG4bK'			
From			RFC 3261 [22]	
addr-spec				
user-info and host	tsc_MCPTT_PublicServ iceId_A tsc_MCVideo_PublicSe			MCPTT MCVIDEO
	rviceId_A tsc_MCData_PublicSer			MCDATA
	viceId_A			
port	not present			
tag	Value assigned by the SS			
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec				
user-info and host	same URI as used as Request URI			
port	not present			
tag	not present			
Call-ID callid	Value assigned by the		RFC 3261 [22]	
<u></u>	SS			
Cseq value	Value assigned by the SS		RFC 3261 [22]	
method	"MESSAGE"			
Max-Forwards	WEGGAGE	<u> </u>	RFC 3261 [22]	

Information Element	Value/remark	Comment	Reference	Condition
value	"67"	The recommended initial value is 70 in		
		RFC 3261.		
		Assuming 3 hops as		
		according to the Via		
		header this results in a		
		value of 67 in the		
		message sent to the UE		
P-Asserted-Service			RFC 6050 [31]	MCDATA
				SDS,
				MCDATA_ FD
Service-ID	"urn:urn-7:3gpp-			MCDATA
	service.ims.icsi.mcdata. sds"			SDS
	"urn:urn-7:3gpp-			MCDATA
	service.ims.icsi.mcdata. fd"			FD
P-Asserted-Service			RFC 6050 [31]	AFFILIATI
				ON,
				LOCATIO
				N_CONFI G
Service-ID	"urn:urn-7:3gpp-			MCPTT
	service.ims.icsi.mcptt"			
	"urn:urn-7:3gpp-			MCVIDEC
	service.ims.icsi.mcvide o"			
	"urn:urn-7:3gpp-			MCDATA
	service.ims.icsi.mcdata			
Accept-Contact			RFC 3841 [29]	
ac-value[1]				MODIT
feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp-			MCPTT
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-			MCVIDEC
	ref=urn:urn-7:3gpp-			NO VIDEC
	service.ims.icsi.mcvide			
	0"			
	"+g.3gpp.icsi-			MCDATA
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcdata			
	"+g.3gpp.icsi-			MCDATA_
	ref=urn:urn-7:3gpp-			SDS
	service.ims.icsi.mcdata. sds"			
	"+g.3gpp.icsi-			MCDATA_
	ref=urn:urn-7:3gpp-			FD
	service.ims.icsi.mcdata. fd"			
req-param	"require"			
explicit-param	"explicit"			
ac-value[2]				ACCEPT-
				CONTACT
				-WITH-
				MEDIA-
				FEATURE TAG
feature-param	"+g.3gpp.mcptt"			MCPTT
	"+g.3gpp.mcvideo"			MCVIDEC
	"+g.3gpp.mcdata" "require"			MCDATA

Derivation Path: TS 24.229 [16]. Information Element	Value/remark	Comment	Reference	Condition
explicit-param	"explicit"			
ac-value[2]				MCDATA_
				SDS,
				MCDATA_
				FD
feature-param	"+g.3gpp.mcdata.sds"			MCDATA_
				SDS
	"+g.3gpp.mcdata.fd"			MCDATA_
rog param	"require"			FD
req-param explicit-param	"explicit"			
P-Asserted-Identity	explicit		RFC 3325 [32]	MCDATA_
-Asserted-identity			111 0 0020 [02]	SDS,
				MCDATA_
				FD
name-addr	px_MCX_SIP_PublicUs	The public user identity		
	erld_B	of the originating		
		MCData user		
P-Asserted-Identity			RFC 3325 [32]	LOCATIO
				N_CONFI
				G
name-addr	tsc_MCPTT_PublicServ	URI of the participating		MCPTT
	iceld_PF_A	MCPTT function which configures the location		
		reporting at the UE		
	tsc_MCVideo_PublicSe	URI of the participating		MCVIDEO
	rviceId_PF_A	MCVideo function		MOVIDEO
		which configures the		
		location reporting at the		
		UE		
	tsc_MCData_PublicSer	URI of the participating		MCDATA
	viceId_PF_A	MCData function which		
		configures the location		
<u></u>		reporting at the UE	DE0 5004 (50)	
Content-Type	"multipart/mixed"		RFC 5621 [58]	
media-type Content-Length	multipart/mixed		RFC 3261 [22]	
value	length of message-		KFC 3201 [22]	
value	body			
Message-body			RFC 3261 [22]	
MIME body part		MCPTT/MCVideo/MCD		
		ata Info		
MIME-part-headers				
MIME-Content-Type	"application/vnd.3gpp.			MCPTT
	mcptt-info+xml"			
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml"			
	"application/vnd.3gpp.			MCDATA
Orașteast ID	mcdata-info+xml"		TO 04 070 (0)	
Content-ID	Unique id in format of a	Unique URL identifying	TS 24.379 [9]	
	Message-ID assigned	the MCPTT/MCVideo/MCD	clause 6.6.3.1	
	by the SS	ata Info XML MIME		
		body; used as		
		reference in the		
		signature MIME body		
			TS 24.379 [9]	MCPTT
MIME-part-body	MCPTT-Info as		13 24.379 [9]	
MIME-part-body	MCPTT-Info as described in Table		clause F.1	
MIME-part-body				
MIME-part-body	described in Table 5.5.3.2.2-1 MCVideo-Info as		clause F.1 TS 24.281 [86]	MCVIDEO
MIME-part-body	described in Table 5.5.3.2.2-1 MCVideo-Info as described in Table		clause F.1	
MIME-part-body	described in Table 5.5.3.2.2-1 MCVideo-Info as described in Table 5.5.3.2.2-2		clause F.1 TS 24.281 [86] clause F.1	MCVIDEO
MIME-part-body	described in Table 5.5.3.2.2-1 MCVideo-Info as described in Table		clause F.1 TS 24.281 [86]	

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
MIME body part		Affiliation-Command		AFFILIATI
MIME-part-headers				ON
MIME-Content-Type	"application/vnd.3gpp. mcptt-affiliation-			MCPTT
	command+xml"			
	"application/vnd.3gpp. mcvideo-affiliation- command+xml"			MCVIDEO
	"vnd.3gpp.mcdata- affiliation- command+xml"			MCDATA
Content-ID	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the affiliation-command XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	MCPTT-Affiliation- Command as described		TS 24.379 [9] clause F.4	MCPTT
	in Table 5.5.3.7-1 MCVideo-Affiliation- Command as described in Table 5.5.3.7-2		TS 24.281 [86] clause F.4	MCVIDEO
	MCData-Affiliation- Command as described in Table 5.5.3.7-3		TS 24.282 [87] clause D.3	MCDATA
MIME body part		Resource lists	RFC 5366 [35]	RESOURC
MIME-part-headers				
MIME-Content-Type	"application/resource- lists+xml"			
Content-ID	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the Resource-lists XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Resource-lists as described in Table 5.5.3.3.2-1			MCPTT
	Resource-lists as described in Table 5.5.3.3.2-2			MCVIDEO
	Resource-lists as described in Table 5.5.3.3.2-3			MCDATA
MIME body part		Location info		LOCATIO N-INFO, LOCATIO N_CONFI G
MIME-part-headers				
MIME-Content-Type	"application/vnd.3gpp. mcptt-location- info+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-location- info+xml"			MCVIDEO
	"application/vnd.3gpp. mcdata-location- info+xml"			MCDATA
Content-ID	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the Location-info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	

Derivation Path: TS 24.229 [16]	, clause A.2.1.4.7a, A.2.2.4.7	ζa		
Information Element	Value/remark	Comment	Reference	Condition
MIME-part-body	Location-info as described in Table 5.5.3.4.2-1		TS 24.379 [9] clause F.3	MCPTT
	Location-info as described in Table 5.5.3.4.2-2		TS 24.281 [86] clause F.3	MCVIDEO
	Location-info as described in Table 5.5.3.4.2-3		TS 24.282 [87] clause D.3	MCDATA
MIME body part		MIKEY message		MIKEY
MIME-part-headers				
Content-Type	"application/mikey"			
MIME-part-body	As described in Table 5.5.9.1-2	MIKEY message, containing the PSK	TS 33.180 [30] TS 24.282 [87]	
MIME body part		MCData Data signalling message		MCDATA_ SIGNALLI NG
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcdata-signalling"			
MIME-part-body	SIGNALLING PAYLOAD as described in Table 5.5.3.8.2-1		TS 24.282 [87]	
MIME body part		MCData Data message		MCDATA_ PAYLOAD
MIME-part-headers				
Content-Type	application/vnd.3gpp.m cdata-payload			
MIME-part-body	DATA_PAYLOAD as described in Table 5.5.3.9.1-2		TS 24.282 [87]	
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-2		TS 24.379 [9]	

Condition	Explanation
RESOURCE_LISTS	Message-body contains Resource lists
LOCATION_CONFIG	Message-body contains location reporting configuration according to TS 24.379 [2] clause 13.2.2
MIKEY	Message-body contains MIKEY message (e.g. for MCData 1-to-1 communication)
MCDATA_SIGNALLING	Message-body contains MCData Data signalling message
MCDATA_PAYLOAD	Message-body contains MCData Data message (DATA PAYLOAD)
MCDATA_SDS	SDS message or SDS disposition notification
MCDATA_FD	FD message or FD disposition notification
ACCEPT-CONTACT-WITH-MEDIA-	Accept-Contact header field contains media feature tag
FEATURE-TAG	("+g.3gpp.mcptt", "+g.3gpp.mcvideo" or "+g.3gpp.mcdata")
For further conditions see table 5.5.1-1	

**ETSI** 

### 5.5.2.8 SIP NOTIFY

This message is sent by the SS.

Table 5.5.2.8-1: SIP NOTIFY

Information Element	clause A.2.1.4.8, A2.2.4.8 Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22]	
Method	"NOTIFY"			
Request-URI	same URI as the UE			
	has provided earlier in			
	the Contact header of			
	the SUBSCRIBE			
SIP-Version	"SIP/2.0"			
Via	51172.0		RFC 3261 [22]	
sent-protocol[1]			RFC 3201 [22]	
	"SIP/2.0/TCP"			
sent-by[1]				
host	P-CSCF address of the	P-CSCF address as		
	SS	assigned to the UE via		
		NAS signalling or P-		
		CSCF discovery		
port	protected server port of			
	the SS			
via-branch[1]	Value assigned by the			
	SS starting with			
	'z9hG4bK'			
sent-protocol[2]	"SIP/2.0/UDP"			
sent-by[2]				
host	"scscf.3gpp.org"			
port	not present			
via-branch[2]	Value assigned by the			
	SS starting with			
	'z9hG4bK'			
agent protocol[2]	"SIP/2.0/UDP"			
sent-protocol[3]	SIP/2.0/0DP			
sent-by[3]				
host	host name of the MC			
	server			
	tsc_MCX_CMS_Hostna			CONFIG
	me			
	tsc_MCX_GMS_Hostn			GROUPC
	ame			ONFIG
port	not present			
via-branch[3]	Value assigned by the			
	SS starting with			
	'z9hG4bK'			
From			RFC 3261 [22]	
addr-spec	same URI as received	Remote URI of the		
	in the To header of the	dialog (from the UE's		
	SUBSCRIBE message			
tag		point of view)		
tag	same tag as in the To-	Remote tag of the		
tag	same tag as in the To- header of the response	Remote tag of the dialog (from the UE's		
tag	same tag as in the To- header of the response which has established	Remote tag of the		
	same tag as in the To- header of the response	Remote tag of the dialog (from the UE's		
То	same tag as in the To- header of the response which has established the dialog	Remote tag of the dialog (from the UE's point of view)	RFC 3261 [22]	
	same tag as in the To- header of the response which has established the dialog same URI as received	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog	RFC 3261 [22]	
То	same tag as in the To- header of the response which has established the dialog same URI as received in the From header of	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog (from the UE's point of	RFC 3261 [22]	
То	same tag as in the To- header of the response which has established the dialog same URI as received in the From header of the SUBSCRIBE	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog	RFC 3261 [22]	
То	same tag as in the To- header of the response which has established the dialog same URI as received in the From header of the SUBSCRIBE message	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog (from the UE's point of view)	RFC 3261 [22]	
То	same tag as in the To- header of the response which has established the dialog same URI as received in the From header of the SUBSCRIBE message same value as received	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog (from the UE's point of view) Local tag of the dialog	RFC 3261 [22]	
To addr-spec	same tag as in the To- header of the response which has established the dialog same URI as received in the From header of the SUBSCRIBE message same value as received in From tag of the	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog (from the UE's point of view) Local tag of the dialog (from the UE's point of	RFC 3261 [22]	
To addr-spec tag	same tag as in the To- header of the response which has established the dialog same URI as received in the From header of the SUBSCRIBE message same value as received	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog (from the UE's point of view) Local tag of the dialog		
To addr-spec	same tag as in the To- header of the response which has established the dialog same URI as received in the From header of the SUBSCRIBE message same value as received in From tag of the	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog (from the UE's point of view) Local tag of the dialog (from the UE's point of	RFC 3261 [22]	
To addr-spec tag	same tag as in the To- header of the response which has established the dialog same URI as received in the From header of the SUBSCRIBE message same value as received in From tag of the	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog (from the UE's point of view) Local tag of the dialog (from the UE's point of		
To addr-spec tag Call-ID	same tag as in the To- header of the response which has established the dialog same URI as received in the From header of the SUBSCRIBE message same value as received in From tag of the SUBSCRIBE message	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog (from the UE's point of view) Local tag of the dialog (from the UE's point of		
To addr-spec tag Call-ID	same tag as in the To- header of the response which has established the dialog same URI as received in the From header of the SUBSCRIBE message same value as received in From tag of the SUBSCRIBE message	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog (from the UE's point of view) Local tag of the dialog (from the UE's point of		
To addr-spec tag Call-ID callid	same tag as in the To- header of the response which has established the dialog same URI as received in the From header of the SUBSCRIBE message same value as received in From tag of the SUBSCRIBE message same as value received in SUBSCRIBE	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog (from the UE's point of view) Local tag of the dialog (from the UE's point of	RFC 3261 [22]	
To addr-spec tag Call-ID callid Cseq	same tag as in the To- header of the response which has established the dialog same URI as received in the From header of the SUBSCRIBE message same value as received in From tag of the SUBSCRIBE message same as value received in SUBSCRIBE message	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog (from the UE's point of view) Local tag of the dialog (from the UE's point of		
To addr-spec tag Call-ID callid	same tag as in the To- header of the response which has established the dialog same URI as received in the From header of the SUBSCRIBE message same value as received in From tag of the SUBSCRIBE message same as value received in SUBSCRIBE message value of CSeq sent by	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog (from the UE's point of view) Local tag of the dialog (from the UE's point of	RFC 3261 [22]	
To addr-spec tag Call-ID callid Cseq	same tag as in the To- header of the response which has established the dialog same URI as received in the From header of the SUBSCRIBE message same value as received in From tag of the SUBSCRIBE message same as value received in SUBSCRIBE message	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog (from the UE's point of view) Local tag of the dialog (from the UE's point of	RFC 3261 [22]	
To addr-spec tag Call-ID callid Cseq	same tag as in the To- header of the response which has established the dialog same URI as received in the From header of the SUBSCRIBE message same value as received in From tag of the SUBSCRIBE message same as value received in SUBSCRIBE message value of CSeq sent by the SS within its previous request in the	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog (from the UE's point of view) Local tag of the dialog (from the UE's point of	RFC 3261 [22]	
To addr-spec tag Call-ID callid Cseq	same tag as in the To- header of the response which has established the dialog same URI as received in the From header of the SUBSCRIBE message same value as received in From tag of the SUBSCRIBE message same as value received in SUBSCRIBE message	Remote tag of the dialog (from the UE's point of view) Local URI of the dialog (from the UE's point of view) Local tag of the dialog (from the UE's point of	RFC 3261 [22]	

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Contact			RFC 3261 [22]	
addr-spec				
user-info and host	Same URI as used as Contact-URI in the 200 (OK) for the SUBSCRIBE message			
port	not present			
Event			RFC 6665 [39] RFC 3842 [61]	
event-type	"presence"			PRESENC E-EVENT
	"xcap-diff"			CONFIG. GROUPC ONFIG
	"poc-settings"			POC- SETTINGS -EVENT
Max-Forwards			RFC 3261 [22]	
value	"67"	The recommended initial value is 70 in RFC 3261. Assuming 3 hops as according to the Via header this results in a value of 67 in the message sent to the UE		
Subscription-State			RFC 6665 [39]	
substate-value	"active"			
expires	"7200"			
Content-Type			RFC 3261 [22] RFC 3842 [61]	
media-type	"multipart/mixed"			
Content-Length			RFC 3261 [22]	
value	length of message- body			
Message-body		DIDE	RFC 3261 [22]	DDEOENO
MIME body part		PIDF		PRESENC E-EVENT
MIME-part-headers				
Content-Type	"application/pidf+xml"		TO 04 070 [0]	
Content-ID	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the PIDF XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6. 3.1	
MIME-part-body	PIDF as described in Table 5.5.3.5.2-1		TS 24.379 [9] clause 9.3.1	MCPTT
	PIDF as described in Table 5.5.3.5.2-2 PIDF as described in		TS 24.281 [86] clause 8.3.1 TS 24.282 [87]	MCVIDEO MCDATA
MIME body part	Table 5.5.3.5.2-3	xcap-diff	clause 8.4.1	CONFIG, GROUPC
MIME-part boadara				ONFIG
MIME-part-headers Content-Type	"application/xcap- diff+xml"			
Content-ID	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the xcap-diff XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	

Derivation Path: TS 24.229 [16]	clause A.2.1.4.8, A2.2.4.8			
Information Element	Value/remark	Comment	Reference	Condition
MIME-part-body	xcap-diff document as described in Table 5.5.3.12-1			CONFIG
	xcap-diff document as described in Table 5.5.3.12-2			GROUPC ONFIG
MIME body part		PoC-Settings		POC- SETTINGS -EVENT
MIME-part-headers				
Content-Type	"application/poc- settings+xml"		RFC 4354 [103]	
Content-ID	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the PoC-Settings XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	PoC-Settings document as described in Table 5.5.3.11.2-1			
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-2		TS 24.379 [9]	

## 5.5.2.9 SIP OPTIONS

Editor's note: It shall be specified who is sending the message.

### Table 5.5.2.9-1: SIP OPTIONS

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
Method	"OPTIONS"			
Request-Disposition	px_MCPTT_Client_A_I D			
	px_MCVideo_Client_A _ID			MCVIDEO
	px_MCData_Client_A_I D			MCDATA
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"			
sent-by	any allowed value	IP address or FQDN and protected server port of the UE		
via-branch	any allowed value	Value starting with 'z9hG4bK'		
From			RFC 3261 [22]	
addr-spec	px_MCPTT_Client_A_I D			
	px_MCVideo_Client_A _ID			MCVIDEO
	px_MCData_Client_A_I D			MCDATA
tag	"1"			
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec	tsc_MCPTT_PublicSer viceId_A			
	tsc_MCVideo_PublicSe rviceId_A			MCVIDEC
	tsc_MCData_PublicSer viceId_A			MCDATA
Call-ID			RFC 3261 [22]	
Callid	same value as in the INVITE			
CSeq			RFC 3261 [22]	
value	value of CSeq sent by the SS within its previous request in the same dialog but increased by one			
Method	"INFO"			
Contact			RFC 3261 [22 RFC 3840 [33]	
addr-spec	SIP URI			
user-info and host	IP address or FQDN (px_MCPTT_Client_A_I D)			
	IP address or FQDN (px_MCVideo_Client_A ID)			MCVIDEO
	IP address or FQDN (px_MCData_Client_A_ ID)			MCDATA
feature-param	"+g.3gpp.mcptt"	This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Push To Talk (MCPTT) communication.		

			1	
	"+g.3gpp.mcvideo"	This media feature tag		MCVIDEO
		when used in a SIP		
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports Mission		
		Critical Video		
		(MCVideo)		
		communication.		
	"+g.3gpp.mcdata.sds"	This media feature tag		MCDATA
		when used in a SIP		
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports Mission		
		Critical Data (MCData)		
-		communication.		
feature-param	"+g.3gpp.icsi-	This URN indicates that		
	ref=urn:urn-7:3gpp-	the device has the		
	service.ims.icsi.mcptt"	capabilities to support		
	1	the mission critical		
		push to talk (MCPTT)		
		service.		
	llug Ogene iggi	This URN indicates that		
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-	the device has the		
	service.ims.icsi.mcvide	capabilities to support		
	O"	the mission critical		
		video (MCVideo)		
		service.		
	"+g.3gpp.icsi-	This URN indicates that		MCDATA
	ref=urn:urn-7:3gpp-	the device has the		WODATA
	service.ims.icsi.mcdata.			
		capabilities to support		
	sds"	the mission critical data		
		(MCData) service.		
feature-param	"audio"	This feature tag		MCPTT
		indicates that the		OR
		device supports audio		MCVIDEO
		as a streaming media		
		type.		
foaturo param	"video"	This feature tag		MCVIDEO
feature-param	VILLEU			
		indicates that the		
		device supports video		
		as a streaming media		
		type.		
feature-param	"text"	This feature tag		MCDATA
		indicates that the		
		device supports text as		
		a streaming media		
		0		
Accept		type.		
Accept				
media-range	"application/sdp"			
Max-Forwards			RFC 3261 [22]	
value	any allowed value	Non-zero value		
Content-Length			RFC 3261 [22]	
value	"0"	No message body		
value	U		1	
		included and of CID		
		included - end of SIP message		

Editor's note: Table 5.5.2.9-1 needs to be reviewed

- 5.5.2.10 SIP PRACK
- 5.5.2.10.1 SIP PRACK from the UE

Table 5.5.2.10.1-1: SIP PRACK from the UE

Derivation Path: TS 24.229 [16] Information Element	Clause A.2.1.4.10, A2.2.4.10	Comment	Reference	Condition
Status-Line	Value/Terriark	Comment	RFC 3261 [22]	Condition
Method	"PRACK"		KFC 3201 [22]	
Request-URI	same URI as the SS			
Request-ON	has sent earlier in the			
	Contact header of a			
	response within the			
	same dialog			
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
sent-protocol	"SIP/2.0/UDP"			UDP
	"SIP/2.0/TCP"			TCP
sent-by	same value as in			101
Som by	INVITE message			
via-branch	Value starting with			
	'z9hG4bK'			
Route			RFC 3261 [22]	
route-param list	URIs of the Record-			
louio parali liot	Route header sent to			
	the UE in the response			
	which has established			
	the dialog, in reverse			
	order			
From			RFC 3261 [22]	
addr-spec	same value as in the	Local URI of the dialog		
F	INVITE message	(from the UE's point of		
		view)		
tag	same value as in the	Local tag of the dialog		
	INVITE	ID (from the UE's point		
		of view)		
То		,	RFC 3261 [22]	
addr-spec	same value as in the	Remote URI of the		
	INVITE	dialog (from the UE's		
		point of view)		
tag	same tag as in the To-	Remote tag of the		
5	header of the response	dialog ID (from the UE's		
	which has established	point of view)		
	the dialog	. ,		
Call-ID	<u> </u>		RFC 3261 [22]	
callid	same value as in			
	INVITE message			
CSeq			RFC 3261 [22]	
value	value of CSeq sent by			
	the endpoint within its			
	previous request in the			
	same dialog but			
	increased by one			
method	"PRACK"			
Max-Forwards			RFC 3261 [22]	
value	any allowed value	Non-zero value		
RAck			RFC 3261 [22]	
response-num	same value as in RSeq			
	header of the reliable			
	response			
cseq-num	same value as in CSeq			
-	of reliable response			
method	same value as in CSeq			
	of reliable response			
			RFC 7315 [52]	
P-Access-Network-Info				
P-Access-Network-Info access-net-spec	Access network		······································	
	Access network technology and, if			
	technology and, if		RFC 3261 [22]	
access-net-spec	technology and, if applicable, the cell ID	No message body		

### 5.5.2.10.2 SIP PRACK from the SS

# Table 5.5.2.10.2-1: SIP PRACK from the SS

Status-Line Method       PRACK"       RFC 3261 [22]         Method       "PRACK"       Contact URI of the UE has sent earlier in the Contact header of a response within the same dialog       Contact URI of the UE ("Callee")       RFC 3261 [22]         SIP-Version       "SIP/2.0"       See Table 5.5.2.5.2.1       RFC 3261 [22]         Via       same as in the INVITE but with updated via- branches       see Table 5.5.2.5.2.1       RFC 3261 [22]         From       same URI as in the From-header of the INVITE       remote URI of the dialog (from the UE's point of view)       RFC 3261 [22]         tag       same tag as in the To- header of the INVITE       local URI of the dialog (from the UE's point of view)       RFC 3261 [22]         tag       same tag as in the To- header of the response which has established the dialog       local URI of the dialog (from the UE's point of view)       RFC 3261 [22]         Call-ID       call of CSeg sent by the endpoint whin its previous request in the same dialog but increased by one       RFC 3261 [22]       RFC 3261 [22]         value       "68"       The recommended initial value is 70 in RFC 3261, Assuming 2 hops as according to the Via header of the reliable response       RFC 3261 [22]         value       "68"       The recommended initial value is 70 in RFC 3261, Pops as according to the Via header of the reliable response       RFC 3261 [22]         value       same value as in CSeq of reliable response	e Condition	Reference	Comment	Value/remark	Derivation Path: TS 24.229 [16]
Method     'PRACK'       Request-URI     same URI as the UE has sent earlier in the Contact header of a response within the same dialog     Contact URI of the UE ('callee')       SIP-Version     'SIP2.0'       Via     same as in the INVITE but with updated via- branches     see Table 5.5.2.5.2.1       From     addr-spec       From     remote URI of the INVITE       addr-spec     same URI as in the From-header of the INVITE       tag     same tag as in the From-header of the INVITE       addr-spec     same URI as in the From-header of the INVITE       addr-spec     same URI as in the From-header of the INVITE       addr-spec     same URI as in the To- header of the response which has established the dialog       tag     same tag as in the To- header of the response which has established       tag     Same value as in INVITE       callid     Same value as in INVITE       value     Value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one       response-num     'G8'       response-num     same value as in RSeq header of the reliable response       response-num     same value as in CSeq of reliable response			oonnient	Value/Ternark	
Request-URI       same URI as the UE has serie artiler in the same dialog       Contact URI of the UE ("callee")         SIP-Version       "SIP/2.0"         Via       same as in the INVITE but with updated via- branches       see Table 5.5.2.5.2.1       RFC 3261 [22]         From       RFC 3261 [22]       remote URI of the dialog (from the UE's point of view)       RFC 3261 [22]         addr-spec       same tag as in the From-header of the INVITE       remote URI of the dialog (from the UE's point of view)       RFC 3261 [22]         addr-spec       same tag as in the From-header of the INVITE       remote URI of the dialog (from the UE's point of view)       RFC 3261 [22]         addr-spec       same tag as in the To- header of the response which has established the dialog       Iccal URI of the dialog (from the UE's point of view)       RFC 3261 [22]         call-ID       Same value as in INVITE       Call-Id of the dialog       RFC 3261 [22]         calid       Same value as in INVITE       Call-Id of the dialog       RFC 3261 [22]         value       Value of CSeq sent by the endpoint within its previous request in the same dialog by one       RFC 3261 [22]       RFC 3261 [22]         value       "G8"       The recommended initial value is 70 in RFC 3261       RFC 3261 [22]         value       "G8"       The recommended initial value is 70 in RFC 3261       Assuming 2 hops as according to the Via header o	22]	KFC 3201 [22]			
Instructhas sent earlier in the Contact header of a response within the same dialog("callee")SIP-Version"SIP2.0"See Table 5.5.2.5.2.1RFC 3261 [22]Viasame as in the INVITE but with updated via- branchessee Table 5.5.2.5.2.1RFC 3261 [22]addr-specsame URI as in the From-header of the INVITEremote URI of the dialog (from the UE's point of view)RFC 3261 [22]tagsame tag as in the From-header of the INVITEremote tag of the dialog (from the UE's point of view)RFC 3261 [22]addr-specsame URI as in the To- header of the INVITEcolar URI of the dialog (from the UE's point of view)RFC 3261 [22]addr-specsame tag as in the To- header of the response which has established the dialogRFC 3261 [22]call-IDcall call of the dialog (from the UE's point of view)RFC 3261 [22]callidSame value as in the dialogCall-Id of the dialog (from the UE's point of view)valuevalue of CSeq sent by the endpoint within its previous request in the same dialog but increased by oneRFC 3261 [22]walue"PRACK"RFC 3261 [22]value"Fos"The recommended initial value is 70 in RFC 3261.RAckRFC 3261 [22]response-numsame value as in RSeq header of the reliable responseRFC 3261 [22]response-numsame value as in CSeq of reliable responseRFC 3261 [22]restordsame value as in CSeqreferencerestodsame value as in					
same dialogSIP-Version"SIP/2.0"Viasame as in the INVITE but with updated via- branchessee Table 5.5.2.5.2.1FromRFC 3261 [22]addr-specsame URI as in the From-header of the INVITEremote URI of the dialog (from the UE's point of view)tagsame tag as in the From-header of the INVITEremote tag of the dialog (from the UE's point of view)Tosame tag as in the To- header of the INVITElocal URI of the dialog (from the UE's point of view)tagsame tag as in the To- header of the INVITElocal ag of the dialog (from the UE's point of view)tagsame tag as in the To- header of the response which has established the dialoglocal ag of the dialog (from the UE's point of view)tagsame tag as in the To- header of the response which has established the dialogRFC 3261 [22]callidSame value as in INVITECall-Id of the dialog (from the UE's point of view)callidSame value as in INVITECall-Id of the dialog (from the UE's point of view)valuevalue of CSeq sent by the endpoint within its previous request in the same dialog got increased by oneRFC 3261 [22]value"68"The recommended initial value is 70 in RFC 3261. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UERFC 3261 [22]RAckresponse- nomsame value as in CSeq of reliable responseRFC 3261 [22]resthodsame value as in CSeq of reliabl				has sent earlier in the Contact header of a	Request-ORI
Via       same as in the INVITE but with updated via- branches       see Table 5.5.2.5.2.1       RFC 3261 [22]         From       remaches       RFC 3261 [22]         addr-spec       same URI as in the From-header of the INVITE       remote URI of the dialog (from the UE's point of view)       RFC 3261 [22]         tag       same tag as in the From-header of the INVITE       remote tag of the dialog (from the UE's point of view)       RFC 3261 [22]         addr-spec       same tag as in the From-header of the response which has established the dialog       RFC 3261 [22]         tag       same tag as in the To- header of the response which has established the dialog       local URI of the dialog (from the UE's point of view)         Call-ID       Same value as in increased by one       RFC 3261 [22]         value       value of CSeq sent by the endpoint within its previous request in the same dialog but       RFC 3261 [22]         value       "68"       The recommended initial value is 70 in RFC 3261.         value       "68"       The recommended initial value is 70 in RFC 3261.         response-num       same value as in RSeq header of the reliable response       RFC 3261 [22]         response-num       same value as in CSeq of reliable response       RFC 3261 [22]				same dialog	
but with updated via- branchesbut with updated via- branchesRFC 3261 [22]addr-specsame URI as in the From-header of the INVITEremote URI of the dialog (from the UE's point of view)RFC 3261 [22]tagsame tag as in the From-header of the INVITEremote tag of the dialog (from the UE's point of view)RFC 3261 [22]addr-specsame URI as in the To- header of the response which has established the dialoglocal tag of the dialog (from the UE's point of view)RFC 3261 [22]tagsame tag as in the To- header of the response which has established the dialoglocal tag of the dialog (from the UE's point of view)RFC 3261 [22]tagsame tag as in the To- header of the response which has established the dialogRFC 3261 [22]RFC 3261 [22]tagsame value as in INVITECall-Id of the dialog (from the UE's point of view)RFC 3261 [22]valuevalue of CSeq sent by the endpoint within its previous request in the same dialog but increased by oneRFC 3261 [22]value"68"The recommended RFC 3261 [22]value"68"The recommended nessage sent to the UEvalue"68"RFC 3261 [22]response-numsame value as in CSeq header of the reliable responseRFC 3261 [22]response-numsame value as in CSeq of reliable responseRFC 3261 [22]methodsame value as in CSeq of reliable responseRFC 3261 [22]					
addr-specsame URI as in the From-header of the INVITEremote URI of the dialog (from the UE's point of view)tagsame tag as in the From-header of the INVITEremote tag of the dialog (from the UE's point of view)Toin the To- header of the INVITElocal URI of the dialog (from the UE's point of view)tagsame tag as in the To- header of the response which has established the dialogRFC 3261 [22]callidSame value as in the dialog (from the UE's point of view)RFC 3261 [22]callidSame value as in increased by oneCall-Id of the dialog (from the UE's point of view)CSeqvalue of CSeq sent by the endpoint within its previous request in the same dialog but increased by oneRFC 3261 [22]walue"PRACK"RFC 3261 [22]value"68"The recommended initial value is 70 in RFC 3261. Assuming 2 hops as according to the Via header of the reliable response-numRFC 3261 [22]RAcksame value as in RSeq 	22]	RFC 3261 [22]	see Table 5.5.2.5.2-1	but with updated via-	Via
From-header of the INVITEdialog (from the UE's point of view)tagsame tag as in the From-header of the INVITEremote tag of the dialog (from the UE's point of view)ToRFC 3261 [22]addr-specsame tag as in the To- header of the INVITElocal URI of the dialog (from the UE's point of view)tagsame tag as in the To- header of the response which has established the dialoglocal tag of the dialog (from the UE's point of view)call-IDsame value as in INVITECall-Id of the dialog (from the UE's point of view)callidSame value as in INVITECall-Id of the dialog (from the UE's point of view)callidSame value as in INVITECall-Id of the dialog (from the UE's point of view)valuevalue of CSeq sent by the endpoint within its previous request in the same dialog but increased by oneRFC 3261 [22]value"PRACK"RFC 3261 [22]value"68"The recommended initial value is 70 in RFC 3261. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the useRAck=RFC 3261 [22]response-numsame value as in CSeq of reliable responseRFC 3261 [22]methodsame value as in CSeqmethodresponse-numsame value as in CSeqmethodmethodsame value as in CSeqmethod	22]	RFC 3261 [22]			From
From-header of the INVITE(rom the UE's point of view)RFC 3261 [22]addr-specsame URI as in the To- header of the INVITElocal URI of the dialog (rom the UE's point of view)RFC 3261 [22]tagsame tag as in the To- header of the response which has established the dialoglocal tag of the dialog (rom the UE's point of view)RFC 3261 [22]call-IDame value as in INVITECall-Id of the dialog (rom the UE's point of view)RFC 3261 [22]callidSame value as in INVITECall-Id of the dialog (rom the UE's point of view)RFC 3261 [22]valuevalue of CSeq sent by the endpoint within its previous request in the same dialog but increased by oneRFC 3261 [22]walue"68"The recommended initial value is 70 in RFC 3261 [22]value"68"The recommended initial value is 70 in RFC 3261 [22]valuesame value as in RSeq header of the reliable responseRFC 3261 [22]response-numsame value as in CSeq of reliable responseRFC 3261 [22]methodsame value as in CSeq of reliable responseRFC 3261 [22]			dialog (from the UE's point of view)	From-header of the INVITE	addr-spec
addr-spec     same URI as in the To- header of the INVITE     local URI of the dialog (from the UE's point of view)       tag     same tag as in the To- header of the response which has established the dialog     local tag of the dialog (from the UE's point of view)       Call-ID     Invite     Call-Id of the dialog       Callid     Same value as in INVITE     Call-Id of the dialog       Value     value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one     RFC 3261 [22]       Value     value     "PRACK"       Max-Forwards     refer 3261.       value     "68"       The recommended initial value is 70 in RFC 3261.       value     "68"       The recommended initial value is 70 in RFC 3261.       Assuming 2 hops as according to the Via header of the reliable response-num       same value as in RSeq header of the reliable response       cseq-num     same value as in CSeq       method     same value as in CSeq			(from the UE's point of	From-header of the	
header of the INVITE(from the UE's point of view)tagsame tag as in the Toheader of the response which has established the dialoglocal tag of the dialog (from the UE's point of view)Call-IDIntersponse which has established the dialogRFC 3261 [22]callidSame value as in INVITECall-Id of the dialogCSeqValue of CSeq sent by the endpoint within its previous request in the same dialog but increased by oneRFC 3261 [22]value"PRACK"RFC 3261 [22]value"68"The recommended initial value is 70 in RFC 3261.value"68"The recommended initial value is 70 in RFC 3261.valuesame value as in RSeq header of the reliable responseRFC 3261 [22]response-numsame value as in RSeq header of the reliable responseRFC 3261 [22]response-numsame value as in CSeqRFC 3261 [22]methodsame value as in CSeqmethod	22]	RFC 3261 [22]			То
header of the response which has established the dialog(from the UE's point of view)Call-IDRFC 3261 [22]callidSame value as in INVITECall-Id of the dialogCSeqValue of CSeq sent by the endpoint within its previous request in the same dialog but increased by oneRFC 3261 [22]valuevalue of CSeq sent by the endpoint within its previous request in the same dialog but increased by oneRFC 3261 [22]value"PRACK"RFC 3261 [22]value"68"The recommended initial value is 70 in RFC 3261. Assuming 2 hops as according to the Via header of the reliable response-numRFC 3261 [22]RAckRFC 3261. Assuming 2 hops as according to the Via header of the reliable responseRFC 3261 [22]response-numsame value as in RSeq header of the reliable responseRFC 3261 [22]methodsame value as in CSeq of reliable responseRFC 3261 [22]			(from the UE's point of view)	header of the INVITE	addr-spec
Call-ID       Same value as in INVITE       Call-Id of the dialog       RFC 3261 [22]         cSeq       value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one       RFC 3261 [22]         Max-Forwards       "PRACK"       RFC 3261 [22]         value       "68"       The recommended initial value is 70 in RFC 3261.         value       "68"       The recommended initial value is 70 in RFC 3261.         Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UE       RFC 3261 [22]         response-num       same value as in RSeq header of the reliable response       RFC 3261 [22]         response-num       same value as in CSeq of reliable response       RFC 3261 [22]			(from the UE's point of	header of the response which has established	tag
callid       Same value as in INVITE       Call-Id of the dialog         CSeq       response       RFC 3261 [22]         value       value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one       RFC 3261 [22]         Max-Forwards       response       RFC 3261 [22]         value       "68"       The recommended initial value is 70 in RFC 3261. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UE       RFC 3261 [22]         RAck       RFC 3261.       RFC 3261 [22]         response-num       same value as in RSeq header of the reliable response       RFC 3261 [22]         response-num       same value as in CSeq of reliable response       RFC 3261 [22]	221	REC 3261 [22]			
CSeq       RFC 3261 [22]         value       value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one       RFC 3261 [22]         method       "PRACK"       RFC 3261 [22]         value       "68"       The recommended initial value is 70 in RFC 3261. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UE       RFC 3261 [22]         RAck       RFC 3261. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UE       RFC 3261 [22]         response-num       same value as in RSeq header of the reliable response       RFC 3261 [22]         cseq-num       same value as in CSeq of reliable response       response         method       same value as in CSeq       method		NI 0 3201 [22]	Call-Id of the dialog		
value       value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one       RFC 3261 [22]         method       "PRACK"       RFC 3261 [22]         Value       "68"       The recommended initial value is 70 in RFC 3261. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UE       RFC 3261 [22]         RAck       RFC 3261       RFC 3261 [22]         response-num       same value as in RSeq header of the reliable response       RFC 3261 [22]         cseq-num       same value as in CSeq of reliable response       method	221	RFC 3261 [22]			CSeq
Max-ForwardsRFC 3261 [22]value"68"The recommended initial value is 70 in RFC 3261. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UERFC 3261 [22]RAckRFC 3261 PasseRFC 3261 [22]response-numsame value as in RSeq header of the reliable responseRFC 3261 [22]cseq-numsame value as in CSeq of reliable responseof reliable responsemethodsame value as in CSeqcseq value as in CSeq				the endpoint within its previous request in the same dialog but increased by one	value
value"68"The recommended initial value is 70 in RFC 3261. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UERAckRFC 3261 PasseRFC 3261 [22]response-numsame value as in RSeq header of the reliable responseRFC 3261 [22]cseq-numsame value as in CSeq of reliable responseof reliable responsemethodsame value as in CSeqcseq value as in CSeq				"PRACK"	
RAckinitial value is 70 in RFC 3261. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UERFC 3261 [22]response-numsame value as in RSeq header of the reliable responseRFC 3261 [22]cseq-numsame value as in CSeq of reliable responseImage: Comparison of the compari	22]	RFC 3261 [22]			Max-Forwards
response-num       same value as in RSeq header of the reliable response         cseq-num       same value as in CSeq of reliable response         method       same value as in CSeq			initial value is 70 in RFC 3261. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the	"68"	
header of the reliable response     reliable       cseq-num     same value as in CSeq of reliable response       method     same value as in CSeq	22]	RFC 3261 [22]			RAck
of reliable response       method       same value as in CSeq				header of the reliable response	response-num
method same value as in CSeq				of reliable response	cseq-num
or reliable response					method
Content-Length RFC 3261 [22]	22]	RFC 3261 [22]			Content-Length
value "0" No message body included				"0"	value

### 5.5.2.11 SIP PUBLISH

This message is sent by the UE.

### Table 5.5.2.11-1: SIP PUBLISH

Derivation Path: TS 24.229 [16]				• • • •
Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22] RFC 5031 [54]	
Method	"PUBLISH"			
Request-URI	tsc_MCPTT_PublicSer viceId_A	The public service identity identifying the originating participating MCPTT function serving the MCPTT user		MCPTT
	tsc_MCVideo_PublicSe rviceId_A	The public service identity identifying the originating participating MCVideo function serving the MCVideo user		MCVIDEO
	tsc_MCData_PublicSer viceId_A	The public service identity identifying the originating participating MCData function serving the MCData user		MCDATA
SIP-Version	"SIP/2.0"		DE0 0004 (00)	
Route	SIP URI		RFC 3261 [22]	
addr-spec[1] user-info and host	P-CSCF address of the SS	P-CSCF address as assigned to the UE via NAS signalling or P- CSCF discovery		
port	protected server port of the SS	as assigned during registration		
uri-parameters	"lr"			
addr-spec[2]	SIP URI			
user-info and host	"scscf.3gpp.org"			
port	not present "Ir"			
uri-parameters Via			RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP" "SIP/2.0/TCP"			UDP TCP
sent-by				
user-info and host	IP address or FQDN	Either the UE's IP address or its home domain name		
port	protected server port of the UE	as assigned during registration		
via-branch	Value starting with 'z9hG4bK'			
From			RFC 3261 [22]	
addr-spec user-info and host	Default public user id (px_MCX_SIP_PublicU serId_A_1)			
port	not present			
tag	any value			
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec				
user-info and host	same URI as used as Request URI			
port	not present			
tag Expires	not present		RFC 3261 [22]	
· · ·			RFC 3903 [43]	
delta-seconds	"4294967295"			

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Require			RFC 3261 [22]	
			RFC 3329 [53]	
option-tag	"sec-agree"		· · ·	
Proxy-Require			RFC 3261 [22]	
			RFC 3329 [53]	
option-tag	"sec-agree"			
Security-Verify			RFC 3329 [53]	
sec-mechanism	same value as Security			
	-Server header sent by			
	SS during registration			
Cseq			RFC 3261 [22]	
value	any allowed value			
method	"PUBLISH"			
Call-ID			RFC 3261 [22]	
callid	any allowed value			
Max-Forwards			RFC 3261 [22]	
value	any allowed value			
P-Access-Network-Info			RFC 7315 [52]	
			RFC 7913 [51]	
access-net-spec	Access network			
	technology and, if			
Friend	applicable, the cell ID		DE0 0000 [40]	
Event			RFC 3903 [43]	DDEOENO
event-type	"presence"			PRESENC
	"noo oottingo"			E-EVENT POC-
	"poc-settings"			SETTINGS
				-EVENT
P-Preferred-Service			RFC 6050 [31]	
Service-ID	"urn:urn-7:3gpp-		TS 24.379 [9]	MCPTT
Service-ID	service.ims.icsi.mcptt"		clause 7.2.1A	
	"urn:urn-7:3gpp-		TS 24.281 [86]	MCVIDEO
	service.ims.icsi.mcvide		clause 7.2.1A	
	0"			
	"urn:urn-7:3gpp-		TS 24.282 [87]	MCDATA
	service.ims.icsi.mcdata		clause 7.2.1A	
	"			
Accept			RFC 3261 [22]	PRESENC
				E-EVENT
media-range	"application/pidf+xml"			
port	not present			
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"			
Content-Length	present in case of TCP		RFC 3261 [22]	
	and when there is a			
	message body			
	(otherwise			
	optional)length of			
	message-body			
value	any value			
Message-body			RFC 3261 [22]	
MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-headers				
Content-Type	"application/vnd.3gpp.			MCPTT
Content-Type	mcptt-info+xml"			
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml"			
	"application/vnd.3gpp.			MCDATA

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Content-ID	any value	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	MCPTT-Info as described in Table 5.5.3.2.1-1		TS 24.379 [9] clause F.1	MCPTT
	MCVideo-Info as described in Table 5.5.3.2.1-2		TS 24.281 [86] clause F.1	MCVIDEO
	MCData-Info as described in Table 5.5.3.2.1-3		TS 24.282 [87] clause D.1	MCDATA
MIME body part		PIDF		PRESENC E-EVENT
MIME-part-headers				
Content-Type	"application/pidf+xml"			
MIME-part-body	PIDF as described in Table 5.5.3.5.1-1		TS 24.379 [9] clause 9.3.1	MCPTT
	PIDF as described in Table 5.5.3.5.1-2		TS 24.281 [86] clause 8.3.1	MCVIDEC
	PIDF as described in Table 5.5.3.5.1-3		TS 24.282 [87] clause 8.3.1	MCDATA
MIME body part		MIKEY		SERVICE AUTH
MIME-part-headers				
Content-Type	"application/mikey"		RFC 3830 [24]	
MIME-part-body	MIKEY message as described in Table 5.5.9.1-1	MIKEY message, containing the CSK	TS 33.180 [94]	
MIME body part		PoC-Settings		POC- SETTINGS -EVENT
MIME-part-headers				
Content-Type	"application/poc- settings+xml"		RFC 4354 [103]	
Content-ID	any value	Unique URL identifying the PoC-settings XML MIME body; used as reference in the signature MIME body		
MIME-part-body	PoC Settings as described in Table 5.5.3.11.1-1		TS 24.379 [9]	
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-1		TS 24.379 [9]	

### 5.5.2.12 SIP REFER

This message is sent by the UE outside of a dialog.

### Table 5.5.2.12-1: SIP REFER

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Conditio
Request-Line			RFC 3261 [22]	
			RFC 5031 [54]	
Method	"REFER"			
Request-URI	tsc_MCX_SessionID_B	session identity of the pre-established session		
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP" "SIP/2.0/TCP"			UDP TCP
sent-by				
host	IP address or FQDN	Either the UE's IP address or its home domain name		
port	protected server port of the UE			
via-branch	Value starting with 'z9hG4bK'			
Route			RFC 3261 [22]	
addr-spec[1]	SIP URI			
user-info and host	P-CSCF address of the SS	P-CSCF address as assigned to the UE via NAS signalling or P- CSCF discovery		
port	protected server port of the SS	as assigned during registration		
uri-parameters	"lr"			
addr-spec[2]	SIP URI			
user-info and host	"scscf.3gpp.org"			
port	not present			
uri-parameters	"lr"			
From			RFC 3261 [22]	
addr-spec				
user-info and host	Default public user id (px_MCX_SIP_PublicU serId_A_1)			
port	not present			
tag	any allowed value			
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec				
user-info and host	Same URI as used in the INVITE creating the pre-established session			
port	not present			
	not present			
Call-ID			RFC 3261 [22]	
	any allowed value			
CSeq			RFC 3261 [22]	
value	any allowed value			
method	"REFER"			
Supported			RFC 3261 [22] RFC 6442 [62] RFC 4488 [36]	
option-tag	"norefersub"			
Refer-Sub			RFC 4488 [36]	
refer-sub-value	"false"			
Target-Dialog			RFC 4538 [37]	
callid	Callid of the pre- established session	Callid as used by the UE in the INVITE for establishment of the pre-established session		

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Require	Value/Terrial K	Johnnent	RFC 3261 [22]	
Nequile			RFC 3312 [56]	
			RFC 3329 [53]	
option-tag	"sec-agree"		NEC 3328 [33]	
option-tag	"multiple-refer"		DE0 0004 (00)	
Proxy-Require			RFC 3261 [22]	
			RFC 3329 [53]	
option-tag	"sec-agree"			
Security-Verify			RFC 3329 [53]	
sec-mechanism	same value as Security			
	-Server header sent by			
	SS during registration			
Contact			RFC 3261 [22	
			RFC 3840 [33]	
addr-spec	SIP URI			
user-info and host	IP address or FQDN			
feature-param	"+g.3gpp.mcptt"	This media feature tag		MCPTT
ioutuio-param	-g.ogpp.mopt	when used in a SIP		
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports Mission		
		Critical Push To Talk		
		(MCPTT)		
		communication.		
	"+g.3gpp.mcvideo"	This media feature tag		MCVIDEO
	3 - 51 1	when used in a SIP		
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports Mission		
		Critical Video		
		(MCVideo)		
		communication.		
	"+g.3gpp.mcdata.sds"	This media feature tag		MCDATA
		when used in a SIP		
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports Mission		
		Critical Data (MCData)		
		communication.		
feature-param	"+g.3gpp.icsi-	This URN indicates that		MCPTT
	ref=urn:urn-7:3gpp-	the device has the		
	service.ims.icsi.mcptt"	capabilities to support		
		the mission critical		
		push to talk (MCPTT)		
		service.		
	"+g.3gpp.icsi-	This URN indicates that	1	MCVIDEO
	ref=urn:urn-7:3gpp-	the device has the		
	service.ims.icsi.mcvide			
	o"	capabilities to support		
	U	the mission critical		
		video (MCVideo)		
		service.		
	"+g.3gpp.icsi-	This URN indicates that		MCDATA
	ref=urn:urn-7:3gpp-	the device has the		
	service.ims.icsi.mcdata.	capabilities to support		
	sds"	the mission critical data		
	343			

Information Element	Value/remark	Comment	Reference	Condition
feature-param	"audio"	This feature tag indicates that the device supports audio as a streaming media		MCPTT OR MCVIDEO
feature-param	"video"	type. This feature tag indicates that the device supports video as a streaming media type.		MCVIDEO
feature-param	"text"	This feature tag indicates that the device supports text as a streaming media type.		MCDATA
Refer-To			RFC 3515 [38]	
addr-spec	a Content-ID ("cid") Uniform Resource Locator (URL) as specified in IETF RFC 2392 that points to an application/resource- lists+xml MIME body as specified in IETF RFC 5366			
Refer-To			RFC 3515 [38]	METHOD- BYE
addr-spec				
user-info and host	tsc_MCX_SessionID_B	The session identity of the pre-established session to leave.		
uri-parameters				
id[1]	method			
value[1]	"BYE"			
Max-Forwards		New energy setup	RFC 3261 [22]	
value P-Access-Network-Info	any allowed value	Non-zero value	RFC 7315 [52]	
access-net-specs	Access network technology and, if applicable, the cell ID			
P-Preferred-Service			RFC 6050 [31]	
Service-ID	"urn:urn-7:3gpp- service.ims.icsi.mcptt"			MCPTT
	"urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO
	"urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			MCDATA
P-Preferred-Identity	If present		RFC 3325 [32]	
PPreferredID-value	same URI as in From- header			
Resource-Priority			RFC 4412 [40] RFC 7134 [57] RFC 8101 [45] TS 24.379 [9] clause 6.2.8.1.15	EMERGEN CY-CALL AND (GROUP- CALL OR PRIVATE- CALL)

Derivation Path: TS 24.229 [16]				
Information Element	Value/remark	Comment	Reference	Condition
namespace	value of the <resource- priority-namespace&gt; element contained in the <emergency- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration documents</onnetwork></emergency- </resource- 	As configured in Table 5.5.8.4-1 for MCPTT and in Table 5.5.8.8-1 for MCVIdeo	TS 24.484 [14]	
r-priority	value of the <resource- priority-priority&gt; element contained in the <emergency- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration document</onnetwork></emergency- </resource- 	As configured in Table 5.5.8.4-1 for MCPTT and in Table 5.5.8.8-1 for MCVIdeo	TS 24.484 [14]	
Resource-Priority			RFC 4412 [40] RFC 7134 [57] RFC 8101 [45] TS 24.379 [9] clause 6.2.8.1.15	IMMPERIL -CALL AND (GROUP- CALL OR PRIVATE- CALL)
r-value				
namespace	value of the <resource- priority-namespace&gt; element contained in the <imminent-peril- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration documents</onnetwork></imminent-peril- </resource- 	As configured in Table 5.5.8.4-1 for MCPTT and in Table 5.5.8.8-1 for MCVIdeo	TS 24.484 [14]	
r-priority	value of the <resource- priority-priority&gt; element contained in the <imminent-peril- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration document</onnetwork></imminent-peril- </resource- 	As configured in Table 5.5.8.4-1 for MCPTT and in Table 5.5.8.8-1 for MCVIdeo	TS 24.484 [14]	
Content-Type	not present			METHOD- BYE
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"			
Content-Length	present in case of TCP and when there is a message body (otherwise optional)		RFC 3261 [22]	
Value	any value	length of message- body		
Message-body	not present			METHOD- BYE
Message-body			RFC 3261 [22]	
MIME body part		Resource list	RFC 5366 [35]	
MIME-part-headers				
Content-Type	"application/resource- lists+xml"			

	6] clause A.2.1.4.11, A.2.2.4.11			
Information Element	Value/remark	Comment	Reference	Condition
Content-ID	same value as the cid URL in the Refer-To header field	Unique URL identifying the Resource-lists XML MIME body; used as reference in the signature MIME body too	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Resource-lists as described in Table 5.5.3.3.1-1 with condition PRE- ESTABLISH and the uri attribute of the single <entry> element extended with the headers of Table 5.5.2.12-2</entry>			MCPTT
	Resource-lists as described in Table 5.5.3.3.1-2			MCVIDEO
	Resource-lists as described in Table 5.5.3.3.1-3			MCDATA
MIME body part		Location info		LOCATIO N-INFO
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-location- info+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-location- info+xml"			MCVIDEO
Content-ID	any value	Unique URL identifying the Location-info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Location-info as described in Table 5.5.3.4.1-1		TS 24.379 [9] clause F.3	MCPTT
	Location-info as described in Table 5.5.3.4.1-2		TS 24.281 [86] clause F.3	MCVIDEO
MIME body part		Signature		
MIME-part-headers		-		
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-1		TS 24.379 [9]	

Table 5.5.2.12-2: SIP header fields extending the uri attribute of the resource-lists' single entry

Information	Value/remark	Comment	Reference	Condition
Element Accept-Contact			RFC 3841 [29]	GROUP-CALL OR CHAT-
ac-value[1]				GROUP-CALL
feature-param	"+g.3gpp.icsi-ref=urn:urn- 7:3gpp-service.ims.icsi.mcptt"			MCPTT
	"+g.3gpp.icsi-ref=urn:urn- 7:3gpp- service.ims.icsi.mcvideo"			MCVIDEO
	"+g.3gpp.icsi-ref=urn:urn- 7:3gpp- service.ims.icsi.mcdata.sds"			MCDATA
req-param	"require"			
explicit-param	"explicit"			
ac-value[2]				
feature-param	"+g.3gpp.mcptt"			MCPTT
	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA
req-param	"require"			
explicit-param	"explicit"			
Answer-Mode	not present			
Answer-Mode			RFC 5373 [34] TS 24.379 [9]	PRIVATE-CALL AND (NOT
			cl. 11.1.1.2.2.1, 8)	FORCE)
answer-mode- value	"Auto"			
answer-mode- value Priv-Answer-	"Manual"			MANUAL
Mode	not present		DEC 5070 (04)	
Priv-Answer- Mode			RFC 5373 [34] TS 24.379 [9] clause 11.1.1.2.2.1, 8) and clause 11.1.6.2.2.1, 8)	PRIVATE-CALL AND FORCE
answer-mode- value	"Auto"	if force of automatic commencement mode at the invited MCPTT client is requested by the MCPTT user,		
Content-Type			RFC 5621 [58]	
media-type body	"multipart/mixed"	NOTE: Characters that are not formatted as ASCII characters are escaped in the following parameters in the headers portion of the SIP URI.	RFC 3261 [22]	
MIME body part		MCPTT/MCVideo/MCData		
MIME-part- headers				
Content- Type	"application/vnd.3gpp.mcptt- info+xml"			MCPTT
	"application/vnd.3gpp.mcvideo -info+xml"			MCVIDEO
	"application/vnd.3gpp.mcdata- info+xml"			MCDATA

Information	Value/remark	Comment	Reference	Condition
Element				
Content-ID	any value	Unique URL identifying the	TS 24.379 [9]	
		MCPTT/MCVideo/MCData	clause 6.6.3.1	
		Info XML MIME body;		
		used as reference in the		
		signature MIME body		
MIME-part-	MCPTT-Info as described in		TS 24.379 [9]	MCPTT
body	Table 5.5.3.2.1-1		clause F.1	
	MCVideo-Info as described in		TS 24.281 [86]	MCVIDEO
	Table 5.5.3.2.1-2		clause F.1	
	MCData-Info as described in		TS 24.282 [87]	MCDATA
	Table 5.5.3.2.1-3		clause D.1	(1400TT 00
MIME body		Location info		(MCPTT OR
part				MCVIDEO) AND
				ALLOW-
				LOCATION-
				INFO
MIME-part- headers				
Content-	"application/vnd.3gpp.mcptt-			MCPTT
Type	location-info+xml"			NICPTI
туре	"application/vnd.3gpp.mcvideo-			MCVIDEO
	location-info+xml"			INC VIDEO
Content-ID	any value	Unique URL identifying the	TS 24.379 [9]	
		Location-info XML MIME	clause 6.6.3.1	
		body; used as reference in		
		the signature MIME body		
MIME-part-	Location-info as described in		TS 24.379 [9]	MCPTT
body	Table 5.5.3.4.1-1		clause F.3	
	Location-info as described in		TS 24.281 [86]	MCVIDEO
	Table 5.5.3.4.1-2		clause F.3	
MIME body		Signature		
part				
MIME-part-				
headers				
Content-	"application/vnd.3gpp.mcptt-		TS 24.379 [9]	
Туре	signed+xml"		TO 04 070 /01	
MIME-part-	Signatures for XML MIME		TS 24.379 [9]	
body	bodies as described in Table			
	5.5.13.1-1			

Condition	Explanation
MANUAL	Call establishment with manual commencement mode
FORCE	force of automatic commencement mode at the invited MCPTT client
	is requested by the MCPTT user
ALLOW-LOCATION-INFO	Implicit floor control is requested AND <allow-location-info-when- talking&gt; element of the <ruleset> element of the MCPTT user profile document set to "true" in Table 5.5.8.3-1</ruleset></allow-location-info-when- 
For further conditions see table 5.5.1-1	

### 5.5.2.13 SIP REGISTER

This message is sent by the UE.

### Table 5.5.2.13-1: SIP REGISTER

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22]	
Method Request-URI	"REGISTER" SIP URI of the home domain name (px_MCX_SIP_HomeD omain_A) if available at the UE or derived from the IMSI otherwise	Depending on the UE configuration the UE may know the home domain name of the SIP core (e.g. when there is an ISIM) or the UE needs to derive it from the IMSI as according to 23.003 [69] clause 13.2 (e.g. when there is a		
		USIM only)		
SIP-Version	"SIP/2.0"		DEC 2264 [22]	
Route Via	Not present		RFC 3261 [22] RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"	UE uses UDP for registration		UDP
	"SIP/2.0/TCP	UE uses TCP for registration		ТСР
sent-by				ļ
host	IP address or FQDN			
port	any value if present	initial REGISTER or subsequent REGISTER using TCP		SIP_REGI STER_INI TIAL OR TCP
	protected server port of the UE	subsequent REGISTER using UDP		
via-branch	Value starting with 'z9hG4bK'			
From			RFC 3261 [22]	
addr-spec				
user-info and host	same value as in the initial REGISTER Default public user id (px_MCX_SIP_PublicU serId_A_1) if available at the UE or derived from the IMSI otherwise	Depending on the UE configuration the UE may know the default public user id (e.g. when there is an ISIM) or the UE needs to derive it from the IMSI as according to 23.003 [69] clause 13.4B (e.g. when there is a USIM		SIP_REGI STER_INI TIAL
		only)		
port	not present			
tag	any value			
То	· · · -			
addr-spec	same value as in From- header			
tag	Not present			
Contact			RFC 3261 [22]	
addr-spec	SIP URI			
user-info and host port	IP address or FQDN any value if present			SIP_REGI STER_INI
	protected server port of the UE			TIAL
feature-param	"+g.3gpp.mcptt"			MCPTT

	"+g.3gpp.mcvideo"	This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Video (MCVideo) communication.		MCVIDEO
feature-param	g.3gpp.mcdata.sds	SDS is supported	TS 24.282 [87] clause 7.2.1	MCDATA AND pc_MCDat a_SDS
feature-param	g.3gpp.mcdata.fd	FD is supported	TS 24.282 [87] clause 7.2.1	MCDATA AND pc_MCDat a_FD
feature-param	g.3gpp.mcdata.ipconn	IPCONN is supported	TS 24.282 [87] clause 7.2.1	MCDATA AND pc_MCDat a_IPCONN
feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcptt"			MCPTT
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o"	This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.		MCVIDEO
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata "	This URN indicates that the device has the capabilities to support the mission critical data (MCData) service.		MCDATA
feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"	SDS is supported	TS 24.282 [87] clause 7.2.1	MCDATA AND pc_MCDat a_SDS
feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. fd"	FD is supported	TS 24.282 [87] clause 7.2.1	MCDATA AND pc_MCDat a_FD
feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. ipconn"	IPCONN is supported	TS 24.282 [87] clause 7.2.1	MCDATA AND pc_MCDat a_IPCONN
feature-param	"audio"			MCPTT OR MCVIDEO
feature-param	"video"	This feature tag indicates that the device supports video as a streaming media type.		MCVIDEO
feature-param	"text"	This feature tag indicates that the device supports text as a streaming media type.		MCDATA_ SDS, MCDATA_ FD
feature-param	"expires=600000" if			
Expires	Present Present if no expires parameter in Contact header		RFC 3261 [22] RFC 3903 [43]	
value	"600000"			

Require			RFC 3261 [22]	
Require			RFC 3201 [22] RFC 3329 [53]	
option-tag	"sec-agree"			
Proxy-Require			RFC 3261 [22]	
			RFC 3329 [53]	
option-tag Supported	"sec-agree"		DEC 2264 [22]	
Supported			RFC 3261 [22] RFC 6442 [62]	
			RFC 4488 [36]	
option-tag	"path"			
option-tag	"timer"			
Cseq			RFC 3261 [22]	
value	any allowed value			SIP_REGI
				STER_INI
	value sent by the UE in			TIAL
	previous REGISTER			
	incremented by one			
method	"REGISTER"			
Call-ID			RFC 3261 [22]	
callid	any value			
Security-Client			RFC 7315 [52]	
mechanism-name	"ipsec-3gpp"			
algorithm protocol	"hmac-sha-1-96" "esp" (if present)			
mode	"trans" (if present)			
encrypt-algorithm	"des-ede3-cbc" or "aes-			
	cbc"			
spi-c	SPI number of the			
	inbound SA at the			
	protected client port			
spi-s	SPI number of the			
	inbound SA at the			
port-c	protected server port protected client port			
port-s	protected server port			
Security-Verify	Not present		RFC 3329 [53]	SIP_REGI
, , , , , , , , , , , , , , , , , , ,				STER_INI
				TIAL
Security-Verify			RFC 3329 [53]	
sec-mechanism	same value as Security Server header sent by			
Authorization	SS		RFC	SIP_REGI
			2617 [72],	STER_INI
			RFC 3310 [96]	TIAL
username	Private user id	Depending on the UE	,	
	(px_MCX_SIP_Private	configuration the UE		
	UserId_A) if available	may know the private		
	at the UE or derived	public user id (e.g.		
	from the IMSI otherwise	when there is an ISIM) or the UE needs to		
		derive it from the IMSI		
		as according to		
		23.003 [69] clause 13.3		
		(e.g. when there is a		
		USIM only)		
realm	same home domain			
	name as used in			
nonce	Request-URI	Empty string		
nonce digest-uri	same SIP-URI as used	Empty string		
uigest-uii	as Request-URI			
opaque	any value if present			
qop	any value if present			
cnonce	any value if present			
nc	any value if present			

algorithm	any value if present			
response	""	Empty string		
Authorization			RFC 2617 [72], RFC 3310 [96]	
username	same value as for condition SIP_REGISTER_INITI AL			
realm	same value as received in the realm directive in the WWW Authenticate header sent by SS			
nonce	same value as in WWW-Authenticate header sent by SS			
digest-uri	same SIP-URI as used as Request-URI			
opaque	same value as sent by the server in "401 Unauthorized for REGISTER"			
qop	"auth"			
cnonce	any value	value assigned by UE affecting the response calculation		
nc	nonce-count value	counter to indicate how many times the UE has sent the same value of nonce within successive REGISTERs, initial value shall be 1		
algorithm	"AKA∨1-MD5"			
response	Digest response	calculated by the client according to RFC 2617		
Max-Forwards			RFC 3261 [22]	
value	any allowed value	Non-zero value		
P-Access-Network-Info			RFC 7315 [52]	
access-net-specs	Access network technology and, if applicable, the cell ID			
Content-Type			RFC 5621 [58]	SERVICE_ AUTH
media-type	"multipart/mixed"			
Content-Length	present in case of TCP and when there is a message body (otherwise optional)		RFC 3261 [22]	
value	any value	length of the message body		
Message-body			RFC 3261 [22]	SERVICE_ AUTH
MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-info+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-info+xml" "application/vnd.3gpp.			MCVIDEO MCDATA
	mcdata-info+xml"			

Content-ID	any value	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	MCPTT-Info as described in Table 5.5.3.2.1-1		TS 24.379 [9] clause F.1	MCPTT
	MCVideo-Info as described in Table 5.5.3.2.1-2		TS 24.281 [86] clause F.1	MCVIDEO
	MCData-Info as described in Table 5.5.3.2.1-3		TS 24.282 [87] clause D.1	MCDATA
MIME body part		MIKEY		
MIME-part-headers				
Content-Type	"application/mikey"		RFC 3830 [24]	
MIME-part-body	MIKEY message as described in Table 5.5.9.1-1	MIKEY message, containing the CSK	TS 33.180 [94]	
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-1		TS 24.379 [9]	

Condition	Explanation
SIP_REGISTER_INITIAL	Initial unprotected REGISTER
For further conditions see table 5.5.1-1	

### 5.5.2.14 SIP SUBSCRIBE

This message is sent by the UE.

### Table 5.5.2.14-1: SIP SUBSCRIBE

Derivation Path: TS 24.229 [16] clause A.2.1.4.13, A.2.2.4.13 Information Element Value/remark Comment Reference Condition **Request-Line** RFC 3261 [22] RFC 5031 [54] Method "SUBSCRIBE" Request-URI tsc\_MCPTT\_PublicSer The public service MCPTT viceld A identity identifying the AND NOT originating participating (CONFIG MCPTT function ÒR serving the MCPTT GROUPC user ONFIG OR re\_SUBSC RIBE) tsc\_MCVideo\_PublicSe The public service MCVIDEO identity identifying the AND NOT rviceId\_A originating participating (CONFIG MCVideo function ÔR serving the MCVideo GROUPC user ONFIG OR re SUBSC RIBE) tsc\_MCData\_PublicSer The public service MCDATA viceId\_A identity identifying the AND NOT originating participating (CONFIG MCData function OR serving the MCData GROUPC user ONFIG OR re\_SUBSC RIBE) "sip:" & SIP URI of the CMS's TS 24.484 [14] CONFIG tsc\_MCX\_CMS\_Hostna domain name: public clause 6.3.13. me service identity (PSI) 2.2 for performing subscription proxy function of the CMS "sip:" & public service identity TS 24.481 [11] GROUPC tsc\_MCX\_GMSURI (PSI) for performing clause 6.3.13. ONFIG subscription proxy 2.1 function of the GMS as configured in the <GMS-URI> element of the initial UE configuration same URI as the SS Contact URI of the re SUBSC has sent earlier in the RIBE recipient of the previous 200 OK Contact header of a message within the same dialog SIP-Version "SIP/2.0" Route RFC 3261 [22] addr-spec[1] SIP URI user-info and host P-CSCF address of the P-CSCF address as SS assigned to the UE via NAS signalling or P-CSCF discovery protected server port of as assigned during port the SS registration uri-parameters "lr" addr-spec[2] SIP URI user-info and host "scscf.3gpp.org" port not present uri-parameters "lr" Route RFC 3261 [22] re SUBSC RIBE

Information Element	Value/remark	Comment	Reference	Condition
route-param list	URIs of the Record-			
	Route header sent to			
	the UE in the response			
	which has established			
	the dialog, in reverse order			
Via			RFC 3261 [22]	
aant protocol	"SIP/2.0/UDP"		RFC 3581 [55]	UDP
sent-protocol	"SIP/2.0/TCP"			TCP
sent-by	31F/2.0/1CF			TOP
host	IP address or FQDN	Either the UE's IP		
host		address or its home domain name		
port	protected server port of the UE	as assigned during registration		
via-branch	value starting with 'z9hG4bK'			
From			RFC 3261 [22]	
addr-spec				
user-info and host	Default public user id (px_MCX_SIP_PublicU serId_A_1)			
port	not present			
tag	any value			
From			RFC 3261 [22]	re_SUBS
			KFC 3201 [22]	RIBE
addr-spec	Same URI of the UE as used earlier in the dialog	Local URI of the dialog (from the UE's point of view)		
tag	Same tag of the UE as used earlier in the	Local tag of the dialog ID (from the UE's point		
То	dialog	of view)	RFC 3261 [22] RFC 5031 [54]	
addr-spec				
user-info and host	same URI as used as			
user-into and host	Request URI			
port	not present			
port				
tag	not present		550 000 / 1001	01150
То			RFC 3261 [22]	re_SUBS
addr-spec	Same URI of the SS as	Remote URI of the		RIBE
auurspec	used earlier in the			
		dialog (from the UE's		
4	dialogURI	point of view)		
tag	Same tag of the SS as	Remote tag of the		
	used earlier in the	dialog ID (from the UE's		
Comtact	dialog	point of view)		
Contact			RFC 3261 [22]	
addr-spec	SIP URI			
user-info and host port	IP address or FQDN protected server port of	as assigned during		
	UE	registration		
feature-param	"+g.3gpp.icsi-	Mandatory media		CONFIG
	ref=urn:urn-7:3gpp- service.ims.icsi.mcptt"	feature tag according to TS 24.481 [11] clause 6.3.13.2.1 and TS 24.484 [14] clause 6.3.13.2.2		or Groupc Onfig
feature-param	any (further) feature	In addition to		
	tags if present	mandatory feature tags		
		(if any) the UE may		
		provide further feature		
		tags which are not		
		LIAON WHICH ALE DOT	1	1

Information Element         Value/remark         Comment         Reference         Redition           Expires	Derivation Path: TS 24.229 [16]				<b>0</b>
value         any value         RFC 3903 [43]           Require         any value         RFC 3261 [22]           option-tag         "sec-agree"         RFC 3229 [53]           option-tag         "sec-agree"         RFC 3229 [53]           sec-machanism         same value as Security         RFC 3329 [53]           sec-machanism         same value as Security         RFC 3229 [53]           Security-Verify         same value as Security         RFC 3229 [53]           Security-Verify         same value as Security         RFC 3261 [22]           value         any allowed value         RFC 3261 [22]           value         any allowed value         RFC 3261 [22]           value         any allowed value         RFC 3261 [22]           results of the endpoint with its previous request in the same dialog but increased by one         RFC 3261 [22]           method         "SUBSCRIBE"         RFC 3261 [22]           Max-Forwards         any allowed value         RFC 3261 [22]           same dialog but increased by one         RFC 3261 [22]         REC 3261 [22]           Max-Forwards         any allowed value         RFC 3261 [22]         REC 3261 [22]           access-net-spec         Access network technology and, if applicable, the cell ID         RFC 3266 [39]         PPCC		Value/remark	Comment		Condition
value         any value         Product         RFC 3261 [22]         RFC 3226 [53]           Proxy-Require         *sec-agree"         RFC 3226 [53]         RFC 3226 [53]         RFC 3226 [53]           option-tag         *sec-agree"         RFC 3226 [53]         Security-Construction         RFC 3226 [53]         Security-Construction           security-Verify         same value as Security         RFC 3226 [22]         RFC 3226 [22]         RFC 3226 [22]           value         any allowed value         RFC 3226 [22]         RFC 3226 [22]         RFC 3226 [22]           value         -Secret Acader sent by S during registration         RFC 3261 [22]         RFC 3261 [22]         RFC 3261 [22]           value         any allowed value         RFC 3261 [22]         RFC 3261 [22]         RFC 3261 [22]           callid         any allowed value         RFC 3261 [22]         RFC 3261 [22]         RFC 3261 [22]           callid         any allowed value         RFC 3261 [22]         RFC 3261 [22]         RFC 3261 [22]           value         any allowed value         Non-zero value         RFC 3261 [22]         RFC 3261 [22]           value         any allowed value         Non-zero value         RFC 3261 [22]         RFC 3261 [22]           event         -resence*         Access network technolo	Expires				
Require         RFC 3261 [22]           option-lag         "sec-agree"         RFC 3261 [22]           Proxy-Require         RFC 3261 [22]         RFC 3261 [22]           security-Verify         same value as Security         RFC 3261 [22]           securechanism         same value as Security         RFC 3261 [22]           value         any allowed value         RFC 3261 [22]           re_SUBSC RIBE"         RFC 3261 [22]           calid         any allowed value         RFC 3261 [22]           galid         any allowed value         RFC 3261 [22]           value         same value as in sultward value         RFC 3261 [22]           value         any allowed value         RFC 3261 [22]           event type         "resence"         RFC 3261 [22]	value			RFC 3903 [43]	
option-tag         Sec-agree"         RFC 3329 [53]           Proxy-Require         sec-agree"         RFC 3329 [53]         sec-agree"           Security-Verity         RFC 3329 [53]         sec-agree"         RFC 3329 [53]           Security-Verity         RFC 3329 [53]         security-Verity         security-Verity           Security-Verity         RFC 3261 [22]         re-Super-Verity         security-Verity           Security-Verity         RFC 3261 [22]         re-Super-Verity         re-Super-Verity           Security-Verity         ary allowed value         RFC 3261 [22]         re-Super-Verity           value         ary allowed value         RFC 3261 [22]         re-Super-Verity           value         ary allowed value         RFC 3261 [22]         re-Super-Verity           callid         ary allowed value         RFC 3261 [22]         re-Super-Verity           callid         ary allowed value         RFC 3261 [22]         re-Super-Verity           same value as in SUBSCRIBE creating the dialog         Non-zero value         RFC 7315 [52]         REC 7315 [52]           access-net-spec         Access network technology and, if applicatio, the cell ID         RFC 3261 [22]         re-Nork           event-type         'presence"         RFC 3261 [22]         RFC 3261 [22]		any value		DEC 2264 [22]	
option-lag         Sec-agree"         RFC 3261 [22] RFC 3329 [53]         PC RFC 3329 [53]           Security-Verify         same value as Security -Server header sent by SS during registration         RFC 3261 [22]         Image: Security -Server header sent by SS during registration         RFC 3261 [22]           value         any allowed value         RFC 3261 [22]         Image: Security -Server header sent by SS during registration         RFC 3261 [22]         Image: Security -Server header sent by registration         RFC 3261 [22]         Image: Security -Security -Security -Security -Security -Security -Security -Security -Security -Security -Security -Security -Security -Security -Security -Secu	Require				
Proxy-Require         RFC 3261 [22]           option-lag         "sec-agree"         RFC 3329 [53]           Security-Verify         RFC 3329 [53]	option tag	"soc agroo"		KFC 3329 [33]	
option-tag         Tsec-agree"         RFC 3329 [53]           Security-Verify         same value as Security         RFC 3329 [53]		Sec-agree		DEC 2264 [22]	
option-lag         "sec-agree"         RFC 329 [53]           sec-mechanism         Same value as Security -Server header sent by SS during registration         RFC 3261 [22]           value         anny allowed value value CSeq sent by the endpoint within its previous request in the same dialog but increased by one anny allowed value         RFC 3261 [22]           method         "GuBSCRIBE"         RFC 3261 [22]           Cai-ID         any allowed value same value as in SUBSCRIBE"         RFC 3261 [22]           Max-Forwards         any allowed value same value as in SUBSCRIBE"         RFC 3261 [22]           Max-Forwards         any allowed value same value as in SUBSCRIBE"         RFC 3261 [22]           P-Access-Aletwork-Info         RFC 7315 [52]         REC 7315 [52]           access-net-spec         Access network technology and, if applicable, the cell ID         RFC 6665 [39]           P-Access-Aletwork-Info         "presence"         RFC 3261 [22]           "media-range         "presence"         RFC 3261 [22]           "application/poc- settings"         RFC 6665 [39]         POC- SETTINGS           P-Preferred-Service         "application/poc- settings"         RFC 6050 [31]           Service-ID         "application/poc- settings-xm"         RFC 6050 [31]           Service-ID         "application/poc- setims.icsi.mcdia         mCONFIG CONFIG </td <td>Floxy-Require</td> <td></td> <td></td> <td>RFC 3201 [22]</td> <td></td>	Floxy-Require			RFC 3201 [22]	
Security-Verity         RFC 3329 [53]           sec-mechanism         same value as Security -Server header sent by SS during registration         RFC 3261 [22]           cseq         any allowed value value         RFC 3261 [22]           value         any allowed value previous request in the same dialog but increased by one same dialog but increased by one         RFC 3261 [22]           caliId         any allowed value same value as in SUBSCRIBE creating the dialog         RFC 3261 [22]           caliId         any allowed value same value as in SUBSCRIBE creating the dialog         RFC 3261 [22]           caliId         any allowed value same value as in SUBSCRIBE creating the dialog         RFC 3261 [22]           calido         access network technology and, if applicable, the cell ID         RFC 7315 [52]           access-net-spec         Access network technology and, if applicable, the cell ID         RFC 6665 [39]           "xcap-diff"         CONFIG GROUPC ONFIG         CONFIG GROUPC ONFIG           "presence"         RFC 3261 [22]         CONFIG GROUPC ONFIG           "presence"         CONFIG Proc-settings"         CONFIG GROUPC ONFIG           "proc-settings"         RFC 3261 [22]         CONFIG GROUPC ONFIG           "proc-settings"         RFC 6050 [31]         CONFIG GROUPC ONFIG           "application/pid+xml"         CONFIG GROUPC ONFIG         MCVIDEO <td>option-tag</td> <td>"sec-agree"</td> <td></td> <td>10 0029 [00]</td> <td></td>	option-tag	"sec-agree"		10 0029 [00]	
sec-mechanism same value as Security SS during registration SS during registration - Server header sent by SS during registration - Server header sent by value				REC 3329 [53]	
-Server header sent by SS during registration         RFC 3261 [22]           value         any allowed value value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one         re_SUBSC RIBE           method         "SUBSCRIBE"         re_SUBSC RIBE           call-ID         SUBSCRIBE"         re_SUBSC RIBE           callid         any allowed value same value as in SUBSCRIBE creating the dialog same value as in SUBSCRIBE creating the dialog         RFC 3261 [22]           Max-Forwards         re_SUBSC RIBE         re_SUBSC RIBE           PAccess-Network-Info         Access network technology and, if applicable, the cell ID applicable, the cell ID applicable, the cell ID applicable, the cell ID         RFC 6665 [39]           Event         "presence"         RFC 3261 [22]           event-lype         "presence"         CONFIG "application/pidf+xml"           media-range         "application/pidf+xml"         CONFIG "application/pidf+xml"           *application/pidf+xml"         CONFIG GROUPC ONFIG         MCPTT OR CONFIG GROUPC           P-Preferred-Service         *um:um-r7:3gpp- service.ims.icsi.mcvide o" "um:um-r7:3gpp- service.ims.icsi.mcvide o" "um:um-r7:3gpp- service.ims.icsi.mcvide o"         MCDATA		same value as Security			
Cseq         RFC 3261 [22]           value         any allowed value         re. SUBSC           value         value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one         re. SUBSC           method         "SUBSCRIBE"         RFC 3261 [22]           call-ID         any allowed value         RFC 3261 [22]           call-ID         any allowed value         re. SUBSC           call-ID         any allowed value         re. SUBSC           same value as in SUBSCRIBE creating the dialog         RFC 3261 [22]         re. SUBSC           Max-Forwards         re. SUBSC         re. SUBSC           value         any allowed value         Non-zero value         RFC 7315 [51]           access-net-spec         Access network technology and, if applicable, the cell ID         RFC 6365 [39]           event-type         "presence"         CONFIG GROUPC         ONFIG           "poc-settings"         RFC 3261 [22]         CONFIG GROUPC           "application/pidf+xml"         GROUPC         ONFIG           "application/pidf+xml"         GROUPC         ONFIG           "application/pidf+xml"         GROUPC         ONFIG           "application/pidf+xml"         CONFIG GROUPC         SetTIINGS           "application/p					
Cseq         my allowed value         RFC 3261 [22]           value         any allowed value         re. SUBSC           walue of CSeq sent by the endpoint within its previous request in the same dialog but increased by one         re. SUBSC           method         "SUBSCRIBE"         RFC 3261 [22]           callid         any allowed value         re. SUBSC           callid         any allowed value         re. SUBSC           callid         any allowed value         re. SUBSC           same value as in values         n         RFC 3261 [22]           callid         any allowed value         re. SUBSC           same value as in values         n         RFC 7315 [52]           P-Access Network-Info         access network technology and, if applicable, the cell ID         RFC 7913 [51]           event-type         "presence"         CONFIG GROUPC ONFIG         GROUPC ONFIG           "vapelication/pidf+xml"         RFC 3261 [22]         CONFIG GROUPC           "application/pidf+xml"         RFC 3261 [22]         CONFIG GROUPC           "application/pidf+xml"         CONFIG GROUPC         SetTTINGS -EVENT           Accept         "application/pidf+xml"         CONFIG GROUPC         SetTINGS -EVENT           P-Preferred-Service         'uru:ur:7:3gpp- service.ims.icsi.mcvide					
value     any allowed value     re     value     re     value     re     value     re     value     re     value     re     value     value     re     value	Cseq			RFC 3261 [22]	
value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one         re. SUBSC. RIBE           call-ID         "SUBSCRIBE"		any allowed value			
method     RIBE       method     "subscriptes" in the same dialog but increased by one     RFC 3261 [22]       Cali-ID     any allowed value     re_SUBSCRIBE"       calid     any allowed value     re_SUBSCRIBE       same value as in SUBSCRIBE creating the dialog     RFC 3261 [22]       Max-Forwards     re_SUBSCRIBE creating the dialog     RFC 3261 [22]       Value     any allowed value     Non-zero value     RFC 7315 [52]       P-Access-Network-Info     RFC 7315 [52]     RFC 7315 [52]       access-net-spec     Access network     technology and, if applicable, the cell ID     RFC 7913 [51]       access-net-spec     Access network technology and, if applicable, the cell ID     RFC 6665 [39]     RFC 6665 [39]       event-type     "presence"     RFC 6665 [39]     RFC 7913 [51]     RFC 6665 [39]       access-net-spec     "resence"     RFC 6665 [39]     RFC 7913 [51]     RFC 7913 [51]       event-type     "presence"     RFC 6665 [39]     RFC 7913 [51]     RFC 7913 [51]     RFC 7913 [51]       access-net-spec     "resence"     RFC 6665 [39]     RFC 7913 [51]     RFC 7913 [51]     RFC 7913 [51]       access-net-spec     "resence"     "resence"     RFC 6665 [39]     RFC 7913 [51]     RFC 7913 [51]       went-type     "presence"     "resence"     RFC 6665 [39]					re SUBSC
same dialog but increased by one         RFC 3261 [22]           Call-ID         RFC 3261 [22]           callid         any allowed value same value as in SUBSCRIBE creating the dialog         RFC 3261 [22]           Max-Forwards         RFC 7315 [52]           value         Non-zero value         RFC 7315 [52]           P-Access-Network-Info         RFC 7315 [52]           access-net-spec         Access network technology and, if applicable, the cell ID         RFC 6665 [39]           event         'presence'         CONFIG           event-type         'presence'         CONFIG           "xcap-diff"         RFC 3261 [22]         CONFIG           "presence"         RFC 6665 [39]         CONFIG           "presence"         RFC 3261 [22]         SETTINGS           Service-ins.icsi.mcptt"         CON					
increased by one         increased by one           Call-ID         RFC 3261 [22]           Callid         any allowed value         RFC 3261 [22]           callid         any allowed value         re_SUBSCR           SuBSCRIBE creating the dialog         RFC 3261 [22]         RIBE           Max-Forwards         any allowed value         RFC 7315 [52]         REC 7315 [52]           P-Access-Network-Info         any allowed value         Non-zero value         RFC 7315 [52]           P-Access-Network-Info         Access network technology and, if applicable, the cell ID         RFC 6665 [39]           Event         "presence"         "presence"         RFC 6665 [39]           event-type         "presence"         POC- SETTINGS -EVENT         CONFIG GROUPC ONFIG           "poc-settings"         Poc-settings"         POC- SETTINGS -EVENT         SetTINGS -EVENT           Accept         "application/poc- settings+xml"         RFC 6050 [31]         MCPTT OR GROUPC ONFIG ONFIG           P-Preferred-Service         "um:um-7:3gpp- service.ims.icsi.mcvide o"         MCPTT OR GROUPC         MCVIDEO           "um:um-7:3gpp- service.ims.icsi.mcvide o"         MCDATA         MCDATA		previous request in the			
method       "SUBSCRIBE"       number of the second					
Call-ID         any allowed value         RFC 3261 [22]           callid         any allowed value         re_SUBSC           same value as in SUBSCRIBE creating the dialog         RFC 3261 [22]           Max-Forwards         RFC 7315 [52]           value         any allowed value         Non-zero value           P-Access-Network-Info         Access network technology and, if applicable, the cell ID         RFC 7315 [52]           access-net-spec         Access network technology and, if applicable, the cell ID         RFC 6665 [39]           Event         "presence"         CONFIG GROUPC ONFIG           event-type         "presence"         CONFIG GROUPC           "poc-settings"         POC- SETTINGS         SetTTINGS - EVENT           Accept         "application/pidf+xml"         CONFIG GROUPC ONFIG           "application/pidf+xml"         CONFIG, GROUPC ONFIG         POC- SETTINGS           Service-ID         "application/pidf+xml"         CONFIG, GROUPC ONFIG           "um:um-7:3gpp- service.ims.icsi.mcvide o"         MCPTT OR GROUPC ONFIG         MCVIDEO           "um:um-7:3gpp- service.ims.icsi.mcvide o"         MCVIDEO         MCVIDEO           "um:um-7:3gpp- service.ims.icsi.mcvide o"         MCVIDEO         MCVIDEO		increased by one			
callid     any allowed value same value as in SUBSCRIEs creating the dialog     re_SUBSC RISE       Max-Forwards     RFC 3261 [22]       value     any allowed value     Non-zero value       P-Access-Network-Info     RFC 7315 [52] RFC 7315 [52]       access-net-spec     Access network technology and, if applicable, the cell ID     RFC 7315 [52]       event-type     "presence"     RFC 6665 [39]       "presence"     RFC 6665 [39]     CONFIG GROUPC ONFIG       "poc-settings"     SETTINGS - EVENT     CONFIG GROUPC ONFIG       Accept     "replication/pidf+xml"     RFC 3261 [22]       media-range     "application/poc- settings+xml"     RFC 3261 [22]       P-Preferred-Service     "application/poc- settings+xml"     MCPTT OR GROUPC ONFIG       Service-ID     "urm:um-7:3gpp- service.ims.icsi.mcvide o"     MCPTT OR GROUPC ONFIG       "urm:um-7:3gpp- service.ims.icsi.mcvide o"     MCVIDEO       "urm:um-7:3gpp- service.ims.icsi.mcvide o"     MCVDATA		"SUBSCRIBE"			
same value as in SUBSCRIBE creating the dialog         RFC 3261 [22]           Max-Forwards         any allowed value         Non-zero value         RFC 3261 [22]           P-Access-Network-Info         any allowed value         Non-zero value         RFC 7315 [52] RFC 7315 [52]           access-net-spec         Access network technology and, if applicable, the cell ID         Access network technology and, if applicable, the cell ID         RFC 6665 [39]           Event         "presence"         RFC 3261 [22]         CONFIG GROUPC           event-type         "presence"         CONFIG GROUPC         CONFIG GROUPC           *ccept         "poc-settings"         POC- SETTINGS         POC- SETTINGS           media-range         "application/pidf+xml"         RFC 3261 [22]         POC- SETTINGS           *application/poc- settings+xml*         "application/pidf+xml"         CONFIG GROUPC           *application/poc- setrings+xml*         RFC 6050 [31]         MCPTT OR CONFIG OR CONFIG           *urn:urn-7:3gpp- service.ims.icsi.mcvide o"         "urn:urn-7:3gpp- service.ims.icsi.mcvide o"         MCVIDEO           *urn:urn-7:3gpp- service.ims.icsi.mcvide o"         MCVIDEO         MCVIDEO				RFC 3261 [22]	
SUBSCRIBE creating the dialog         REC 3261 [22]           Max-Forwards value         any allowed value         Non-zero value         RFC 3261 [22]           P-Access-Network-Info         RFC 7315 [52] RFC 7913 [51]         RFC 7913 [51]           access-net-spec         Access network technology and, if applicable, the cell ID         Access network technology and, if applicable, the cell ID         RFC 6665 [39]           Event         "presence"         CONFIG GROUPCONFIG         CONFIG GROUPCONFIG           **cap-diff"         CONFIG GROUPCONFIG         SETTINGS           *boc-settings"         RFC 3261 [22]         EVENT           media-range         "application/pidf+xml"         SETTINGS           *application/pidf+xml"         CONFIG GROUPCONFIG         SETTINGS           *application/poc- settings+xml"         RFC 3261 [22]         MCPTT GROUPCONFIG           *application/poc- settings+xml"         RFC 6050 [31]         SETTINGS           P-Preferred-Service         "um:um-7:3gpp- service.ims.icsi.mcptt"         MCPTT OR GROUPC ONFIG ONFIG           *um:um-7:3gpp- service.ims.icsi.mcvide o'         MCDATA         MCDATA	callid				
Ithe dialog     RFC 3261 [22]       Max-Forwards     any allowed value     Non-zero value     RFC 3261 [22]       P-Access-Network-Info     RFC 7315 [52] RFC 7913 [51]     RFC 7913 [51]       access-net-spec     Access network technology and, if applicable, the cell ID     Access network technology and, if applicable, the cell ID     RFC 6665 [39]       Event     "presence"     CONFIG GROUPC ONFIG       event-type     "presence"     CONFIG GROUPC       "scap-diff"     RFC 3261 [22]       media-range     "poc-settings"     POC- SETTINGS -EVENT       Accept     RFC 3261 [22]     Non-zero value       media-range     "application/pidf+xml"     RFC 3261 [22]       Service-ID     "application/pidf+xml"     CONFIG GROUPC       settings+xml"     POC- SETTINGS -EVENT     POC- SETTINGS -EVENT       P-Preferred-Service     "um:um-7:3gpp- service.ims.icsi.mcptt"     MCPTT OR CONFIG ONFIG       "um:um-7:3gpp- service.ims.icsi.mcptd"     MCPTT OR CONFIG ONFIG       "um:um-7:3gpp- service.ims.icsi.mcvide o"     MCDATA       "um:um-7:3gpp- service.ims.icsi.mcvide o"     MCDATA					
Max-Forwards         number of the service instance insteace instance instance insteace instance instance					RIBE
value         any allowed value         Non-zero value         C           P-Access-Network-Info         RFC 7315 [52] RFC 7313 [51]         RFC 7313 [51]           access-net-spec         Access network technology and, if applicable, the cell ID applicable, the cell ID         Access network technology and, if applicable, the cell ID         RFC 6665 [39]           Event         "presence"         RFC 3261 [22]         RFC 3261 [22]           "vacap-diff"         "application/pidf+xml"         RFC 3261 [22]           media-range         "application/xcap- diff+xml"         RFC 6050 [31]           "application/poc- settings+xml"         CONFIG GROUPC ONFIG         SETTINGS -EVENT           P-Preferred-Service         "um:um-7:3gpp- service.ims.icsi.mcptt"         RFC 6050 [31]           "um:um-7:3gpp- service.ims.icsi.mcvide o"         "um:um-7:3gpp- service.ims.icsi.mcptt"         MCDATA           "um:um-7:3gpp- service.ims.icsi.mcdata "         mCDATA         MCDATA		the dialog			
P-Access-Network-Info       RFC 7315 [52] RFC 7913 [51]         access-net-spec       Access network technology and, if applicable, the cell ID       RFC 6665 [39]         Event       "presence"       RFC 6665 [39]         event-type       "presence"       RFC 3261 [22]         "xcap-diff"       CONFIG (RROUPC ONFIG       CONFIG (RROUPC ONFIG         media-range       "application/pidf+xml"       RFC 3261 [22]         "application/pidf+xml"       CONFIG (ROUPC ONFIG       SETTINGS -EVENT         P-Preferred-Service       RFC 6050 [31]       CONFIG (ROUPC ONFIG         service-ID       "urn:urn-7:3gpp- service.ims.icsi.mcptt"       RFC 6050 [31]         "urn:urn-7:3gpp- service.ims.icsi.mcvide o"       MCVIDEO         "urn:urn-7:3gpp- service.ims.icsi.mcvide o"       MCVIDEO         "urn:urn-7:3gpp- service.ims.icsi.mcdata       MCVIDEO				RFC 3261 [22]	
access-net-spec     Access network technology and, if applicable, the cell ID     Access network technology and, if applicable, the cell ID     RFC 6665 [39]       Event     "presence"     CONFIG GROUPC ONFIG       "vcap-diff"     CONFIG       "poc-settings"     POC- SETTINGS -EVENT       Accept     RFC 3261 [22]       media-range     "application/pidf+xml"       "application/pidf+xml"     CONFIG GROUPC ONFIG       "application/pidf+xml"     CONFIG GROUPC ONFIG       "splication/pidf+xml"     CONFIG GROUPC ONFIG       "application/pidf+xml"     CONFIG GROUPC ONFIG       "application/poc- settings+xml"     POC- SETTINGS -EVENT       P-Preferred-Service     RFC 6050 [31]       Service-ID     "urn:urn-7:3gpp- service.ims.icsi.mcpit"       "urn:urn-7:3gpp- service.ims.icsi.mcpit"     RFC 6050 [31]       "urn:urn-7:3gpp- service.ims.icsi.mcpit"     MCDATA       "urn:urn-7:3gpp- service.ims.icsi.mcvide o"     MCDATA       "urn:urn-7:3gpp- service.ims.icsi.mcvide o"     MCDATA		any allowed value	Non-zero value		
access-net-spec       Access network technology and, if applicable, the cell ID       Access network technology and, if applicable, the cell ID       RFC 6665 [39]         Event       "presence"       CONFIG GROUPC ONFIG         "xcap-diff"       CONFIG groupc         "poc-settings"       POC- SETTINGS -EVENT         Accept       RFC 3261 [22]         media-range       "application/pidf+xml" "application/ccap- diff+xml"       CONFIG POC- SETTINGS -EVENT         P-Preferred-Service       RFC 6050 [31]         Service-ID       "urn:urn-7:3gpp- service.ims.icsi.mcptt"       RFC 6050 [31]         "urn:urn-7:3gpp- service.ims.icsi.mcptt"       MCPTT OR GROUPC ONFIG       MCVIDEO MCVIDEO         "urn:urn-7:3gpp- service.ims.icsi.mcdata "       MCDATA         "Content-Type       RFC 5621 [58]	P-Access-Network-Info				
technology and, if applicable, the cell ID       technology and, if applicable, the cell ID         event-type       "presence"       RFC 6665 [39]         "xcap-diff"       CONFIG         "poc-settings"       POC- SETTINGS         Accept       RFC 3261 [22]         media-range       "application/pidf+xml"         "application/pidf+xml"       CONFIG         "application/pidf+xml"       CONFIG         "application/pidf+xml"       CONFIG         "application/poc- settings+xml"       CONFIG         Service-ID       "um:um-7:3gpp- service.ims.icsi.mcptt"         "um:um-7:3gpp- service.ims.icsi.mcdata       MCPTT         "um:um-7:3gpp- service.ims.icsi.mcdata       MCDATA         "um:um-7:3gpp- service.ims.icsi.mcdata       MCDATA				RFC 7913 [51]	
applicable, the cell ID         applicable, the cell ID         applicable, the cell ID         receive           event-type         "presence"         CONFIG           "xcap-diff"         CONFIG         GROUPC           "xcap-diff"         POC-         SETTINGS           "poc-settings"         POC-         SETTINGS           Accept         RFC 3261 [22]         POC-           media-range         "application/pidf+xml"         CONFIG           "application/ccap-         GROUPC         ONFIG           diff+xml"         CONFIG         CONFIG           "application/poc-         SetTTINGS         -EVENT           settings+xml"         SETTINGS         -EVENT           Service-ID         "urn:um-7:3gpp-         Service.ims.icsi.mcptt"         OR           "urn:um-7:3gpp-         service.ims.icsi.mcvide         MCVIDEO         OR           "urn:um-7:3gpp-         service.ims.icsi.mcdata         MCDATA         MCDATA	access-net-spec				
Event         mpresence"         RFC 6665 [39]           event-type         "presence"         CONFIG           "xcap-diff"         CONFIG         GROUPC           "poc-settings"         CONFIG         SETTINGS           "poc-settings"         RFC 3261 [22]         SETTINGS           media-range         "application/pidf+xml"         CONFIG           "application/poc-settings+xml"         CONFIG         CONFIG           "application/poc-settings:settings+xml"         POC-settings         POC-SETTINGS           Service-ID         "urn:urn-7:3gpp-service.ims.icsi.mcptt"         RFC 6050 [31]         MCPTT           Service-ID         "urn:urn-7:3gpp-service.ims.icsi.mcptt"         MCVIDEO         MCVIDEO           "urn:urn-7:3gpp-service.ims.icsi.mcptt"         MCDATA         MCDATA           "urn:urn-7:3gpp-service.ims.icsi.mcptt"         MCDATA         MCDATA					
event-type       "presence"       CONFIG         "xcap-diff"       CONFIG       GROUPC         "poc-settings"       POC- SETTINGS       EVENT         Accept       RFC 3261 [22]       EVENT         media-range       "application/pidf+xml"       CONFIG         "application/xcap- diff+xml"       CONFIG       CONFIG         "application/poc- settings+xml"       POC- SETTINGS       CONFIG         P-Preferred-Service       RFC 6050 [31]       SETTINGS         Service-ID       "urn:urn-7:3gpp- service.ims.icsi.mcptt"       MCPTT OR CONFIG         "urn:urn-7:3gpp- service.ims.icsi.mcvide o"       MCVIDEO       MCVIDEO         "urn:urn-7:3gpp- service.ims.icsi.mcvide o"       MCDATA         "urn:urn-7:3gpp- service.ims.icsi.mcdata       MCDATA	Freed	applicable, the cell ID	applicable, the cell ID	DE0 0005 (00)	
"xcap-diff"       CONFIG         "poc-settings"       POC-         SETTINGS       SETTINGS         media-range       "application/pidf+xml"         "application/poc-       CONFIG         settings+xml"       CONFIG         "application/poc-       POC-         settings+xml"       POC-         Service-ID       RFC 6050 [31]         "urn:urn-7:3gpp-       MCPTT         Service-ID       "urn:urn-7:3gpp-         service.ims.icsi.mcptt"       MCPTT         "urn:urn-7:3gpp-       MCVIDEO         service.ims.icsi.mcvide       MCVIDEO         "urn:urn-7:3gpp-       MCVIDEO         service.ims.icsi.mcvide       MCVIDEO         Service.ims.icsi.mcdata       MCDATA		"""		RFC 6665 [39]	
Image: service-ID       "urn:urn-7:3gpp-service ims.icsi.mcvide o"       RFC 6050 [31]       MCCDATA         Service-ID       "urn:urn-7:3gpp-service.ims.icsi.mcvide o"       MCDATA       MCDATA         Service.Type       Image: service.ims.icsi.mcdata       MCDATA       MCDATA         Service.Type       Image: service.ims.icsi.mcdata       MCDATA       MCDATA         Service.Type       Image: service.ims.icsi.mcdata       MCDATA       MCDATA	event-type				
Image: service.ims.icsi.mcvide o"Image: service.ims.icsi.mcvide o"ONFIG"um:um-7:3gpp- service.ims.icsi.mcvide o""um:um-7:3gpp- service.ims.icsi.mcvide o"MCDATA"um:um-7:3gpp- service.ims.icsi.mcvide o"MCDATA"um:um-7:3gpp- service.ims.icsi.mcvide o"MCDATA		xcap-diff			
"poc-settings"     POC- SETTINGS -EVENT       Accept     RFC 3261 [22]       media-range     "application/pidf+xml"       "application/xcap- diff+xml"     CONFIG, GROUPC ONFIG       "application/poc- settings+xml"     POC- SETTINGS -EVENT       P-Preferred-Service     RFC 6050 [31]       Service-ID     "urn:urn-7:3gpp- service.ims.icsi.mcptt"       "urn:urn-7:3gpp- service.ims.icsi.mcvide o"     MCPTT OR CONFIG       "urn:urn-7:3gpp- service.ims.icsi.mcvide o"     MCDATA       "urn:urn-7:3gpp- service.ims.icsi.mcdata "     MCDATA					
Accept       RFC 3261 [22]         media-range       "application/pidf+xml"       CONFIG,         "application/xcap- diff+xml"       "application/xcap- diff+xml"       CONFIG,         "application/poc- settings+xml"       POC- SETTINGS -EVENT       POC- SETTINGS -EVENT         P-Preferred-Service       RFC 6050 [31]       MCPTT OR CONFIG         Service-ID       "um:um-7:3gpp- service.ims.icsi.mcptt"       MCPTT OR GROUPC ONFIG         "um:um-7:3gpp- service.ims.icsi.mcvide o"       MCVIDEO         "um:um-7:3gpp- service.ims.icsi.mcvide o"       MCVIDEO         "um:um-7:3gpp- service.ims.icsi.mcvide o"       MCVIDEO         "um:um-7:3gpp- service.ims.icsi.mcvide o"       MCDATA         "um:um-7:3gpp- service.ims.icsi.mcdata "       MCDATA		"noc-settings"			
Accept-EVENTAccept"application/pidf+xml"RFC 3261 [22]media-range"application/xcap- diff+xml"CONFIG, GROUPC ONFIG"application/poc- settings+xml"POC- SETTINGS -EVENTP-Preferred-ServiceRFC 6050 [31]Service-ID"urn:urn-7:3gpp- service.ims.icsi.mcptt"MCPTT OR GROUPC ONFIG"urn:urn-7:3gpp- service.ims.icsi.mcvide o"MCVIDEO MCVIDEO"urn:urn-7:3gpp- service.ims.icsi.mcvide o"MCDATA"urn:urn-7:3gpp- service.ims.icsi.mcvide o"MCDATA		poc-settings			
Accept       RFC 3261 [22]         media-range       "application/pidf+xml"       CONFIG, GROUPC         "application/poc-settings+xml"       POC-settings+xml"       POC-settings+xml"         Service-ID       "urn:urn-7:3gpp-service.ims.icsi.mcptt"       RFC 6050 [31]         "urn:urn-7:3gpp-service.ims.icsi.mcptt"       MCPTT OR GROUPC ONFIG         "urn:urn-7:3gpp-service.ims.icsi.mcvide o"       MCVIDEO         "urn:urn-7:3gpp-service.ims.icsi.mcvide o"       MCVIDEO         Service.ims.icsi.mcvide o"       MCVIDEO         Service.ims.icsi.mcvide o"       MCDATA         "urn:urn-7:3gpp-service.ims.icsi.mcvide o"       MCDATA					
media-range       "application/pidf+xml"       CONFIG,         "application/xcap- diff+xml"       "application/xcap- diff+xml"       CONFIG,         "application/poc- settings+xml"       POC- settings+xml"       POC- settings+xml"         P-Preferred-Service       RFC 6050 [31]         Service-ID       "urn:urn-7:3gpp- service.ims.icsi.mcptt"       MCPTT OR CONFIG OR GROUPC ONFIG         "urn:urn-7:3gpp- service.ims.icsi.mcvide o"       MCVIDEO         "urn:urn-7:3gpp- service.ims.icsi.mcvide o"       MCVIDEO         Service.ims.icsi.mcvide o"       MCDATA         "urn:urn-7:3gpp- service.ims.icsi.mcdata       MCDATA	Accept			RFC 3261 [22]	
"application/xcap- diff+xml"CONFIG, GROUPC ONFIG"application/poc- settings+xml"POC- SETTINGS SETTINGS -EVENTP-Preferred-ServiceRFC 6050 [31]Service-ID"urn:urn-7:3gpp- service.ims.icsi.mcptt"MCPTT OR CONFIG OR GROUPC ONFIG"urn:urn-7:3gpp- service.ims.icsi.mcvide o"MCVIDEO"urn:urn-7:3gpp- service.ims.icsi.mcvide o"MCVIDEO"urn:urn-7:3gpp- service.ims.icsi.mcdata "MCDATAContent-TypeIRFC 5621 [58]		"application/pidf+xml"			
diff+xml"GROUPC ONFIG"application/poc- settings+xml"POC- SETTINGS -EVENTP-Preferred-ServiceRFC 6050 [31]Service-ID"urn:urn-7:3gpp- service.ims.icsi.mcptt"MCPTT OR CONFIG OR GROUPC ONFIG"urn:urn-7:3gpp- service.ims.icsi.mcvide o"MCPTT OR CONFIG"urn:urn-7:3gpp- service.ims.icsi.mcvide o"MCVIDEOservice.ims.icsi.mcvide o"MCVIDEOService.ims.icsi.mcvide o"MCVIDEOService.ims.icsi.mcvide o"MCDATATurn:urn-7:3gpp- service.ims.icsi.mcdata "MCDATA					CONFIG.
"application/poc-settings+xml"       POC-SETTINGS         P-Preferred-Service       RFC 6050 [31]         Service-ID       "urn:urn-7:3gpp-service.ims.icsi.mcptt"       MCPTT OR CONFIG OR GROUPC ONFIG         "urn:urn-7:3gpp-service.ims.icsi.mcvide o"       "urn:urn-7:3gpp-service.ims.icsi.mcvide o"       MCVIDEO         "urn:urn-7:3gpp-service.ims.icsi.mcvide o"       MCVIDEO       MCVIDEO         "urn:urn-7:3gpp-service.ims.icsi.mcvide o"       MCVIDEO       MCDATA         "urn:urn-7:3gpp-service.ims.icsi.mcdata "       MCDATA       MCDATA					
settings+xml"SETTINGS -EVENTP-Preferred-ServiceRFC 6050 [31]Service-ID"urn:urn-7:3gpp- service.ims.icsi.mcptt"MCPTT OR CONFIG OR GROUPC ONFIG"urn:urn-7:3gpp- service.ims.icsi.mcvide o""urn:urn-7:3gpp- service.ims.icsi.mcvide o"MCVIDEO"urn:urn-7:3gpp- service.ims.icsi.mcvide o"MCVIDEOMCVIDEOService.ims.icsi.mcvide o"MCVIDEOMCVIDEOService.ims.icsi.mcdata "WCDATAMCDATAContent-TypeMC S621 [58]MCDATA					ONFIG
P-Preferred-Service       RFC 6050 [31]         Service-ID       "urn:um-7:3gpp-service.ims.icsi.mcptt"       MCPTT OR CONFIG OR GROUPC ONFIG         "urn:um-7:3gpp-service.ims.icsi.mcvide o"       MCVIDEO         "urn:um-7:3gpp-service.ims.icsi.mcvide o"       MCVIDEO         "urn:um-7:3gpp-service.ims.icsi.mcvide o"       MCVIDEO         Service.ims.icsi.mcdata "       MCDATA		"application/poc-			
P-Preferred-Service       RFC 6050 [31]         Service-ID       "urn:urn-7:3gpp-service.ims.icsi.mcptt"       MCPTT OR CONFIG OR GROUPC ONFIG         "urn:urn-7:3gpp-service.ims.icsi.mcvide o"       MCVIDEO         "urn:urn-7:3gpp-service.ims.icsi.mcvide o"       MCVIDEO         "urn:urn-7:3gpp-service.ims.icsi.mcvide o"       MCVIDEO         Service.ims.icsi.mcdata "       MCDATA         Content-Type       RFC 5621 [58]		settings+xml"			
Service-ID       "urn:urn-7:3gpp-service.ims.icsi.mcptt"       MCPTT         service.ims.icsi.mcptt"       OR       CONFIG         "urn:urn-7:3gpp-service.ims.icsi.mcvide       MCVIDEO         "urn:urn-7:3gpp-service.ims.icsi.mcvide       MCVIDEO         "urn:urn-7:3gpp-service.ims.icsi.mcvide       MCVIDEO         "urn:urn-7:3gpp-service.ims.icsi.mcdata       MCDATA         Content-Type       RFC 5621 [58]					-EVENT
service.ims.icsi.mcptt"       OR       CONFIG         OR       CONFIG       OR         "urn:urn-7:3gpp-       GROUPC       ONFIG         service.ims.icsi.mcvide       MCVIDEO         "urn:urn-7:3gpp-       MCVIDEO         service.ims.icsi.mcvide       MCDATA         "urn:urn-7:3gpp-       MCDATA         Service.ims.icsi.mcdata       MCDATA         "       MCDATA				RFC 6050 [31]	
''urn:urn-7:3gpp- service.ims.icsi.mcvide o"       CONFIG GROUPC ONFIG         "urn:urn-7:3gpp- service.ims.icsi.mcdata "       MCVIDEO         "urn:urn-7:3gpp- service.ims.icsi.mcdata "       MCDATA         Content-Type       I       I	Service-ID				
Image: service ims.icsi.mcvide o"       OR GROUPC ONFIG         Image: service ims.icsi.mcvide o"       MCVIDEO         Image: service ims.icsi.mcvide o"       MCVIDEO         Image: service ims.icsi.mcvide o"       MCVIDEO         Image: service ims.icsi.mcvide o"       MCDATA         Image: service ims.icsi.mcdata or model       MCDATA         Image: service ims.icsi.mcdata or model       Image: service ims.icsi.mcdata or model         Image: service ims.icsi.mcdata or model       Image: service ims.icsi.mcdata or model         Image: service ims.icsi.mcdata or model       Image: service ims.icsi.mcdata or model         Image: service ims.icsi.mcdata or model       Image: service ims.icsi.mcdata or model         Image: service ims.icsi.mcdata or model       Image: service ims.icsi.mcdata or model         Image: service ims.icsi.mcdata or model       Image: service ims.icsi.mcdata or model         Image: service ims.icsi.mcdata or model       Image: service image: servic		service.ims.icsi.mcptt"			
Image: service ims.icsi.mcvide o"       GROUPC ONFIG         "urn:urn-7:3gpp-service.ims.icsi.mcvide o"       MCVIDEO         "urn:urn-7:3gpp-service.ims.icsi.mcdata "       MCDATA         Content-Type       Image: service.ims.icsi.mcdata in the service.ims.					
Image: Service image					
"urn:urn-7:3gpp-service.ims.icsi.mcvide o"       MCVIDEO         "urn:urn-7:3gpp-service.ims.icsi.mcdata "       MCDATA         Service.ims.icsi.mcdata "       MCDATA         Content-Type       RFC 5621 [58]					
service.ims.icsi.mcvide          o"       "urn:urn-7:3gpp-service.ims.icsi.mcdata         service.ims.icsi.mcdata       MCDATA         Content-Type          Image: Service in the serv				+	
o"     MCDATA       "urn:urn-7:3gpp- service.ims.icsi.mcdata "     MCDATA       Content-Type     RFC 5621 [58]					NUCVIDEO
"urn:urn-7:3gpp-service.ims.icsi.mcdata       MCDATA         Content-Type       RFC 5621 [58]					
service.ims.icsi.mcdata					ΜΩΠΑΤΑ
"         End					WODATA
		"			
				1	1
	Content-Type			RFC 5621 [58]	
	media-type	"multipart/mixed"			

Information Element	Value/remark	3 Comment	Reference	Condition
Content-Length	present in case of TCP		RFC 3261 [22]	
0	and when there is a			
	message body			
	(otherwise optional)			
value	any value	length of message-		
		body		
Message-body			RFC 3261 [22]	
MIME body part		MCPTT/MCVideo/MCD		
		ata Info		
MIME-part-headers				
Content-Type	"application/vnd.3gpp.			MCPTT
	mcptt-info+xml"			OR
				CONFIG
				OR
				GROUPC
				ONFIG
	"application/vnd.3gpp.			MCVIDEC
	mcvideo-info+xml"			
	"application/vnd.3gpp.			MCDATA
	mcdata-info+xml"			
Content-ID	any value	Unique URL identifying	TS 24.379 [9]	
00		the	clause 6.6.3.1	
		MCPTT/MCVideo/MCD		
		ata Info XML MIME		
		body; used as		
		reference in the		
		signature MIME body		
MIME-part-body	MCPTT-Info as		TS 24.379 [9]	MCPTT
<u> </u>	described in Table		clause F.1	OR
	5.5.3.2.1-1			CONFIG
				OR
				GROUPC
				ONFIG
	MCVideo-Info as		TS 24.281 [86]	MCVIDEC
	described in Table		clause F.1	
	5.5.3.2.1-2			
	MCData-Info as		TS 24.282 [87]	MCDATA
	described in Table		clause D.1	
	5.5.3.2.1-3			
MIME body part		SIMPLE-FILTER		PRESENC
51				E-EVENT
MIME-part-headers				
Content-Type	"application/simple-			
	filter+xml"			
Content-ID	any value	Unique URL identifying	TS 24.379 [9]	
	, , , , , , , , , , , , , , , , , , , ,	the SIMPLE-FILTER	clause 6.6.3.1	
		XML MIME body; used		
		as reference in the		
		signature MIME body		
MIME-part-body	SIMPLE-FILTER as		TS 24.379 [9]	
	described in Table		clause 9.3.2	
	5.5.3.6-1		TS 24.281 [86]	
			clause 8.3.2	
			TS 24.282 [87]	
			clause 8.4.2	
MIME body part		Resource-lists		CONFIG,
				GROUPC
				ONFIG
MIME-part-headers				
Content-Type	"application/resource-			
••	lists+xml"			1

Derivation Path: TS 24.229 [16]	clause A.2.1.4.13, A.2.2.4.1	3		
Information Element	Value/remark	Comment	Reference	Condition
Content-ID	any value	Unique URL identifying the Resource-lists XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Resource-lists as described in Table 5.5.3.3.1A-1			
MIME body part		MIKEY	RFC 3830 [24]	CONFIG, GROUPC ONFIG
MIME-part-headers				
Content-Type	"application/mikey"			
MIME-part-body	MIKEY message as described in Table 5.5.9.1-1	MIKEY message, containing the CSK	TS 33.180 [94]	
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-1		TS 24.379 [9]	

Condition	Explanation
re_SUBSCRIBE	SUBSCRIBE within a dialog
For further conditions see table 5.5.1-1	

- 5.5.2.15 SIP UPDATE
- 5.5.2.15.1 SIP UPDATE from the UE

Table 5.5.2.15.1-1: SIP UPDATE from the UE

Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22]	
			RFC 5031 [54]	
Method	"UPDATE"			
Request-URI	The same URI value as			
	the recipient of			
	UPDATE has earlier			
	sent in its Contact			
	header within the same			
	dialog 'SIP/2.0"			
SIP-Version Via	5IP/2.0		DEC 0004 [00]	
VIA			RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"		KFC 3301 [35]	
sent-protocol	"SIP/2.0/TCP"			TCP
sent-by	same value as in			MO_CALL
Sent-by	INVITE message			
sent-by				MT_CALL
host	IP address or FQDN	Either the UE's IP	<u> </u>	
		address or its home		
		domain name		
port	protected server port of	as assigned during		
F	the UE	registration		
via-branch	Value starting with			
	'z9hG4bK'			
Route			RFC 3261 [22]	
route-param list	URIs of the Record-			MO_CALL
	Route header sent to			
	the UE in the response			
	which has established			
	the dialog, in reverse			
	order			
	URIs of the Record-			MT_CALL
	Route header sent to			
	the UE in the INVITE			
From			RFC 3261 [22]	
addr-spec	Same URI of the UE as	Local URI of the dialog		
	used earlier in the	(from the UE's point of		
	dialog	view)		
tag	Same tag of the UE as	Local tag of the dialog		
	used earlier in the	ID (from the UE's point		
To	dialog	of view)		
То			RFC 3261 [22]	
addr apaa	Same URI of the SS as	Pamata LIPL of the	RFC 5031 [54]	
addr-spec		Remote URI of the		
	used earlier in the dialog	dialog (from the UE's point of view)		
tag	Same tag of the SS as	Remote tag of the		
tag	used earlier in the	dialog ID (from the UE's		
	dialog	point of view)		
Call-ID			RFC 3261 [22]	
callid	Same value as used in			
	the INVITE initiating the			
	dialog			
Contact	Contact header with the		RFC 3261 [22]	MO_CALL
	same Contact URI and			
	the same mandatory			
	feature parameters as			
	in the INVITE creating			
	the dialog			

	Contact header with the same Contact URI and			MT_CALL
	the same mandatory feature parameters as			
	in the response for the			
	INVITE creating the			
	dialog			
CSeq			RFC 3261 [22]	
value	value of CSeq sent by the UE within its previous request in the same dialog but			
method	increased by one "UPDATE"			
Require	OFDATE		RFC 3261 [22]	
Nequile			RFC 3329 [53]	
option-tag	"sec-agree"			
Proxy-Require			RFC 3261 [22]	
			RFC 3329 [53]	
option-tag	"sec-agree"			
Security-Verify			RFC 3329 [53]	
sec-mechanism	same value as Security			
	-Server header sent by			
	SS during registration			
Max-Forwards			RFC 3261 [22]	
value	any allowed value	Non-zero value		
P-Access-Network-Info			RFC 7315 [52] RFC 7913 [51]	
access-net-spec	Access network technology and, if applicable, the cell ID			
Content-Type			RFC 5621 [58]	
media-type	"application/sdp"		11 0 0021 [00]	
Content-Length	present in case of TCP and when there is a message body		RFC 3261 [22]	
	(otherwise optional)	I an attain of an and a second		
value	any value	length of message- body		
Message-body			RFC 3261 [22]	
SDP Message	SDP Message as described in Table 5.5.3.1.1-1			
	SDP Message as described in Table 5.5.3.1.1-2			MCVIDEO
	SDP Message as described in Table 5.5.3.1.1-3			MCDATA

5.5.2.15.2 SIP UPDATE from the SS

Table 5.5.2.15.2-1: SIP UPDATE from the SS

Request-Line				
			RFC 3261 [22] RFC 5031 [54]	
Method	"UPDATE"			
Request-URI	same URI as the UE has sent earlier in the Contact header of a response within the same dialog	Contact URI of the UE ("callee")		
SIP-Version	'SIP/2.0"			
Via	same as specified for INVITE sent by the SS in Table 5.5.2.5.2-1 with updated via- branches		RFC 3261 [22]	
From			RFC 3261 [22]	
addr-spec	Same URI of the SS as used earlier in the dialog	Remote URI of the dialog (from the UE's point of view)		
tag	Same tag of the SS as used earlier in the dialog	Remote tag of the dialog (from the UE's point of view)		
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec	Same URI of the UE as used earlier in the dialog	Local URI of the dialog (from the UE's point of view)		
tag	Same tag of the UE as used earlier in the dialog	Local tag of the dialog (from the UE's point of view)		
Call-ID	ž – ž		RFC 3261 [22]	
callid	Same value as used in the INVITE initiating the dialog			
Contact	same as in the response for the INVITE creating the dialog		RFC 3261 [22]	MO_CALL
	same as in the INVITE creating the dialog			MT_CALL
CSeq			RFC 3261 [22]	
value	value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one			
method	"UPDATE"			
Max-Forwards			RFC 3261 [22]	
value	"68"	The recommended initial value is 70 in RFC 3261 [22]. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UE.		
Content-Type			RFC 5621 [58]	
media-type	"application/sdp"			
Content-Length	length of message- body		RFC 3261 [22]	
value	length of message- body			

SDP Message	SDP Message as described in Table 5.5.3.1.1-2		
	SDP Message as described in Table 5.5.3.1.2-2		MCVIDEO
	SDP Message as described in Table 5.5.3.1.2-3		MCDATA

## 5.5.2.16 SIP 1xx

## 5.5.2.16.1 SIP 100 (Trying)

This message is sent by the UE or the SS.

## Table 5.5.2.16.1-1: SIP 100 (Trying)

Derivation Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"100"			
Reason-Phrase	"Trying"			
Via				
via-parm	same value as received in INVITE message			
From				
addr-spec	same value as received in INVITE message			
tag	same value as received in INVITE message			
То	×			
addr-spec	same value as received in INVITE message			
Call-ID				
callid	same value as received in INVITE message			
CSeq				
value	same value as received in INVITE message			
Content-Length	Optional in case of the message being sent by the UE			
value	"0"	No message body included - end of SIP message		

## 5.5.2.16.2 SIP 180 (Ringing)

## 5.5.2.16.2.1 SIP 180 (Ringing) from the UE

## Table 5.5.2.16.2.1-1: SIP 180 (Ringing) from the UE

Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"180"			
Reason-Phrase	"Ringing"			
Record-Route			RFC 3261 [22]	
rec-route	same as received in INVITE message			
Via	same as received in INVITE message		RFC 3261 [22] RFC 3581 [55]	
Require			· ·	100rel
option-tag	"100rel"			
From				
addr-spec	same value as received in INVITE message			
tag	same value as received in INVITE message			
То				
addr-spec	same value as received in INVITE message			
tag	same value as received in the INVITE message or any value if missing in the INVITE message.			
Contact				
addr-spec	SIP URI			
user-info and host	IP address or FQDN			
port	protected server port of UE	as assigned during registration		
feature-param	"+g.3gpp.mcptt"			MCPTT
	"+g.3gpp.mcvideo"			MCVIDEO
feature-param	"+g.3gpp.icsi-ref= urn:urn-7:3gpp- service.ims.icsi.mcptt"			MCPTT
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO
feature-param	"audio"			MCPTT OR MCVideo
feature-param	"video"			MCVIDEO
Supported				
option-tag	"norefersub"			
Rseq			RFC 3262 [97]	100rel
response-num	previous RSeq number sent in the same direction incremented by one			
Call-ID				
callid	same value as received in INVITE message			
CSeq				
value	same value as received in INVITE message			
Content-Length	if present			
value	"0"	No message body included		

Condition	Explanation
100rel	Reponse sent reliable according to RFC 3262 [97]

5.5.2.16.2.2 SIP 180 (Ringing) from the SS

## Table 5.5.2.16.2.2-1: SIP 180 (Ringing) from the SS

Derivation Path: RFC 3261 [22]		-		
Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"180"			
Reason-Phrase	"Ringing"			
Record-Route	same as spefied for the SIP 200 (OK) from the SS in table 5.5.2.17.1.2-1 with condition INVITE-RSP		RFC 3261 [22]	
Via	same as received in the INVITE message		RFC 3261 [22] RFC 3581 [55]	
Require	Ŭ Ŭ			100rel
option-tag	"100rel"			
From				
addr-spec	same value as in the request			
tag	same value as in the request			
То				
addr-spec	same value as in the request			
tag	same value as in the request or To-tag assigned by the SS if missing in the request			
Contact				
addr-spec				
user-info and host	tsc_MCPTT_SessionId tsc_MCVideo_SessionI d			MCPTT MCVIDEO
port	not present			
feature-param	"+g.3gpp.mcptt" "+g.3gpp.mcvideo"			MCPTT MCVIDEO
feature-param	"+g.3gpp.icsi-ref= urn:urn-7:3gpp- service.ims.icsi.mcptt"			MCPTT
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO
feature-param	"audio"			MCPTT OR MCVIDEO
feature-param	"video"	This feature tag indicates that the device supports video as a streaming media type.		MCVIDEO
feature-param	"isfocus"			
Supported				
option-tag	"norefersub"			
Rseq			RFC 3262 [97]	100rel

Information Element	Value/remark	Comment	Reference	Condition
response-num	previous RSeq number sent in the same direction incremented by one; arbitrarily selected if there is no previous RSeq number			
Call-ID				
callid	same value as received in INVITE message			
CSeq				
value	same value as received in INVITE message			
Content-Length	¥			
value	"0"	No message body included		

Condition	Explanation
100rel	Reponse sent reliable according to RFC 3262 [97]

- 5.5.2.16.3 SIP 183 (Session Progress)
- 5.5.2.16.3.1 SIP 183 (Session Progress) from the UE

Table 5.5.2.16.3.1-1: SIP 183 (Session Progress) from the UE

Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"183"			
Reason-Phrase	"Session progress"			
Record-Route			RFC 3261 [22]	
rec-route	same as received in INVITE message			
Via	same as received in INVITE message		RFC 3261 [22] RFC 3581 [55]	
Require				100rel
option-tag	"100rel"			100101
From	100161			
addr-spec	same value as received in INVITE message			
tag	same value as received			
То	in INVITE message			
addr-spec	same value as received in INVITE message			
tag	same value as received in the INVITE message			
	or any value if missing in the INVITE message.			
Contact				
addr-spec	SIP URI			
user-info and host	IP address or FQDN			
port	protected server port of UE	as assigned during registration		
feature-param	"+g.3gpp.mcptt"			MCPTT
	"+g.3gpp.mcvideo"			MCVIDEO
feature-param	"+g.3gpp.icsi-ref= urn:urn-7:3gpp- service.ims.icsi.mcptt"			MCPTT
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO
feature-param	"audio"			MCPTT OR
footuro porem	"video"			MCVideo
feature-param	"video"			MCVIDEO
Supported	lle and a set l			<u> </u>
option-tag	"norefersub"			100
Rseq response-num	previous RSeq number sent in the same direction incremented by one			100rel
Call-ID				1
callid	same value as received in INVITE message			
CSeq				
value	same value as received in INVITE message			
P-Anewor-Stata				<u> </u>
P-Answer-State	if present			
value	"unconfirmed"			<b> </b>
Content-Length	if present		RFC 3261 [22]	
value	"0"	No message body included		

Condition	Explanation
100rel	Reponse sent reliable according to RFC 3262 [97]

### 5.5.2.16.3.2

### SIP 183 (Session Progress) from the SS

Derivation Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"183"			
Reason-Phrase	"Session progress"			
Record-Route	same as specified for the SIP 200 (OK) from the SS in table 5.5.2.17.1.2-1 with condition INVITE-RSP		RFC 3261 [22]	
Via	same as received in the INVITE message		RFC 3261 [22] RFC 3581 [55]	
Require				100rel
option-tag	"100rel"			
From				
addr-spec	same value as in the request			
tag	same value as in the request			
То				
addr-spec	same value as in the request			
tag	same value as in the request or To-tag assigned by the SS if missing in the request			
Contact				
addr-spec				
user-info and host	tsc_MCPTT_SessionId tsc_MCVideo_SessionI d			MCPTT MCVIDEO

## Table 5.5.2.16.3.2-1: SIP 183 (Session Progress) from the SS

port	not present			
feature-param	"+g.3gpp.mcptt"			MCPTT
	"+g.3gpp.mcvideo"			MCVIDEO
feature-param	"+g.3gpp.icsi-ref=			MCPTT
	urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcvide			
	Ο"			
feature-param	"audio"			MCPTT
				OR
				MCVIDEO
feature-param	"video"	This feature tag		MCVIDEO
		indicates that the		
		device supports video		
		as a streaming media		
		type.		
feature-param	"isfocus"			
Supported				
option-tag	"norefersub"			
Rseq				100rel
response-num	previous RSeq number			
	sent in the same			
	direction incremented			
	by one; arbitrarily			
	selected if there is no			
	previous RSeq number			
Call-ID				
callid	same value as received			
	in INVITE message			
CSeq				
value	same value as received			
	in INVITE message			
P-Answer-State				
value	"unconfirmed"			
P-Asserted-Identity			RFC 3325 [32]	
addr-spec				
user-info and host	tsc_MCPTT_PublicServ			MCPTT
	iceld_A			
	tsc_MCVideo_PublicSe			MCVIDEO
	rviceId_A			
port	not present			
Content-Length			RFC 3261 [22]	
value	"0"	No message body		
		included		

Condition	Explanation
100rel	Response sent reliable according to RFC 3262 [97]

- 5.5.2.17 SIP 2xx
- 5.5.2.17.1 SIP 200 (OK)
- 5.5.2.17.1.1 SIP 200 (OK) from the UE

Table 5.5.2.17.1.1-1: SIP 200 (OK) from the UE

Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"200"			
Reason-Phrase Via	"OK"		DEC 0004 [00]	
	same as received in the request		RFC 3261 [22] RFC 3581 [55]	
Record-Route			RFC 3261 [22]	INVITE- RSP
rec-route	same as received in the request			
From				
addr-spec	Same value as received in the request			
tag	same value as received in the request			
То				
addr-spec	same value as received in the request			
tag	same value as received in the request or any value if missing in the			
	request.			
Contact				INVITE- RSP
user-info and host	IP address or FQDN			
port	protected server port of UE	as assigned during registration		
feature-param	"+g.3gpp.mcptt"			MCPTT
	"+g.3gpp.mcvideo"			MCVIDEC
	"+g.3gpp.mcdata.sds"		TS 24.282 [87] clause 9.2.3.2.4	MCDATA_ SDS
	"+g.3gpp.mcdata.fd"		TS 24.282 [87] clause 10.2.5.2.4	MCDATA_ FD
	"+g.3gpp.mcdata.ipcon n"		TS 24.282 [87] clause 20.2.2	MCDATA_ PCONN
feature-param	"+g.3gpp.icsi-ref= urn:urn- 7:3gpp- service.ims.icsi.mcptt"			MCPTT
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"		TS 24.282 [87] clause 9.2.3.2.4	MCDATA_ SDS
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. fd"		TS 24.282 [87] clause 10.2.5.2.4	MCDATA_ FD
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. ipconn"		TS 24.282 [87] clause 20.2.2	MCDATA_ PCONN
feature-param	"audio"			MCPTT OR MCVideo
feature-param	"video"			MCVIDEO
feature-param	"text"			MCDATA_ SDS, MCDATA_
			1	FD

Information Element	Value/remark	Comment	Reference	Condition
callid	same value as received in the request			
CSeq				
value	same value as received in the request			
Require				INVITE- RSP
option-tag	"timer"			
Session-Expires				INVITE- RSP
delta-seconds	Same value as session expires header in SIP INVITE		RFC 4028 [30] TS 24.229 [16] cl.5.1.4.1	
refresher	"uas"			
Content-Type			RFC 5621 [58]	INVITE- RSP
value	"multipart/mixed"			
Content-Length	present in case of TCP and when there is a message body (otherwise optional)		RFC 3261 [22]	
value	any value	length of message- body		
P-Answer-State	If present		RFC 4964 [118] TS 24.379 [9] clause 6.2.3.1.2	INVITE- RSP AND GROUP- CALL
answer-type	"confirmed"			
Message-body	not present		RFC 3261 [22]	
Message-body			RFC 3261 [22]	INVITE- RSP
MIME body part		SDP message		
MIME-part-header				
MIME-Content-Type	"application/sdp"		RFC 4566 [27]	
MIME-part-body	SDP message as described in Table 5.5.3.1.1-1			MCPTT
	SDP message as described in Table 5.5.3.1.1-2			MCVIDEC
	SDP message as described in Table 5.5.3.1.1-3			MCDATA
MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-header				
MIME-Content-Type	"application/vnd.3gpp. mcptt-info+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-info+xml"			MCVIDEC
	"application/vnd.3gpp. mcdata-info+xml"			MCDATA
Content-ID	any value	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	MCPTT-Info as described in Table 5.5.3.2.1-1	- <u> </u>	TS 24.379 [9] clause F.1	MCPTT

Derivation Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
	MCVideo-Info as described in Table 5.5.3.2.1-2		TS 24.281 [86] clause F.1	MCVIDEO
	MCData-Info as described in Table 5.5.3.2.1-3		TS 24.282 [87] clause D.1	MCDATA
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-1		TS 24.379 [9]	

Condition	Explanation
INVITE-RSP	200 OK is the response to the SIP INVITE
MCDATA_SDS	200 OK for INVITE to setup SDS session
MCDATA_FD	200 OK for INVITE to FD session using media plane
MCDATA_IPCONN	200 OK for INVITE to setup IP connectivity

### ETSI

5.5.2.17.1.2 SIP 200 (OK) from the SS

Table 5.5.2.17.1.2-1: SIP 200 (OK) from the SS

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"200"			
Reason-Phrase	"OK"			
Via	same as received in the request		RFC 3261 [22] RFC 3581 [55]	
Record-Route			RFC 3261 [22]	INVITE- RSP
addr-spec[1]	SIP URI			
user-info and host	pcscf.other.com			
port	not present			
uri-parameters	"lr"			
addr-spec[2]	SIP URI			
user-info and host	scscf.other.com			
port	not present			
uri-parameters	"lr"			
addr-spec[3]	SIP URI			
user-info and host	orig@scscf.3gpp.org			
port uri poromotoro	not present "Ir"			
uri-parameters	SIP URI			
addr-spec[4] user-info and host		P-CSCF address		
user-into and nost	same address as sent by the UE in the first entry of the Route header of the INVITE	P-CSCF address		
port	not present			
uri-parameters	"lr"			
Record-Route			RFC 3261 [22]	SUBSCRI BE-RSP
addr-spec[1]	SIP URI			
user-info and host	P-CSCF address of the SS	P-CSCF address as assigned to the UE via NAS signalling or P- CSCF discovery		
port	not present			
uri-parameters	"lr"			
From				
addr-spec	same value as in the request			
tag	same value as in the request			
То				
addr-spec	same value as in the request			
tag	same value as in the request or To-tag assigned by the SS if missing in the request			
Expires			RFC 3261 [22] RFC 3903 [43]	SUBSCRI BE-RSP, PUBLISH- RSP
value	same value as in the request			
Contact				REGISTE R-RSP
addr-spec	same value as received in the REGISTER			
feature-param	"+g.3gpp.mcptt"			MCPTT
feature-param	"+g.3gpp.mcvideo"			MCVIDEO
feature-param	"+g.3gpp.mcdata.sds"			MCDATA
feature-param	"+g.3gpp.mcdata.fd"			MCDATA
expires	"600000"			

Information Element	Value/remark	Comment	Reference	Condition
Contact				SUBSCRI
				BE-RSP
addr-spec user-info and host	Same URI as used as			
user-into and host	Request-URI of the			
	SUBSCRIBE message			
port	not present			
Contact				INVITE-
Contact				RSP
addr-spec				
user-info and host	tsc_MCPTT_SessionId			MCPTT
	tsc_MCVideo_SessionI			MCVIDEO
	d			
	tsc_MCData_SessionId			MCDATA
port	not present			
feature-param	"+g.3gpp.mcptt"			MCPTT
	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"		TS 24.282 [87]	MCDATA_
			clause	SDS
			9.2.3.2.4	
	"+g.3gpp.mcdata.fd"		TS 24.282 [87]	MCDATA_
			clause	FD
			10.2.5.2.4	MODATA
	"+g.3gpp.mcdata.ipcon		TS 24.282 [87]	MCDATA_
f t	n"		clause 20.3.1	PCONN
feature-param	"+g.3gpp.icsi-ref=			MCPTT
	urn:urn- 7:3gpp-			
	service.ims.icsi.mcptt"			100 / 550
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcvide			
	0"		TO 04 000 [07]	
	"+g.3gpp.icsi-		TS 24.282 [87]	MCDATA_
	ref=urn:urn-7:3gpp- service.ims.icsi.mcdata.		clause 9.2.3.2.4	SDS
	service.ims.icsi.mcdata.		9.2.3.2.4	
	"+g.3gpp.icsi-		TS 24.282 [87]	MCDATA
	ref=urn:urn-7:3gpp-		clause	FD
	service.ims.icsi.mcdata.		10.2.5.2.4	ΤD
	fd"		10.2.3.2.4	
	"+g.3gpp.icsi-		TS 24.282 [87]	MCDATA
	ref=urn:urn-7:3gpp-		clause 20.3.1	PCONN
	service.ims.icsi.mcdata.			
	ipconn"			
feature-param	"audio"			MCPTT
				OR
				MCVIDEO
feature-param	"video"			MCVIDEO
feature-param	"text"			MCDATA
-				SDS,
				MCDATA_
				FD
feature-param	"isfocus"			
Call-ID				
callid	same value as received			
	in the request			
CSeq				
value	same value as received			
	in the request			
Require				INVITE-
	n			RSP
option-tag	"timer"			
Session-Expires				INVITE-
				RSP

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
refresher	"uac"			
Supported				INVITE- RSP
option-tag	"tdialog"			
option-tag	"norefersub"			
option-tag	"explicitsub"			
option-tag	"nosub"			
Refer-Sub			RFC 4488 [36]	REFER- RSP
refer-sub-value	"false"			
P-Associated-URI			RFC 7315 [52]	REGISTE R-RSP
addr-spec[1]	SIP URI			
host	px_MCX_SIP_PublicUs erId_A_1			
port	not present			
Service-Route			RFC 3261 [22]	REGISTE R-RSP
addr-spec[1]	SIP URI			
host	scscf.3gpp.org			
port	not present			
uri-parameters	"lr"			
SIP-ETag			RFC 3903 [43]	PUBLISH- RSP
entity-tag	unique value arbitrarily selected by the SS			
Content-Type			RFC 4566 [27]	INVITE- RSP
media-type	"application/sdp"			
Content-Length			RFC 3261 [22]	
value	length of message- body			
Message-body			RFC 3261 [22]	INVITE- RSP
SDP message	SDP message as described in Table 5.5.3.1.2-1			MCPTT
	SDP message as described in Table 5.5.3.1.2-2			MCVIDEO
	SDP message as described in Table 5.5.3.1.2-3			MCDATA

Condition	Explanation
REGISTER-RSP	200 OK is the response to a SIP REGISTER
INVITE-RSP	200 OK is the response to a SIP INVITE
SUBSCRIBE-RSP	200 OK is the response to a SIP SUBSCRIBE
PUBLISH-RSP	200 OK is the response to a SIP PUBLISH
REFER-RSP	200 OK is the response to a SIP REFER
MCDATA_SDS	200 OK for INVITE to setup SDS session
MCDATA_FD	200 OK for INVITE to FD session using media plane
MCDATA_IPCONN	200 OK for INVITE to setup IP connectivity

## 5.5.2.17.2 SIP 202 (Accepted)

Derivation Path: RFC 2616 [26]				
Information Element	Value/remark	Comment	Reference	Condition
Status-Line			RFC 3261 [22]	
SIP-Version	"SIP/2.0"			
Status-Code	"202"			
Reason-Phrase	"Accepted"			
Via	same value as received in request		RFC 3261 [22]	
From			RFC 3261 [22]	
addr-spec	same value as received in request			
tag	same value as received in request			
То			RFC 3261 [22]	
addr-spec	same value as received in request			
tag	same value as in the request or To-tag assigned by the SS if missing in the request			
Call-ID			RFC 3261 [22]	
callid	same value as received in request			
CSeq			RFC 3261 [22]	
value	same value as received in request			
Content-Length			RFC 3261 [22]	
value	"0"			

# Table 5.5.2.17.2-1: SIP 202 (Accepted)

## 5.5.2.18 SIP 3xx

## 5.5.2.18.1 SIP 302 (Moved Temporarily)

### Table 5.5.2.18.1-1: SIP 302 (Moved Temporarily)

Delivery Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"302"			
Reason-Phrase	"Moved Temporarily"			
Content-Length			RFC 3261 [22]	
value	"0"	No message body included - end of SIP message		

Editor's note: Table 5.5.2.18.1-1 needs to be reviewed

## 5.5.2.19 SIP 4xx

## 5.5.2.19.1 SIP 403 (Forbidden)

This message is sent by the SS.

### Table 5.5.2.19.1-1: SIP 403 (Forbidden)

Delivery Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"403"			
Reason-Phrase	"Forbidden"			
Via	same as received in the request			
From				
addr-spec	same value as in the request			
tag	same value as in the request			
То				
addr-spec	same value as in the request			
tag	same value as in the request or To-tag assigned by the SS if missing in the request			
Call-ID				
callid	same value as in the request			
CSeq				
value	same value as in the request			
Warning			RFC 3261 [22]	
warn-code[1]	"100"			
warn-agent[1]		name or pseudonym of the server adding the Warning header		
pseudonym	"MCX Server"			
warn-text[1]	"function not allowed due to" <detailed reason&gt;</detailed 			
Content-Length			RFC 3261 [22]	
value	"0"			

## 5.5.2.19.2 SIP 404 (Not Found)

### Table 5.5.2.19.2-1: SIP 404 (Not Found)

Delivery Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"404"			
Reason-Phrase	"Not Found"			
Content-Length			RFC 3261 [22]	
value	"0"	No message body included - end of SIP message		

Editor's note: Table 5.5.2.19.2-1 needs to be reviewed

### 5.5.2.19.3 SIP 423 (Interval Too Brief)

### Table 5.5.2.19.3-1: SIP 423 (Interval Too Brief)

Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"423"			
Reason-Phrase	"Internal Too Brief"			
Content-Length			RFC 3261 [22]	
value	"0"	No message body included - end of SIP message		

#### Editor's note: Table 5.5.2.19.3-1 needs to be reviewed

### 5.5.2.19.4 SIP 480 (Temporarily unavailable)

This message is sent by the UE.

### Table 5.5.2.19.4-1: SIP 480 (Temporarily unavailable)

Derivation Path: RFC 3261 [22]					
Information Element	Value/remark	Comment	Reference	Condition	
Request-Line					
SIP-Version	"SIP/2.0"				
Status-Code	"480"				
Reason-Phrase	"Temporarily Unavailable"				
Via	same as received in request message		RFC 3261 [22] RFC 3581 [55]		
From					
addr-spec	same value as received in INVITE message				
tag	same value as received in request message				
То					
addr-spec	same value as received in request message				
tag	same value as received in the INVITE or any value if missing in the INVITE.				
Warning			RFC 3261 [22]		
warn-code[1]	"399"				
warn-agent[1]	any value				
warn-text[1]	"110 user declined the call invitation"				
Call-ID	same value as received in request message				
CSeq	same value as received in request message				
Content Length	if present				
value	"0"	No message body included			

### 5.5.2.19.5 SIP 486 (Busy Here)

### Table 5.5.2.19.5-1: SIP 486 (Busy Here)

Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"486"			
Reason-Phrase	"Busy Here"			
Content-Length			RFC 3261 [22]	
value	"0"	No message body included - end of SIP message		

Editor's note: Table 5.5.2.18.5-1 needs to be reviewed

5.5.2.19.6 SIP 488 (Not Acceptable Here)

### Table 5.5.2.19.6-1: SIP 488 (Not Acceptable Here)

Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"488"			
Reason-Phrase	"Not Acceptable Here"			
Content-Length			RFC 3261 [22]	
value	"0"	No message body included - end of SIP message		

Editor's note: Table 5.5.2.19.6-1 needs to be reviewed

5.5.2.19.7 SIP 401 (Unauthorized)

Table 5.5.2.19.7-1: SIP 401 (Unauthorized)

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Status-Line		Johnnent	RFC 3261 [22]	USIANUUT
SIP-Version	"SIP/2.0"			
Status-Code	"401"			
Reason-Phrase	"Unauthorized"			
Via	Same value as		RFC 3261 [22]	
	received in the			
	REGISTER message			
То			RFC 3261 [22]	
addr-spec	Same value as			
	received in the REGISTER message			
tag	To-tag assigned by the			
lag	SS			
From	Same value as		RFC 3261 [22]	
	received in the			
	REGISTER message			
Call-ID	Same value as		RFC 3261 [22]	
	received in the			
	REGISTER message			
CSeq	Same value as		RFC 3261 [22]	
	received in the			
WWW-Authenticate	REGISTER message		DEC 0647 [70]	
wwwww-Aumenticate			RFC 2617 [72] RFC 3310 [96]	
Realm	px_MCX_DomainName			
Realiti	_Organization_A			
algorithm	"AKAv1-MD5"			
qop-value	"auth"			
nonce	Base 64 encoding of			
	RAND and AUTN			
opaque	arbitrary value (to be			
	returned by the UE in			
	subsequent			
	REGISTER)			
Security-Server			RFC 3329 [50]	
mechanism-name	"ipsec-3gpp"			
algorithm[1]	px_lpSecAlgorithm (hmac-md5-96 or			
	hmac-sha-1-96)			
spi-c[1]	SPI number of the			
ob: o[1]	inbound SA at the			
	protected client port			
spi-s[1]	SPI number of the			
	inbound SA at the			
	protected server port			
port-c[1]	protected client port of			
	SS			
port-s[1]	protected server port of			
	SS			
Encrypt-algorithm[1]	des-ede3-cbc or aes- cbc			
q[1]	"0.9"			
mechanism-name[2]	"Ipsec-3gpp"			
algorithm[2]	Algorithm not selected			
	by px_lpSecAlgorithm			
	(hmac-sha-1-96 or			
	hmac-md5-96)			
spi-c[2]	SPI number of the			
	inbound SA at the			
	protected client port			
spi-s[2]	SPI number of the			
	inbound SA at the			
	protected server port			ļ
port-c[2]	protected client port of			
	SS			

port-s[2]	protected server port of SS	
encrypt-algorithm[2]	des-ede3-cbc or aes- cbc	
q[2]	"0.7"	
Content-Length		RFC 3261 [22]
value	"0"	

## 5.5.2.19.8 SIP 487 (Request Terminated)

### Table 5.5.2.19.8-1: SIP 486 (Request Terminated)

Derivation Path: RFC 3261 [22]					
Information Element	Value/remark	Comment	Reference	Condition	
Request-Line					
SIP-Version	"SIP/2.0"				
Status-Code	"487"				
Reason-Phrase	"Request Terminated"				
Content-Length			RFC 3261 [22]		
value	"0"	No message body included - end of SIP message			

## 5.5.2.20 SIP 5xx

### 5.5.2.20.1 SIP 500 (Server Internal Error)

### Table 5.5.2.20.1-1: SIP 500 (Server Internal Error)

Derivation Path: RFC 3261 [22]					
Information Element	Value/remark	Comment	Reference	Condition	
Request-Line					
SIP-Version	"SIP/2.0"				
Status-Code	"500"				
Reason-Phrase	"Server Internal Error"				
Content-Length			RFC 3261 [22]		
value	"0"	No message body included - end of SIP			
		message			

Editor's note: Table 5.5.2.20.1-1 needs to be reviewed

## 5.5.2.21 SIP 6xx

### 5.5.2.21.1 SIP 606 (Not Acceptable)

### Table 5.5.2.21.1-1: SIP 606 (Not Acceptable)

Derivation Path: RFC 3261 [22]					
Information Element	Value/remark	Comment	Reference	Condition	
Request-Line					
SIP-Version	"SIP/2.0"				
Status-Code	"606"				
Reason-Phrase	"Not Acceptable"				
Content-Length			RFC 3261 [22]		
value	"O"	No message body included - end of SIP message			

Editor's note: Table 5.5.2.21.1-1 needs to be reviewed

# 5.5.3 Default SDP message and other information elements

## 5.5.3.1 SDP Message

## 5.5.3.1.0 Common conditions for SDP Message

The following conditions apply throughout clause 5.5.3.1:

Condition	Explanation
INITIAL_SDP_OFFER	SDP message is an initial offer
SDP_OFFER	SDP message is an offer;
_	INITIAL_SDP_OFFER implies SDP_OFFER, i.e. when a test
	case or test procedure specifies INITIAL_SDP_OFFER then
	SDP_OFFER shall be applied too, even when not explicitly
	specified.
SDP_ANSWER	SDP message is an Answer
FIRST_SDP_FROM_UE	First SDP message sent by the UE within the session;
	FIRST_SDP_FROM_UE shall be applied implicitly for an SDP
	message sent by the UE when the SDP message is the first
	SDP message sent by the UE for a session.
	$\Rightarrow$ In general FIRST_SDP_FROM_UE does not need to be
	specified for a specific message content.
FIRST_SDP_FROM_SS	First SDP message sent by the SS within the session;
	FIRST_SDP_FROM_SS shall be applied implicitly for an SDP
	message sent by the SS when the SDP message is the first
	SDP message sent by the UE for a session.
	$\Rightarrow$ In general FIRST_SDP_FROM_SS does not need to be
	specified for a specific message content; nevertheless
	FIRST_SDP_FROM_SS may be specified for a specific
	message content when the SDP message is for a new session
	(e.g. when a new dialog replaces a pre-established session)
IMPLICIT_GRANT_REQUESTED	An implicit grant is requested by the user
IMPLICIT_FLOOR_GRANTED	An implicit grant shall be granted by the SS
PRE_ESTABLISHED_SESSION	SDP message during establishment or modification of a pre-
	established session
	NOTE: The condition shall be applied for all SDP messages of
	preestablished session test cases and it is not explicitly
	mentioned in specific message content for these test cases
WITHOUT_FLOORCONTROL	SDP message for MCPTT call without floor control:
	In general when this condition is applied for an on-demand call
	the SDP message does not contain a media description for
	media plane control at all, whereas for call establishment using
	pre-established session the SDP message still contains a media description for media plane control but without any floor
	control related fmtp attributes (see TS 24.380 [10] clauses
	14.2.6 and 14.3.7).
WITHOUT_TRANSMISSIONCONTROL	SDP message for MCVideo call without transmission control
	Editor's note:
	In contrast to MCPTT there is no "mc_no_floor_ctrl" (or similar)
	fmtp parameter for MCVideo yet.
WITHOUT_SECURITY	In case of private call: SDP message shall not contain any
_	"a=key-mgmt" attribute for end-to-end security
WITH_SECURITY	End-to-end security to be applied independent from other
	conditions like PRIVATE-CALL, SDP_OFFER (e.g. for first-to-
	answer call)
SDS_SESSION	SDP message for establishment of an SDS session according
	to TS 24.282 [87] clause 9.2.4.

## 5.5.3.1.1 SDP Message from the UE

MCPTT

-

## Table 5.5.3.1.1-1: SDP Message from the UE for MCPTT

Derivation Path: RFC 4566 [27]				
Information Element	Value/remark	Comment	Reference	Condition
Session description:				
Protocol Version	"0"	v= line		
Origin	Same o=line as in the previous SDP message	o= line		
	sent by the UE except			
	that sess-version is			
	incremented by one			
Origin		o= line		FIRST_SD
				P_FROM_
				UE
username	any allowed value			
sess-id	any allowed value	A numeric string such		
		that the tuple of <username>, <sess-< td=""><td></td><td></td></sess-<></username>		
		id>, <nettype>,</nettype>		
		<addrtype>, and</addrtype>		
		<unicast-address></unicast-address>		
		forms a globally unique		
		identifier for the session		
sess-version	any allowed value			
nettype	"IN"			
Addrtype	"IP4" or "IP6"			
	depending on IP			
unicast-address	address IP address of the UE	ID address assigned at		
unicast-address	IP address of the UE	IP address assigned at initial registration		
Session Name	at least one UTF-8-	s= line		
	encoded character, or if	3- 1116		
	no name is given, a			
	single empty space			
Connection Data	not required if included	c= line		
	in all media			
nettype	"IN"			
Addrtype	"IP4" or "IP6"			
	depending on IP address			
connection-address	IP address of the UE			
Bandwidth		b= line		<u> </u>
"AS"	any allowed value		TS 26.114 [64]	
	,		Table K.6	
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Session attribute	present only if there is	a= line		WITH_SE
	no key-mgmt media attribute in the media	attribute = key-mgmt		CURITY
	description for audio	(NOTE 2)		OR (PRIVATE-
				CALL AND
				SDP_OFF
				ER AND
				NOT
				WITHOUT
				_SECURIT
			TO 04 070 101	Y)
key-mgmt			TS 24.379 [9]	
mikey	MIKEY-SAKKE		clause 6.2.1 RFC 4567 [44]	
	I_MESSAGE as		KFC 4007 [44]	
	specified in Table			
	5.5.9.1-2A for condition			
	MCPTT			
Session attribute	optional (NOTE 3)	a=line	RFC 5245	PRE_EST
		attribute="ice-lite"	[115]	ABLISHED
			1	_SESSION

Information Element	Value/remark	Comment	Reference	Conditior
ice-lite				
Media description[1]		Media description for audio		
media description		m= line media = audio	RFC 4867 [59]	
media	"audio"			
port	any allowed value	The transport port to which the media stream is sent		
proto	"RTP/SAVP"			
fmt	any allowed value(s)	Indicating RTP payload type numbers		
media title	"speech"	i= line		
Connection Data	present if session description does not contain a c=line; optional otherwise	c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address"			
connection-address	IP address of the UE			
Bandwidth		b= line		
"AS"	any allowed value		TS 26.114 [64] Table K.6	
"RS"	any allowed value if present		RFC 3556 [113]	
"RR"	any allowed value if present		RFC 3556 [113]	
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	same value as format parameter of the "fmtp" attribute			
encoding name	"AMR-WB"			
clock rate	16000		RFC 4867 [59] clause 8.3	
encoding parameter	"1" if present	Channel number		
media attribute		a= line attribute = fmtp		
fmtp	"fmtp"			
format	a value given in fmt in the audio media description			
format specific parameters		Parameters of WB- AMR codec NOTE: In addition to the parameters below the UE may provide further parameters		
mode-change-capability	"2"	To be able to interoperate fully with gateways to circuit switched networks	RFC 4867 [59] clause 8.2	
max-red	"0"	No redundancy will be used	RFC 4867 [59] clause 8.2	
media attribute		a= line attribute =ptime		
ptime	any allowed value	packet time		
media attribute		a= line		

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
media attribute	optional	a= line attribute =sendrecv Indicates send and		
		receive mode being activated		
sendrecv		Attribute has no value		
media attribute	one or several attribute lines if present	a=line attribute=ssrc	RFC 5576 [116]	
SSIC				
ssrc-id	any allowed value but all the same if there is more than one ssrc attribute for audio			
attribute	any source attribute according to RFC 5576 [116] (NOTE 1)			
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION
candidate		candidate for RTP		
foundation	any value			1
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			
priority	any value			
connection-address	same IP address as in speech media's c= line or in the session's c= line if the speech media does not have a c= line	default candidate		
port	same port number as in the m= line for speech			
cand-type	"host"			
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION
candidate		candidate for RTCP		_
foundation	any value			
component-id	2	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			
priority	any value			
connection-address	same IP address as in speech media's c= line or in the session's c= line if the speech media does not have a c= line	default candidate		
port	same port number as in the m= line for speech incremented by 1			
cand-type	"host"			1
media attribute	present only if there is no key-mgmt attribute at session level	a= line attribute = key-mgmt		WITH_SE CURITY OR (PRIVATE: CALL AND SDP_OFF ER AND NOT WITHOUT
key-mgmt			TS 24.379 [9]	_SECURIT Y)

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2A for condition MCPTT		RFC 4567 [44]	
Media description[2]		Media description for media control		NOT WITHOUT _FLOORC ONTROL OR PRE_EST ABLISHED _SESSION
media description		m= line media = application SDP media-level		
		section for a media- control entity		
modio	"appliaction"	(NOTE 2)		
media port	"application" any allowed value	The port for the media- control entity		
proto	"udp"			
fmt	"MCPTT"			
Connection Data	present if session description does not contain a c=line; optional otherwise	c= line		
nettype	"İN"			
Addrtype	"IP4" or "IP6" depending on IP address"			
connection-address	IP address of the UE			
media attribute		a= line attribute = fmtp		
fmtp	"MCPTT"			
format format specific parameters	MCPTT			SDP_OFF
mc_queueing	act proposit			ER AND NOT WITHOUT _FLOORC ONTROL
mc_queueing	not present present	Parameter has no	TS 24.380 [10]	pc_MCPT
		value	clause 14.2.2	_FloorReq uestQueue ing
mc_priority	any allowed value	Any integer value in the range of 1255	TS 24.380 [10] clause 14.2.3	
mc_granted	not present			
	present	Parameter has no value	TS 24.380 [10] clause 14.2.4	INITIAL_S DP_OFFE R
mc_implicit_request	not present			
	present	Parameter has no value	TS 24.380 [10] clause 14.2.5	IMPLICIT_ GRANT_R EQUESTE D

Information Element	Value/remark	Comment	Reference	Condition
mc_ssrc	not present	According to TS 24.380		
		[10] there is no		
		"mc_ssrc" in an SDP		
		offer but the client may		
		use the "a=ssrc"		
		attribute to indicate the		
		Audio SSRC it would		
		like to use		
mc_no_floor_ctrl	not present			
mc_floor_ssrc	any value if present	Rel-18		
format specific parameters				SDP_ANS WER AND NOT WITHOUT _FLOORC ONTROL
mc_queueing	not present			
	present	Parameter has no	TS 24.380 [10]	pc_MCPT
	proson	value	clause 14.3.2	_FloorReq uestQueue ing
mc_priority	same value as in the offer		TS 24.380 [10] clause 14.3.3	
mc_granted	not present			
mc_implicit_request	not present			
mc_ssrc	not present			
mc_no_floor_ctrl	not present			
mc_floor_ssrc	any value if present	Rel-18		
		Rei-To		
format specific parameters				WITHOUT _FLOORC ONTROL
mc_queueing	not present			
mc_priority	not present			
mc_granted	not present			
mc_implicit_request	not present			
mc_ssrc	not present			
mc_no_floor_ctrl	present	Parameter has no	TS 24.380 [10]	
		value	clauses 14.2.6 and 14.3.7	
mc_floor_ssrc	any value if present	Rel-18		
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHEI _SESSIOI
candidate		candidate for Media Control messages		
foundation	any value			
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			
priority	any value			
connection-address	same IP address as in	default candidate		
	application media's c=			
	line or in the session's			
	c= line if the application			
	media does not have a			
	c= line			
port	same port number as in			
Poir	the m= line for			
	application			
		1	1	1

Derivation Path: RFC 4566 [27]						
Info	rmation Element	Value/remark	Comment	Reference	Condition	
NOTE 1: If "ssrc" media attributes are included, then at least one "ssrc=" line shall contain a "cname" source attribute according to RFC 5576 [116] clause 6.1.						
NOTE 2:	NOTE 2: Even though there is no clarity in core specs it is assumed that a key-mgmt attribute at session level does not affect the media control security, i.e. the key-mgmt attribute is not applicable for the "application" media description for which still the CSK is used as security key. This is in contrast to RFC 4566 [27] clause 5 saying "In general, session-level values are the default for all media unless overridden by an equivalent media-level value."					
NOTE 3:		as lite implementation acco nevertheless this is not a te				

256

MCVideo

Table 5.5.3.1.1-2: SDP Message from the UE for MCVideo

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
Session description:		Johnneitt	I CIEICIICE	
Protocol Version	"0"	v= line		
Origin	Same o=line as in the	o= line		
0g	previous SDP message			
	sent by the UE except			
	that sess-version is			
	incremented by one			
Origin		o= line		FIRST_SD
-				P_FROM_
				UE
username	any allowed value			
sess-id	any allowed value	A numeric string such		
		that the tuple of		
		<username>, <sess-< td=""><td></td><td></td></sess-<></username>		
		id>, <nettype>,</nettype>		
		<addrtype>, and</addrtype>		
		<unicast-address></unicast-address>		
		forms a globally unique		
		identifier for the session.		
sess-version	any allowed value	3033UH.		
sess-version nettype	"IN"			
	"IN" "IP4" or "IP6"			
Addrtype	depending on IP			
	address			
unicast-address	IP address of the UE	IP address assigned at		
4111695-0001699	I AUDICOS UI LIE UE	initial registration		
Session Name	at least one UTF-8-	s= line		
	encoded character, or if	5- 1110		
	no name is given, a			
	single empty space			
Connection Data	not required if included	c= line		
	in all media			
nettype	"IN"			
Addrtype	"IP4" or "IP6"			
	depending on IP			
	address			
connection-address	IP address of the UE			
Bandwidth		b= line		
"AS"	any allowed value			
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			14/1
Session attribute	present only if there is	a= line		WITH_SE
	no key-mgmt media	attribute = key-mgmt		CURITY
	attribute in the media			OR
	descriptions for audio	(NOTE 2)		
	and video			CALL AND SDP_OFF
				ER AND
				NOT
				WITHOUT
				_SECURIT
				Y)
key-mgmt			TS 24.379 [9]	.,
-,			clause 6.2.1	
mikey	MIKEY-SAKKE		RFC 4567 [44]	
····	I_MESSAGE as			
	specified in Table			
	5.5.9.1-2A for condition			
	MCVIDEO			
Session attribute	optional (NOTE 3)	a=line	RFC 5245	PRE_EST
		attribute="ice-lite"	[115]	ABLISHED
				_SESSION

Information Element	Value/remark	Comment	Reference	Condition
ice-lite Media description[1]		Media description for audio		
media description		m= line media = audio	RFC 4867 [59]	
media	"audio"			
port	any allowed value	The transport port to which the media stream is sent		
proto	"RTP/SAVP"			
fmt	any allowed value(s)	Indicating RTP payload type numbers		
media title	"audio component of MCVideo"	i= line		
Connection Data	present if session description does not contain a c=line; optional otherwise	c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address"			
connection-address	IP address of the UE			
Bandwidth		b= line		
"AS"	any allowed value			
"RS"	any allowed value if present		RFC 3556 [113]	
"RR"	any allowed value if present		RFC 3556 [113]	
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	same value as format parameter of the "fmtp" attribute			
encoding name	"AMR-WB"			
clock rate	16000		RFC 4867 [59] clause 8.3	
encoding parameter	"1" if present	Channel number		
media attribute		a= line attribute = fmtp		
fmtp	"fmtp"			
format	a value given in fmt in the audio media description			
format specific parameters		Parameters of WB- AMR codec NOTE: In addition to the parameters below the UE may provide further parameters		
mode-change-capability	"2"	To be able to interoperate fully with gateways to circuit switched networks	RFC 4867 [59] clause 8.2	
max-red	"0"	No redundancy will be used	RFC 4867 [59] clause 8.2	
media attribute		a= line attribute =ptime		
ptime	any allowed value	packet time		
media attribute		a= line attribute =maxptime		
maxptime	any allowed value	maximum packet time		

Information Element	Value/remark	Comment	Reference	Condition
media attribute	optional	a= line attribute =sendrecv Indicates send and		
		receive mode being activated		
sendrecv		Attribute has no value		
media attribute	one or several attribute lines if present	a=line attribute=ssrc	RFC 5576 [116]	
ssrc				
ssrc-id	any allowed value but all the same if there is more than one ssrc attribute for audio			
attribute	any source attribute according to RFC 5576 [116] (NOTE 1)			
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHE _SESSIO
candidate		candidate for RTP		
foundation	any value			
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			
priority	any value			
connection-address	same IP address as in audio media's c= line or in the session's c= line if the audio media does not have a c= line	default candidate		
port	same port number as in the m= line for audio			
cand-type	"host"			
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_ES ABLISHE _SESSIO
candidate		candidate for RTCP		
foundation	any value			
component-id	2	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			
priority	any value			
connection-address	same IP address as in audio media's c= line or in the session's c= line if the audio media does not have a c= line	default candidate		
port	same port number as in the m= line for audio incremented by 1			
cand-type	"host"			
media attribute	present only if there is no key-mgmt attribute at session level	a= line attribute = key-mgmt		WITH_SE CURITY OR (PRIVATE CALL AN SDP_OFF ER AND NOT WITHOU <sup>T</sup> _SECURI
key-mgmt			TS 24.281 [86]	Y)

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2A for condition MCVIDEO (NOTE 4)		RFC 4567 [44]	
Media description[2]		Media description for video		
media description		m= line		
·		media = video SDP media-level section for a media-		
		transmission control		
media	"video"	entity		
port	any allowed value	The port for the media- transmission control entity		
proto	"RTP/SAVPF" or "RTP/SAVP"			
fmt	any allowed value(s)			
media title	"video component of MCVideo"	i= line		
Connection Data	present if session description does not contain a c=line; optional otherwise	c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address"			
connection-address	IP address of the UE			
Bandwidth		b= line		
"AS" "RS"	any allowed value any allowed value if		RFC 3556	
	present		[113] RFC 3556	
"RR"	any allowed value if present		[113]	
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	same value as format parameter of the "fmtp" attribute			
encoding name	"H264"			
clock rate	90000		RFC 4867 [59] clause 8.3	
media attribute		a= line attribute = fmtp		
fmtp	"fmtp"			
format	a value given in fmt in the audio media description			
format specific parameters		Parameters of H264 codec NOTE: In addition to the parameters below the UE may provide further parameters	RFC 6184 [129]	
profile-level-id	any allowed value			
packetization-mode	0			SDP_ANS WER

Information Element	Value/remark	Comment	Reference	Condition
media attribute	present if proto="RTP/AVP" in the m=line	a= line attribute = tcap	RFC 5939 [128] TS 26.114 [64] clause 6.2.1a.2	SDP_OFF ER
tcap				
trpr-cap-num	1			
proto-list	RTP/AVPF			
media attribute	present if proto="RTP/AVP" in the m=line	a= line attribute = pcfg	RFC 5939 [128] TS 26.114 [64] clause 6.2.1a.2	SDP_OFF ER
pcfg				
config-number	1			
pot-cfg-list	t=1			
media attribute	one or several attribute lines if present	a=line attribute=ssrc	RFC 5576 [116]	
ssrc				
ssrc-id attribute	any allowed value but all the same if there is more than one ssrc attribute for video any source attribute			
	according to RFC 5576 [116] (NOTE 1)			
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHEI _SESSIO
candidate		candidate for RTP		
foundation	any value			
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			
priority	any value			
connection-address	same IP address as in video media's c= line or in the session's c= line if the video media does not have a c= line	default candidate		
port	same port number as in the m= line for video			
cand-type	"host"			
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHE _SESSIO
candidate		candidate for RTCP		
foundation	any value			
component-id	2	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			
priority	any value			
connection-address	same IP address as in video media's c= line or in the session's c= line if the video media does not have a c= line	default candidate		
port	same port number as in the m= line for video incremented by 1			
			1	1

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
media attribute	present only if there is	a= line		WITH_SE
	no key-mgmt attribute	attribute = key-mgmt		CURITY
	at session level	attribute = key fight		OR
				(PRIVATE
				CALL AND
				SDP_OFF
				ER AND
				NOT
				WITHOUT
				_SECURIT
				_02001011 Y)
key-mgmt			TS 24.281 [86]	• • •
key night			clause 6.2.1	
mikey	MIKEY-SAKKE		RFC 4567 [44]	
milloy	I_MESSAGE as			
	specified in Table			
	5.5.9.1-2A for condition			
	MCVIDEO (NOTE 4)			
Media description[3]		Media description for		NOT
		media control		WITHOUT
		media control		TRANSM
				SSIONCO
				NTROL
				OR
				PRE_EST
				ABLISHED
				_SESSION
media description		m= line		
		media = application		
		SDP media-level		
		section for a media-		
		control entity		
P		(NOTE 2)	TO 04 504 [00]	
media	"application"		TS 24.581 [88]	
n e st		The next fer the readin	clause 12	
port	any allowed value	The port for the media-		
n note	lludo ll	control entity		
proto fmt	"udp"			
fmt	"MCVideo"			
Connection Data	propost if access			
Connection Data	present if session	c= line		
Connection Data	description does not	c= line		
Connection Data	description does not contain a c=line;	c= line		
	description does not contain a c=line; optional otherwise	c= line		
nettype	description does not contain a c=line; optional otherwise "IN"	c= line		
	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6"	c= line		
nettype	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6" depending on IP	c= line		
nettype Addrtype	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6" depending on IP address"	c= line		
nettype Addrtype connection-address	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6" depending on IP			
nettype Addrtype	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6" depending on IP address"	a= line		
nettype Addrtype connection-address media attribute	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6" depending on IP address"			
nettype Addrtype connection-address	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6" depending on IP address"	a= line	TS 24.581 [88]	
nettype Addrtype connection-address media attribute	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6" depending on IP address"	a= line	clause 12,	
nettype Addrtype connection-address media attribute fmtp	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6" depending on IP address" IP address of the UE	a= line		
nettype Addrtype connection-address media attribute fmtp format	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6" depending on IP address"	a= line	clause 12,	
nettype Addrtype connection-address media attribute fmtp	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6" depending on IP address" IP address of the UE	a= line	clause 12,	
nettype Addrtype connection-address media attribute fmtp format	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6" depending on IP address" IP address of the UE	a= line	clause 12,	SDP_OFF ER AND
nettype Addrtype connection-address media attribute fmtp format	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6" depending on IP address" IP address of the UE	a= line	clause 12,	ER AND NOT
nettype Addrtype connection-address media attribute fmtp format	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6" depending on IP address" IP address of the UE	a= line	clause 12,	ER AND NOT
nettype Addrtype connection-address media attribute fmtp format	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6" depending on IP address" IP address of the UE	a= line	clause 12,	ER AND
nettype Addrtype connection-address media attribute fmtp format	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6" depending on IP address" IP address of the UE	a= line	clause 12,	ER AND NOT WITHOUT _TRANSM
nettype Addrtype connection-address media attribute fmtp format	description does not contain a c=line; optional otherwise "IN" "IP4" or "IP6" depending on IP address" IP address of the UE	a= line	clause 12,	ER AND NOT WITHOUT

Information Element mc_priority mc_reception_priority	Value/remark present any allowed value if present	Comment Parameter has no value. Any integer value in the range of 1255 Shall be present when priority other than the	Reference           TS 24.581 [88]           clause 14.2.2           TS 24.581 [88]           clause 14.2.3	Condition pc_MCVid eo_Transm issionRequ estQueuei ng
	present	range of 1255 Shall be present when		
mc_reception_priority	any allowed value if	default priority is required		
	any allowed value if present	Any integer value in the range of 0255 Shall be present when priority other than the default reception priority is required	TS 24.581 [88] clause 14.2.6	
mc_granted	not present			
	present	Parameter has no value	TS 24.581 [88] clause 14.2.4	INITIAL_S DP_OFFE R
mc_implicit_request	not present			
	present	Parameter has no value	TS 24.581 [88] clause 14.2.5	IMPLICIT_ GRANT_R EQUESTE D
mc_audio_ssrc	not present	Rel-18		
mc_video_ssrc	not present	Rel-18		
mc_transmission_ssrc	any value if present	Rel-18		
format specific parameters				SDP_ANS WER AND NOT WITHOUT _TRANSMI SSIONCO NTROL
mc_queueing	not present			
	present	Parameter has no value	TS 24.581 [88] clause 14.3.2	pc_MCVid eo_Transm issionRequ estQueuei ng
mc_priority	same value as in the SDP offer if present, not present otherwise		TS 24.581 [88] clause 14.3.3	
mc_reception_priority	same value as in the SDP offer if present, not present otherwise		TS 24.581 [88] clause 14.3.6	
mc_granted	not present			
mc_implicit_request	not present			
mc_audio_ssrc	not present	Rel-18		
mc_video_ssrc	not present	Rel-18		 
mc_transmission_ssrc	any value if present	Rel-18	DE0 55 15	
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION
candidate		candidate for Transmission Control Messages		
foundation	any value			
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		
transport priority	"UDP" any value			

Derivation Path: RFC 4566 [27]						
Info	rmation Element	Value/remark	Comment	Reference	Condition	
conne	ction-address	same IP address as in application media's c= line or in the session's c= line if the application media does not have a c= line	default candidate			
port		same port number as in the m= line for application				
cand-t	type	"host"				
	<ul> <li>If "ssrc" media attributes are included, then at least one "ssrc=" line shall contain a "cname" source attribute according to RFC 5576 [116] clause 6.1.</li> <li>Even though there is no clarity in core specs it is assumed that a key-mgmt attribute at session level does</li> </ul>					
	not affect the media control security, i.e. the key-mgmt attribute is not applicable for the "application" media description for which still the CSK is used as security key. This is in contrast to RFC 4566 [27] clause 5 saying "In general, session-level values are the default for all media unless overridden by an equivalent media-level value."				clause 5	
NOTE 3:		as lite implementation acco nevertheless this is not a te				
NOTE 4:	If present the a=key-mg	mt attributes for audio and	video carry the same keys			

265

MCData

Table 5.5.3.1.1-3: SDP Message from the UE for MCData

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
Session description:				
Protocol Version	"0"	v= line		
Origin	Same o=line as in the previous SDP message sent by the UE except that sess-version is incremented by one	o= line		
Origin		o= line		FIRST_SD P_FROM_ UE
username	any allowed value			
sess-id	any allowed value	A numeric string such that the tuple of <username>, <sess- id&gt;, <nettype>, <addrtype>, and <unicast-address> forms a globally unique identifier for the session.</unicast-address></addrtype></nettype></sess- </username>		
sess-version	any allowed value			
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address"			
unicast-address	IP address of the UE	IP address assigned at initial registration		
Session Name	at least one UTF-8- encoded character, or if no name is given, a single empty space	s= line		
Connection Data	not required if included in all media	c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address"			
connection-address	IP address of the UE			
Session attribute	optional (NOTE 1)	a=line attribute="ice-lite"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION
ice-lite				
Time description				
Timing		t= line		
start-time	"0"			
stop-time Session attribute	"0" present only if there is no key-mgmt media attribute in the media description for data	a= line attribute = key-mgmt		SDP_OFF ER AND MCD_1to1
key-mgmt			TS 24.379 [9] clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2A for condition MCDATA		RFC 4567 [44]	
Media description[1]		Media description for data		
media description		m= line media = message	RFC 4867 [59] TS 24.282 [87]	
media	"message"			
port	any allowed value	The transport port to which the media stream is sent		

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
proto	"TCP/MSRP"			
fmt	···			
Connection Data	present if session description does not contain a c=line; optional otherwise	c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6"			
Additype	depending on IP address"			
connection-address	IP address of the UE			
media attribute		a= line attribute = sendonly		SDP_OFF ER AND NOT SDS_SES SION
sendonly		No parameters associated with this line		
media attribute		a= line attribute = recvonly		SDP_ANS WER AND NOT SDS_SES SION
recvonly		No parameters associated with this line		
media attribute		a= line		SDS_SES
		attribute = sendrecv		SION
sendrecv		No parameters associated with this line		
media attribute		a= line attribute = path		
path	MSRP URI according to RFC 4975 [120] clause 6 and 9	attribute containing its own MSRP URI. An example: msrp://mcdata.example .com:7654/abcde1; tcp	TS 24.282 [87]	
scheme	"msrp"	,		
authority			RFC 3986 [123] clause 3.2	
userinfo	any value if present			
host	any allowed value	domain name or IP address of the UE		
port	same value as in the media line if present	port at which the UE may be connected to for MSRP; mandatory when hostname is an IP address		
session id	any allowed value if present			
transport	"tcp"	mandatory for MSRP according to RFC 4975 [120] clause 6		
URI-parameter	not present			
media attribute		a= line attribute = accept-types	RFC 4975 [120]	
accept-types				
format-entry[1]	"application/vnd.3gpp. mcdata-signalling"			
format-entry[2]	"application/vnd.3gpp. mcdata-payload"			MCDATA SDS
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHEI _SESSIOI

candidate for TCP/MSRP according to RFC 5245 [115] clause 4.1.1.1 default candidate default candidate	RFC 4145 [119] RFC 5547 [124] RFC 5547 [124] clause	SDP_OF ER SDP_AN WER MCDATA FD
according to RFC 5245 [115] clause 4.1.1.1 default candidate a= line attribute = setup a= line attribute = file-transfer-	[119] RFC 5547 [124] RFC 5547	ER SDP_AN WER MCDATA
[115] clause 4.1.1.1 default candidate a= line attribute = setup a= line attribute = file-transfer-	[119] RFC 5547 [124] RFC 5547	ER SDP_AN WER MCDATA
default candidate a= line attribute = setup a= line attribute = file-transfer-	[119] RFC 5547 [124] RFC 5547	ER SDP_AN WER MCDATA
a= line attribute = setup a= line attribute = file-transfer-	[119] RFC 5547 [124] RFC 5547	ER SDP_AN WER MCDATA
a= line attribute = setup a= line attribute = file-transfer-	[119] RFC 5547 [124] RFC 5547	ER SDP_AN WER MCDATA
attribute = setup a= line attribute = file-transfer-	[119] RFC 5547 [124] RFC 5547	ER SDP_AN WER MCDATA
attribute = setup a= line attribute = file-transfer-	[119] RFC 5547 [124] RFC 5547	ER SDP_AN WER MCDATA
attribute = setup a= line attribute = file-transfer-	[119] RFC 5547 [124] RFC 5547	ER SDP_AN WER MCDATA
a= line attribute = file-transfer-	RFC 5547 [124] RFC 5547	ER SDP_AN WER MCDATA
attribute = file-transfer-	[124] RFC 5547	WER MCDATA
attribute = file-transfer-	[124] RFC 5547	
		1
	8.2.1	SDP_OF ER
	RFC 5547 [124] clause 8.2.2	SDP_AN WER
a= line attribute = file-selector	RFC 5547 [124]	MCDATA FD
		SDP_OF ER
e.g. "TestFile.txt"		
e.g. "text/plain"		
		SDP_AN WER
a= line attribute = file-date	RFC 5547 [124]	MCDATA FD AND SDP_OF ER
a= line attribute = key-mgmt		SDP_OF ER AND MCD_1to
	TS 24.379 [9] clause 6.2.1	
	RFC 4567 [44]	
	a= line attribute = key-mgmt	attribute = file-date [124] a= line attribute = key-mgmt TS 24.379 [9] clause 6.2.1

## 5.5.3.1.2 SDP Message from the SS

MCPTT

-

## Table 5.5.3.1.2-1: SDP Message from the SS for MCPTT

Derivation Path: RFC 4566 [2				
Information Element	Value/remark	Comment	Reference	Condition
Session description:				
Protocol Version	"0"	v= line		
Origin	Same o=line as in the previous SDP message sent by the SS except that sess-version is incremented by one	o= line		
Origin		o= line		FIRST_SDP _FROM_SS
username	"_"	"-" indicating the concept of user IDs not being supported		
sess-id	"11111111"	A numeric string such that the tuple of <username>, <sess- id&gt;, <nettype>, <addrtype>, and <unicast-address> forms a globally unique identifier for the session.</unicast-address></addrtype></nettype></sess- </username>		
sess-version	"1111111"			
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address"	This depends on the unicast address of the UE		
unicast-address	IP address of the SS			
Session Name	и и 	s= line single empty space indicating no session name		
Bandwidth		b= line		
"AS"	38		TS 26.114 [64] Table K.6	
Time description				
Timing		t= line		
start-time	"0"			
stop-time Session attribute	"0"	a=line attribute="ice-lite"	RFC 5245 [115]	PRE_ESTA BLISHED_S ESSION
ice-lite				
Media description[1]		Media description for audio		
media description		m= line media = audio	RFC 4867 [59]	
media	"audio"			
port	port number assigned by the SS (even integer)	The transport port to which the media stream is sent	RFC 6335 [63] clause 6	
proto	"RTP/SAVP"			
fmt	"99"	RTP/SAVP payload type for AMR-WB is dynamic		INITIAL_SD P_OFFER
	value for AMR-WB as used in initial offer			
media title	"speech"	i= line		
Connection Data		c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address"	This depends on the connection address		
connection-address	IP address of the SS			
Bandwidth		b= line		

Information Element	Value/remark	Comment	Reference	Condition
"AS"	38		TS 26.114 [64] Table K.6	
"RS"	0		RFC 3556 [113]	
"RR"	2000		RFC 3556 [113]	
media attribute		a= line	[110]	
		attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"99"			INITIAL_S P_OFFER
	value for AMR-WB as used in initial offer			
encoding name	"AMR-WB"			
clock rate	16000		RFC 4867 [59] clause 8.3	
encoding parameter	"1"	Channel number		
media attribute		a= line attribute = fmtp		
fmtp				
format	"99"			INITIAL_S P_OFFER
	value for AMR-WB as used in initial offer			
format specific parameters		Parameters of WB- AMR codec		
mode-change-capability	"2"	To be able to interoperate fully with gateways to circuit	RFC 4867 [59] clause 8.2	
max-red	"0"	switched networks No redundancy will be used	RFC 4867 [59] clause 8.2	
media attribute		a= line attribute =ptime		
ptime	"20"	packet time		
media attribute		a= line attribute =maxptime		
maxptime	"240"	maximum packet time		
media attribute		a= line attribute = key-mgmt		WITH_SEC URITY OR (PRIVATE CALL AND SDP_OFF R AND NC WITHOUT SECURITY
key-mgmt			TS 24.379 [9] clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2 for condition MCPTT		RFC 4567 [44]	
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST BLISHED_ ESSION
candidate		candidate for RTP		
foundation	1234	arbitrarily selected		
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		

Information ElementValue/reipriority2130706431priority2130706431connection-addressIP address of (same IP address of response)portsame port num the c=line for same port num the m= line for same port num the m= line for same port num the milling for same port num the c=line for same port num the c=line for same port num the milling for same port num the	the SS ess as in speech) nber as in speech the SS ess as in speech) nber as in speech y 1	Comment RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate a=line attribute="candidate" candidate for RTCP same as for RTP according to RFC 5245 [115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate Media description for media control	Reference           RFC 5245           [115]	Condition
connection-address       IP address of (same IP address of the c=line for same port num the m= line for same port num the m= line for cand-type         port       same port num the m= line for same port num the m= line for same port num the m= line for same port num the num same port num the num same port num the c=line for same port num the m= line for incremented b cand-type         media description[2]       "application"         media description       "application"         media       "application"         port       port number a by the SS beir	the SS ess as in speech) nber as in speech the SS ess as in speech) nber as in speech y 1	4.2: $2^{24} * 126 +$ $2^{8} * 65535 +$ 256 - component id default candidate a=line attribute="candidate" candidate for RTCP same as for RTP according to RFC 5245 [115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: $2^{24} * 126 +$ $2^{8} * 65535 +$ 256 - component id default candidate Media description for		BLISHED_S ESSION
port(same IP addr the c=line for s same port num the m= line for "host"media attribute"host"candidate-foundation1234component-id2transport"UDP" prioritypriority2130706430connection-addressIP address of (same IP addr the c=line for sportsame port num the m= line for incremented bcand-type"host"media description[2]"host"media description-media"application" port number a by the SS beir	the SS ess as in speech) hber as in speech the SS ess as in speech) hber as in speech y 1	2 <sup>8</sup> * 65535 + 256 - component id default candidate a=line attribute="candidate" candidate for RTCP same as for RTP according to RFC 5245 [115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate Media description for		BLISHED_S ESSION
port(same IP addr the c=line for s same port num the m= line for "host"cand-type"host"media attribute"host"candidate1234foundation1234component-id2transport"UDP"priority2130706430connection-addressIP address of i (same IP addr the c=line for sportsame port num the m= line for incremented bcand-type"host"media description[2]"host"media description"application" port number a by the SS beir	the SS ess as in speech) nber as in speech the SS ess as in speech) nber as in speech y 1	256 - component id default candidate attribute="candidate" candidate for RTCP same as for RTP according to RFC 5245 [115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate Media description for		BLISHED_S ESSION
port(same IP addr the c=line for s same port num the m= line for "host"cand-type"host"media attribute"host"candidate1234foundation1234component-id2transport"UDP"priority2130706430connection-addressIP address of i (same IP addr the c=line for sportsame port num the m= line for incremented bcand-type"host"media description[2]"host"media description"application" port number a by the SS beir	the SS ess as in speech) nber as in speech the SS ess as in speech) nber as in speech y 1	a=line attribute="candidate" candidate for RTCP same as for RTP according to RFC 5245 [115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate Media description for		BLISHED_S ESSION
port(same IP addr the c=line for s same port num the m= line for "host"cand-type"host"media attribute"host"candidate1234foundation1234component-id2transport"UDP"priority2130706430connection-addressIP address of i (same IP addr the c=line for sportsame port num the m= line for incremented bcand-type"host"media description[2]"host"media description"application" port number a by the SS beir	ess as in speech) nber as in speech	a=line attribute="candidate" candidate for RTCP same as for RTP according to RFC 5245 [115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate Media description for		BLISHED_S ESSION
portsame port num the m= line for same port num the m= line for "host"media attribute"host"candidate1234foundation1234component-id2transport"UDP" prioritypriority2130706430connection-addressIP address of r (same IP addr the c=line for s asme port num the m= line for incremented bportsame port num the m= line for incremented bmedia description[2]"host"media description"application" port number a by the SS bein	speech) hber as in speech speech the SS ess as in speech) hber as in speech y 1	attribute="candidate" candidate for RTCP same as for RTP according to RFC 5245 [115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate		BLISHED_S ESSION
portsame port num the m= line for "host"media attribute"host"media attribute1234component-id2transport"UDP"priority2130706430connection-addressIP address of r (same IP addr the c=line for sportsame port num the m= line for incremented bcand-type"host"media description[2]"application" portmedia"application" port number a by the SS beir	the SS ess as in speech) hber as in speech y 1	attribute="candidate" candidate for RTCP same as for RTP according to RFC 5245 [115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate		BLISHED_S ESSION
portsame port num the m= line for "host"media attribute"host"media attribute1234component-id2transport"UDP"priority2130706430connection-addressIP address of r (same IP addr the c=line for sportsame port num the m= line for incremented bcand-type"host"media description[2]"application" portmedia"application" port number a by the SS beir	the SS ess as in speech) hber as in speech y 1	attribute="candidate" candidate for RTCP same as for RTP according to RFC 5245 [115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate		BLISHED_S ESSION
the m= line for         cand-type       "host"         media attribute       "host"         candidate	the SS ess as in speech) nber as in speech y 1	attribute="candidate" candidate for RTCP same as for RTP according to RFC 5245 [115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate		BLISHED_S ESSION
cand-type"host"media attribute"host"candidate	the SS ess as in speech) nber as in speech y 1	attribute="candidate" candidate for RTCP same as for RTP according to RFC 5245 [115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate		BLISHED_S ESSION
media attributecandidatefoundation1234component-id2transport"UDP"priority2130706430connection-addressIP address of (same IP address of same port num the c=line for same port num the m= line for incremented bportsame port num the m= line for same port num the male in effor same port num the male incremented bmedia description[2]"host"media description"application"portport number a by the SS beir	the SS ess as in speech) nber as in speech y 1	attribute="candidate" candidate for RTCP same as for RTP according to RFC 5245 [115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate		BLISHED_S ESSION
foundation1234component-id2transport"UDP"priority2130706430connection-addressIP address of (same IP address of same port num the c=line for same port num the m= line for incremented bportsame port num the m= line for incremented bcand-type"host"Media description[2]"application"media"application"portport number a by the SS beir	the SS ess as in speech) nber as in speech y 1	candidate for RTCP same as for RTP according to RFC 5245 [115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate Media description for		BLISHED_S ESSION
foundation1234component-id2transport"UDP"priority2130706430connection-addressIP address of (same IP address of same port num the c=line for same port num the m= line for incremented bportsame port num the m= line for incremented bcand-type"host"Media description[2]"application"media"application"portport number a by the SS beir	the SS ess as in speech) nber as in speech y 1	same as for RTP according to RFC 5245 [115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate Media description for		NOT WITHOUT_ FLOORCOM
foundation1234component-id2transport"UDP"priority2130706430connection-addressIP address of (same IP address of same port num the c=line for same port num the m= line for incremented bportsame port num the m= line for incremented bcand-type"host"Media description[2]"application"media"application"portport number a by the SS beir	the SS ess as in speech) nber as in speech y 1	same as for RTP according to RFC 5245 [115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate Media description for		WITHOUT_ FLOORCOM
component-id2transport"UDP"priority2130706430connection-addressIP address of 1 (same IP address of 1 (same IP address of 1) same port num the c=line for 1)portsame port num the m= line for 1) incremented bcand-type"host"Media description[2]"application" port port number a by the SS bein	the SS ess as in speech) nber as in speech y 1	according to RFC 5245 [115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: $2^{24} * 126 +$ $2^8 * 65535 +$ 256 - component id default candidate Media description for		WITHOUT_ FLOORCOM
transport     "UDP"       priority     2130706430       connection-address     IP address of (same IP address of same port num the c=line for same port num the m= line for incremented b       port     same port num the m= line for incremented b       cand-type     "host"       Media description[2]     "application"       media     "application"       port     port number a by the SS beir	the SS ess as in speech) nber as in speech y 1	[115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate Media description for		WITHOUT_ FLOORCOM
transport       "UDP"         priority       2130706430         connection-address       IP address of (same IP address of same port num the c=line for same port num the m= line for incremented b         port       same port num the m= line for incremented b         cand-type       "host"         Media description[2]       "application"         media       "application"         port       port number a by the SS beir	the SS ess as in speech) nber as in speech y 1	[115] clause 4.1.1.1 RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate Media description for		WITHOUT_ FLOORCOM
priority       2130706430         connection-address       IP address of 1 (same IP address of 1 (same IP address))         port       same port num the c=line for s same port num the m= line for incremented b         cand-type       "host"         Media description[2]       "media description"         media       "application"         port       port number a by the SS beir	the SS ess as in speech) nber as in speech y 1	RFC 5245 [115] clause 4.2: $2^{24} * 126 +$ $2^8 * 65535 +$ 256 - component id default candidate Media description for		WITHOUT_ FLOORCOM
priority       2130706430         connection-address       IP address of 1 (same IP address of 1 (same IP address))         port       same port num the c=line for s same port num the m= line for incremented b         cand-type       "host"         Media description[2]       "application"         media       "application"         port       port number a by the SS beir	the SS ess as in speech) nber as in speech y 1	4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate Media description for		WITHOUT_ FLOORCOM
connection-address       IP address of i (same IP address of i (same IP address of i same port num the c=line for same port num the m= line for incremented b         port       same port num the m= line for incremented b         cand-type       "host"         Media description[2]       "host"         media description       "application"         port       port number a by the SS bein	the SS ess as in speech) nber as in speech y 1	4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate Media description for		WITHOUT_ FLOORCOM
image: solution of the section of the content of the content of the section of the model of	the SS ess as in speech) nber as in speech y 1	2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id default candidate Media description for		WITHOUT_ FLOORCOM
image: solution of the section of the content of the content of the section of the model of	the SS ess as in speech) nber as in speech y 1	2 <sup>8</sup> * 65535 + 256 - component id default candidate Media description for		WITHOUT_ FLOORCOM
image: solution of the section of the content of the content of the section of the model of	the SS ess as in speech) nber as in speech y 1	default candidate Media description for		WITHOUT_ FLOORCOM
image: solution of the section of the content of the content of the section of the model of	the SS ess as in speech) nber as in speech y 1	default candidate Media description for		WITHOUT_ FLOORCOM
image: solution of the section of the content of the content of the section of the model of	ess as in speech) nber as in speech y 1			WITHOUT_ FLOORCOM
ithe c=line for s         port       same port num         incremented b         cand-type       "host"         Media description[2]         media description         media       "application"         port       port number a         by the SS bein	speech) nber as in · speech y 1			WITHOUT_ FLOORCOM
port       same port num the m= line for incremented b         cand-type       "host"         Media description[2]       "host"         media description       "application"         port       port number a by the SS beir	nber as in speech y 1			WITHOUT_ FLOORCOM
the m= line for         incremented b         cand-type       "host"         Media description[2]         media description         media description         media       "application"         port       port number a         by the SS beir	speech y 1			WITHOUT_ FLOORCOM
incremented b cand-type "host" Media description[2] media description media description media description media by the SS beir	y 1			WITHOUT_ FLOORCOM
cand-type       "host"         Media description[2]				WITHOUT_ FLOORCOM
Media description[2]         media description         media description         media         port         port         port         port number a by the SS beir				WITHOUT_ FLOORCOM
media "application" port port number a by the SS beir				FLOORCO
media "application" port port number a by the SS beir				
media "application" port port number a by the SS beir				
media "application" port port number a by the SS beir				TROL OR
media "application" port port number a by the SS beir				PRE_ESTA
media "application" port port number a by the SS beir				BLISHED_S
media "application" port port number a by the SS beir				ESSION
media "application" port port number a by the SS beir		m= line		
port port number a by the SS beir		media = application		
port port number a by the SS beir				
port port number a by the SS beir		SDP media-level		
port port number a by the SS beir		section for a media		
port port number a by the SS beir		control entity		
port port number a by the SS beir		· · ·		
by the SS beir	ssigned	The port for the media		
	na	control entity		
		· · · · · · · · · · · · · · · · · · ·		
number of the				
channel (RTP)				
associated co				
channel (RTC				
proto "udp"			1	1
fmt "MCPTT"				+
Connection Data		c= line	1	1
nettype "IN"			1	+
Addrtype "IP4" or "IP6"		This depends on the		
depending on		connection address		
address				
connection-address IP address of				
media attribute	IP			1
	IP the SS	a- line		
fmtp	IP the SS	a= line		+
format "MCPTT"	IP the SS	a= line attribute = fmtp		+

Information Element	Value/remark	Comment	Reference	Conditio
format specific parameters				SDP_OFF R AND NO WITHOUT FLOORCO TROL
mc_queueing	present	Parameter has no value	TS 24.380 [10] clause 14.2.2	
mc_priority	"3"	"3" is the value of the <user-priority> element for user A in the MCPTT Group Configuration (Table 5.5.7.1-1)</user-priority>	TS 24.380 [10] clause 14.2.3	
mc_granted	not present			
mc_implicit_request	not present			
mc_ssrc	not present			
mc_no_floor_ctrl	not present			
mc_floor_ssrc	not present	Rel-18		
format specific parameters				SDP_ANS ER AND NOT WITHOUT FLOORCO TROL
mc_queueing	present if included in the offer	Parameter has no value	TS 24.380 [10] clause 14.3.2	
mc_priority	if a value is provided in the offer: "3" or the value provided in the offer, whichever is the lower value; otherwise not present	"3" is the value of the <user-priority> element for user A in the MCPTT Group Configuration (Table 5.5.7.1-1) NOTE: <num-levels- priority-hierarchy&gt; has a value of 10 for on- network i.e. it is greater than 3</num-levels- </user-priority>	TS 24.380 [10] clause 14.3.3	
mc_granted	not present			
	present	Parameter has no value	TS 24.380 [10] clause 14.3.4	IMPLICIT LOOR_GF NTED
mc_implicit_request	not present			
	present	Parameter has no value	TS 24.380 [10] clause 14.3.5	IMPLICIT RANT_RE UESTED
mc_ssrc	not present			
	Audio SSRC of the client as defined in clause 5.5.6.1		TS 24.380 [10] clause 14.3.6	IMPLICIT RANT_RE UESTED
mc_no_floor_ctrl	not present			
mc_floor_ssrc	not present	Rel-18		
format specific parameters				WITHOUT FLOORCO TROL
mc_queueing	not present			
mc_priority	not present			
mc_granted	not present			
mc_implicit_request	not present			
mc_ssrc	not present			
mc_no_floor_ctrl	present	Parameter has no value	TS 24.380 [10] clause 14.3.7	
mc_floor_ssrc	not present	Rel-18		
nedia attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST BLISHED ESSION

.

Information Element	Value/remark	Comment	Reference	Condition
candidate		candidate for Media		
		Control messages		
foundation	4321	arbitrarily selected;		
		different than for		
		RTP/RTCP		
component-id	1	according to RFC 5245		
		[115] clause 4.1.1.1		
transport	"UDP"			
priority	2130706431	RFC 5245 [115] clause		
		4.2:		
		2 <sup>24</sup> * 126 +		
		2 <sup>8</sup> * 65535 +		
		256 - component id		
connection-address	IP address of the SS	default candidate		
	(same IP address as in			
	the c=line for media			
	control)			
port	same port number as in			
•	the m= line for			
	application			
cand-type	"host"			

275

MCVideo

Table 5.5.3.1.2-2: SDP Message from the SS for MCVideo

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
Session description:	value/itiliaiK	Comment	NEIEIEIIUE	Condition
Protocol Version	"0"	v= line		
Origin	Same o=line as in the	o= line		
Origin	previous SDP message sent by the SS except	0= line		
	that sess-version is incremented by one			
Origin		o= line		FIRST_SD P_FROM_ SS
username	"_"	"-" indicating the concept of user IDs not		
sess-id	"1111111"	being supported A numeric string such that the tuple of <username>, <sess- id&gt;, <nettype>, <addrtype>, and <unicast-address> forms a globally unique identifier for the session.</unicast-address></addrtype></nettype></sess- </username>		
sess-version	"11111111"			
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address	This depends on the unicast address of the UE		
unicast-address	IP address of the SS			
Session Name	и и	s= line single empty space indicating no session name		
Bandwidth		b= line		
"AS"	352			
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Session attribute		a=line attribute="ice-lite"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION
ice-lite				
Media description[1]		Media description for audio		
media description		m= line media = audio	RFC 4867 [59]	
media port	"audio" port number assigned by the SS (even integer)	The transport port to which the media stream is sent	RFC 6335 [63] clause 6	
proto	"RTP/SAVP"			
fmt	"99"	RTP/SAVP payload type for AMR-WB is dynamic		INITIAL_S DP_OFFE R
	value for AMR-WB as used in initial offer			
media title	"audio component of MCVideo"	i= line		
Connection Data		c= line		
	"IN"	This day 1 of		
Addrtype	"IP4" or "IP6" depending on IP address	This depends on the connection address		
connection-address	IP address of the SS			
Bandwidth		b= line		

Information Element	Value/remark	Comment	Reference	Condition
"AS"	37			
"RS"	0		RFC 3556 [113]	
"RR"	2000		RFC 3556 [113]	
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"99"			INITIAL_S DP_OFFE R
	value for AMR-WB as used in initial offer			
encoding name	"AMR-WB"		DE0 (007 (50)	
clock rate	16000		RFC 4867 [59] clause 8.3	
encoding parameter	"1"	Channel number		
media attribute		a= line attribute = fmtp		
fmtp				
format	"99"			INITIAL_S DP_OFFE R
	value for AMR-WB as used in initial offer			
format specific parameters		Parameters of WB- AMR codec		
mode-change-capability	"2"	To be able to interoperate fully with gateways to circuit switched networks	RFC 4867 [59] clause 8.2	
max-red	"0"	No redundancy will be used	RFC 4867 [59] clause 8.2	
media attribute		a= line attribute =ptime		
ptime	"20"	packet time		
media attribute		a= line attribute =maxptime		
maxptime	"240"	maximum packet time		
media attribute		a= line attribute = key-mgmt		WITH_SE CURITY OR (PRIVATE CALL ANI SDP_OFF ER AND NOT WITHOUT _SECURI Y)
key-mgmt			TS 24.281 [86] clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2 for condition MCVIDEO		RFC 4567 [44]	
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHE _SESSIO
candidate		candidate for RTP		
foundation	1234	arbitrarily selected		
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
priority	2130706431	RFC 5245 [115] clause		
		4.2:		
		2 <sup>24</sup> * 126 +		
		2 <sup>8</sup> * 65535 +		
		256 - component id		
connection-address	IP address of the SS	default candidate		
	(same IP address as in			
	the c=line for audio)			
port	same port number as in			
	the m= line for audio			
cand-type	"host"			
media attribute		a=line	RFC 5245	PRE_EST
		attribute="candidate"	[115]	ABLISHED
				_SESSION
candidate		candidate for RTCP		
foundation	1234	same as for RTP		
component-id	2	according to RFC 5245		
		[115] clause 4.1.1.1		
transport	"UDP"			
priority	2130706430	RFC 5245 [115] clause		
		4.2:		
		2 <sup>24</sup> * 126 +		
		2 <sup>8</sup> * 65535 +		
		256 - component id		
connection-address	IP address of the SS	default candidate		
	(same IP address as in			
	the c=line for audio)			
port	same port number as in			
F	the m= line for audio			
	incremented by 1			
cand-type	"host"			
Media description[2]		Media description for		
		video		
media description		m= line		
		media = video		
		SDP media-level		
		section for a media-		
		transmission control		
		entity		
media	"video"			
port	port number of the	The port for the media-		1
1	audio stream	transmission control		
	incremented by 2	entity		
	(resulting in even			
	integer)			
proto	"RTP/SAVPF"			1
fmt	"100"			INITIAL_S
				DP_OFFE
				R
	value for H264 as used			
	in initial offer			
media title	"video component of	i= line		
	MCVideo"			
Connection Data	<del>_</del>	c= line		
nettype	"IN"	-		1
Addrtype	"IP4" or "IP6"			1
, laditypo	depending on IP			
	address			
connection-address	IP address of the SS			
Bandwidth		b= line		
"AS"	315			
- CO	515			1
"RS"	0		RFC 3556	

Information Element	Value/remark	Comment	Reference	Condition
"RR"	2500		RFC 3556 [113]	
media attribute		a= line		
		attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"100"			INITIAL_S DP_OFFE R
	value for H264 as used in initial offer			
encoding name clock rate	"H264" 90000		RFC 6184	
	90000		[129]	
media attribute		a= line attribute = fmtp		
fmtp				
format	"100"			INITIAL_S DP_OFFE R
	value for H264 as used in initial offer			
format specific parameters		Parameters the H264 codec	RFC 6184 [129]	SDP_OFF ER
packetization-mode	"0"			
profile-level-id	"42e00c"			
sprop-parameter-sets	"J0LgDJWgUH6Af1A=, KM46gA=="			
format specific parameters	same parameters and values as sent by the UE in the corresponding SDP offer	Parameters the H264 codec		SDP_ANS WER
media attribute		a= line attribute = rtcp-fb	RFC 4585 [130]	SDP_OFF ER
rtcp-fb				
rtcp-fb-pt	"*"			
rtcp-fb-val	"trr-int 5000"			
media attribute		a= line attribute = rtcp-fb	RFC 4585 [130]	SDP_OFF ER
rtcp-fb				
rtcp-fb-pt	"*"			
rtcp-fb-val	"nack"			
media attribute		a= line attribute = rtcp-fb	RFC 4585 [130]	SDP_OFF ER
rtcp-fb				
rtcp-fb-pt	"*"			
rtcp-fb-val	"nack pli"	P		000 000
media attribute		a= line	RFC 4585	SDP_OFF
rtcp-fb		attribute = rtcp-fb	[130]	ER
rtcp-fb-pt	"*"		+	-
rtcp-fb-val	"ccm fir"			
media attribute		a= line attribute = rtcp-fb	RFC 4585 [130]	SDP_OFF ER
rtcp-fb				
rtcp-fb-pt	"*"			
rtcp-fb-val	"ccm tmmbr"			
media attribute	present if there have been a=tcap and a=pcfg attributes in the corresponding SDP offer	a= line attribute = acfg	RFC 5939 [128] TS 26.114 [64] clause 6.2.1a.3	SDP_ANS WER
acfg				
config-number	1			

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
sel-cfg-list	"t=1"			
media attribute		a= line attribute = key-mgmt		WITH_SE CURITY OR (PRIVATE- CALL AND SDP_OFF ER AND NOT WITHOUT _SECURIT Y)
key-mgmt			TS 24.281 [86] clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2 for condition MCVIDEO		RFC 4567 [44]	
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION
candidate		candidate for RTP		
foundation	2345	arbitrarily selected; different than audio		
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			
priority	2130706431	RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id		
connection-address	IP address of the SS (same IP address as in the c=line for video)	default candidate		
port	same port number as in the m= line for video			
cand-type	"host"			
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION
candidate		candidate for RTCP		
foundation	22345	same as for RTP		
component-id	2	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			
priority	2130706430	RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id		
connection-address	IP address of the SS (same IP address as in the c=line for video)	default candidate		
port	same port number as in the m= line for video incremented by 1			

Derivation Path: RFC 4566 [27]				
Information Element	Value/remark	Comment	Reference	Condition
Media description[3]		Media description for media control		NOT WITHOUT _TRANSMI SSIONCO NTROL OR PRE_EST ABLISHED _SESSION
media description		m= line media = application SDP media-level section for a media control entity		
media	"application"			
port	port number assigned by the SS being different than the port number of the audio and video channels (RTP) and their associated control channels (RTCP)"	The port for the media control entity		
proto	"udp"			
fmt	"MCVideo"			
Connection Data		c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address	This depends on the connection address		
connection-address	IP address of the SS			
media attribute		a= line attribute = fmtp		
fmtp				
format format specific parameters	"MCVideo"			SDP_OFF ER AND NOT WITHOUT _TRANSMI SSIONCO NTROL
mc_queueing	present	Parameter has no value	TS 24.581 [88] clause 14.2.2	
mc_priority	"5"	Any integer value in the range of 1255	TS 24.581 [88] clause 14.2.3	
mc_granted	not present			
mc_implicit_request	not present			
mc_reception_priority	not present			
mc_audio_ssrc	not present	Rel-18		
mc_video_ssrc	not present	Rel-18		
mc_transmission_ssrc format specific parameters	not present	Rel-18		SDP_ANS WER AND NOT WITHOUT _TRANSMI SSIONCO NTROL
mc_queueing	present if included in the offer	Parameter has no value	TS 24.581 [88] clause 14.3.2	

Information Element	Value/remark	Comment	Reference	Condition
mc_priority	if a value is provided in the offer: "3" or the	"3" is the value of the <user-priority> element</user-priority>	TS 24.581 [88] clause 14.3.3	
	value provided in the offer, whichever is the	for user A in the MCVideo Group		
	lower value; otherwise not present	Configuration (Table 5.5.7.2-1)		
mc_granted	not present	, , , , , , , , , , , , , , , , , , ,		
	present	Parameter has no value	TS 24.581 [88] clause 14.3.4	IMPLICIT_ FLOOR_G RANTED
mc_implicit_request	not present			
	present	Parameter has no value	TS 24.581 [88] clause 14.3.5	IMPLICIT_ GRANT_R EQUESTE D
mc_reception_priority	same value as in the SDP offer if present, not present otherwise		TS 24.581 [88] clause 14.3.6	
mc_audio_ssrc	not present	Rel-18		
mc_video_ssrc	not present	Rel-18		
mc_transmission_ssrc	not present	Rel-18		
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHED SESSION
candidate		candidate for Media Control messages		
foundation	4321	arbitrarily selected; different than for RTP/RTCP (audio, video)		
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			
priority	2130706431	RFC 5245 [115] clause 4.2: 2 <sup>24</sup> * 126 + 2 <sup>8</sup> * 65535 + 256 - component id		
connection-address	IP address of the SS (same IP address as in the c=line for media control)	default candidate		
port	same port number as in the m= line for application			
cand-type	"host"			

283

MCData

Table 5.5.3.1.2-3: SDP Message from the SS for MCData

Derivation Path: RFC 4566 [27]	M-L - La - L	<b>A</b>	Def	0
Information Element	Value/remark	Comment	Reference	Condition
Session description:				
Protocol Version	"0"	v= line		
Origin	Same o=line as in the previous SDP message sent by the SS except that sess-version is incremented by one	o= line		
Origin		o= line		FIRST_SD P_FROM_ SS
username	"_"	"-" indicating the concept of user IDs not being supported		
sess-id	"11111111"	A numeric string such that the tuple of <username>, <sess- id&gt;, <nettype>, <addrtype>, and <unicast-address> forms a globally unique identifier for the session.</unicast-address></addrtype></nettype></sess- </username>		
sess-version	"11111111"			
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address			
unicast-address	IP address of the SS			
Session Name	""	s= line		
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"		DE0 50 /5	
Session attribute		a=line attribute="ice-lite"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION
ice-lite				
Media description[1]		Media description for data	DE0 (007/50)	
media description		m= line media = message	RFC 4867 [59] TS 24.282 [87]	
media	"message"	The transport rest to		
port	port number assigned by the SS	The transport port to which the media stream is sent		
proto	"TCP/MSRP"			
fmt	"*"			
Connection Data		c= line		
nettype Addrtype	"IN" "IP4" or "IP6" depending on IP address			
connection-address	IP address of the SS			000 055
media attribute		a= line attribute = sendonly		SDP_OFF ER AND NOT SDS_SES SION
sendonly		No parameters associated with this line		
media attribute		a= line attribute = recvonly		SDP_ANS WER AND NOT SDS_SES SION

Information Element	Value/remark	Comment	Reference	Conditio
recvonly		No parameters associated with this line		
media attribute		a= line		SDS_SES
		attribute = sendrecv		SION
sendrecv		No parameters associated with this line		
media attribute		a= line attribute = path		
path	MSRP URI according to RFC 4975 [120] clause 6 and 9		TS 24.282 [87]	
scheme	"msrp"			
authority			RFC 3986 [123] clause 3.2	
userinfo	not present			
host	IP address of the SS			
port	same value as in the media line			
session id	assigned by the SS			
transport	"tcp"			
URI-parameter	not present			
media attribute		a= line	RFC 4975	
opport the se		attribute = accept-types	[120]	
accept-types format-entry[1]	"application/vnd.3gpp.			
	mcdata-signalling"			
format-entry[2]	"application/vnd.3gpp. mcdata-payload"			MCDATA SDS
media attribute		a= line attribute = setup	RFC 4145 [119]	
setup	"actpass"			SDP_OFF ER
	"passive"			SDP_ANS WER
media attribute		a= line attribute = file-transfer- id	RFC 5547 [124]	MCDATA <u></u> FD
file-transfer-id	value assigned by the SS	randomly chosen globally unique identification (RFC 5547 [124])		SDP_OFF ER
	same value as in the sdp offer			SDP_ANS WER
media attribute		a= line attribute = file-selector	RFC 5547 [124]	MCDATA FD
file-selector				SDP_OFI ER
selector[1]				
filename	name of the file to be transferred	e.g. "TestFile.txt"		
filesize	size of the file to be transferred			
filetype	type of the file to be transferred	e.g. "text/plain"		
hash				
algorithm	"sha-1"			
value	hash value of the file to be transferred			
file-selector	same value as in the sdp offer			SDP_AN WER
media attribute		a= line attribute = file-date	RFC 5547 [124]	MCDATA FD AND SDP_OFI ER

Derivation Path: RFC 4566 [27]					
Information Element	Value/remark	Comment	Reference	Condition	
file-date					
date-param[1]					
type	"creation"				
date-time	date and time when the file has been created	e.g. "Mon, 20 Dec 2021 15:01:31 +0100"	RFC 5322 [109]		
media attribute		a= line attribute = key-mgmt		SDP_OFF ER AND MCD_1to1	
key-mgmt			TS 24.379 [9] clause 6.2.1		
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2 for condition MCDATA		RFC 4567 [44]		
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION	
candidate		candidate for TCP/MSRP			
foundation	1234	arbitrarily selected			
component-id	1	according to RFC 5245 [115] clause 4.1.1.1			
transport	"TCP/MSRP"				
priority	2130706431	RFC 5245 [115] clause 4.2: 224 * 126 + 28 * 65535 + 256 - component id			
connection-address	IP address of the SS (same IP address as in the c=line)	default candidate			
port	same port number as in the m= line				
cand-type	"host"				

5.5.3.1.3 SDP Message from the UE - Off-network

- MCPTT

Table 5.5.3.1.3-1: SDP Message from the UE - Off-network for MCPTT

Derivation Path: RFC 4566 [27]				
Information Element	Value/remark	Comment	Reference	Condition
Session description:				
Protocol Version	"0"	v= line		
Origin		o= line		
username	"_"			
sess-id	any allowed value	A numeric string such		
		that the tuple of		
		<username>, <sess-< td=""><td></td><td></td></sess-<></username>		
		id>, <nettype>,</nettype>		
		<addrtype>, and</addrtype>		
		<unicast-address></unicast-address>		
		forms a globally unique		
		identifier for the		
		session.		
sess-version	any allowed value			
nettype	"IN"			
addrtype	"IP4"	"IP4" or "IP6"		
unicast-address	px_MCPTT_IP_Connec			
	tionAddressAll			
Session Name	"_"	s= line		
Connection Data		c= line		
nettype	"IN"			
addrtype	"IP4"	"IP4" or "IP6"		
connection-address	px_MCPTT_IP_Connec	Set to the multicast IP		
	tionAddressAll	address of the MCPTT		
		group		
Bandwidth		b= line		
bwtype	"AS:"	bwtype:bandwidth		
bandwidth	any allowed value	bwtype.bandwidth		
Time description				
Timing		t= line		
start-time	"0"			
	"0"			
stop-time	0			
Media descriptions		an line		
media description		m= line		
		media = audio		
media	"audio"			
port	any allowed value	Set to a port number for		
		MCPTT speech of the		
		MCPTT group		-
proto	"RTP/AVP"			-
fmt	any allowed value(s)	Indicating RTP payload		
	"	type numbers		
media title	"speech"	i= line		
media attribute		a= line		
		attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"99"			
encoding name	"AMR-WB"			
clock rate	16000			
encoding parameter	"1" if present	Channel number		
media attribute		a= line		
		attribute = fmtp		
fmtp	"fmtp"			
format	the value given in fmt in			
	the audio media			
	description			
format specific parameters		Parameters of WB-		
		AMR codec		
mode-change-capability	"2"	To be able to		
		interoperate fully with		
		gateways to circuit		
		switched networks		
max-red	"0"	No redundancy will be		

Information Element	Value/remark	Comment	Reference	Condition
media attribute		a= line		
		attribute =ptime		
ptime	any allowed value	packet time		
media attribute	, ,	a= line		
		attribute =maxptime		
maxptime	any allowed value	maximum packet time		
media description		m= line		
		media = application		
media	"application"			
port	any allowed value	Set to a port number for		
Port		media-floor control		
		entity of the MCPTT		
		group		
proto	"udp"	group		
fmt	"MCPTT"			
media attribute		a= line		
moula attributo		attribute = fmtp		
fmtp				
format	"MCPTT"			
format specific parameters				
mc_queueing	optional	Parameter has no		
mo_quouoing	optional	value		
mc_priority	not present	Any integer value in the		
mo_prionty	or	range of 1255		
	any allowed value			
mc_granted	present	Parameter has no		1
mo_gramou	procent	value		
mc_implicit_request	present	Parameter has no		
mo_mpilot_roquoot	procent	value		
media attribute		a= line		
		attribute = key-mgmt		
key-mgmt		in the second se		1
mikey	MIKEY-SAKKE			
	I MESSAGE as			
	specified in Table			
	5.5.9.1-2			

290

MCVideo

Table 5.5.3.1.3-2: SDP Message from the UE - Off-network for MCVideo

Derivation Path: RFC 4566 [27]				
Information Element	Value/remark	Comment	Reference	Condition
Session description:				
Protocol Version	"0"	v= line		
Origin		o= line		
username	"_"			
sess-id	any allowed value	A numeric string such that the tuple of <username>, <sess- id&gt;, <nettype>,</nettype></sess- </username>		
		<ul> <li><addrtype>, and</addrtype></li> <li><unicast-address></unicast-address></li> <li>forms a globally unique</li> <li>identifier for the</li> <li>session.</li> </ul>		
sess-version	any allowed value			
nettype	"IN"			
addrtype	"IP4"	"IP4" or "IP6"		
unicast-address	px_MCVideo_IP_Conn ectionAddressAll			
Session Name	"_"	s= line		
Connection Data		c= line		
nettype	"IN"			
addrtype	"IP4"	"IP4" or "IP6"		
connection-address	px_MCVideo_IP_Conn ectionAddressAll	Set to the multicast IP address of the		
		MCVideo group		
Bandwidth		b= line		
bwtype	"AS:"	bwtype:bandwidth		
bandwidth	any allowed value			
Time description				1
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Media descriptions	0			
media descriptions		m= line		
-		media = audio		
media	"audio"			
port	any allowed value	Set to a port number for MCVideo speech of the MCVideo group		
proto	"RTP/AVP"			
fmt	any allowed value(s)	Indicating RTP payload type numbers		
media title	"speech"	i= line		
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"99"			
encoding name	"AMR-WB"			
clock rate	16000			
encoding parameter	"1" if present	Channel number		
media attribute		a= line attribute = fmtp		
fmtp	"fmtp"			
format	the value given in fmt in the audio media description			
format specific parameters		Parameters of WB- AMR codec		
mode-change-capability	"2"	To be able to interoperate fully with gateways to circuit switched networks		
max-red	"0"	No redundancy will be used		

Information Element	Value/remark	Comment	Reference	Conditio
media attribute		a= line		
		attribute =ptime		
ptime	any allowed value	packet time		
media attribute		a= line		
		attribute =maxptime		
maxptime	any allowed value	maximum packet time		
media description		m= line media = video		
		SDP media-level		
		section for a media-		
		transmission control		
		entity		
media	"video"			
port	any allowed value	The port for the media-		
		transmission control		
		entity		
proto	"udp"	User Datagram		
		Protocol. With UDP,		
		computer applications		
		can send messages to other hosts on		
		an Internet Protocol		
		(IP) network. Time-		
		sensitive applications		
		often use UDP because		
		dropping packets is		
		preferable to waiting for		
		packets delayed due		
		to retransmission,		
		which may not be an		
		option in a real-time		
		system.		
fmt	"MCVideo"			
Connection Data		c= line		
		Included if the media		
		plane control channel		
		uses a different IP		
		address than other		
		media described in the		
nettype	"IN"	SDP		
addrtype	"IP4"			
connection-address	px_MCVideo_IP_Conn			
	ectionAddressApp			
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	""			
encoding name	"H.264"			
clock rate			RFC 4867 [59] clause 8.3	
encoding parameter	"" if present	Channel number		
media attribute		a= line attribute = fmtp		
fmtp			TS 24.581 [88]	
			clause 12,	
			clause 14	
format	"MCVideo"			
format specific parameters				

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
mc_queueing	optional	Parameter has no	TS 24.581 [88]	
		value.	clause 12,	
		Shall include the	clause 14	
		"mc_queueing" fmtp		
		attribute in SDP offers		
		when queueing of		
		Transmission request is		
		supported.		
mc_priority	not present	Any integer value in the	TS 24.581 [88]	
ine_priority	or	range of 1255	clause 12,	
	any allowed value	Shall include the	clause 14	
		"mc_priority" fmtp		
		attribute when a		
		transmission priority		
		different than the		
		default priority is		
me reception micrity		required.	TO 04 F04 [00]	
mc_reception_priority	not present	Any integer value in the	TS 24.581 [88]	
	or	range of 0255	clause 12,	
	any allowed value		clause 14	
		Shall include the		
		"mc_reception_priority"		
		fmtp attribute when a		
		reception priority		
		different than the		
		default reception		
		priority is required.		
mc_granted	present	Parameter has no	TS 24.581 [88]	
		value	clause 12,	
		Shall include the	clause 14	
		"mc_granted" fmtp		
		attribute in the SDP		
		offer of an initial SIP		
		INVITE request when it		
		is acceptable for the		
		MCVideo client to		
		receive a granted		
		indication in the SIP		
		200 (OK) response to		
		an initial INVITE		
and the little		request.	TO 04 504 1001	
mc_implicit_request	present	Parameter has no	TS 24.581 [88]	
		value	clause 12,	
		Shall include the	clause 14	
		"mc_implicit_request"		
		fmtp attribute when a		
		SIP request shall be		
		interpreted as an		
		implicit Transmission		
		request. If not explicitly		
		stated in procedures in		
		the present document		
		or in procedures in		
		TS 24.281 [2] that the		
		"mc_implicit_request"		
		fmtp attribute shall be		
		included, the decision		
		to include the		
		"mc_implicit_request"		
		fmtp attribute or not, is		
		an implementation		
		option.		
media attribute		a= line attribute = key-mgmt		PRIVATE- CALL

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
key-mgmt		Key Management	TS 24.281 [86]	
		attribute field in the	clause 6.2.1	
		media and session		
		level.		
mikey	MIKEY-SAKKE	MIKEY carries the	RFC 4567 [44]	
	I_MESSAGE as	security parameters		
	specified in Table	needed for		
	6.1.1.1.3.3-3	setting up the security		
		protocol. It is a protocol		
		designed for		
		government and		
		relevant enterprises to		
		enable secure, cross-		
		platform multimedia		
madia description		communications. m= line		
media description				
media	application"	media = application		
port	any allowed value	Set to a port number for		
ροπ	any anowed value	media-floor control		
		entity of the MCVideo		
		group		
proto	"udp"	group		
fmt	"MCVideo"			
media attribute		a= line		
		attribute = fmtp		
fmtp				
format	"MCVideo"			
format specific parameters				
mc_queueing	optional	Parameter has no		
		value		
mc_priority	not present	Any integer value in the		
	or	range of 1255		
and a superstand	any allowed value	Developmenter		
mc_granted	present	Parameter has no		
mc_implicit_request	present	Value Parameter has no		
mc_implicit_request	present	value		
media attribute		a= line		
		attribute = key-mgmt		
key-mgmt				
mikey	MIKEY-SAKKE			
	I_MESSAGE as			
	specified in Table			
	5.5.9.1-2A			

MCData

# Table 5.5.3.1.3-3: SDP Message from the UE - Off-network for MCData

FFS

-

5.5.3.1.4 SDP Message from the SS - Off-network

- MCPTT

Table 5.5.3.1.4-1: SDP Message from the SS - Off-network for MCPTT

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
Session description:	Value/Terriark	Comment	Kelerence	Condition
Protocol Version	"0"	v= line		
Origin	0	o= line		
username	"_"			
sess-id	"12345678"	A numeric string such		
	12010010	that the tuple of		
		<username>, <sess-< td=""><td></td><td></td></sess-<></username>		
		id>, <nettype>,</nettype>		
		<addrtype>, and</addrtype>		
		<unicast-address></unicast-address>		
		forms a globally unique		
		identifier for the		
		session.		
sess-version	"12345678"			
nettype	"IN"			
addrtype	"IP4"			
unicast-address	px_MCPTT_IP_Connec			
	tionAddressAll			
Session Name	"_"	s= line		
Connection Data		c= line		
nettype	"IN" "IP4"			
addrtype connection-address		"IP4" or "IP6" Set to the multicast IP		
connection-address	px_MCPTT_IP_Connec tionAddressAll			
	tionAddressAll	address of the MCPTT		
Bandwidth		group b= line		
	"AS:"	b= line bwtype:bandwidth		
bwtype bandwidth	any allowed value	bwtype.bandwidth		
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Media descriptions	0			
media description		m= line		
		media = audio		
media	"audio"			
port	"49152"	Set to a port number for		
		MCPTT speech of the		
		MCPTT group		
proto	"RTP/AVP"	<u> </u>		
fmt	"99"	Indicating RTP payload		
		type numbers		
media title	"speech"	i= line		
media attribute		a= line		
		attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"99"			
encoding name	"AMR-WB"			
clock rate	16000			
encoding parameter	"1" if present	Channel number		
media attribute		a= line		
		attribute = fmtp		
fmtp	"fmtp"			-
format	"99"			
format specific parameters		Parameters of WB-		
modo obongo oppobility	"2"	AMR codec To be able to		1
mode-change-capability	<u> </u>	interoperate fully with		
		gateways to circuit		
		switched networks		
max-red	"0"	No redundancy will be		
maxiou		used		
media attribute		a= line		
		attribute =ptime		

Information Element	Value/remark	Comment	Reference	Condition
ptime	"20"	packet time		
media attribute		a= line		
		attribute =maxptime		
maxptime	"240"	maximum packet time		
media description		m= line		
·		media = application		
media	"application"			
port	"49153"	Set to a port number for media-floor control entity of the MCPTT group		
proto	"udp"			
fmt	"MCPTT"			
media attribute		a= line attribute = fmtp		
fmtp				
format	"MCPTT"			
format specific parameters				
mc_queueing	present	Parameter has no value		
mc_priority	"5"	Any integer value in the range of 1255		
mc_granted	present	Parameter has no value		
mc_implicit_request	present	Parameter has no value		
media attribute		a= line attribute = key-mgmt		
key-mgmt				
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2			

298

MCVideo

Table 5.5.3.1.4-2: SDP Message from the SS - Off-network for MCVideo

Derivation Path: RFC 4566 [27]				
Information Element	Value/remark	Comment	Reference	Condition
Session description:				
Protocol Version	"0"	v= line		
Origin		o= line		
username	"_"			
sess-id	"12345678"	A numeric string such that the tuple of <username>, <sess- id&gt;, <nettype>, <addrtype>, and <unicast-address> forms a globally unique identifier for the session.</unicast-address></addrtype></nettype></sess- </username>		
soss vorsion	"12345678"	session.		
sess-version	"IN"			
nettype	"IP4"			
addrtype unicast-address	px_MCVideo_IP_Conn			
	ectionAddressAll			
Session Name	"_"	s= line		
Connection Data		c= line		
nettype	"IN"			
addrtype	"IP4"	"IP4" or "IP6"		
connection-address	px_MCVideo_IP_Conn ectionAddressAll	Set to the multicast IP address of the MCVideo group		
Bandwidth		b= line		
bwtype	"AS:"	bwtype:bandwidth		
bandwidth	any allowed value			
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Media descriptions				
media description		m= line media = audio		
media	"audio"			
port	"49152"	Set to a port number for MCVideo speech of the MCVideo group		
proto	"RTP/AVP"			
fmt	"99"	Indicating RTP payload type numbers		
media title	"speech"	i= line		1
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"99"			
encoding name	"AMR-WB"			
clock rate	16000			
encoding parameter	"1" if present	Channel number		
media attribute		a= line attribute = fmtp		
fmtp	"fmtp"			1
format	"99"			
format specific parameters		Parameters of WB- AMR codec		
mode-change-capability	"2"	To be able to interoperate fully with gateways to circuit switched networks		
max-red	"0"	No redundancy will be used		
media attribute		a= line attribute =ptime		

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
ptime	"20"	packet time		
media attribute		a= line		
		attribute =maxptime		
maxptime	"240"	maximum packet time		
media description		m= line		
		media = video		
		SDP media-level		
		section for a media-		
		transmission control		
media	"video"	entity		
	any allowed value	The port for the media-		
port	any allowed value	transmission control		
proto	"udp"	entity User Datagram		
proto	uap	Protocol. With UDP,		
		computer applications		
		can send messages to		
		other hosts on		
		an Internet Protocol		
		(IP) network. Time-		
		sensitive applications		
		often use UDP because		
		dropping packets is		
		preferable to waiting for		
		packets delayed due		
		to retransmission,		
		which may not be an		
		option in a real-time		
		system.		
fmt	"MCVideo"			
Connection Data		c= line		
		Included if the media		
		plane control channel		
		uses a different IP		
		address than other		
		media described in the		
		SDP		
nettype	"IN"			
addrtype	"IP4"			
connection-address	px_MCVideo_IP_Conn			
	ectionAddressApp			
media attribute		a= line		
		attribute = rtpmap		
rtpmap	"rtpmap"			
payload type				
encoding name	"H.264"			
clock rate			RFC 4867 [59]	
			clause 8.3	
encoding parameter	"" if present	Channel number		
media attribute		a= line		
-		attribute = fmtp		
fmtp			TS 24.581 [88]	
			clause 12,	
			clause 14	
format	"MCVideo"			
format specific parameters				

Derivation Path: RFC 4566 [27]       Information Element     Value/remark     Comment     Reference       mc_queueing     optional     Parameter has no value.     TS 24.581 [88] clause 12, Shall include the "mc_queueing" fmtp attribute in SDP offers	Condition
value. clause 12, Shall include the clause 14 "mc_queueing" fmtp attribute in SDP offers	
Shall include the clause 14 "mc_queueing" fmtp attribute in SDP offers	I
"mc_queueing" fmtp attribute in SDP offers	
attribute in SDP offers	1
	1
	1
when queueing of	1
Transmission request is	1
supported.	
mc_priority not present Any integer value in the TS 24.581 [88] or range of 1255 clause 12,	1
or range of 1255 clause 12, any allowed value Shall include the clause 14	1
"mc_priority" fmtp	1
attribute when a	1
transmission priority	1
different than the	1
default priority is	1
required.	1
mc_reception_priority not present Any integer value in the TS 24.581 [88]	
or range of 0255 clause 12,	l
any allowed value clause 14	l
Shall include the	1
"mc_reception_priority"	1
fmtp attribute when a	l
reception priority	1
different than the	1
default reception	l
priority is required.	1
mc_granted present Parameter has no TS 24.581 [88]	
value clause 12,	1
Shall include the clause 14	1
"mc_granted" fmtp	1
attribute in the SDP	1
offer of an initial SIP	1
INVITE request when it	1
is acceptable for the	1
MCVideo client to	1
receive a granted	1
indication in the SIP	1
200 (OK) response to	1
an initial INVITE	1
request.	
mc_implicit_request present Parameter has no TS 24.581 [88]	1
value clause 12, Shall include the clause 14	l
"mc_implicit_request"	1
fmtp attribute when a	1
SIP request shall be	1
interpreted as an	1
implicit Transmission	1
request. If not explicitly	1
stated in procedures in	1
the present document	1
or in procedures in	1
TS 24.281 [2] that the	1
"mc_implicit_request"	1
fmtp attribute shall be	1
included, the decision	1
to include the	1
"mc_implicit_request"	l
	1
fmtp attribute or not, is	1
fmtp attribute or not, is an implementation	
an implementation option.	
an implementation	PRIVATE- CALL

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
key-mgmt		Key Management	TS 24.281 [86]	
Key mgm		attribute field in the	clause 6.2.1	
		media and session		
		level.		
mikey	MIKEY-SAKKE	MIKEY carries the	RFC 4567 [44]	
,	I_MESSAGE as	security parameters		
	specified in Table	needed for		
	6.1.1.1.3.3-3	setting up the security		
		protocol. It is a protocol		
		designed for		
		government and		
		relevant enterprises to		
		enable secure, cross-		
		platform multimedia		
		communications.		
media description		m= line		
P		media = application		
media	"application"			
port	"49153"	Set to a port number for media-floor control		
		entity of the MCVideo		
		group		
proto	"udp"	group		
fmt	"MCVideo"			
media attribute	Movideo	a= line		
		attribute = fmtp		
fmtp				
format	"MCVideo"			
format specific parameters				
mc_queueing	present	Parameter has no		
	F	value		
mc_priority	"5"	Any integer value in the		
	_	range of 1255		
mc_granted	present	Parameter has no		
-		value		
mc_implicit_request	present	Parameter has no		
		value		
media attribute		a= line		
		attribute = key-mgmt		
key-mgmt				
mikey	MIKEY-SAKKE			
	I_MESSAGE as			
	specified in Table			
	5.5.9.1-2			

MCData

## Table 5.5.3.1.4-3: SDP Message from the SS - Off-network for MCData

FFS

-

- 5.5.3.2 MCS Info Lists
- 5.5.3.2.1 MCS Info Lists from the UE
- MCPTT

Table 5.5.3.2.1-1: MCPTT-Info from the UE

Information Element	lause F.1.2 Value/remark	Comment	Reference	Condition
ncpttinfo				
mcptt-Params				
mcptt-access-token	not present Encrypted (NOTE 2) <mcptt-access-token> with mcpttString set to access token as assigned to the UE in</mcptt-access-token>	The access token is opaque to the MCPTT client	TS 33.180 [94] , clause B.4 RFC 6749 [77]	CONFIG, GROUPC ONFIG
	the Token Response			
session-type	not present			
	"prearranged"			GROUP- CALL ANE INVITE_R EFER
	"private"			PRIVATE- CALL AND INVITE_R EFER
	"chat"			CHAT- GROUP- CALL ANE INVITE_R EFER
	"first-to-answer"			FIRST-TO ANSWER AND INVITE_R EFER
mcptt-request-uri	not present			
	Encrypted (NOTE 2) <mcptt-request-uri> with mcpttURI set to px_MCPTT_Group_A_I D</mcptt-request-uri>	The URI of the group		(GROUP- CALL OR CHAT- GROUP- CALL) AND INVITE_R EFER
	not present or encrypted (NOTE 2) <mcptt-request-uri> with mcpttURI set to px_MCPTT_ID_User_B</mcptt-request-uri>	The URI of the invited MCPTT Client		PRIVATE- CALL ANE INVITE_R EFER
	encrypted (NOTE 2) <mcptt-request-uri> with mcpttURI set to px_MCPTT_ID_User_A</mcptt-request-uri>			POC- SETTINGS -EVENT
mcptt-calling-user-id	not present or encrypted (NOTE 2) <mcptt-calling-user-id> with mcpttURI set to px_MCPTT_ID_User_A</mcptt-calling-user-id>			
	not present			CONFIG, GROUPC ONFIG, POC- SETTINGS -EVENT
mcptt-called-party-id	not present not present or encrypted (NOTE 2) <mcptt-called-party-id> with mcpttURI set to px_MCPTT_ID_User_A</mcptt-called-party-id>			INVITE- RSP
		1		l
mcptt-calling-group-id	not present			

Derivation Path: TS 24.379 [9] of				
Information Element	Value/remark	Comment	Reference	Condition
emergency-ind	not present or encrypted (NOTE 2) <emergency-ind> with mcpttBoolean set to "false"</emergency-ind>			
	Encrypted (NOTE 2) <emergency-ind> with mcpttBoolean set to "true"</emergency-ind>			EMERGEN CY-CALL AND INVITE_R EFER
alert-ind	not present or encrypted (NOTE 2) <alert-ind> with mcpttBoolean set to "false"</alert-ind>			
	Encrypted (NOTE 2) <alert-ind> with mcpttBoolean set to pc_MCX_EmergencyIn dWithAlertInd</alert-ind>			EMERGEN CY-CALL AND INVITE_R EFER
imminentperil-ind	not present or encrypted (NOTE 2) <imminentperil-ind> with mcpttBoolean set to "false"</imminentperil-ind>			
	Encrypted (NOTE 2) < imminentperil -ind> with mcpttBoolean set to "true"			IMMPERIL -CALL AND INVITE_R EFER
broadcast-ind	not present or "false" "true"			BROADCA ST-CALL
mc-org	not present			
floor-state	not present			
associated-group-id	not present			
	px_MCPTT_Group_A_I D if mcptt-request-uri contains a temporary group identity; otherwise, not present	if the <mcptt-request- uri&gt; element contains a group identity then this element can include an MCPTT group ID associated with the group identity in the <mcptt-request-uri> element. E.g. if the <mcptt-request-uri> element contains a temporary group identity (TGI), then the <associated-group-id> element can contain the constituent MCPTT group ID</associated-group-id></mcptt-request-uri></mcptt-request-uri></mcptt-request- 	TS 24.379 [9] clause F.1.3	GROUP- CALL
originated-by	not present			
MKFC-GKTPs	not present			
mcptt-client-id	not present			

Derivation Path: TS 24.379 [9] cla Information Element	Value/remark	Comment	Reference	Condition
	encrypted (NOTE 2) <mcptt-client-id> with mcpttString set to valid</mcptt-client-id>	The UUID URN of the MCPTT Client	RFC 4122 [106] TS 24.379 [9]	(GROUP- CALL OR CHAT-
	UUID URN (NOTE 1)		clause 4.10	GROUP- CALL OR EMERGEN CY-CALL OR IMMPERIL -CALL) AND INVITE_R EFER
	not present or encrypted (NOTE 2) <mcptt-client-id> with mcpttString set to valid UUID URN (NOTE 1)</mcptt-client-id>			(PRIVATE- CALL OR FIRST-TO- ANSWER) AND INVITE_R EFER
	not present or encrypted (NOTE 2) <mcptt-client-id> with mcpttString set to valid UUID URN (NOTE 1)</mcptt-client-id>	in general mcptt-client- id is not mandatory (e.g. for SIP SUBSCRIBE)	RFC 4122 [106] TS 24.379 [9] clause 4.10	CONFIG, GROUPC ONFIG
	encrypted (NOTE 2) <mcptt-client-id> with mcpttString set to valid UUID URN (NOTE 1)</mcptt-client-id>	mcptt-client-id is mandatory in the SIP REGISTER or SIP PUBLISH for service authorisation according to TS 24.379 [9] clauses 7.2.1 and 7.2.2	RFC 4122 [106] TS 24.379 [9] clause 4.10	CONFIG AND REGISTE R_PUBLIS H
	encrypted (NOTE 2) <mcptt-client-id> with mcpttString set to valid UUID URN (NOTE 1)</mcptt-client-id>	mcptt-client-id is mandatory in SIP PUBLISH for MCPTT service settings only, according to TS 24.379 [9] clause 7.2.3	RFC 4122 [106] TS 24.379 [9] clause 4.10	POC- SETTINGS -EVENT
alert-ind-rcvd	not present			
gw-mcptt-usage anyExt	not present not present	Rel-18	TS 24.379 [9], clause F.1.3	
anyExt		anyExt shall not contain any further elements than listed below unless specified otherwise in the specific message content of a test case	TS 24.379 [9], clause F.1.3	FUNCTIO NAL_ALIA S
functional-alias-URI	encrypted (NOTE 2) <functional-alias-uri> with mcpttURI set to px_MCPTT_ID_FA_A</functional-alias-uri>	set to the value of the functional alias that is used together with the "mcptt-calling-user-id"		
"urn:uuid:XXXXXXXX-	ng sent by the UE to be a va YYYY-ZZZZ-yyyy-zzzzzzz UUID URN in subsequent m	zzzz" according to RFC 41		

Condition	Explanation
REGISTER_PUBLISH	MCPTT-Info in SIP REGISTER or SIP PUBLISH request for service authorisation
INVITE_REFER	MCPTT-Info in SIP INVITE or SIP REFER request for call establishment
INVITE-RSP	MCPTT-Info in SIP response to a SIP INVITE NOTE: INVITE-RSP is inherited from the SIP response, i.e. it shall be considered as true whenever set for the SIP response
FUNCTIONAL_ALIAS	An active Functional Alias is used
For further conditions see table 5.5.1-1	

# Table 5.5.3.2.1-1A: Encrypted MCPTT info parameter sent by the UE

Derivation Path: TS 24.379 [9] clauses F.1.2, F.1.3					
Information Element	Value/remark	Comment	Reference	Condition	
type attribute	"Encrypted"				
EncryptedData	EncryptedData as described in Table 5.5.13.2-1 containing encrypted element content of the mcptt parameter				

## MCVideo

-

# Table 5.5.3.2.1-2: MCVideo-Info from the UE

Derivation Path: TS 24.281 [86] Clause F.1.2				
Information Element	Value/remark	Comment	Reference	Condition
mcvideoinfo				
mcvideo-Params				
mcvideo-access-token	not present Encrypted (NOTE 2)	The access token is	TE 22 190 [04	CONFIG
	<pre><mcvideo-access- token&gt; with mcvideoString set to access token as assigned to the UE in the Token Response</mcvideo-access- </pre>	opaque to the MCVideo client	TS 33.180 [94 ], clause B.4 RFC 6749 [77]	GROUPCO NFIG
session-type	not present			
	"prearranged"			GROUP- CALL AND INVITE_RE FER
	"private"			PRIVATE- CALL AND INVITE_RE FER
	"chat"			CHAT- GROUP- CALL AND INVITE_RE FER
mcvideo-request-uri	not present			
	Encrypted (NOTE 2) <mcvideo-request-uri> with mcvideoURI set to px_MCVideo_Group_A _ID</mcvideo-request-uri>	The URI of the group		(GROUP- CALL OR CHAT- GROUP- CALL) AND INVITE_RE FER

	not present or	The URI of the invited	PRIVATE-
	Encrypted (NOTE 2)	MCVideo Client	CALL AND
	<mcvideo-request-uri></mcvideo-request-uri>		_
	with mcvideoURI set to		FER
	px_MCVideo_User_B_I		
	D		
	Encrypted (NOTE 2)		POC-
	<mcvideo-request-uri></mcvideo-request-uri>		SETTINGS
	with mcvideoURI set to		-EVENT
	px_MCVideo_User_A_I		
	D		
mcvideo-calling-user-id	not present or		
	Encrypted (NOTE 2)		
	<mcvideo-request-uri></mcvideo-request-uri>		
	with mcvideoURI set to		
	px_MCVideo_ID_User_		
	А		
	not present		CONFIG,
			GROUPCO
			NFIG,
			POC-
			SETTINGS
			-EVENT
mcvideo-called-party-id	not present		
	not present or		INVITE-
	Encrypted (NOTE 2)		RSP
	<mcvideo-request-uri></mcvideo-request-uri>		
	with mcvideoURI set to		
	px_MCVideo_ID_User_		
	A		
mcvideo-calling-group-id	not present		
required	not present		
emergency-ind	not present or		
<b>C</b>	encrypted (NOTE 2)		
	<emergency-ind> with</emergency-ind>		
	mcvideoBoolean set to		
	"false"		
	encrypted (NOTE 2)		EMERGEN
	<emergency-ind> with</emergency-ind>		CY-CALL
	mcvideoBoolean set to		AND
	true		INVITE-
			REFER
alert-ind	not present or		
	encrypted (NOTE 2)		
	<pre><alert-ind> with</alert-ind></pre>		
	mcvideoBoolean set to		
	"false"		
	encrypted (NOTE 2)	<u> </u>	EMERGEI
	<alert-ind> with</alert-ind>		CY-CALL
	mcvideoBoolean set to		AND
	pc_MCX_EmergencyIn		INVITE_R
imminanta oriliad	dWithAlertInd	<u> </u>	FER
imminentperil-ind	not present or		
	encrypted (NOTE 2)		
	<imminentperil-ind></imminentperil-ind>		
	with mcvideoBoolean		
	set to "false"	<u> </u>	
	encrypted (NOTE 2)		IMMPERIL
	<imminentperil-ind></imminentperil-ind>		CALL AND
	with mcvideoBoolean		INVITE-
	set to true		REFER
broadcast-ind	not present or "false"		
	"true"		BROADCA
			ST-CALL
moorg	not present		
mc-org associated-group-id	not present		

	r			1
	px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity; otherwise, not present	if the <mcvideo- request-uri&gt; element contains a group identity then this element can include an MCVideo group ID associated with the group identity in the <mcvideo-request-uri> element. E.g. if the <mcvideo-request-uri> element contains a temporary group identity (TGI), then the <associated-group-id> element can contain the constituent MCVideo group ID</associated-group-id></mcvideo-request-uri></mcvideo-request-uri></mcvideo- 	TS 24.281 [86 ] clause F.1.3	GROUP- CALL
originated-by	not present			
MKFC-GKTPs	not present			
mcvideo-client-id	not present encrypted (NOTE 2) < mcvideo-client-id> with mcvideoString set to valid UUID URN (NOTE 1)	The UUID URN of the MCVIDEO Client	RFC 4122 [106] TS 24.281 [86] clause 4.9	(GROUP- CALL OR CHAT- GROUP- CALL OR
				EMERGEN CY-CALL OR
				IMMPERIL- CALL) AND INVITE_RE FER
	not present or encrypted (NOTE 2) < mcvideo-client-id> with mcvideoString set to valid UUID URN (NOTE 1)			PRIVATE- CALL AND INVITE_RE FER
	not present or encrypted (NOTE 2) < mcvideo-client-id> with mcvideoString set to valid UUID URN (NOTE 1)	in general mcvideo- client-id is not mandatory (e.g. for SIP SUBSCRIBE)	RFC 4122 [106] TS 24.281 [86 ] clause 4.9	CONFIG, GROUPCO NFIG
	encrypted (NOTE 2) < mcvideo-client-id> with mcvideoString set to valid UUID URN (NOTE 1)	mcvideo-client-id is mandatory in the SIP REGISTER or SIP PUBLISH for service authorisation according to TS 24.281 [86] clauses 7.2.1 and 7.2.2	RFC 4122 [106] TS 24.281 [86 ] clause 4.9	CONFIG AND REGISTER _PUBLISH
	encrypted (NOTE 2) < mcvideo-client-id> with mcvideoString set to valid UUID URN (NOTE 1)	mcvideo-client-id is mandatory in SIP PUBLISH for MCVideo service settings only, according to TS 24.281 [86] clause 7.2.3	RFC 4122 [106] TS 24.281 [86 ] clause 4.9	POC- SETTINGS -EVENT
alert-ind-rcvd	not present			
multiple-devices-ind	not present			
video-pull-url	not present	Dol 19		
gw-mcvideo-usage	not present	Rel-18		

anyExt	not present	TS 24.281 [86		
		] clause F.1.3		
NOTE 1:	The SS shall check the mcvideo-client-id			
	<ul> <li>at the first time being sent by the UE to be a valid UUID URN with a format like</li> </ul>			
	"urn:uuid:XXXXXXXXY-YYYY-ZZZZ-yyyy-zzzzzzzzzzzz" according to RFC 4122 [106]			
	- to be all the same UUID URN in subsequent m	essages.		
NOTE 2:	Encrypted element as described in Table 5.5.3.2.1	-2A		

Condition	Explanation
REGISTER_PUBLISH	MCVideo-Info in SIP REGISTER or SIP PUBLISH request for service
	authorisation
INVITE_REFER	MCVideo-Info in SIP INVITE or SIP REFER request for call
	establishment
INVITE-RSP	MCVideo-Info in SIP response to a SIP INVITE
For further conditions see table 5.5.1-1	

# Table 5.5.3.2.1-2A: Encrypted MCVideo info parameter sent by the UE

Derivation Path: TS 24.281 [86] clauses F.1.2, F.1.3						
Information Element	Value/remark	Comment	Reference	Condition		
type attribute	"Encrypted"					
EncryptedData	EncryptedData as described in Table 5.5.13.2-1 containing encrypted element content of the mcvideo parameter					

311

MCData

Table 5.5.3.2.1-3: MCData-Info from the UE

Derivation Path: TS 24.282 [87], Information Element	Value/remark	Comment	Reference	Condition
mcdata-info				
mcdata-Params				
mcdata-access-token	not present			
	Encrypted (NOTE 2) <mcdata-access- token&gt; with mcdataString set to access token as assigned to the UE in the Token Response</mcdata-access- 	The access token is opaque to the MCData client	TS 33.180 [94] , clause B.4 RFC 6749 [77]	CONFIG GROUPC ONFIG
request type	not present			
request-type	"one-to-one-sds"			MCD_1to1
	"group-sds"			MCD_ft01
mcdata-request-uri	not present			MCD_gip
modala-request-un	Encrypted (NOTE 2) <mcdata-request-uri> with mcdataURI set to px_MCData_Group_A_ ID</mcdata-request-uri>			MCD_grp
	Encrypted (NOTE 2) <mcdata-request-uri> with mcdataURI set to px_MCData_Group_A_ ID</mcdata-request-uri>			POC- SETTINGS -EVENT
mcdata-calling-user-id	not present			
mcdata-called-party-id	not present			
mcdata-calling-group-id	not present			
alert-ind	not present			
originated-by mcdata-client-id	not present			
	Encrypted (NOTE 2) <mcdata-client-id> with mcdataString set to valid UUID URN (NOTE 1)</mcdata-client-id>			MCD_grp
	Encrypted (NOTE 2) <mcdata-client-id> with mcdataString set to valid UUID URN (NOTE 1)</mcdata-client-id>			CONFIG AND PUBLISH
	not present or encrypted (NOTE 2) <mcdata-client-id> with mcdataString set to valid UUID URN (NOTE 1)</mcdata-client-id>	in general mcdata- client-id is not mandatory (e.g. for SIP SUBSCRIBE)		(CONFIG OR GROUPC ONFIG) AND NOT REGISTE R (NOTE 3)
	Encrypted (NOTE 2) <mcdata-client-id> with mcdataString set to valid UUID URN (NOTE 1)</mcdata-client-id>	mcdata-client-id is mandatory in SIP PUBLISH for MCData service settings only, according to TS 24.282 [87] clause 7.2.3	RFC 4122 [106]	POC- SETTINGS -EVENT
mcdata-controller-psi	not present	Del 40		
gw-mcdata-usage	not present	Rel-18		
anyExt anyExt	not present	anyExt shall not contain any further elements than listed below unless specified otherwise in the specific message		PRE_EST ABLISHEE _SESSION OR FUNCTIO NAL_ALIA

pre-established-session-ind	"true"	TS 24.282 [87], Clause		PRE_EST		
		18.3.2.1		ABLISHED		
				_SESSION		
functional-alias-URI	encrypted (NOTE 2)	set to the value of the		FUNCTIO		
	<functional-alias-uri></functional-alias-uri>	functional alias that is		NAL_ALIA		
	with mcdataURI set to	used together with the		S		
	px_MCData_ID_FA_A	"mcdata-calling-user-id"				
NOTE 1: The SS shall check the	NOTE 1: The SS shall check the mcdata-client-id					
<ul> <li>at the first time bein</li> </ul>	<ul> <li>at the first time being sent by the UE to be a valid UUID URN with a format like</li> </ul>					
"urn:uuid:XXXXXXXX-	"urn:uuid:XXXXXXXX-YYYY-ZZZZ-yyyy-zzzzzzzzzzzzz" according to RFC 4122 [106]					
- to be all the same U	<ul> <li>to be all the same UUID URN in subsequent messages.</li> </ul>					
NOTE 2: Encrypted element as described in Table 5.5.3.2.1-3A						
NOTE 3: In contrast to MCPTT and MCVideo for MCData TS 24.282 [87] clause 7.2.1 does not specify the client-id						
to be included in the RE	EGISTER request.					

Condition	Explanation
MCD_1to1	A one-to-one MCData call
MCD_grp	A goup MCData call
REGISTER	MCData-Info in SIP REGISTER request for service authorisation
PUBLISH	MCData-Info in SIP PUBLISH request for service authorisation
PRE_ESTABLISHED_SESSION	A pre-established sessions is being established
FUNCTIONAL_ALIAS	An active Functional Alias is used
For further conditions see table 5.5.1-1	

# Table 5.5.3.2.1-3A: Encrypted MCData info parameter sent by the UE

Derivation Path: TS 24.282 [87] clauses D.1.2, D.1.3					
Information Element	Value/remark	Comment	Reference	Condition	
type attribute	"Encrypted"				
EncryptedData	EncryptedData as described in Table 5.5.13.2-1 containing encrypted element content of the mcdata parameter				

# 5.5.3.2.2 MCS Info Lists from the SS

## MCPTT

-

Table 5.5.3.2.2-1: MCPTT-Info from the S	S
--	---

Derivation Path: TS 24.379 [9] of Information Element	Value/remark	Comment	Reference	Condition
mcpttinfo				
mcptt-Params				
mcptt-access-token	not present			
session-type	not present			
	"prearranged"			GROUP- CALL
	"private"			
	pirrate			CALL
	"chat"			CHAT- GROUP-
				CALL
	"first-to-answer"			FIRST-TC ANSWER
mcptt-request-uri	Encrypted (NOTE 1)	The URI of the called		7 NOVER
mopte roquoot un	<mcptt-request-uri></mcptt-request-uri>	user		
	with mcpttURI set to			
	px_MCPTT_ID_User_A			
mcptt-calling-user-id	Encrypted (NOTE 1)	The URI of the calling	1	
mopte bailing abor la	<mcptt-calling-user-id></mcptt-calling-user-id>	user		
	with mcpttURI set to			1
	px_MCPTT_ID_User_B			
mcptt-called-party-id	not present			
mcptt-calling-group-id	not present			
mepti-calling-group-lu	Encrypted (NOTE 1)	The URI of the group		GROUP-
	<pre>cmcptt-calling-group-</pre>	The ORI of the group		CALL OR
	id> with mcpttURI set to			CHAT-
	px_MCPTT_Group_A_I			GROUP-
				CALL
required	not present			OALL
emergency-ind	not present			
0	Encrypted (NOTE 1)			EMERGE
	<emergency-ind> with</emergency-ind>			CY-CALL
	mcpttBoolean set to			
	"true"			
alert-ind	not present			
	Encrypted (NOTE 1)			EMERGE
	<alert-ind> with</alert-ind>			CY-CALL
	mcpttBoolean set to			
	"false"			
imminentperil-ind	not present			
	Encrypted (NOTE 1)			IMMPERI
	<imminentperil-ind></imminentperil-ind>			-CALL
	with mcpttBoolean set			_ · · - <b>-</b>
	to "true"			
broadcast-ind	not present			
	"true"			BROADC ST-CALL
mc-org	not present			ST-CALL
floor-state	not present			
associated-group-id	not present			
originated-by	not present		1	1
MKFC-GKTPs	not present		1	
mcptt-client-id	not present			1
alert-ind-rcvd	not present			
gw-mcptt-usage	not present	Rel-18		
anyExt	not present		TS 24.379 [9],	
5. I Y L / L	not prodotit	1	10 27.010 [0],	1

Derivation Path: TS 24.379 [9] clauses F.1.2, F.1.3					
Information Element	Value/remark	Comment	Reference	Condition	
type attribute	"Encrypted"				
EncryptedData	EncryptedData as described in Table 5.5.13.2-2 containing encrypted element content of the mcptt parameter				

## MCVideo

\_

## Table 5.5.3.2.2-2: MCVideo-Info from the SS

Information Element	Value/remark	Comment	Reference	Condition
ncvideoinfo				
mcvideo-Params				
mcvideo-access-token	not present			
session-type	not present			
	"prearranged"			GROUP- CALL
	"private"			PRIVATE CALL
	"chat"			CHAT- GROUP- CALL
mcvideo-request-uri	Encrypted (NOTE 1) <mcvideo-request-uri> with mcvideoURI set to px_MCVideo_ID_User_ A</mcvideo-request-uri>	The URI of the called user		
mcvideo-calling-user-id	Encrypted (NOTE 1) <mcvideo-calling-user- id&gt; with mcvideoURI set to px_MCVideo_ID_User_ B</mcvideo-calling-user- 	The URI of the calling user		
mcvideo-called-party-id	not present			
mcvideo-calling-group-id	not present			
	Encrypted (NOTE 1) <mcvideo-calling- group-id&gt; with mcvideoURI set to px_MCVideo_Group_A _ID</mcvideo-calling- 	The URI of the group		GROUP- CALL OR CHAT- GROUP- CALL
required	not present			
emergency-ind	Encrypted (NOTE 1) <emergency-ind> with mcvideoBoolean set to "false"</emergency-ind>			
	Encrypted (NOTE 1) <emergency-ind> with mcvideoBoolean set to "true"</emergency-ind>			EMERGE CY-CALL
alert-ind	not present Encrypted (NOTE 1) <alert-ind> with mcvideoBoolean set to "false"</alert-ind>			EMERGE CY-CALL
imminentperil-ind	not present			

.

Information Element	Value/remark	Comment	Reference	Condition
	Encrypted (NOTE 1) <imminentperil-ind> with mcvideoBoolean set to "true"</imminentperil-ind>			IMMPERIL -CALL
broadcast-ind	not present			
	"true"			BROADCA ST-CALL
mc-org"	not present			
associated-group-id	not present			
originated-by	not present			
MKFC-GKTPs	not present			
mcvideo-client-id	not present			
alert-ind-rcvd	not present			
multiple-devices-ind	not present			
video-pull-url	not present			
gw-mcvideo-usage	not present	Rel-18		
anyExt	not present		TS 24.281 [86] clause F.1.3	

# Table 5.5.3.2.2-2A: Encrypted MCVideo info parameter sent by the SS

Derivation Path: TS 24.281 [86] clauses F.1.2, F.1.3					
Information Element	Value/remark	Comment	Reference	Condition	
type attribute	"Encrypted"				
EncryptedData	EncryptedData as described in Table 5.5.13.2-2 containing encrypted element content of the mcvideo parameter				

# MCData

Derivation Path: TS 24.282 [87],				
Information Element	Value/remark	Comment	Reference	Condition
mcdata-info				
mcdata-Params				
mcdata-access-token	not present			
request-type	not present			
	"one-to-one-sds"			MCD_1to1
	"group-sds"			MCD_grp
mcdata-request-uri	Encrypted (NOTE 1)			
	<mcdata-request-uri></mcdata-request-uri>			
	with mcdataURI set to			
	px_MCData_ID_User_			
	A			
mcdata-calling-user-id	Encrypted (NOTE 1)			
	<mcdata-calling-user-< td=""><td></td><td></td><td></td></mcdata-calling-user-<>			
	id> with mcdataURI set			
	to			
	px_MCData_ID_User_			
	В			
mcdata-called-party-id	not present			
mcdata-calling-group-id	not present			
	Encrypted (NOTE 1)			MCD_grp
	<mcdata-calling-group-< td=""><td></td><td></td><td></td></mcdata-calling-group-<>			
	id> with mcdataURI set			
	to			
	px_MCData_Group_A_			
a la set la set	ID			
alert-ind	not present			
originated-by	not present			
mcdata-client-id	not present			
	Encrypted (NOTE 1)			MCD_grp
	<mcdata-client-id> with</mcdata-client-id>			
	mcdataString set to			
	px_MCX_Client_B_ID			
mcdata-controller-psi	not present	Del 40		
gw-mcdata-usage	not present	Rel-18		
anyExt	not present			

Condition	Explanation
MCD_1to1	A one-to-one MCData call
MCD_grp	A group MCData call
For further conditions see table 5.5.1-1	

# Table 5.5.3.2.2-3A: Encrypted MCData info parameter sent by the SS

Derivation Path: TS 24.282 [87] clauses D.1.2, D.1.3				
Information Element	Value/remark	Comment	Reference	Condition
type attribute	"Encrypted"			
EncryptedData	EncryptedData as described in Table 5.5.13.232 containing encrypted element content of the mcdata parameter			

# 5.5.3.3 Resource-lists

5.5.3.3.1 Resource-lists from the UE for call control

## - MCPTT

### Table 5.5.3.3.1-1: Resource-lists from the UE for call control in MCPTT

Derivation Path: RFC 5366 [35] / Information Element	Value/remark	Comment	Reference	Condition
resource-lists	encrypted (NOTE 1)	Comment	Reference	Condition
list[1]	encrypted (NOTE 1)			
name attribute				
	Not present Not present			
display-name				
entry[1]	NOTE 1, 2			
uri attribute	px_MCPTT_ID_User_B	The MCPTT ID of the		
	SIP-URI with	invited user SIP-URI:		PRE-
	px_MCPTT_Group_A_I	prearranged MCPTT		ESTABLIS
	D (NOTE 3) extended	group identity or		H AND
	with SIP URI header	chat group identity		(GROUP-
	fields as specified for	extended with header		CALL OR
	the SIP REFER	fields		CHAT-
	message	liolad		GROUP-
	meeeuge			CALL)
	SIP-URI with	SIP-URI:		PRE-
	px_MCPTT_ID_User_B	MCPTT ID of the called		ESTABLIS
	(NOTE 3) extended	user extended with		HAND
	with SIP URI header	header fields		(PRIVATE-
	fields as specified for			CALL OR
	the SIP REFER			FIRST-TO-
	message			ANSWER)
display-name	not present			
entry[2]	NOTE 1, 2			FIRST-TO-
				ANSWER
uri attribute	px_MCPTT_ID_User_C			
display-name	not present			
entry[2]	NOTE 1, 2			PRE-
				ESTABLIS
				H AND
				FIRST-TO-
				ANSWER
uri attribute	SIP-URI with	SIP-URI:		
	px_MCPTT_ID_User_C	MCPTT ID of the called		
	(NOTE 3) extended	user extended with		
	with SIP URI header	header fields		
	fields as specified for			
	the SIP REFER			
display name	message not present			
display-name NOTE 1: XML encryption may b		1		l
	ption of the root element <re< td=""><td>source-lists&gt; as described</td><td>in Table 5 5 13 2</td><td>_1</td></re<>	source-lists> as described	in Table 5 5 13 2	_1
	ption of (each) <list> element</list>			•
	on of the entry's uri attribute			
	document contains more the			r
NOTE 3: TS 23.179 [8] specifies				
	SIP URIs; nevertheless acc			
			needs to be a SI	,

Condition	Explanation
PRE-ESTABLISH	Call establishment using a pre-established session
For further conditions see table 5.5.1-1	

-

#### 319

## MCVideo

### Table 5.5.3.3.1-2: Resource-lists from the UE for call control in MCVideo

Information Element	Value/remark	Comment	Reference	Condition
resource-lists	encrypted (NOTE 1)			
list[1]	encrypted (NOTE 1)			
name attribute	Not present			
display-name	Not present			
entry[1]	NOTE 1, 2			
uri attribute	px_MCVideo_ID_User_ B	The MCVideo ID of the invited user		
display-name	Not present			
NOTE 1: XML encryption may	be done by			
	ryption of the root element <r< td=""><td></td><td></td><td>2-1</td></r<>			2-1
- element content encryption of (each) <li>list&gt; element as described in Table 5.5.13.2-1</li>				
- attribute URI encryption of the entry's uri attribute as described in Table 5.5.13.3-1				
NOTE 2: When a resource-list	s document contains more th	nan one entry, the entries ma	ay be in any orde	er.

### MCData

### Table 5.5.3.3.1-3: Resource-lists from the UE for call control in MCData

Derivation Path: RFC 5366 [35] / F	RFC 4826 [83]			
Information Element	Value/remark	Comment	Reference	Condition
resource-lists	encrypted (NOTE 1)			
list	encrypted (NOTE 1)			
name attribute	Not present			
display-name	Not present			
entry[1]	NOTE 1, 2			
uri attribute	px_MCData_ID_User_ B	The MCData ID of the target MCData user		
	SIP-URI with px_MCData_Group_A_ ID (NOTE 3) extended with SIP URI header fields as specified for the SIP REFER message	SIP-URI: prearranged MCData group identity with header fields		PRE- ESTABLIS H AND MCD_grp
	SIP-URI with px_MCData_ID_User_ B (NOTE 3) extended with SIP URI header fields as specified for the SIP REFER message	SIP-URI: MCData ID of the called user extended with header fields		PRE- ESTABLIS H AND MCD_1to1
display-name	not present			
<ul> <li>element content end</li> </ul>	cryption of the root element cryption of (each) <list> ele biton of the entry's uri attribu locument contains more the t [87] (clauses 9.2.5.2.1.1, s</list>		5.5.13.2-1 .5.13.3-1 ay be in any orde	ır.

Condition	Explanation
PRE-ESTABLISH	Call establishment using a pre-established session
MCD_1to1	A one-to-one MCData call
MCD_grp	A group MCData call
For further conditions see table 5.5.1-1	

## 5.5.3.3.1A Resource-lists from the UE for initial configuration

Information Element	Value/remark	Comment	Reference	Condition
resource-lists	encrypted (NOTE 1)		TS 24.481 [11]	
			TS 24.484 [14]	
list[1]	encrypted (NOTE 1)			
name attribute	not present			
display-name	Not present			
entry[1]	NOTE 1, 2, 4		TS 24.484 [14]	CONFIG
uri attribute	AUID-ue-config & "/users/" & XUID & "/" & <u>MCSUEID &amp; "/"</u> AUID-ue-config & "/users/" & XUID & "/"	UE Configuration document (NOTE 3) Editor's note: It is not clear in the core specs whether both options are allowed or only one of both; if the UE is allowed not to include the MCSUEID, it is not		
		clear where the MC server gets it from		
display-name	Not present			
entry[2]	NOTE 1, 2, 4		TS 24.484 [14]	CONFIG
uri attribute	AUID-user-profile & "/users/" & XUID & "/"	UE User Profile document (NOTE 3)		
display-name	Not present			
entry[3]	NOTE 1, 2, 4		TS 24.484 [14]	CONFIG
uri attribute	AUID-service-config & "/global/service- config.xml"	UE Service Configuration document (NOTE 3)		
display-name	Not present			
entry[1]	NOTE 1, 2, 4		TS 24.484 [14]	GROUPC ONFIG
uri attribute	"org.openmobileallianc e.groups/global/byGrou pID/" & Group-ID	UE Group Configuration document		
display-name	Not present			
entry[2]	NOTE 1, 2, 4		TS 24.481 [11]	GROUPC ONFIG AND GROUPKI Y
uri attribute	Doc-Sel_T & "~~" & Node-Sel	MCPTT-GKTP document (NOTE 3)		
display-name	Not present			
entry[1]	NOTE 1, 2, 4		TS 24.481 [11]	GROUPKI Y AND NOT GROUPC ONFIG
uri attribute	Doc-Sel & "~~" & Node- Sel	MCPTT-GKTP document (NOTE 3)		
display-name	Not present	1		

## Table 5.5.3.3.1A-1: Resource-lists from the UE for initial configuration

NOTE 2: When a resource-lists document contains more than one entry, the entries may be in any order.

NOTE 3: The terms AUID-ue-config, AUID-user-profile, AUID-service-config, XUID, Group-ID, Doc-Sel, Node-Sel and MCSUEID are defined in table 5.5.3.3.1A-2.

NOTE 4: Additionalattributes may be included for each entry

Term	Value	Condition
AUID-ue-config	"org.3gpp.mcptt.ue-config"	MCPTT
-	"org.3gpp.mcvideo.ue-config"	MCVideo
	"org.3gpp.mcdata.ue-config"	MCData
AUID-user-profile	"org.3gpp.mcptt.user-profile"	MCPTT
	"org.3gpp.mcvideo.user-profile"	MCVideo
	"org.3gpp.mcdata.user-profile"	MCData
AUID-service-config	"org.3gpp.mcptt.service-config"	MCPTT
	"org.3gpp.mcvideo.service-config"	MCVideo
	"org.3gpp.mcdata.service-config"	MCData
XUID	"sip:" & px_MCPTT_ID_User_A	MCPTT
	sip:" & px_MCVideo_ID_User_A	MCVideo
	"sip:" & px_MCData_ID_User_A	MCData
Group-ID	px_MCPTT_Group_A_ID	MCPTT
	px_MCVideo_Group_A_ID	MCVideo
	px_MCData_Group_A_ID	MCData
Doc-Sel	"org.3gpp.MCPTT-GKTP/global/byGroupID/" & Group-ID & "/"	
Node-Sel	"/group/list-service/mgktp:GKTPs?xmlns(mgktp=urn:3gpp:ns:mcpttGKTP:1.0)"	
MCSUEID	Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8)	

### Table 5.5.3.3.1A-2: Terms used in Resource-lists' URIs

## 5.5.3.3.2 Resource-lists from the SS

### MCPTT

-

-

# Table 5.5.3.3.2-1: Resource-lists from the SS for MCPTT

Derivation Path: RFC 5366 [35]	/ RFC 4826 [83]			
Information Element	Value/remark	Comment	Reference	Condition
resource-lists	Editor's note: XML element content encryption to be added			
name attribute	Not present			
display-name	Not present			
list				
entry[1]				
uri attribute	px_MCPTT_ID_User_A	The MCPTT ID of the invited user		
display-name	Not present			

## MCVideo

### Table 5.5.3.3.2-2: Resource-lists from the SS for MCVideo

Derivation Path: RFC 5366 [35] / RFC 4826 [83]				
Information Element	Value/remark	Comment	Reference	Condition
resource-lists	Editor's note: XML element content encryption to be added			
list				
entry[1]				
uri attribute	px_MCVideo_ID_User_ A	The MCVideo ID of the invited user		
display name	not present			

322

## MCData

Table 5.5.3.3.2-3:	Resource-lists from	the SS for MCData
Table J.J.J.J.Z-J.	Nesource-lists itolii	

Derivation Path: RFC 5366 [35] / RFC 4826 [83]				
Information Element	Value/remark	Comment	Reference	Condition
resource-lists	Editor's note: XML element content encryption to be added			
list				
entry[1]				
uri attribute	px_MCData_ID_User_ A	The MCData ID of the invited user		
display name	not present			

- 5.5.3.4 Location-info
- 5.5.3.4.1 Location-info (Report from the UE)
- MCPTT

Table 5.5.3.4.1-1: Location-info (Report from the UE) for MCPTT

erivation Path: TS 24.379 [9] Information Element	Value/remark	Comment	Reference	Conditio
ocation-info				
Report				
ReportID attribute	not present	Attribute is used to return the value in the <requestid> attribute in the <request> element. Only present in response to a</request></requestid>		
		Location-Info Request.		
ReportType attribute	"Emergency"	Required The <reporttype> attribute has two values "Emergency" and "NonEmergency" used to inform whether the client is sending the report in an emergency situation or not.</reporttype>		
TriggerID	not present	An element which can occur multiple times. Contains the value of the <triggerid> attribute associated with a trigger that has fired. Only present if a trigger is the cause of the Location-info Report.</triggerid>		
mcptt-reporting-uri	not present	Rel-18		
CurrentLocation		A mandatory element that contains the location information		
CurrentServingEcgi	Encrypted (NOTE 2) <currentservingecgi> with any content if present</currentservingecgi>	This is optional depending on the configuration sent by the SS		
NeighbouringEcgi	Encrypted (NOTE 2) <neighbouringecgi> with any content if present</neighbouringecgi>	This is optional depending on the configuration sent by the SS		
MbmsSald	Encrypted (NOTE 2) <mbmssald> with any content if present</mbmssald>	This is optional depending on the configuration sent by the SS		
MbsfnArea	Encrypted (NOTE 2) <mbsfnarea> with any content if present</mbsfnarea>	This is optional depending on the configuration sent by the SS		
CurrentCoordinate	if present	This is optional depending on the configuration sent by the SS		
longitude	Encrypted (NOTE 1) <longitude> with any content</longitude>			
latitude	Encrypted (NOTE 1) <latitude> with any content</latitude>			

Derivation Path: TS 24.379 [9] c	ause F.3.2 (tCoordinateType	e)		
Information Element	Value/remark	Comment	Reference	Condition
type attribute	"Encrypted"			
EncryptedData	EncryptedData as			
	described in Table			

Table 5.5.3.4.1-1A: Encrypted sub-element of <CurrentCoordinate> sent by the UE

### Table 5.5.3.4.1-1B: Encrypted sub-element of <CurrentLocation> sent by the UE

5.5.13.2-1 containing encrypted element content of the sub-

<CurrentCoordinate>

element of

Derivation Path: TS 24.379 [9] clause F.3.2 (tCurrentLocationType)					
Information Element	Value/remark	Comment	Reference	Condition	
type attribute	"Encrypted"				
EncryptedData	EncryptedData as described in Table 5.5.13.2-1 containing encrypted element content of the sub- element of <currentlocation></currentlocation>				

### MCVideo

Table 5.5.3.4.1-2: Location-info (Report from the UE) for MCVideo

Derivation Path: TS 24.281 [86] Information Element	Value/remark	Comment	Reference	Conditio
ocation-info				
Report				
ReportID attribute	not present	Attribute is used to		
·		return the value in the		
		<requestid> attribute</requestid>		
		in the <request></request>		
		element. Only present		
		in response to a		
		Location-Info Request.		
ReportType attribute	"Emergency"	Required		
Report ype attribute	Emergency	The <reporttype></reporttype>		
		attribute has two values		
		"Emergency" and		
		"NonEmergency" used		
		to inform whether the		
		client is sending the		
		report in an emergency		
TriggerID		situation or not.		+
TriggerID	not present	An element which can		
		occur multiple times.		
		Contains the value of		
		the <triggerid></triggerid>		
		attribute associated		
		with a trigger that has		
		fired. Only present if a		
		trigger is the cause of		
		the Location-info		
		Report.		
mcvideo-reporting-uri	not present	Rel-18		
CurrentLocation		A mandatory element		
		that contains the		
		location information		
CurrentServingEcgi	Encrypted (NOTE 2)	This is optional		
	<currentservingecgi></currentservingecgi>	depending on the		
	with any content if	configuration sent by		
	present	the SS		
NeighbouringEcgi	Encrypted (NOTE 2)	This is optional		
	<neighbouringecgi></neighbouringecgi>	depending on the		
	with any content if	configuration sent by		
	present	the SS		
MbmsSald	Encrypted (NOTE 2)	This is optional		
-	<mbmssald> with any</mbmssald>	depending on the		
	content if present	configuration sent by		
		the SS		
MbsfnArea	Encrypted (NOTE 2)	This is optional		1
	<mbsfnarea> with any</mbsfnarea>	depending on the		
	content if present	configuration sent by		
		the SS		
CurrentCoordinate	if present	This is optional		1
Carroncoordinate		depending on the		
		configuration sent by		
		the SS		
longitude	Encrypted (NOTE 1)			1
iongitude				
	<longitude> with any</longitude>			
latitude	Encrypted (NOTE 1)			
	<latitude> with any</latitude>			
	content	<u> </u>		
		s described in Table 5.5.3.4	1 0 1	

Derivation Path: TS 24.281 [86] clause F.3.2 (tCoordinateType)					
Information Element	Value/remark	Comment	Reference	Condition	
type attribute	"Encrypted"				
EncryptedData	EncryptedData as described in Table 5.5.13.2-1 containing encrypted element content of the sub- element of <currentcoordinate></currentcoordinate>				

Table 5.5.3.4.1-2A: Encrypted sub-element of <CurrentCoordinate> sent by the UE

### Table 5.5.3.4.1-2B: Encrypted sub-element of <CurrentLocation> sent by the UE

Derivation Path: TS 24.281 [86] clause F.3.2 (tCurrentLocationType)					
Information Element	Value/remark	Comment	Reference	Condition	
type attribute	"Encrypted"				
EncryptedData	EncryptedData as described in Table 5.5.13.2-1 containing encrypted element content of the sub- element of <currentlocation></currentlocation>				

### MCData

Table 5.5.3.4.1-3: Location-info (Report from the UE) for MCData

Perivation Path: TS 24.282 [87] Information Element	Value/remark	Comment	Reference	Conditio
cation-info				
Report				
ReportID attribute	not present	Attribute is used to		
•		return the value in the		
		<requestid> attribute</requestid>		
		in the <request></request>		
		element. Only present		
		in response to a		
		Location-Info Request.		
ReportType attribute	"Emergency"	Required		
		The <reporttype></reporttype>		
		attribute has two values		
		"Emergency" and		
		"NonEmergency" used		
		to inform whether the		
		client is sending the		
		report in an emergency		
		situation or not.		
TriggerID	not present	An element which can		
		occur multiple times.		
		Contains the value of		
		the <triggerid></triggerid>		
		attribute associated		
		with a trigger that has		
		fired. Only present if a		
		trigger is the cause of		
		the Location-info		
		Report.		
mcdata-reporting-uri	not present	Rel-18		
CurrentLocation		A mandatory element		
		that contains the		
		location information		
CurrentServingEcgi	Encrypted (NOTE 2)	This is optional		
	<currentservingecgi></currentservingecgi>	depending on the		
	with any content if	configuration sent by		
	present	the SS		
NeighbouringEcgi	Encrypted (NOTE 2)	This is optional		
	<neighbouringecgi></neighbouringecgi>	depending on the		
	with any content if	configuration sent by		
	present	the SS		
MbmsSald	Encrypted (NOTE 2)	This is optional		
	<mbmssald> with any</mbmssald>	depending on the		
	content if present	configuration sent by the SS		
MbsfnAroa	Eponyptod (NOTE 2)	This is optional		+
MbsfnArea	Encrypted (NOTE 2)			
	<mbsfnarea> with any content if present</mbsfnarea>	depending on the configuration sent by		
		the SS		
CurrentCoordinate	if present	This is optional		
Currenicoordinale		depending on the		
		configuration sent by		
		the SS		
longitude	Encrypted (NOTE 1)			-
Iongitude	<pre><longitude> with any</longitude></pre>			
	content			
latituda	Encrypted (NOTE 1)	+		+
latitude	<pre></pre> <pre></pre>			
	content			
		I lis described in Table 5.5.3.4		1

Derivation Path: TS 24.282 [87] clause d.4.2 (tCoordinateType)					
Information Element	Value/remark	Comment	Reference	Condition	
type attribute	"Encrypted"				
EncryptedData	EncryptedData as described in Table 5.5.13.2-1 containing encrypted element content of the sub- element of				

Table 5.5.3.4.1-3A: Encrypted sub-element of <CurrentCoordinate> sent by the UE

#### Table 5.5.3.4.1-3B: Encrypted sub-element of <CurrentLocation> sent by the UE

<CurrentCoordinate>

Derivation Path: TS 24.282 [87] clause D.4.2 (tCurrentLocationType)					
Information Element	Value/remark	Comment	Reference	Condition	
type attribute	"Encrypted"				
EncryptedData	EncryptedData as described in Table 5.5.13.2-1 containing encrypted element content of the sub- element of <currentlocation></currentlocation>				

# 5.5.3.4.2 Location-info (Configuration sent by the SS)

MCPTT

\_

Table 5.5.3.4.2-1: Location-info (Configuration sent by the SS) for MCPTT

Derivation Path: TS 24.379 [9] cla Information Element	Value/remark	Comment	Reference	Condition
location-info				
Configuration				
ConfigScope	"Full"	The MCPTT Client		
		shall replace any		
		previous configuration.		
NonEmergencyLocationInformat ion				
ServingEcgi	present	An optional element		
		specifying that the		
		serving E-UTRAN Cell		
		Global Identity (ECGI) needs to be reported		
NeighbouringEcgi	present	An optional element		
	F	that can occur multiple		
		times, specifying that		
		neighbouring ECGIs		
		need to be reported		
MbmsSald	present	An optional element		
		specifying that the		
		serving MBMS Service		
		Area Id needs to be		
MbsfnArea	nraaant	reported; An optional element		
MDSINArea	present	specifying that the		
		MBSFN area Id needs		
		to be reported;		
GeographicalCoordinate	present	An optional element		
<u>-</u>	F	specifying that the		
		geographical		
		coordinate specified in		
		clause 6.1 in 3GPP		
		TS 23.032 [65] needs		
		to be reported		
minimumIntervalLength	"10"	A mandatory element specifying the minimum		
		time the MCPTT client		
		needs to wait between		
		sending location		
		reports. The value is		
		given in seconds		
EmergencyLocationInformation"				
ServingEcgi	present	An optional element		
		specifying that the		
		serving E-UTRAN Cell		
		Global Identity (ECGI)		
NeighbouringCasi	procent	needs to be reported		
NeighbouringEcgi	present	An optional element that can occur multiple		
		times, specifying that		
		neighbouring ECGIs		
		need to be reported		
MbmsSald	present	An optional element		1
		specifying that the		
		serving MBMS Service		
		Area Id needs to be		
		reported;		
MbsfnArea	present	An optional element		
		specifying that the MBSFN area Id needs		
		IVIDOFIN ALEA IO NEEDS		1

Derivation Path: TS 24.379 [9] clause F.3					
Information Element	Value/remark	Comment	Reference	Condition	
GeographicalCoordinate	present	An optional element specifying that the geographical coordinate specified in clause 6.1 in 3GPP TS 23.032 [65] needs to be reported			
minimumIntervalLength	"5"	A mandatory element specifying the minimum time the MCPTT client needs to wait between sending location reports. The value is given in seconds			
TriggeringCriteria		9			
CellChange	not present				
TrackingAreaChange	not present				
PlmnChange	not present				
MbmsSaChange	not present				
MbsfnAreaChange	not present				
PeriodicReport	not present				
TravelledDistance	not present				
McpttSignallingEvent	not present				
GeographicalAreaChange					
AnyAreaChange	not present				
EnterSpecificAreaType	not present				
ExitSpecificAreaType	not present				
anyExt		mandatory for Rel-15 and above			
EmergencyTriggeringCriteria					
CellChange	not present				
TrackingAreaChange	not present				
PlmnChange	not present				
MbmsSaChange	not present				
MbsfnAreaChange	not present				
PeriodicReport	not present				
TravelledDistance	not present				
McpttSignallingEvent	not present				
GeographicalAreaChange					
AnyAreaChange	not present				
EnterSpecificAreaType	not present				
ExitSpecificAreaType	not present				

333

MCVideo

Table 5.5.3.4.2-2: Location-info (Configuration sent by the SS) for MCVideo

Derivation Path: TS 24.281 [86] ( Information Element	Value/remark	Comment	Reference	Condition
location-info	Talao, Tollan			
Configuration				
ConfigScope	"Full"	The MCVideo Client		
5		shall replace any		
		previous configuration.		
NonEmergencyLocationInformat				
ServingEcgi	present	An optional element		
		specifying that the		
		serving E-UTRAN Cell		
		Global Identity (ECGI)		
		needs to be reported		
NeighbouringEcgi	present	An optional element		
		that can occur multiple		
		times, specifying that		
		neighbouring ECGIs		
		need to be reported		
MbmsSald	present	An optional element		
		specifying that the		
		serving MBMS Service		
		Area Id needs to be		
		reported;		
MbsfnArea	present	An optional element		
		specifying that the		
		MBSFN area Id needs		
		to be reported;		
GeographicalCoordinate	present	An optional element		
		specifying that the		
		geographical		
		coordinate specified in		
		clause 6.1 in 3GPP		
		TS 23.032 [65] needs to be reported		
minimumIntervalLength	"10"	A mandatory element		
minimummervaiLengin	10	specifying the minimum		
		time the MCVIdeo		
		client needs to wait		
		between sending		
		location reports. The		
		value is given in		
		seconds		
EmergencyLocationInformation"	propert	An optional algebrat		
ServingEcgi	present	An optional element specifying that the		
		serving E-UTRAN Cell		
		Global Identity (ECGI)		
		needs to be reported		
NeighbouringEcgi	present	An optional element		1
	P	that can occur multiple		
		times, specifying that		
		neighbouring ECGIs		
		need to be reported		
MbmsSald	present	An optional element		
	<b>`</b>	specifying that the		
		serving MBMS Service		
		Area Id needs to be		
		reported;		
MbsfnArea	present	An optional element		
		specifying that the		
		MBSFN area Id needs		
		to be reported;		1

Derivation Path: TS 24.281 [86] c	lause F.3			
Information Element	Value/remark	Comment	Reference	Condition
GeographicalCoordinate	present	An optional element specifying that the geographical coordinate specified in clause 6.1 in 3GPP TS 23.032 [65] needs to be reported		
minimumIntervalLength	"5"	A mandatory element specifying the minimum time the MCVideo client needs to wait between sending location reports. The value is given in seconds		
TriggeringCriteria				
CellChange	not present			
TrackingAreaChange	not present			
PlmnChange	not present			
MbmsSaChange	not present			
MbsfnAreaChange	not present			
PeriodicReport	not present			
TravelledDistance	not present			
McvideoSignallingEvent	not present			
GeographicalAreaChange				
AnyAreaChange	not present			
EnterSpecificAreaType	not present			
ExitSpecificAreaType	not present			

336

MCData

Table 5.5.3.4.2-3: Location-info (Configuration sent by the SS) for MCData

Derivation Path: TS 24.282 [87] c Information Element	Value/remark	Comment	Reference	Condition
location-info	Value/Ielliain	Somment		
Configuration				
ConfigScope	"Full"	The MCData Client		
geocpe		shall replace any		
		previous configuration.		
NonEmergencyLocationInformat ion				
ServingEcgi	present	An optional element		
5 5		specifying that the		
		serving E-UTRAN Cell		
		Global Identity (ECGI)		
		needs to be reported		
NeighbouringEcgi	present	An optional element		
		that can occur multiple		
		times, specifying that		
		neighbouring ECGIs		
		need to be reported		
MbmsSald	present	An optional element		
		specifying that the		
		serving MBMS Service		
		Area Id needs to be		
		reported;		
MbsfnArea	present	An optional element		
		specifying that the MBSFN area Id needs		
GeographicalCoordinate	present	to be reported; An optional element		
GeographicalCoordinate	present	specifying that the		
		geographical		
		coordinate specified in		
		clause 6.1 in 3GPP		
		TS 23.032 [65] needs		
		to be reported		
minimumIntervalLength	"10"	A mandatory element		
		specifying the minimum		
		time the MCData client		
		needs to wait between		
		sending location		
		reports. The value is		
		given in seconds		
EmergencyLocationInformation"				
ServingEcgi	present	An optional element		
		specifying that the		
		serving E-UTRAN Cell		
		Global Identity (ECGI)		
		needs to be reported		
NeighbouringEcgi	present	An optional element		
		that can occur multiple		
		times, specifying that		
		neighbouring ECGIs		
Mile and Conclude		need to be reported		
MbmsSald	present	An optional element		
		specifying that the		
		serving MBMS Service		
		Area Id needs to be		
MbofaAroo	procent	reported;		
MbsfnArea	present	An optional element		
		specifying that the MBSFN area Id needs		
		MRSEN aroa ld boode		

Derivation Path: TS 24.282 [87] clause D.4					
Information Element	Value/remark	Comment	Reference	Condition	
GeographicalCoordinate	present	An optional element specifying that the geographical coordinate specified in clause 6.1 in 3GPP TS 23.032 [65] needs to be reported			
minimumIntervalLength	"5"	A mandatory element specifying the minimum time the MCData client needs to wait between sending location reports. The value is given in seconds			
TriggeringCriteria					
CellChange	not present				
TrackingAreaChange	not present				
PlmnChange	not present				
MbmsSaChange	not present				
MbsfnAreaChange	not present				
PeriodicReport	not present				
TravelledDistance	not present				
McdataSignallingEvent	not present				
GeographicalAreaChange					
AnyAreaChange	not present				
EnterSpecificAreaType	not present				
ExitSpecificAreaType	not present				

# 5.5.3.4.3 Location-info (Request sent by the SS)

#### MCPTT

-

-

### Table 5.5.3.4.3-1: Location-info (Request sent by the SS) for MCPTT

Derivation Path: TS 24.379 [9] clause F.3						
Information Element	Value/remark	Comment	Reference	Condition		
location-info						
Request						
RequestID	"1"	The RequestID that the MCPTT Client will reference in the Report				
refresh	not present	Rel-18				

#### MCVideo

#### Table 5.5.3.4.3-2: Location-info (Request sent by the SS) for MCVideo

Derivation Path: TS 24.281 [96] clause F.3					
Information Element	Value/remark	Comment	Reference	Condition	
location-info					
Request					
RequestID	"1"	The RequestID that the MCVideo Client will reference in the Report			
refresh	not present	Rel-18			

-

#### MCData

#### Table 5.5.3.4.3-3: Location-info (Request sent by the SS) for MCData

Derivation Path: TS 24.282 [87] clause D.4						
Information Element	Value/remark	Comment	Reference	Condition		
location-info						
Request						
RequestID	"1"	The RequestID that the MCData Client will reference in the Report				
refresh	not present	Rel-18				

5.5.3.4.4 Location-info (Report from the SS)

MCPTT

#### Table 5.5.3.4.4-1: Location-info (Report from the SS) for MCPTT

Derivation Path: TS 24.379 [9] of		<b>0</b>		
Information Element	Value/remark	Comment	Reference	Condition
location-info				
Report				
ReportID attribute	not present			
ReportType attribute	"Emergency"			
TriggerID	not present			
mcptt-reporting-uri	not present	Rel-18		
CurrentLocation				
CurrentServingEcgi	not present			
NeighbouringEcgi	not present			
MbmsSald	not present			
MbsfnArea	not present			
CurrentCoordinate				
longitude	Encrypted (NOTE 1)			
	<longitude> with</longitude>			
	content as specified by			
	the test case			
latitude	Encrypted (NOTE 1)			
	<latitude> with content</latitude>			
	as specified by the test			
	case			
NOTE 1: Encrypted tCoordina	teType element as described	in Table 5.5.3.4.4-1A		

#### Table 5.5.3.4.4-1A: Encrypted sub-element of <CurrentCoordinate> sent by the SS

Derivation Path: TS 24.379 [9] clause F.3.2 (tCoordinateType)						
Information Element	Value/remark	Comment	Reference	Condition		
type attribute	"Encrypted"					
EncryptedData	EncryptedData as described in Table 5.5.13.2-2 containing encrypted element content of the sub- element of <currentcoordinate></currentcoordinate>					

### MCVideo

Derivation Path: TS 24.281 [86] Information Element	Value/remark	Comment	Reference	Condition
location-info	Value/Ternark			Condition
Report				
ReportID attribute	not present			
ReportType attribute	"Emergency"			
TriggerID	not present			
mcvideo-reporting-uri	not present	Rel-18		
CurrentLocation				
CurrentServingEcgi	not present			
NeighbouringEcgi	not present			
MbmsSald	not present			
MbsfnArea	not present			
CurrentCoordinate				
longitude	Encrypted (NOTE 1) <longitude> with content as specified by the test case</longitude>			
latitude	Encrypted (NOTE 1) <latitude> with content as specified by the test case</latitude>			

# Table 5.5.3.4.4-2A: Encrypted sub-element of <CurrentCoordinate> sent by the SS

Derivation Path: TS 24.281 [86] of	clause F.3.2 (tCoordinateType	e)		
Information Element	Value/remark	Comment	Reference	Condition
type attribute	"Encrypted"			
EncryptedData	EncryptedData as described in Table 5.5.13.2-2 containing encrypted element content of the sub- element of <currentcoordinate></currentcoordinate>			

### MCData

Derivation Path: TS 24.282 [87] Information Element	Value/remark	Comment	Reference	Condition
location-info				
Report				
ReportID attribute	not present			
ReportType attribute	"Emergency"			
TriggerID	not present			
mcdata-reporting-uri	not present	Rel-18		
CurrentLocation				
CurrentServingEcgi	not present			
NeighbouringEcgi	not present			
MbmsSald	not present			
MbsfnArea	not present			
CurrentCoordinate				
longitude	Encrypted (NOTE 1) <longitude> with content as specified by the test case</longitude>			
latitude	Encrypted (NOTE 1) <latitude> with content as specified by the test case</latitude>			

# Table 5.5.3.4.4-3A: Encrypted sub-element of <CurrentCoordinate> sent by the SS

Derivation Path: 24.282 [87] clause D.4.2 (tCoordinateType)					
Information Element	Value/remark	Comment	Reference	Condition	
type attribute	"Encrypted"				
EncryptedData	EncryptedData as described in Table 5.5.13.2-2 containing encrypted element content of the sub- element of <currentcoordinate></currentcoordinate>				

### 5.5.3.5 PIDF

#### PIDF from the UE 5.5.3.5.1

#### MCPTT -

### Table 5.5.3.5.1-1: PIDF for MCPTT from the UE

Derivation Path: RFC 3863 [114] Information Element	Value/remark	Comment	Reference	Condition
presence			RFC 3863 [114]	
entity attribute	Encrypted URI (NOTE 1) with value set to px_MCPTT_ID_User_A			
tuple				
id attribute	Encrypted URI (NOTE 1) with value set to the mcptt-client-id as provided by the UE at registration			
status				
affiliation		MCPTT extension	TS 24.379 [9] clause 9.3.1	AFFILIATI ON
group	Encrypted URI (NOTE 1) with value set to px_MCPTT_Group_A_I D			
client	not present			
status	not present			
expires	not present			
functionalAlias		MCPTT extension	TS 24.379 [9] Table 9A.3.1.2-1	FUNCTIO NAL_ALIA S_STATU S_CHANG E
functionalAliasID attribute	Encrypted URI (NOTE 1) with value set to px_MCPTT_ID_FA_A			
user attribute	not present			
status attribute	not present			
expires attribute	not present			
contact	not present			
note	not present			
timestamp	not present			
note	not present			
p-id	any allowed value if present		TS 24.379 [9] clause 9.3.1	AFFILIATI ON
p-id-fa	Any allowed value	a globally unique value set to an identifier of a SIP PUBLISH request	TS 24.379 [9] clause 9A.2.1.2	FUNCTIO NAL_ALIA S_STATU S_CHANG E

Condition	Explanation
FUNCTIONAL_ALIAS_STATUS_CHANGE	PIDF sent by the UE in request for functional alias status change
For further conditions see table 5.5.1-1	

#### MCVideo

Information Element	Value/remark	Comment	Reference	Condition
presence			RFC 3863	
			[114]	
entity attribute	Encrypted URI (NOTE 1) with value set to px_MCVideo_ID_User_ A			
tuple				
id attribute	Encrypted URI (NOTE 1) with value set to the mcptt-client-id as provided by the UE at registration			
status				
affiliation			TS 24.281 [86] clause 8.3.1	AFFILIATI ON
group	Encrypted URI (NOTE 1) with value set to px_MCVideo_Group_A _ID			
client	not present			
status	not present			
expires	not present			
p-id	any allowed value if			AFFILIATI
-	present			ON

#### MCData

Information Element	Value/remark	Comment	Reference	Condition
presence			RFC 3863	
			[114]	
entity attribute	Encrypted URI (NOTE			
	<ol> <li>with value set to</li> </ol>			
	px_MCData_ID_User_			
	A			
tuple				
id attribute	Encrypted URI (NOTE			
	1) with value set to the			
	mcptt-client-id as			
	provided by the UE at			
	registration			
status				
affiliation			TS 24.282 [87]	AFFILIATI
			clause 8.4.1	ON
group	Encrypted URI (NOTE			
	1) with value set to			
	px_MCDATA_Group_A			
aliant	_ID			
client	not present			
status	not present			
expires functionalAlias	not present	MCData extension	TS 24.282 [87]	FUNCTIO
TUNCIONAIAIIAS		MCData extension	Table	NAL_ALIA
			22.3.1.2-1	S_STATU
			22.3.1.2-1	S CHANG
				E
functionalAliasID attribute	Encrypted URI (NOTE			L
	1) with value set to			
	px_MCData_ID_FA_A			
user attribute	not present			
status attribute	not present			
expires attribute	not present			
p-id	any allowed value or	set to an identifier of a	1	AFFILIATI
•	same value as sent in	SIP PUBLISH request		ON
	SIP PUBLISH			
p-id-fa	Any allowed value	a globally unique value	TS 24.282 [87]	FUNCTIO
	-	set to an identifier of a	clause	NAL_ALIA
		SIP PUBLISH request	22.2.1.2	S_STATU
				S_CHANG
				E

### 5.5.3.5.2 PIDF from the SS

\_

#### MCPTT

#### Table 5.5.3.5.2-1: PIDF for MCPTT from the SS

Derivation Path: RFC 3863 [114] Information Element	Value/remark	Comment	Reference	Condition
presence			RFC 3863	
P			[114]	
entity attribute	Encrypted URI (NOTE			
	1) with value set to			
	px_MCPTT_ID_User_A			
tuple				
id attribute	Encrypted URI (NOTE			
	1) with value set to the			
	mcptt-client-id as			
	provided by the UE at			
	registration			
status		MODIT estension	TO 04 070 [0]	
affiliation		MCPTT extension	TS 24.379 [9] clause 9.3.1	AFFILIATI
	Encrypted URI (NOTE		clause 9.3.1	ON
group	1) with value set to			
	px_MCPTT_Group_A_I			
client	not present			
status	"affiliating"			
expires	not present			
functionalAlias		MCPTT extension	TS 24.379 [9]	FUNCTIO
			Table	NAL ALIA
			9A.3.1.2-1	S_ACTIVA
				TED
functionalAliasID attribute	Encrypted URI (NOTE			
	1) with value set to			
	px_MCPTT_ID_FA_A			
user attribute	not present			
status attribute	"activated"			
expires attribute	not present			
contact	not present			
note	not present			
timestamp	not present			
note	not present			
p-id	not present			AFFILIATI ON
p-id-fa	same value as received		TS 24.379 [9]	NOTIFY_F
	in the SIP PUBLISH		clause	OR_PUBLI
	message		9A.2.2.5	SH
NOTE 1: Encrypted attribute as	described in Table 5.5.13.3	-1		

Condition	Explanation
FUNCTIONAL_ALIAS_ACTIVATED	PIDF sent by the SS in notification for functional alias getting activated
NOTIFY_FOR_PUBLISH	PIDF sent by the SS in notification associated with a previous SIP
	PUBLISH message sent by the UE
For further conditions see table 5.5.1-1	

#### MCVideo

Information Element	Value/remark	Comment	Reference	Condition
presence			RFC 3863 [114]	
entity attribute	Encrypted URI (NOTE 1) with value set to px_MCVideo_ID_User_ A			
tuple				
id attribute	Encrypted URI (NOTE 1) with value set to the mcptt-client-id as provided by the UE at registration			
status				
affiliation			TS 24.281 [86] clause 8.3.1	AFFILIATI ON
group	Encrypted URI (NOTE 1) with value set to px_MCVideo_Group_A _ID			
client	not present			
status	"affiliating"			
expires	not present			
p-id	not present			AFFILIATI ON

-

#### MCData

Information Element	Value/remark	Comment	Reference	Condition
presence			RFC 3863 [114]	
entity attribute	Encrypted URI (NOTE 1) with value set to px_MCDATA_ID_User _A			
tuple				
id attribute	Encrypted URI (NOTE 1) with value set to the mcptt-client-id as provided by the UE at registration			
status				
affiliation			TS 24.282 [87] clause 8.4.1	AFFILIATI ON
group	px_MCDATA_Group_A _ID			
client	not present			
status	"affiliating"			
expires	not present			
functionalAlias		MCData extension	TS 24.282 [87] Table 22.3.1.2-1	FUNCTIO NAL_ALIA S_ACTIVA TED
functionalAliasID attribute	Encrypted URI (NOTE 1) with value set to px_MCData_ID_FA_A			
user attribute	not present			
status attribute	"activated"			
expires attribute	not present			
p-id	not present			AFFILIATI ON
p-id-fa	same value as received in the SIP PUBLISH message		TS 24.282 [87] clause 22.2.2.5	NOTIFY_F OR_PUBL SH

Condition	Explanation
FUNCTIONAL_ALIAS_ACTIVATED	PIDF sent by the SS in notification for functional alias getting activated
NOTIFY_FOR_PUBLISH	PIDF sent by the SS in notification associated with a previous SIP PUBLISH message sent by the UE
For further conditions see table 5.5.1-1	

# 5.5.3.6 SIMPLE-FILTER

#### Table 5.5.3.6-1: SIMPLE-FILTER

Derivation Path: RFC 4661 [48] Information Element	Value/remark	Comment	Reference	Condition
filter-set				
ns-bindings		TS 24.379 [9]		
		clause 9.3.2.2 requires		
		two separate ns-		
		binding elements		
ns-binding urn [1]				
prefix	"pidf"			
um	"urn:ietf:params:xml:ns: pidf"			
ns-binding urn [2]				MCPTT
prefix	"mcpttPI10"			
urn	"urn:3gpp:ns:mcpttPres			
	Info:1.0"			
ns-binding urn [2]				MCVIDEC
prefix	"mcvideoPI10"			
urn	"urn:3gpp:ns:mcvideoP			
	resInfo:1.0"			
ns-binding urn [2]				MCDATA
prefix	"mcdataPI10"			
urn	"urn:3gpp:ns:mcdataPr esInfo:1.0"			
filter[1]	esinio. 1.0			
id attribute	Any value	The value of the 'id'		
	Any value	attribute has to be		
		unique within the <filter-< td=""><td></td><td></td></filter-<>		
		set> element		
uri attribute	Not present	According to		
		TS 24.379 [9]		
		clause 9.3.2.2		-
domain attribute	Not present	According to		
		TS 24.379 [9] clause 9.3.2.2		
remove attribute	false if present	'false' per default		
enabled attribute	true if present	'true' per default		
what			RFC 4661 [48]	PER-
				CLIENT
include[1]				
type	xpath if present	"xpath" per default		
base	"//presence/tuple[@id="	contains the value,		
	& client id (NOTE 1) &	according to IETF RFC		
	"]" Editorio Nietor	4661 [48], set to		
	Editor's Note: FFS whether and how	concatenation of the '//presence/tuple[@id="'		
	this element should be	string, the MCX client		
	encrypted	ID, and the '"]' string		
what		i z, and the journg	RFC 4661 [48]	PER-
				GROUP
include[1]				
type	xpath if present	"xpath" per default		
base	"//pidf:presence/pidf:ad		TS 24.379 [9]	
	ditionalData/@pidf:grou		clause 9.3.2.2	
triggor	pCallOngoing"			
trigger NOTE 1: UUID URN as provid	Not present ed by the client at initial regis	1	l	l

Condition Explanation	
PER-CLIENT	Per-client restrictions of presence event package notification
	information according to TS 24.379 [9] clause 9.3.2.2
PER-GROUP	Per-group restrictions of presence event package notification
	information according to TS 24.379 [9] clause 9.3.2.2

#### Table 5.5.3.6-2: Void

#### Table 5.5.3.6-3: Void

#### 5.5.3.7 AFFILIATION-COMMAND

#### MCPTT

-

-

-

#### Table 5.5.3.7-1: MCPTT-AFFILIATION-COMMAND for MCPTT

Derivation Path: TS 24.379 [9] clause F.4					
Information Element	Value/remark	Comment	Reference	Condition	
command-list					
affiliate					
group[1]	px_MCPTT_Group_A_I	MCPTT group name			
	D				
de-affiliate	not present				

#### MCVideo

#### Table 5.5.3.7-2: MCVideo-AFFILIATION-COMMAND for MCVideo

Derivation Path: TS 24.281 [86] clause F.4					
Information Element	Value/remark	Comment	Reference	Condition	
command-list					
affiliate					
group[1]	px_MCVideo_Group_A _ID	MCVideo group name			
de-affiliate	not present				

#### MCData

#### Table 5.5.3.7-3: MCData-AFFILIATION-COMMAND for MCData

Derivation Path: TS 24.282 [87] clause D.3					
Information Element	Value/remark	Comment	Reference	Condition	
command-list					
affiliate					
group[1]	px_MCData_Group_A_ ID	MCData group name			
de-affiliate	not present				

### 5.5.3.8 MCData Data signalling messages

The MCData Data signalling messages specified in this clause are protected according to TS 33.180 clause 8.5.4, i.e. a MCData Data signalling message is contained in the protected payload of a MCData Protected Payload Message according to clause 5.5.3.10 with condition PROTECTED\_MESSAGE and CSK.

The following conditions apply throughout clause 5.5.3.8:

Condition	Explanation
DELIVERED	Disposition request/notification type DELIVERED
READ	Disposition request/notification type READ
DELIVERED_READ	Disposition request/notification type DELIVERED AND READ
FD_ACCEPTED	Disposition notification type FILE DOWNLOAD REQUEST ACCEPTED
FD_REJECTED	Disposition notification type FILE DOWNLOAD REQUEST REJECTED
FD_COMPLETED	Disposition notification type FILE DOWNLOAD COMPLETED
FD_DEFERRED	Disposition notification type FILE DOWNLOAD DEFERRED
FD_HTTP	FD Message for FD using using HTTP
FD_MSRP	FD Message for FD using media plane

#### Table 5.5.3.8-1: Conditions

# 5.5.3.8.1 SDS SIGNALLING PAYLOAD message from the UE

Derivation Path: TS 24.282 [87] of		-		-
Information Element	Value/remark	Comment	Reference	Condition
SDS signalling payload	'00000001'B	SDS SIGNALLING	TS 24.282 [87]	
message identity		PAYLOAD	clause 15.2.2	
Date and time	Any allowed value	The Date and time	TS 24.282 [87]	
		value is an unsigned	clause 15.2.8	
		integer containing UTC		
		time of the time when a		
		message was sent, in		
		seconds since midnight		
		UTC of January 1,		
		1970 (not counting leap		
		seconds).		
Conversation ID	Any allowed value	The Conversation ID	TS 24.282 [87]	
		contains a number	clause 15.2.9	
		uniquely identifying the		
		conversation. The		
		value is a universally		
MassawalD		unique identifier.	<b>TO</b> 04 000 (071	
Message ID	Any allowed value	The Message ID	TS 24.282 [87] clause 15.2.10	
		contains a number	clause 15.2.10	
		uniquely identifying a message. The value is		
		a universally unique		
		identifier		
InReplyTo message ID	Not present		TS 24.282 [87]	
			clause 15.2.11	
Application ID	Not present		TS 24.282 [87]	
			clause 15.2.7	
SDS disposition request type	'0001'B		TS 24.282 [87]	DELIVERE
			clause 15.2.3	D
	'0010'B			READ
	'0011'B			DELIVERE
				D_READ
Extended application ID	Not present		TS 24.282 [87]	
			clause 15.2.24	
User location	Any allowed value if		TS 24.282 [87]	
0 1 1000 / 10	present		clause 15.2.25	
Sender MCData user ID	Not present		TS 24.282 [87]	
A 11 21 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		5.1.17	clause 15.2.15	
Application metadata container	Any allowed value if	Rel-17	TS 24.282 [87]	
	present		clause 15.2.28	

# 5.5.3.8.2 SDS SIGNALLING PAYLOAD message from the SS

Derivation Path: TS 24.282 [87]		-		
Information Element	Value/remark	Comment	Reference	Condition
SDS signalling payload	'00000001'B	SDS SIGNALLING	TS 24.282 [87]	
message identity		PAYLOAD	clause 15.2.2	
Date and time	The current date and	The Date and time	TS 24.282 [87]	
	time	value is an unsigned	clause 15.2.8	
		integer containing UTC		
		time of the time when a		
		message was sent, in		
		seconds since midnight		
		UTC of January 1,		
		1970 (not counting leap seconds).		
Conversation ID	0101010101010101010101	The Conversation ID	TS 24.282 [87]	
	01010101010101010101010101010101010101	contains a number	clause 15.2.9	
	010101010101010	uniquely identifying the		
		conversation. The		
		value is a universally		
		unique identifier.		
Message ID	'01010101010101010101	The Message ID	TS 24.282 [87]	
5	01010101010101'O	contains a number	clause 15.2.10	
		uniquely identifying a		
		message. The value is		
		a universally unique		
		identifier		
InReplyTo message ID	Not present		TS 24.282 [87]	
			clause 15.2.11	
Application ID	Not present		TS 24.282 [87]	
			clause 15.2.7	
SDS disposition request type	'0001'B		TS 24.282 [87]	DELIVERE
			clause 15.2.3	D
	'0010'B			READ
	'0011'B			
Extended employed in ID	Net present		TO 04 000 [07]	D_READ
Extended application ID	Not present		TS 24.282 [87]	
lleen leestien	Not propert		clause 15.2.24 TS 24.282 [87]	
User location	Not present		clause 15.2.25	
Sender MCData user ID	Not present		TS 24.282 [87]	
	not present		clause 15.2.15	
Application metadata container	Not present	Rel-17	TS 24.282 [87]	
	not present		clause 15.2.28	

# Table 5.5.3.8.2-1: SDS SIGNALLING PAYLOAD message from the SS

#### 5.5.3.8.3

### SDS NOTIFICATION message from the UE

Information Element	Value/remark	Comment	Reference	Condition
SDS notification message identity	'00000101'B	SDS NOTIFICATION	TS 24.282 [87] clause 15.2.2	
SDS disposition notification type	'00000010'B		TS 24.282 [87] clause 15.2.5	DELIVERE D
	'00000011'B			READ
	'00000100'B			DELIVERE D_READ
Date and time	Any allowed value	The Date and time value is an unsigned integer containing UTC time of the time when a message was sent, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).	TS 24.282 [87] clause 15.2.8	
Conversation ID	Same value as in the corresponding SDS SIGNALLING PAYLOAD sent to the UE	The Conversation ID contains a number uniquely identifying the conversation. The value is a universally unique identifier.	TS 24.282 [87] clause 15.2.9	
Message ID	Same value as in the corresponding SDS SIGNALLING PAYLOAD sent to the UE	The Message ID contains a number uniquely identifying a message. The value is a universally unique identifier	TS 24.282 [87] clause 15.2.10	
Application ID	Not present		TS 24.282 [87] clause 15.2.7	
Extended application ID	Not present		TS 24.282 [87] clause 15.2.24	
Sender MCData user ID	Not present		TS 24.282 [87] clause 15.2.15	

#### Table 5.5.3.8.3-1: SDS NOTIFICATION message from the UE

#### 5.5.3.8.4

### SDS NOTIFICATION message from the SS

Information ElementValue/remarkCommentReferenceConditionSDS notification message identity'00000101'BSDS NOTIFICATIONTS 24.282 [87] clause 15.2.2DELIVERE DSDS disposition notification type /00000011'B'00000010'BTS 24.282 [87] clause 15.2.5DELIVERE D'00000010'B'0000010'BREADREAD'0000010'BThe Date and time value is an unsigned integer containing UTC time of the time when a message was sent, in seconds since midninght UTC of January 1, 1970 (not counting leap seconds)TS 24.282 [87] clause 15.2.8Conversation IDSame value as in the corresponding SDS SIGNALLING from the UEThe Correstation ID contains a number uniquel identifier.TS 24.282 [87] clause 15.2.8Message IDSame value as in the corresponding SDS SIGNALLING from the UEThe Message ID contains a number uniquel identifiing a message. The value is a universally unique identifier.TS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING p AVLOAD received from the UEThe Message ID message. The value is a universally unique identifier.TS 24.282 [87] clause 15.2.10Application IDNot presentThe Message ID message. The value is a universally unique identifier.TS 24.282 [87] clause 15.2.7Application IDNot presentTS 24.282 [87] clause 15.2.74Clause 15.2.74 clause 15.2.74Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.74	Derivation Path: TS 24.282 [87] clause 15.1.5				
identityclause 15.2.2SDS disposition notification type'0000010'BTS 24.282 [87] clause 15.2.5DELIVERE D'0000011'B'0000010'BREAD'0000010'BThe current date and timeThe current date and timeThe Date and time value is an unsigned integer containing UTC time of the time when a message was sent, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).TS 24.282 [87] clause 15.2.8Conversation IDSame value as in the corresponding SDS SIGNALLING from the UEThe Conversation ID contains a number uniquely identifying the contains a number unique identifier.TS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING from the UEThe Message ID contains a number unique identifier.TS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING pAYLCAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.24Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24	Information Element			Reference	Condition
SDS disposition notification type'00000010'BTS 24.282 [87] clause 15.2.5DELIVERE D'00000011'B'00000110'BREAD'00000010'B'0000010'BDELIVERE D_READDate and timeThe current date and timeThe Date and time value is an unsigned integer containing UTC time of the time when a message was sent, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).TS 24.282 [87] clause 15.2.8Conversation IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Conversation ID contains a number uniquely identifying the corresponding SDS SIGNALLING PAYLOAD received from the UETS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7Application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.4	0	'00000101'B	SDS NOTIFICATION		
Image: Constraint of the constra					
100000011'BREAD100000100'BDELIVERE D_READDate and timeThe current date and timeThe Date and time value is an unsigned integer containing UTC time of the time when a message was sent, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).TS 24.282 [87] clause 15.2.8Conversation IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Conversation ID contains a number uniquely identifying the corresponding SDS SIGNALLING PAYLOAD received from the UETS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7TS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7TS 24.282 [87] clause 15.2.7Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24TS 24.282 [87] clause 15.2.7	SDS disposition notification type	'00000010'B			
00000100'BDELIVERE D_READDate and timeThe current date and timeThe Date and time value is an unsigned integer containing UTC time of the time when a message was sent, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).TS 24.282 [87] clause 15.2.8Conversation IDSame value as in the corresponding SDS SIGNALLING from the UEThe Conversation ID contains a number uniquely identifying the corresponding SDS SIGNALLING PAYLOAD received from the UETS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING pAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.10TS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7TS 24.282 [87] clause 15.2.10Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24				clause 15.2.5	-
Date and timeThe current date and timeThe Date and timeTS 24.282 [87] clause 15.2.8D_READDate and timeThe current date and timeThe Date and time value is an unsigned integer containing UTC time of the time when a message was sent, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).TS 24.282 [87] clause 15.2.9TS 24.282 [87] clause 15.2.9Conversation IDSame value as in the corresponding SDS SIGNALLING from the UEThe Conversation ID contains a number uniquely identifying the conversation. The value is a universally unique identifier.TS 24.282 [87] clause 15.2.9Image: Clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying the contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.9Application IDNot presentThe Message ID contains a number uniquely identifierTS 24.282 [87] clause 15.2.10Application IDNot presentThe Message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.74TS 24.282 [87] clause 15.2.74Extended application IDNot presentTS 24.282 [87] clause 15.2.24TS 24.282 [87] clause 15.2.74Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.44TS 24.282 [87] clause 15.2.74					
Date and timeThe current date and timeThe Date and time value is an unsigned integer containing UTC time of the time when a message was sent, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).TS 24.282 [87] clause 15.2.8Conversation IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Conversation ID contains a number uniquely identifier.TS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifier.TS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifier.TS 24.282 [87] clause 15.2.10Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7TS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.4		'00000100'B			
timetimevalue is an unsigned integer containing UTC time of the time when a message was sent, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).clause 15.2.8Conversation IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Conversation ID contains a number uniquely identifying the conversation. The value is a universally unique identifier.TS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying the contains a number unique identifier.TS 24.282 [87] clause 15.2.10Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.7					D_READ
integer containing UTC time of the time when a message was sent, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).The Conversation ID clause 15.2.9Conversation IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Conversation ID contains a number uniquely identifying the conversation. The value is a universally unique is a universally unique is a universally unique identifier.TS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number unique identifier.TS 24.282 [87] clause 15.2.10Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.70Application IDNot presentTS 24.282 [87] clause 15.2.74Extended application IDNot presentTS 24.282 [87] clause 15.2.74Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.74	Date and time				
time of the time when a message was sent, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).TS 24.282 [87] clause 15.2.9Conversation IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Conversation ID contains a number uniquely identifying the corresponding SDS signal contains an umber value is a universally unique identifier.TS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.24Extended application IDNot presentTS 24.282 [87] clause 15.2.24Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24		time		clause 15.2.8	
Conversation IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Conversation ID contains a number uniquely identifying the conversation. The value is a universally unique identifier.TS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UETS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UETS 24.282 [87] clause 15.2.10Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UETS 24.282 [87] clause 15.2.10Message IDNot presentTS 24.282 [87] clause 15.2.7Application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.24Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24					
Seconds since midnight UTC of January 1, 1970 (not counting leap seconds).Seconds since midnight UTC of January 1, 1970 (not counting leap seconds).Conversation ID corresponding SDS SIGNALLING PAYLOAD received from the UEThe Conversation ID contains a number uniquely identifying the conversation. The value is a universally unique identifier.TS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.24clause 15.2.24Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24clause 15.2.24					
Conversation IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Conversation ID contains a number uniquely identifying the conversation. The value is a universally unique identifier.TS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number unique identifier.TS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7TS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7TS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.4TS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.4					
Conversation IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Conversation ID contains a number uniquely identifying the conversation. The value is a universally unique identifier.TS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number unique identifier.TS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.4Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24					
Conversation IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Conversation ID contains a number uniquely identifying the conversation. The value is a universally unique identifier.TS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING from the UEThe Message ID contains a number unique identifier.TS 24.282 [87] clause 15.2.10Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24					
Conversation IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Conversation ID contains a number uniquely identifying the conversation. The value is a universally unique identifier.TS 24.282 [87] clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number unique identifier.TS 24.282 [87] clause 15.2.10Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24					
Corresponding SDS SIGNALLING PAYLOAD received from the UEcontains a number uniquely identifying the conversation. The value is a universally unique identifier.clause 15.2.9Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24			· · · · ·	<b>TO</b> 04 000 (071	
SIGNALLING PAYLOAD received from the UEuniquely identifying the conversation. The value is a universally unique identifier.Instant mathematical methodMessage IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24	Conversation ID				
PAYLOAD received from the UEconversation. The value is a universally unique identifier.Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24				clause 15.2.9	
from the UEvalue is a universally unique identifier.Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24					
Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24					
Message IDSame value as in the corresponding SDS SIGNALLING PAYLOAD received from the UEThe Message ID contains a number uniquely identifying a message. The value is a universally unique identifierTS 24.282 [87] clause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.7		nom the DE			
corresponding SDS SIGNALLING PAYLOAD received from the UEcontains a number uniquely identifying a message. The value is a universally unique identifierclause 15.2.10Application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24	Magagaga ID	Some value on in the	The Measage ID	TC 24 202 [07]	
SIGNALLING PAYLOAD received from the UEuniquely identifying a message. The value is a universally unique identifieruniquely identifying a message. The value is a universally unique identifierApplication IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.7Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24	Message ID				
PAYLOAD received from the UEmessage. The value is a universally unique identifiermessage. The value is a universally unique identifierApplication IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.4Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24				clause 15.2.10	
from the UEa universally unique identifiera universally unique identifierApplication IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.24Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24					
Application IDNot presentTS 24.282 [87] clause 15.2.7Extended application IDNot presentTS 24.282 [87] clause 15.2.24Sender MCData user IDNot presentTS 24.282 [87] clause 15.2.24					
Application ID       Not present       TS 24.282 [87] clause 15.2.7         Extended application ID       Not present       TS 24.282 [87] clause 15.2.24         Sender MCData user ID       Not present       TS 24.282 [87]					
Extended application ID     Not present     TS 24.282 [87] clause 15.2.24       Sender MCData user ID     Not present     TS 24.282 [87]	Application ID	Not present		TS 24 282 [87]	
Extended application ID     Not present     TS 24.282 [87] clause 15.2.24       Sender MCData user ID     Not present     TS 24.282 [87]		nor hiesenr			
Sender MCData user ID     Not present     Clause 15.2.24	Extended application ID	Not present			
Sender MCData user ID Not present TS 24.282 [87]		nor present			
	Sender MCData user ID	Not present			
				clause 15.2.15	

### Table 5.5.3.8.4-1: SDS NOTIFICATION message from the SS

# 5.5.3.8.5 FD SIGNALLING PAYLOAD message from the UE

Derivation Path: TS 24.282 [87] c		Commont	Deference	Condition
Information Element	Value/remark	Comment	Reference	Condition
FD signalling payload message identity	'00000010'B	FD SIGNALLING PAYLOAD	TS 24.282 [87] clause 15.2.2	
Date and time	Any allowed value	The Date and time value is an unsigned integer containing UTC time of the time when a message was sent, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).	TS 24.282 [87] clause 15.2.8	
Conversation ID	Any allowed value	The Conversation ID contains a number uniquely identifying the conversation. The value is a universally unique identifier.	TS 24.282 [87] clause 15.2.9	
Message ID	Any allowed value	The Message ID contains a number uniquely identifying a message. The value is a universally unique identifier	TS 24.282 [87] clause 15.2.10	
InReplyTo message ID	Not present		TS 24.282 [87] clause 15.2.11	
Application ID	Not present		TS 24.282 [87] clause 15.2.7	
FD disposition request type	"0001"	FILE DOWNLOAD COMPLETED UPDATE	TS 24.282 [87] clause 15.2.4	
Mandatory download	Not present	Not present indicates a Non-Mandatory download	TS 24.282 [87] clause 15.2.16	
	'0001'B	MANDATORY DOWNLOAD		FD_MSRP
Payload			TS 24.282 [87] clause 15.2.13	FD_HTTP
Length of Payload contents	Length of the payload contents			
Payload content type	"00000100"	FILEURL		
Payload contents	same URL as assigned by the SS in the HTTP 201 (Created) response to the HTTP POST request			
Metadata	if present	Metadata is optional	TS 24.282 [87] clause 15.2.17	FD_HTTP
file-selector	Any allowed value			
file-date	Any allowed value			
file-availability	Any allowed value			
Extended application ID	Not present		TS 24.282 [87] clause 15.2.24	
User location	Any allowed value if present	Rel-18	TS 24.282 [87] clause 15.2.25	
Sender MCData user ID	Not present		TS 24.282 [87] clause 15.2.15	
Application metadata container	Any allowed value if present	Rel-17	TS 24.282 [87] clause 15.2.28	

### Table 5.5.3.8.5-1: FD SIGNALLING PAYLOAD message from the UE

5.5.3.8.6 FD SIGNALLING PAYLOAD message from the SS

Table 5.5.3.8.6-1: FD SIGNALLING PAYLOAD message from the SS

Derivation Path: TS 24.282 [87] of Information Element	Value/remark	Comment	Reference	Condition
FD signalling payload message	'00000010'B	FD SIGNALLING	TS 24.282 [87]	Condition
identity		PAYLOAD	clause 15.2.2	
Date and time	The current date and	The Date and time	TS 24.282 [87]	
	time	value is an unsigned	clause 15.2.8	
		integer containing UTC		
		time of the time when a		
		message was sent, in		
		seconds since midnight		
		UTC of January 1,		
		1970 (not counting leap seconds).		
Conversation ID	01010101010101010101	The Conversation ID	TS 24.282 [87]	
Conversation ID	0101010101010101010	contains a number	clause 15.2.9	
		uniquely identifying the	010030 10.2.0	
		conversation. The		
		value is a universally		
		unique identifier.		
Message ID	'010101010101010101	The Message ID	TS 24.282 [87]	
	01010101010101'O	contains a number	clause 15.2.10	
		uniquely identifying a		
		message. The value is		
		a universally unique		
InPontyTo monogra ID	Not propert	identifier	TC 04 000 [07]	
InReplyTo message ID	Not present		TS 24.282 [87] clause 15.2.11	
Application ID	Not present		TS 24.282 [87]	
			clause 15.2.7	
FD disposition request type	'0001'B	FILE DOWNLOAD	TS 24.282 [87]	
	00010	COMPLETED UPDATE	clause 15.2.4	
Mandatory download	Not present	Not present indicates a	TS 24.282 [87]	
······		Non-Mandatory	clause 15.2.16	
		download		
	'0001'B	MANDATORY		FD_MSRP
		DOWNLOAD		
Length of Payload contents	Length of the payload			
Device of exertencial	contents			
Payload content type	"00000100"	FILEURL		
Payload contents	tsc_MCData_MSF_URI & "/" & sub-path	URL identifying the location of the stored		
		file;		
		sub-path is arbitrarily		
		selected by the SS and		
		shall be different for		
		every file upload of a		
		test case		
Metadata		NOTE 1	TS 24.282 [87]	FD_HTTP
			clause 15.2.17	
file-selector			RFC 5547	
filonamo	name of the file	o a "TootEilo tv#"	[124]	
filename filesize	name of the file size of the file	e.g. "TestFile.txt"		<u> </u>
type	type of the file	e.g. "text/plain"		}
hash				
algorithm	"sha-1"			
value	hash value of the file			
file-date			RFC 5547	
			[124]	
date-param[1]				
type	"creation"			
date-time	date and time when the	e.g. "Mon, 20 Dec 2021	RFC 5322	
	file has been created	15:01:31 +0100"	[109]	
file-availability	Date and time until	e.g. "Fri, 30 Dec 2050	TS 24.282 [87]	
	which the file is	23:59:59 +0100"	table 15.2.17-1	
	available	1		1

file-description	"Test file"		TS 24.282 [87]
			table 15.2.17-1
Extended application ID	Not present		TS 24.282 [87]
			clause 15.2.24
Sender MCData user ID	Not present		TS 24.282 [87]
			clause 15.2.15
User location	Not present	Rel-18	TS 24.282 [87]
			clause 15.2.25
Sender MCData user ID	Not present		TS 24.282 [87]
			clause 15.2.15
Application metadata container	Not present	Rel-17	TS 24.282 [87]
			clause 15.2.28
NOTE 1: file-selector, file-date, file-availability and file-description are concatenated using CRLF (carriage-return/line-			
feed) as separator			-

### 5.5.3.8.7 FD NOTIFICATION message from the UE

#### Table 5.5.3.8.7-1: FD NOTIFICATION message from the UE

Derivation Path: TS 24.282 [87] clause 15.1.6				
Information Element	Value/remark	Comment	Reference	Condition
FD notification message identity	'00000110'B	FD NOTIFICATION	TS 24.282 [87]	
			clause 15.2.2	
FD disposition notification type	'0000001'B		TS 24.282 [87]	FD_ACCE
			clause 15.2.6	PTED
	'00000010'B			FD_REJE
				CTED
	'00000011'B			FD_COMP
	10000040010			LETED
	'00000100'B			FD_DEFE RRED
Date and time		The Date and time	TC 04 000 [07]	RRED
Date and time	Any allowed value	value is an unsigned	TS 24.282 [87] clause 15.2.8	
		integer containing UTC	clause 15.2.0	
		time of the time when a		
		message was sent, in		
		seconds since midnight		
		UTC of January 1,		
		1970 (not counting leap		
		seconds).		
Conversation ID	Same value as in the	The Conversation ID	TS 24.282 [87]	
Convolution 12	corresponding FD	contains a number	clause 15.2.9	
	SIGNALLING	uniquely identifying the		
	PAYLOAD sent to the	conversation. The		
	UE	value is a universally		
		unique identifier.		
Message ID	Same value as in the	The Message ID	TS 24.282 [87]	
3	corresponding FD	contains a number	clause 15.2.10	
	SIGNALLING	uniquely identifying a		
	PAYLOAD sent to the	message. The value is		
	UE	a universally unique		
		identifier		
Application ID	Not present		TS 24.282 [87]	
			clause 15.2.7	
Extended application ID	Not present		TS 24.282 [87]	
			clause 15.2.24	
Sender MCData user ID	Not present		TS 24.282 [87]	
			clause 15.2.15	

#### 5.5.3.8.8

### FD NOTIFICATION message from the SS

Derivation Path: TS 24.282 [87] c				
Information Element	Value/remark	Comment	Reference	Condition
FD notification message identity	'00000110'B	FD NOTIFICATION	TS 24.282 [87]	
			clause 15.2.2	
FD disposition notification type	'0000001'B		TS 24.282 [87]	FD_ACCE
			clause 15.2.6	PTED
	'00000010'B			FD_REJE
				CTED
	'00000011'B			FD_COMP
				LETED
	'00000100'B			FD_DEFE
				RRED
Date and time	The current date and	The Date and time	TS 24.282 [87]	
	time	value is an unsigned	clause 15.2.8	
		integer containing UTC		
		time of the time when a		
		message was sent, in		
		seconds since midnight		
		UTC of January 1,		
		1970 (not counting leap		
		seconds).		
Conversation ID	Same value as in the	The Conversation ID	TS 24.282 [87]	
	corresponding FD	contains a number	clause 15.2.9	
	SIGNALLING	uniquely identifying the		
	PAYLOAD received	conversation. The		
	from the UE	value is a universally		
Maaaaaa ID		unique identifier.	TO 04 000 [07]	
Message ID	Same value as in the	The Message ID contains a number	TS 24.282 [87] clause 15.2.10	
	corresponding FD SIGNALLING		clause 15.2.10	
	PAYLOAD received	uniquely identifying a		
	from the UE	message. The value is		
	from the UE	a universally unique identifier		
Application ID	Not proport		TC 04 000 [07]	
Application ID	Not present		TS 24.282 [87] clause 15.2.7	
Extended application ID	Not propert		TS 24.282 [87]	
Extended application ID	Not present			
Sandar MCData upor ID	Not propert		clause 15.2.24	
Sender MCData user ID	Not present		TS 24.282 [87] clause 15.2.15	
			clause 15.2.15	

### Table 5.5.3.8.8-1: FD NOTIFICATION message from the SS

#### 5.5.3.8.9 SDS OFF-NETWORK MESSAGE message from the UE

#### Derivation Path: TS 24.282 [87] table 15.1.7.1-1 Information Element Value/remark Comment Reference Condition TS 24.282 [87] Date and time Any allowed value The Date and time value is an unsigned clause 15.2.8 integer containing UTC time of the time when a message was sent, in seconds since midnight UTC of January 1. 1970 (not counting leap seconds). Number of payloads 1 payload TS 24.282 [87] 1 clause 15.2.12 The Conversation ID Conversation ID Any allowed value TS 24.282 [87] clause 15.2.9 contains a number uniquely identifying the conversation. The value is a universally unique identifier. Message ID Any allowed value The Message ID TS 24.282 [87] contains a number clause 15.2.10 uniquely identifying a message. The value is a universally unique identifier Sender MCData user ID px\_MCData\_ID\_User\_ InReplyTo message ID Not present TS 24.282 [87] clause 15.2.11 TS 24.282 [87] Application ID Not present clause 15.2.7 SDS disposition request type '0001'B TS 24.282 [87] DELIVERE clause 15.2.3 D '0010'B READ '0011'B DELIVERE D\_READ MCD\_1to1 MCData Protected MCData Protected TS 33.180 [94] Security parameters Payload Message as Payload Message described in Table 5.5.3.10-1 with condition PROTECTED\_PAYLO AD containing the Payload as described in Table 5.5.3.8.9-2 MCData group ID px\_MCData\_Group\_A\_ TS 24.282 [87] MCD\_grp clause 15.2.14 ID Recipient MCData user ID px\_MCData\_ID\_User\_ MCD\_1to1 В TS 24.282 [87] Payload Payload as described MCD\_grp in Table 5.5.3.8.9-3 clause 15.2.13 Extended application ID Not present TS 24.282 [87] clause 15.2.24

#### Table 5.5.3.8.9-1: SDS OFF-NETWORK MESSAGE message from the UE

Condition	Explanation
MCD_1to1	A one-to-one MCData call
MCD_grp	A group MCData call
For further conditions see table 5.5.3.8-1	

Field	Value/remark	Comment	Reference	Condition
Payload IEI	'78'O		TS 24.282 [87]	
			clause 15.1.4	
Length of Payload	length of the content			
Payload content type	'0000001'B	TEXT		
Payload data	any allowed value	The data payload Example: "abcdEFGH"		

### Table 5.5.3.8.9-2: Payload contained in the Security parameters

### Table 5.5.3.8.9-3: DATA PAYLOAD message for group communication from the UE

Derivation Path: TS 24.282 [87] clause 15.1.4				
Information Element	Value/remark	Comment	Reference	Condition
Data payload message identity	'00000011'B	Data payload	TS 24.282 [87] clause 15.2.2	
Number of payloads	1	1 payload	TS 24.282 [87] clause 15.2.12	
Payload			TS 24.282 [87] clause 15.2.13	
Payload IEI	'78'O			
Length of Payload	length of the content			
Payload content type	'00000001'B	TEXT		
Payload data	any allowed value	The data payload Example: "abcdEFGH"		

#### 5.5.3.8.10 SDS OFF-NETWORK MESSAGE message from the SS

#### Derivation Path: TS 24.282 [87] table 15.1.7.1-1 Information Element Value/remark Comment Reference Condition TS 24.282 [87] Date and time The current date and The Date and time time value is an unsigned clause 15.2.8 integer containing UTC time of the time when a message was sent, in seconds since midnight UTC of January 1. 1970 (not counting leap seconds). Number of payloads 1 payload TS 24.282 [87] 1 clause 15.2.12 The Conversation ID Conversation ID '01010101010101010101 TS 24.282 [87] 01010101010101'O clause 15.2.9 contains a number uniquely identifying the conversation. The value is a universally unique identifier. '01010101010101010101 The Message ID TS 24.282 [87] Message ID 01010101010101'O contains a number clause 15.2.10 uniquely identifying a message. The value is a universally unique identifier Sender MCData user ID px\_MCData\_ID\_User\_ B InReplyTo message ID Not present TS 24.282 [87] clause 15.2.11 TS 24.282 [87] Application ID Not present clause 15.2.7 SDS disposition request type '0001'B TS 24.282 [87] DELIVERE clause 15.2.3 D '0010'B READ '0011'B DELIVERE D\_READ MCData Protected MCData Protected TS 33.180 [94] MCD 1to1 Security parameters Payload Message as Payload Message described in Table 5.5.3.10-2 with condition PROTECTED\_PAYLO AD containing the Payload as described in Table 5.5.3.8.10-2 MCData group ID px\_MCData\_Group\_A\_ TS 24.282 [87] MCD\_grp clause 15.2.14 ID Recipient MCData user ID px\_MCData\_ID\_User\_ MCD\_1to1 A TS 24.282 [87] Payload Payload as described MCD\_grp in Table 5.5.3.8.10-3 clause 15.2.13 Extended application ID Not present TS 24.282 [87] clause 15.2.24

#### Table 5.5.3.8.10-1: SDS OFF-NETWORK MESSAGE message from the SS

Condition	Explanation
MCD_1to1	A one-to-one MCData call
MCD_grp	A group MCData call
For further conditions see table 5.5.3.8-1	

Derivation Path: TS 24.282 [87] clause 15.2.13				
Field	Value/remark	Comment	Reference	Condition
Payload IEI	'78'O		TS 24.282 [87]	
-			clause 15.1.4	
Length of Payload	length of the content			
Payload content type	'00000001'B	TEXT		
Payload data	"Test"	The data payload		

### Table 5.5.3.8.10-2: Payload contained in the Security parameters and Payload

#### Table 5.5.3.8.10-3: DATA PAYLOAD message for group communication from the SS

Derivation Path: TS 24.282 [87] clause 15.1.4				
Information Element	Value/remark	Comment	Reference	Condition
Data payload message identity	'00000011'B	Data payload	TS 24.282 [87]	
			clause 15.2.2	
Number of payloads	1	1 payload	TS 24.282 [87]	
			clause 15.2.12	
Payload			TS 24.282 [87]	
			clause 15.2.13	
Payload IEI	'78'O			
Length of Payload	length of the content			
Payload content type	'00000001'B	TEXT		
Payload data	"Test"	The data payload		

### 5.5.3.8.11 SDS OFF-NETWORK NOTIFICATION message from the UE

Derivation Path: TS 24.282 [87] ta				
Information Element	Value/remark	Comment	Reference	Condition
SDS disposition notification type	'0000010'B		TS 24.282 [87]	DELIVERE
			clause 15.2.5	D
	'00000011'B			READ
	'00000100'B			DELIVERE
				D_READ
Date and time	Any allowed value	The Date and time	TS 24.282 [87]	
		value is an unsigned	clause 15.2.8	
		integer containing UTC		
		time of the time when a		
		message was sent, in		
		seconds since midnight		
		UTC of January 1,		
		1970 (not counting leap		
		seconds).		
Conversation ID	Same value as in the	The Conversation ID	TS 24.282 [87]	
	corresponding SDS	contains a number	clause 15.2.9	
	OFF-NETWORK	uniquely identifying the		
	MESSAGE sent to the	conversation. The		
	UE	value is a universally		
		unique identifier.		
Message ID	Same value as in the	The Message ID	TS 24.282 [87]	
	corresponding SDS	contains a number	clause 15.2.10	
	OFF-NETWORK	uniquely identifying a		
	MESSAGE sent to the	message. The value is		
	UE	a universally unique		
		identifier		
Sender MCData user ID	px_MCData_ID_User_			
	A			
Application ID	Not present			
Extended application ID	Not present			

#### Table 5.5.3.8.11-1: SDS OFF-NETWORK message from the UE

### 5.5.3.8.12 SDS OFF-NETWORK NOTIFICATION message from the SS

Derivation Path: TS 24.282 [87] table 15.1.8.4-1				
Information Element	Value/remark	Comment	Reference	Condition
SDS disposition notification type	'00000010'B		TS 24.282 [87]	DELIVERE
			clause 15.2.5	D
	'00000011'B			READ
	'00000100'B			DELIVERE
				D_READ
Date and time	The current date and	The Date and time	TS 24.282 [87]	
	time	value is an unsigned	clause 15.2.8	
		integer containing UTC		
		time of the time when a		
		message was sent, in seconds since midnight		
		UTC of January 1,		
		1970 (not counting leap		
		seconds).		
Conversation ID	Same value as in the	The Conversation ID	TS 24.282 [87]	
	corresponding SDS	contains a number	clause 15.2.9	
	OFF-NETWORK	uniquely identifying the		
	MESSAGE received	conversation. The		
	from the UE	value is a universally		
		unique identifier.		
Message ID	Same value as in the	The Message ID	TS 24.282 [87]	
	corresponding SDS	contains a number	clause 15.2.10	
	OFF-NETWORK	uniquely identifying a		
	MESSAGE received	message. The value is		
	from the UE	a universally unique identifier		
Sender MCData user ID	px_MCData_ID_User_			
	B			
Application ID	Not present			
Extended application ID	Not present			

### Table 5.5.3.8.12-1: SDS OFF-NETWORK message from the SS

### 5.5.3.9 MCData Data Payload

### 5.5.3.9.1 MCData Data Payload for group communication

The MCData Data Payload messages for group communication specified in this clause are protected according to TS 33.180 clause 8.5.4, i.e. a MCData Data Payload message is contained in the protected payload of a MCData Protected Payload Message according to clause 5.5.3.10 with condition PROTECTED\_MESSAGE and GMK.

#### Table 5.5.3.9.1-1: DATA PAYLOAD message for group communication from the UE

Information Element	Value/remark	Comment	Reference	Condition
Data payload message identity	'00000011'B	Data payload	TS 24.282 [87]	
			clause 15.2.2	
Number of payloads	1	1 payload	TS 24.282 [87]	
			clause 15.2.12	
Payload			TS 24.282 [87]	
-			clause 15.2.13	
Payload IEI	'78'O			
Length of Payload	length of the content			
Payload content type	'00000001'B	TEXT		
Payload data	any allowed value	The data payload Example: "abcdEFGH"		

### Table 5.5.3.9.1-2: DATA PAYLOAD message for group communication from the SS

Derivation Path: TS 24.282 [87] clause 15.1.4				
Information Element	Value/remark	Comment	Reference	Condition
Data payload message identity	'00000011'B	Data payload	TS 24.282 [87]	
			clause 15.2.2	
Number of payloads	1	1 payload	TS 24.282 [87]	
			clause 15.2.12	
Payload			TS 24.282 [87]	MCD_grp
			clause 15.2.13	_
Payload IEI	'78'O			
Length of Payload	length of the content			
Payload content type	'00000001'B	TEXT		
Payload data	"Test"	The data payload		

### 5.5.3.9.2 MCData Data Payload for one-to-one communication

### Table 5.5.3.9.2-1: DATA PAYLOAD message for one-to-one communication from the UE

Derivation Path: TS 24.282 [87] c	Derivation Path: TS 24.282 [87] clause 15.1.4				
Information Element	Value/remark	Comment	Reference	Condition	
Data payload message identity	'00000011'B	Data payload	TS 24.282 [87]		
			clause 15.2.2		
Number of payloads	1	1 payload	TS 24.282 [87]		
			clause 15.2.12		
Security parameters and Payload	MCData Protected Payload Message as described in Table 5.5.3.10-1 with condition PROTECTED_PAYLO AD containing the Payload as described in Table 5.5.3.9.2-1A	MCData Protected Payload Message	TS 33.180 [94]		

#### Table 5.5.3.9.2-1A: Payload contained in the Security parameters and Payload

Derivation Path: TS 24.282 [87] clause 15.2.13				
Field	Value/remark	Comment	Reference	Condition
Payload IEI	'78'O		TS 24.282 [87]	
-			clause 15.1.4	
Length of Payload	length of the content			
Payload content type	'0000001'B	TEXT		
Payload data	any allowed value	The data payload		
-		Example: "abcdEFGH"		

Derivation Path: TS 24.282 [87] clause 15.1.4				
Information Element	Value/remark	Comment	Reference	Condition
Data payload message identity	'00000011'B	Data payload	TS 24.282 [87]	
			clause 15.2.2	
Number of payloads	1	1 payload	TS 24.282 [87]	
			clause 15.2.12	
Security parameters and Payload	MCData Protected Payload Message as described in Table 5.5.3.10-2 with condition PROTECTED_PAYLO AD containing the Payload as described in Table 5.5.3.9.2-2A	MCData Protected Payload Message	TS 33.180 [94]	

### Table 5.5.3.9.2-2: DATA PAYLOAD message for one-to-one communication from the SS

#### Table 5.5.3.9.2-2A: Payload contained in the Security parameters and Payload

Derivation Path: TS 24.282 [87] clause 15.2.13				
Field	Value/remark	Comment	Reference	Condition
Payload IEI	'78'O		TS 24.282 [87]	
			clause 15.1.4	
Length of Payload	length of the content			
Payload content type	'0000001'B	TEXT		
Payload data	"Test"	The data payload		

#### 5.5.3.10 MCData Protected Payload Message

Information Element	Value/remark	Comment	Reference	Condition
Message Type	Same message type as in the MCData message contained as Payload but with bit 7 set to '1'B			PROTECT ED_MESS AGE
	'01?????'B	NOTE: TS 33.180 [94] does not specify any message type		PROTECT ED_FILE
	'01111010B	'7A'O; IEI	TS 24.282 [87] clause 15.1.4	PROTECT ED_PAYL OAD
Date and Time	Any allowed value	Date and Time of creation of protected payload message		
Payload ID	Any allowed value	The identifier for the payload.		
Payload sequence number	Any allowed value	The sequence number of the protected payload.		
Payload Algorithm	'01'O	DP_AES_128_GCM		
Signalling algorithm	not present			
IV	Any allowed value	Initialisation vector (or nonce) for message. Length depends on the algorithm and key used. 128 bits or 256 bits depending on the algorithm.		
DPPK-ID	PCK-ID			PROTECT ED_PAYL OAD, PCK
	GMK-ID			GMK
	CSK-ID			CSK
Payload		Protected Payload (Ciphertext)	TS 24.282 [87] clause 15.2.13	
Payload IEI	'78'O	Value as used in MCData messages in TS 24.282 [87]		
Length of Payload contents	length of the content			
Payload content type	'02'O	BINARY		
Payload contents	Encrypted MCData message (NOTE 1)			PROTECT ED_MESS AGE
	Encrypted file or portion of file Encrypted Payload(s) of the unprotected DATA PAYLOAD			PROTECT ED_FILE PROTECT ED_PAYL OAD
NOTE 1: The whole message i	message (NOTE 2) s encrypted (including its me	ssage type)		

### Table 5.5.3.10-1: MCData Protected Payload Message from the UE

NOTE 2: The whole payload(s) are encrypted (including their IEI and length); in general there is only one payload

Condition	Explanation
PROTECTED_MESSAGE	The MCData Protected Payload message contains a whole encrypted
	MCData message
PROTECTED_FILE	The MCData Protected Payload message contains encrypted binary
	data representing a file or portion of a file
PROTECTED_PAYLOAD	The MCData Protected Payload message contains the Payload IE(S)
	of the MCData DATA PAYLOAD message
PCK	Encryption uses PCK
GMK	Encryption uses GMK
CSK	Encryption uses CSK

Derivation Path: TS 33.180 [94] Information Element	Value/remark	Comment	Reference	Condition
Message Type	Same message type as in the MCData message contained as Payload but with bit 7 set to '1'B			PROTECT ED_MESS AGE
	'01000011'B	'43'O; same as for protected DATA PAYLOAD		PROTECT ED_FILE
	'01111010B	'7A'O; IEI	TS 24.282 [87] clause 15.1.4	PROTECT ED_PAYL OAD
Date and Time	The current date and time	Date and Time of creation of protected payload message		
Payload ID	"1"	The identifier for the payload.		
Payload sequence number	"1"	The sequence number of the protected payload.		
Payload Algorithm	'01'O	DP_AES_128_GCM		
Signalling algorithm	not present			
IV	'DCB9085150B3CF21E 2F7DF5B542C25C2'O	Initialisation vector (or nonce) for message. Length depends on the algorithm and key used. 128 bits or 256 bits depending on the algorithm.		
DPPK-ID	PCK-ID			PROTECT ED_PAYL OAD, PCK
	GMK-ID			GMK
	CSK-ID			CSK
Payload		Protected Payload (Ciphertext)	TS 24.282 [87] clause 15.2.13	
Payload IEI	'78'O	Value as used in MCData messages in TS 24.282 [87]		
Length of Payload contents	length of the content			
Payload content type	'02'O	BINARY		
Payload contents	Encrypted MCData message (NOTE 1)			PROTECT ED_MESS AGE
	Encrypted field or portion of file			PROTECT ED_FILE
	Encrypted Payload(s) of the unprotected DATA PAYLOAD message (NOTE 2)			PROTECT ED_PAYL OAD

 Table 5.5.3.10-2: MCData Protected Payload Message from the SS

NOTE 2: The whole payload(s) are encrypted (including their IEI and length); in general there is only one payload

Condition	Explanation
PROTECTED_MESSAGE	The MCData Protected Payload message contains a whole encrypted MCData message
PROTECTED_FILE	The MCData Protected Payload message contains encrypted binary data representing a file or portion of a file
PROTECTED_PAYLOAD	The MCData Protected Payload message contains the Payload IE(S) of the MCData DATA PAYLOAD message
PCK	Encryption uses PCK
GMK	Encryption uses GMK
CSK	Encryption uses CSK

# 5.5.3.11 PoC Settings

# 5.5.3.11.1 PoC Settings from the UE

### Table 5.5.3.11.1-1: PoC Settings from the UE

Derivation Path: RFC 4354 [103 Information Element	Value/remark	Comment	Reference	Condition
	value/remark	Comment	Reference	Condition
poc-settings				
entity [1]				
id attribute	any value	unique identifier of the EPA (Event Publication Agent) Editor's note: to be clarified whether there are requirements for the id	RFC 4354 [103]	
am-settings			RFC 4354 [103]	
answer-mode	"automatic" or "manual"			
	"manual"			MANUAL
	"automatic"			AUTOMAT IC
selected-user-profile-index			TS 24.379 [9] clause 7.4.1	
user-profile-index	same value the user- profile-index in the user profile in Table 5.5.8.3- 1			

Condition	Explanation
MANUAL	Manual answer mode
AUTOMATIC	Automatic answer mode

# 5.5.3.11.2 PoC Settings from the SS

Derivation Path: RFC 4354 [103]				
Information Element	Value/remark	Comment	Reference	Condition
poc-settings				
entity [1]				
id-attribute	"PoC-Settings-1"	unique identifier of the EPA (Event Publication Agent) Editor's note: to be clarified whether there are requirements for the id	RFC 4354 [103]	
isb-settings				
incoming-session-barring	"false"			
am-settings			RFC 4354 [103]	
answer-mode				
	"manual"			MANUAL
	"automatic"			AUTOMAT IC
ipab-settings				
incoming-personal-alert- barring	"false"			
sss-settings				
simultaneous-sessions- support	"true"			
selected-user-profile-index			TS 24.379 [9] clause 7.4.1	
user-profile-index	same value the user- profile-index in the user profile in Table 5.5.8.3- 1			

# Table 5.5.3.11.2-1: PoC Settings from the SS

Condition	Explanation
MANUAL	Manual answer mode
AUTOMATIC	Automatic answer mode

# 5.5.3.12 Xcap-diff documents

Derivation Path: RFC 5874 [107] clause 4				
Information Element	Value/remark	Comment	Reference	Condition
xcap-diff	encrypted (NOTE 5)			
xcap-root attribute	tsc_MCX_CMSXCAPR ootURI	same URI as <cms- XCAP-root-URI&gt; element of the initial UE configuration</cms- 		
document[1]				
sel attribute	AUID1 & "/users/" & XUID & "/" & MCSUEID & "/" & UE-Config "	NOTE 1a, 2, 2A, 3		
new-etag	arbitrary value			
previous-etag	same as new-etag			
document[2]				
sel attribute	AUID2 & "/users/" & XUID & "/" & User- Profile	NOTE 1b, 2, 2B		
new-etag	arbitrary value (different than for document[1])			
previous-etag	same as new-etag			
document[3]				
sel attribute	AUID3 & "/global/service- config.xml"	NOTE 1c		
new-etag	arbitrary value (different than for document[1] and [2])			
previous-etag	same as new-etag			
AUID1 = "org.3gpp.r AUID1 = "org.3gpp.r AUID2 = "org.3gpp.r AUID2 = "org.3gpp.r AUID2 = "org.3gpp.r AUID2 = "org.3gpp.r AUID3 = "org.3gpp.r AUID4 = "sip:" & px_AUID4		dition MCVideo dition MCData dition MCPTT ondition MCVideo ndition MCData ondition MCPTT Condition MCVideo Condition MCData ondition MCPTT Condition MCVideo condition MCVideo condition MCData lition MCPTT		
UE-Config= "mcvideo-u UE-Config= "mcdata-ue NOTE 2B: User-Profile = "mcptt- User-Profile = "mcvide User-Profile = "mcdata	e-configuration.xml" for Co e-configuration.xml" for Cor user-profile-" & profile-inde eo-user-profile-" & profile-inde a-user-profile-" & profile-inde l of the UE (derived from the e as in the user-profile-inde	ondition MCVideo ndition MCData x & ".xml" for Condition MC ndex & ".xml" for Condition I dex & ".xml" for Condition M ne IMEI according to 23.003 ex attribute of the correspor	MCVideo (NOTE ICData (NOTE 4) 8 [69] clause 13.8 ading document	)

### Table 5.5.3.12-1: xcap-diff document for MCX configuration

Derivation Path: RFC 5854 [107	] clause 4			
Information Element	Value/remark	Comment	Reference	Condition
xcap-diff	encrypted (NOTE 1)			
xcap-root	tsc_MCX_GMSXCAPR ootURI	same URI as <gms- XCAP-root-URI&gt; element of the initial UE configuration</gms- 		
document[1]				GROUPC ONFIG
sel attribute	"org.openmobileallianc e.groups/global/byGrou pID/" & Group-ID	NOTE 2		
new-etag	arbitrary value for first notification, 'incremented' value otherwise (NOTE 4)	NOTE 5		
previous-etag	same as new-etag for first notification, same as <new-etag> of previous notification otherwise</new-etag>	NOTE 5		
element[1]				GROUPKE Y
sel attribute	"org.3gpp.MCPTT- GKTP/global/byGroupl D/" & Group-ID & "/~~" & Node-Sel	NOTE 2, 3		
GKTPs	group key transport payloads (GKTP) document as described in Table 5.5.3.14-1			
	TT_Group_A_ID for Conditi ideo_Group_A_ID for Cor ata_Group_A_ID for Conditi st-service/mgktp:GKTPs?xml ation dependent how the eta	on MCPTT ndition MCVideo on MCData Ins(mgktp=urn:3gpp:ns:mcp g is incremented	ttGKTP:1.0)"	as described

Table 5.5.3.12-2: xcap-diff document for MCX group configuration

5.5.3.13 Void

# 5.5.3.14 MCS group key transport payloads (GKTP) document

Table 5.5.3.14-1: group	key transport payloads	(GKTP) document
-------------------------	------------------------	-----------------

Derivation Path: TS 24.481 [11] clause 7.7					
Information Element	Value/remark	Comment	Reference	Condition	
GKTPs					
GMK-GKTPs					
GKTP[1]	MIKEY message as described in Table 5.5.9.1-3	MIKEY message, containing the GMK	TS 33.180 [94]		
id attribute	arbitrary value	unique charstring assigned by the SS			

5.5.3.15 Conference-info

Table 5.5.3.15-1: Conference-info from the SS

Information Element	7] clause 6 Value/remark	Comment	Reference	Condition
conference-info	Value/Terriark	Comment	Reference	Condition
entity attribute	Encrypted URI (NOTE	The URI of the group		MCPTT
	1) with value set to	The orthor the group		
	px_MCPTT_Group_A_I			
	Encrypted URI (NOTE			MCVIDEC
	1) with value set to			MOVIDE0
	px_MCVideo_Group_A			
state attribute	not present			
version attribute	not present			
conference-description	not present			
host-info	not present			
conference-state	not present			
users	not present			
user [1]				
entity attribute	Encrypted URI (NOTE			MCPTT
entity attribute	1) with value set to			NCFTT
	px_MCPTT_ID_User_A			
	Encrypted URI (NOTE			MCVIDEC
	1) with value set to			NICVIDEC
	px_MCVideo_ID_User_			
state attribute	not present			
display-text	not present			
associated-aors				
	not present			
roles	not present			
languages	not present			
cascaded-focus	not present			
endpoint			DE0 4575	
entity attribute	px_MCX_SIP_PublicUs erId_A_1	Contact URI of the participant	RFC 4575 [127] clause	
		participant	5.7	
status attribute	not present		0.1	
display-text	not present			
referred	not present			
status	connected			
joining-method	not present			
joining-info	not present			
disconnection-method	not present			
disconnection-info	not present			
media	not present			
call-info	not present			
user [2]				MODIT
entity attribute	Encrypted URI (NOTE			MCPTT
	1) with value set to			
	px_MCPTT_ID_User_B			
	Encrypted URI (NOTE			MCVIDEO
	1) with value set to			
	px_MCVideo_ID_User_			
	B			
state attribute	not present			
display-text	not present			
associated-aors	not present			
roles	not present			
languages	not present			
cascaded-focus	not present			1
endpoint				
entity attribute	px_MCX_SIP_PublicUs	Contact URI of the	RFC 4575	
	erld_B	participant	[127] clause	
			5.7	
status attribute	not present			
display-text	not present			
referred	not present			

status	connected			
joining-method	not present			
joining-info	not present			
disconnection-method	not present			
disconnection-info	not present			
media	not present			
call-info	not present			
user [3]				
entity attribute	Encrypted URI (NOTE 1) with value set to px_MCPTT_ID_User_C			MCPTT
	Encrypted URI (NOTE 1) with value set to px_MCVideo_ID_User_ C			MCVIDEO
state attribute	not present			
display-text	not present			
associated-aors	not present			
roles	not present			
languages	not present			
cascaded-focus	not present			
endpoint				
entity attribute	px_MCX_SIP_PublicUs erId_C	Contact URI of the participant	RFC 4575 [127] clause 5.7	
status attribute	not present			
display-text	not present			
referred	not present			
status	connected			
joining-method	not present			
joining-info	not present			
disconnection-method	not present			
disconnection-info	not present			
media	not present			
call-info	not present			
sidebars-by-ref	not present			
sidebars-by-val	not present			
NOTE 1: Encrypted attribute a	s described in Table 5.5.13.3	-1		

# 5.5.3.16 MCS-Regroup

### 5.5.3.16.1 Common conditions for MCS-Regroup

The following conditions apply throughout clause 5.5.3.16:

### Table 5.5.3.16.1-1: Conditions

Condition	Explanation
GROUP_REGROUP	Creating a group regroup using preconfigured group
USER_REGROUP	Creating a user regroup using preconfigured group
REMOVE	Remove a user or group regroup using a preconfigured group

# 5.5.3.16.2 MCS-Regroup from the UE

### MCPTT

-

Derivation Path: TS 24.379 [9] c	lause F.7.2			
Information Element	Value/remark	Comment	Reference	Condition
mcpttregroup				
mcpttregroup-Params				
preconfig-group-id	Encrypted (NOTE 1)			
preconfigured-group	not present			
	px_MCPTT_Group_A_I	The URI of a group to		GROUP_R
	D	be used as the		EGROUP,
		configuration of the		USER_RE
		group regroup		GROUP
mcptt-regroup-uri	Encrypted (NOTE 2)			
mcptt-regroup-uri	px_MCPTT_Group_T_I	The URI of the group		
	D	regroup		
groups-for-regroup	not present			
groups-for-regroup	Encrypted (NOTE 3)			GROUP_R
				EGROUP
group [1]	px_MCPTT_Group_A_I	The URI of a group to		
	D	regroup		
group [2]	px_MCPTT_Group_B_I	The URI of a group to		
	D	regroup		
users-for-regroup	not present			
users-for-regroup	Encrypted (NOTE 4)			USER_RE GROUP
user [1]	px_MCPTT_ID_User_A			
user [2]	px_MCPTT_ID_User_B			
user [3]	px_MCPTT_ID_User_D			
regroup-action	"create"			
5	"remove"			REMOVE
NOTE 1: Element content encr group> (if present) as			ub-element <prec< td=""><td>-</td></prec<>	-
NOTE 2: Element content encr as described in Table	yption either of element <mc< td=""><td></td><td>b-element <mcpt< td=""><td>t-regroup-uri&gt;</td></mcpt<></td></mc<>		b-element <mcpt< td=""><td>t-regroup-uri&gt;</td></mcpt<>	t-regroup-uri>
NOTE 3: Element content encr as described in Table	yption either of element <gro< td=""><td>oups-for-regroup&gt; or of eac</td><td>h of its sub-eleme</td><td>ents <group></group></td></gro<>	oups-for-regroup> or of eac	h of its sub-eleme	ents <group></group>
NOTE 4: Element content encryption either of element <users-for-regroup> or of each of its sub-elements <user> as described in Table 5.5.13.2-1</user></users-for-regroup>				

### 5.5.3.16.3 MCS-Regroup from the SS

#### MCPTT

Derivation Path: TS 24.379 [9] c				
Information Element	Value/remark	Comment	Reference	Condition
mcpttregroup				
mcpttregroup-Params				
preconfig-group-id				
preconfig-group-id	Encrypted (NOTE 1)			
preconfigured-group	not present			
	px_MCPTT_Group_A_I D	The URI of a group to be used as the configuration of the group regroup		GROUP_R EGROUP, USER_RE GROUP
mcptt-regroup-uri	Encrypted (NOTE 2)			
mcptt-regroup-uri	px_MCPTT_Group_T_I D	The URI of the group regroup		
groups-for-regroup	not present			
groups-for-regroup	Encrypted (NOTE 3)			GROUP_R EGROUP
group [1]	px_MCPTT_Group_A_I D	The URI of a group to regroup		
group [2]	px_MCPTT_Group_B_I	The URI of a group to		
	D	regroup		
users-for-regroup	not present			
users-for-regroup	Encrypted (NOTE 4)			USER_RE GROUP
user [1]	px_MCPTT_ID_User_A			
user [2]	px_MCPTT_ID_User_B			
user [3]	px_MCPTT_ID_User_D			
regroup-action	"create"			
	"remove"			REMOVE
NOTE 1:Element content encl present) as describedNOTE 2:Element content encl described in Table 5.NOTE 3:Element content encl in Table 5.5.13.2-2	yption of element <mcptt-reg 5.13.2-2 yption of element <mcptt-reg 5.13.2-2 yption of each of element <g< td=""><td>roup-uri&gt;'s sub-element <r roups-for-regroup&gt;'s sub-e</r </td><td>ncptt-regroup-uri: lements <group></group></td><td>&gt; as as described</td></g<></mcptt-reg </mcptt-reg 	roup-uri>'s sub-element <r roups-for-regroup&gt;'s sub-e</r 	ncptt-regroup-uri: lements <group></group>	> as as described
NOTE 4: Element content encryption of each of element <users-for-regroup>'s sub-elements <user> as described in Table 5.5.13.2-2</user></users-for-regroup>				

# 5.5.4 Default HTTP message and other information elements

### 5.5.4.1 General

The HTTP Messages are specified in RFC 2616 [26]. Wherever another reference applies to their content it is explicitly indicated.

The following conditions apply throughout clause 5.5:

### Table 5.5.4.1-1: Conditions

Condition Explanation	_		
		Condition	Explanation

AUTH	Message/IE sent only as part of an MCX UE authentication
UEINITIALCONFIG	Message/IE sent only as part of an MCX UE initial configuration
USERAUTH	Message/IE sent only as part of an MCX UE user authentication
UECONFIG	Message/IE sent only as part of an MCX UE configuration
UEUSERPROF	Message/IE sent only as part of an MCX UE User profile configuration
UESERVCONFIG	Message/IE sent only as part of an MCX UE service configuration
GROUPCONFIG	Message/IE sent only as part of an MCX group configuration
TEMPGROUP	Message/IE sent only in temporary group creation scenario
TOKEN	Message/IE sent only as part of an MCX token exchange
KMSINIT	Message/IE sent only as part of an MCX KMS initialisation
KMSKEY	Message/IE sent only as part of an MCX KMS key exchange
FD_HTTP	Message/IE sent only as part of MCData signalling for FD using HTTP
MSG_STORE	Message/IE sent only as part of MCData signalling for access to the MCData
	Message Store

5.5.4.2 GET

### Table 5.5.4.2-1: HTTP GET

Derivation Path: RFC 2616 [26]	Mat and the second		Defe	
Information Element	Value/remark	Comment	Reference	Condition
Request-Line	"GET"			
Method Request-URI	GET			
uri	tsc_MCX_IdMS_auth_	points to the	TS 33.180 [94]	AUTH
	UriPath	Authorisation endpoint of the IdM Server		
	px_MCX_InitialConfigS erver_UriPath	points to initial UE Configuration document	TS 24.484 [14]	UEINITIAL CONFIG
	tsc_MCX_CMSXCAPR ootURI & "/" & AUID1 & "/users/" & XUI & ue- config-docname	points to UE Configuration document (NOTE 1a, 2, 3, 5)	TS 24.484 [14]	UECONFI G
	tsc_MCX_CMSXCAPR ootURI & "/" & AUID2 & "/users/" & XUID & ""/" & user-profile-docname	points to UE User Profile document (NOTE 1b, 2, 4)	TS 24.484 [14]	UEUSERP ROF
	tsc_MCX_CMSXCAPR ootURI & "/" & AUID3 & "/global/service- config.xml"	points to UE Service Configuration document (NOTE 1c, 2)	TS 24.484 [14]	UESERVC ONFIG
	tsc_MCX_GMSXCAPR ootURI & "/" & "org.openmobileallianc e.groups/global/byGrou pID/" & group-id	points to group configuration document (NOTE 6)	TS 24.481 [11]	GROUPC ONFIG
	URI as contained in the payload of the FD SIGNALLING PAYLOAD from the SS indicating the file upload			FD_HTTP
query	As described in Table 5.5.4.10.1-1		TS 33.180 [94]	AUTH
HTTP-Version	"HTTP/1.1"			
Cache-Control	if present		RFC 2616 [26]	
cache-directive	"no-cache"			
Authorization			RFC 2617 [72]	UECONFI G, UEUSERP ROF, UESERVC ONFIG, GROUPC ONFIG, FD_HTTP, MSG_STO RE
authentication-scheme	"Bearer"		RFC 6750 [104]	
b64token	Access token as assigned to the UE by Token Response		RFC 6750 [104]	
Authorization	not present			
Host host	px_MCX_IdMS_auth_I		RFC 2616 [26]	AUTH
port	PAddress px_MCX_IdMS_auth_P			
Host	ort if present		RFC 2616 [26]	UEINITIAL CONFIG
host	px_MCX_InitialConfigS erver_IPAddress			
port	px_MCX_InitialConfigS erver_Port if present			

Host			RFC 2616 [26]	UECONFI	
				G,	
				UEUSERP ROF,	
				UESERVC	
				ONFIG	
host	xcap." &				
	tsc_MCX_CMS_Hostna				
	me				
port	not present				
Host			RFC 2616 [26]	GROUPC ONFIG	
host	xcap." &				
	tsc_MCX_GMS_Hostna				
port	me				
port Host	not present		RFC 2616 [26]	FD_HTTP	
host	tsc_MCData_MSF_Hos				
noot	tname				
port	not present				
Host				MSG_STO	
haat		hootoomo idontifuing	TS 24.282	RE	
host	tsc_MCData_MsgSF_H	hostname identifying the message store	[87], clause		
	ostilarite	function	21.2.1.1		
port	not present				
Content-Type	if present			AUTH	
media-type	"application/x-www-				
	form-urlencoded"				
Content-Type	Not present				
Message-body	Not present				
	.mcptt.ue-config" for Conditi				
	.mcvideo.ue-config" for Con .mcdata.ue-config" for Conc				
	.mcptt.user-profile" for Conc				
	.mcvideo.user-profile" for Co				
	.mcdata.user-profile" for Co				
	.mcptt.service-config" for Co				
	.mcvideo.service-config" for				
	.mcdata.service-config" for				
	_MCPTT_ID_User_A for C				
	_MCVideo_ID_User_A for				
XUID = "sip:" & px_MCData_ID_User_A for Condition MCDATA NOTE 3: MCSUEID = Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8)					
NOTE 4: user-profile-docname= "mcptt-user-profile-" & profile-index & ".xml" for Condition MCPTT					
user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO					
	"mcdata-user-profile-" & profile-index & ".xml" for Condition MCDATA				
with profile-index being	g the same as in the <user-p< td=""><td>profile-index&gt; attribute of th</td><td></td><td>locument</td></user-p<>	profile-index> attribute of th		locument	
NOTE 5: ue-config-docname =	"mcptt-ue-configuration.xm	I" for Condition MCPTT			
	"mcvideo-ue-configuration.				
	mcdata-ue-configuration.x		A		
	T_Group_A_ID for Conditio				
	leo_Group_A_ID for Condit				
group-id = px_MCDa	ta_Group_A_ID for Condition				

5.5.4.3 POST

### Table 5.5.4.3-1: HTTP POST

Derivation Path: RFC 2616 [26]		<b></b>		<b>A 1</b> 11
Information Element	Value/remark	Comment	Reference	Condition
Status-Line Method	"POST"			
Request-URI	P051			
uri	tsc_MCX_IdMS_auth_ UriPath	points to the Authorisation endpoint of the IdM Server	TS 33.180 [94]	AUTH
	tsc_MCX_IdMS_userau th_UriPath	points to the endpoint verifying the user authentication; same URI as provided to the UE in the action attribute of the HTML login form	TS 33.180 [94] HTML 4.01 Specification [105]	USERAUT H
	tsc_MCX_IdMS_token_ UriPath	points to the Token endpoint of the IdM Server	TS 33.180 [94]	TOKEN
	UriScheme & tsc_MCX_KMS_Hostna me & tsc_MCX_KMS_init_Uri Path	"KMS Initialize" request according to TS 33.180 [94] D.2.3 (NOTE 2)	TS 33.180 [94]	KMSINIT
	UriScheme & tsc_MCX_KMS_Hostna me & tsc_MCX_KMS_keypro v_UriPath	"KMS KeyProvision" request according to TS 33.180 [94] D.2.4 (NOTE 2)	TS 33.180 [94]	KMSKEY
	tsc_MCX_GMSXCAPR ootURI & "/" & "org.openmobileallianc e.groups/users/" & px_MCX_GroupCreatio nXUI & "/" & temporary- group-id	Points to the temporary group configuration document to be created (NOTE 1)	TS 24.481[11] clause 6.3.14.2	TEMPGRO UP
	tsc_MCData_MSF_URI	The absolute URI identifying the resource on a media storage function	TS 24.282 [87], clause 10.2.2.1	FD_HTTP
HTTP-Version	"HTTP/1.1"			
Cache-Control	if present		RFC 2616 [26]	
cache-directive	"no-cache"			
Authorization			RFC 2617 [72]	KMSINIT, KMSKEY, TEMPGRO UP, FD_HTTP, MSG_STO RE
authentication-scheme	"Bearer"		RFC 6750 [104]	
b64token	Access token as assigned to the UE by Token Response		RFC 6750 [104]	
Host			RFC 2616 [26]	AUTH, USERAUT H
host	px_MCX_IdMS_auth_I PAddress			
port	px_MCX_IdMS_auth_P ort if present			
Host			RFC 2616 [26]	TOKEN
host	px_MCX_IdMS_token_I PAddress			
port	px_MCX_IdMS_token_ Port if present			

	I			
Host			RFC 2616 [26]	KMSINIT, KMSKEY
host	tsc_MCX_KMS_Hostna me			
port	not present			
Host			RFC 2616 [26]	TEMPGRO
				UP
host	xcap." & tsc_MCX_GMS_Hostn ame			
port	not present			
Host				FD_HTTP
host	tsc_MCData_MSF_Hos tname	hostname identifying the media storage function	TS 24.282 [87], clause 10.2.2.1	
port	not present			
Host				MSG_STO RE
host	tsc_MCData_MsgSF_H ostname	hostname identifying the message store function	TS 24.282 [87], clause 21.2.1.1	NL.
port	not present			
Content-Type				AUTH, USERAUT H, TOKEN
media-type	"application/x-www- form-urlencoded"			
Content-Type		present in case of KMS request security		(KMSINIT OR KMSKEY) AND pc_MCX_K MS_Reque stSecurity
media-type	"application/xml"		RFC 7303 [112]	sidecunty
Content-Type			[112]	TEMPGRO
media-type	"application/vnd.3gpp.G MOP+xml"			UP
Content-Type				FD_HTTP
media-type	"multipart/mixed"		TS 24.282 [87], clause 10.2.2.1	
Message-body				AUTH
Authentication Request	As described in Table 5.5.4.10.1-1			
Message-body			HTML 4.01 Specification [105]	USERAUT H
user	px_MCX_User_A_user name			
password	px_MCX_User_A_pass word			
Message-body				TOKEN
Token request	As described in Table 5.5.4.10.3-1			
Message-body	0.0.7.10.0-1	present in case of KMS request security		(KMSINIT OR KMSKEY) AND pc_MCX_K MS_Reque stSecurity
Signed KMS Request	As described in Table 5.5.4.10.9-1			

Message-body				TEMPGRO UP
Temporary Group Creation Document"	As described in Table 5.5.7.4-2			
Message-body				FD_HTTP
MIME body part		MCData-Info		
MIME-part-headers				
MIME-Content-Type	"application/vnd.3gpp. mcdata-info+xml"			
MIME-part-body	MCData-Info described in Table 5.5.3.2.1-3			
MIME body part		File content	TS 24.282 [87] clause 10.2.2.1	
MIME-part-headers				
MIME-Content-Type	"application/octet- stream"			
MIME-part-body	binary data representing the file			
temporary-group-id	= px_MCPTT_Group_T_ID f = px_MCVideo_Group_T_ID = px_MCData_Group_T_ID http" or "https"	o for Condition MCVIDEO		

# 5.5.4.4 PUT

### Table 5.5.4.4-1: HTTP PUT

Derivation Path: RFC 2616 [26]				
Information Element	Value/remark	Comment	Reference	Condition
Request-line				
Method	"PUT"			
Request-URI	tsc_MCX_GMSXCAPR ootURI & "/" & "org.openmobileallianc e.groups/users/" & px_MCX_GroupCreatio nXUI & "/" & document name (NOTE 1)	XCAP URI in users tree where the XUI is set to a group creation XUI configuration parameter	TS 24.481 [11] clause 6.3.2.2.1	GROUPC REATE
Cache-Control	if present		RFC 2616 [26]	
cache-directive	"no-cache"			
Authorization		TS 24.482 [12] A.2.3: Expected by the server to validate and identify the client	RFC 2617 [72]	
authentication-scheme	"Bearer"		RFC 6750 [104]	
b64token	Access token as assigned to the UE by Token Response		RFC 6750 [104]	
Host			RFC 2616 [26]	GROUPC REATE
host	xcap." & tsc_MCX_GMS_Hostn ame			
port	not present			
Host				MSG_STO RE
host	tsc_MCData_MsgSF_H ostname	hostname identifying the message store function	TS 24.282 [87], clause 21.2.1.1	
port	not present			
Content-Type				GROUPC REATE
media-type	application/vnd.oma.po c.groups+xml			
Message-body				GROUPC REATE
Group Creation Document	As described in Table 5.5.7.4-1			
NOTE 1: document name is the	name of the group docume	nt contained in the messag	e body	

Condition	Explanation
GROUPCREATE	Message/IE sent only in group creation scenario
NOTE: For further conditions see table 5.5.1-	1

# 5.5.4.5 DELETE

Derivation Path: RFC 2616 [26]				
Information Element	Value/remark	Comment	Reference	Condition
Request-line				
Method	"DELETE"			
Request-URI	tsc_MCX_GMSXCAPR ootURI & "/" & "org.openmobileallianc e.groups/users/" & px_MCX_GroupCreatio nXUI & "/" & temporary- group-id	Points to the group configuration document (NOTE 1)	TS 24.481 [11]	TEMPGRO UP
Cache-Control	if present		RFC 2616 [26]	
cache-directive	"no-cache"			
Authorization		TS 24.482 [12] A.2.3: Expected by the server to validate and identify the client	RFC 2617 [72]	
authentication-scheme	"Bearer"		RFC 6750 [104]	
b64token	Access token as assigned to the UE by Token Response		RFC 6750 [104]	
Host			RFC 2616 [26]	TEMPGRO UP
host	xcap." & tsc_MCX_GMS_Hostna me			
port	not present			
Host				MSG_STO RE
host	tsc_MCData_MsgSF_H ostname	hostname identifying the message store function	TS 24.282 [87], clause 21.2.1.1	
port	not present			
temporary-group-id =	= px_MCPTT_Group_T_ID f = px_MCVideo_Group_T_ID = px_MCData_Group_T_ID f	for Condition MCVIDEO		

### Table 5.5.4.5-1: HTTP DELETE

5.5.4.6 HTTP 200 (OK)

Table 5.5.4.6-1: HTTP 200 (OK)

Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
HTTP-Version	"HTTP/1.1"			
Status-Code	"200"			
Reason-Phrase	"OK"			
Cache-Control			RFC 2616 [26]	
cache-directive	"no-store"			
ETag			RFC 2616 [26]	
entity-tag	Any value as selected by the SS			UEINITIAL CONFIG, UECONFI G, UEUSERF ROF, UESERVC ONFIG, GROUPC ONFIG; TEMPGRC UP
Pragma			RFC 2616 [26]	
pragma-directive	"no-cache"			
Content-Length				
value	length of message- body			
Content-Type				TOKEN
media-type	"application/json;charse t=UTF-8"		TS 33.180 [94]	
Content-Type				KMSINIT
media-type	"application/xml"		TS 33.180 [94]	
Content-Type				KMSKEY
media-type	"application/xml"		TS 33.180 [94]	
Content-Type				UEINITIAL CONFIG
media-type	"application/vnd.3gpp. mcptt-ue-init- config+xml"		TS 24.484 [14]	
Content-Type				UECONFI G
media-type	"application/vnd.3gpp. mcptt-ue-config+xml"		TS 24.484 [14]	MCPTT
	"application/vnd.3gpp. mcvideo-ue- config+xml"			MCVIDEO
	"application/vnd.3gpp. mcdata-ue-config+xml"			MCDATA
Content-Type				UEUSERF ROF
media-type	"application/vnd.3gpp. mcptt-user-profile+xml"		TS 24.484 [14]	MCPTT
	"application/vnd.3gpp. mcvideo-user- profile+xml"			MCVIDEO
	"application/vnd.3gpp. mcdata-user- profile+xml"			MCDATA
Content-Type				UESERVC ONFIG
media-type	"application/vnd.3gpp. mcptt-service- config+xml"		TS 24.484 [14]	MCPTT
	"application/vnd.3gpp. mcvideo-service- config+xml"			MCVIDEO

	"application/vnd.3gpp. mcdata-service- config+xml"			MCDATA
Content-Type				GROUPC ONFIG
media-type	"application/vnd.oma.p oc.groups+xml"		TS 24.481 [11]	
Content-Type				TEMPGRO UP
media-type	"application/vnd.3gpp.G MOP+xml"		TS 24.481 [11]	
Content-Type				FD_HTTP
media-type	"application/octet- stream"			
Message-body	otroann			TOKEN
Token response	As described in Table 5.5.4.10.4-1			
Message-body				KMSINIT
KMS Certificate	As described in Table 5.5.4.10.6-1			
Message-body	A 1 11 11			KMSKEY
KMS Key Set	As described in Table 5.5.4.10.8-1			
Message-body				UEINITIAL CONFIG
mcptt-initial-UE-configuration	As described in Table 5.5.8.1-1	Initial UE Configuration document returned		
Message-body				UECONFI G
mcptt-UE-configuration	As described in Table 5.5.8.2-1	UE Configuration document returned		MCPTT
mcvideo-UE-configuration	As described in Table 5.5.8.5-1	UE Configuration document returned		MCVIDEO
mcdata-UE-configuration	As described in Table 5.5.8.10-1	UE Configuration document returned		MCDATA
Message-body				UEUSERP ROF
mcptt-user-profile	As described in Table 5.5.8.3-1	UE User Profile document returned		MCPTT
mcvideo-user-profile	As described in Table 5.5.8.7-1	UE User Profile document returned		MCVIDEO
mcdata-user-profile	As described in Table 5.5.8.11-1	UE User Profile document returned		MCDATA
Message-body				UESERVC ONFIG
service-configuration-info	As described in Table 5.5.8.4-1	UE Service Configuration document returned		MCPTT
service-configuration-info	As described in Table 5.5.8.8-1	UE Service Configuration document returned		MCVIDEO
service-configuration-info	As described in Table 5.5.8.12-1	UE Service Configuration document returned		MCDATA
Message-body				GROUPC ONFIG
group-configuration	As described in Table 5.5.7.1-1	Group Configuration document returned		
Message-body	0.0.7.1 1			TEMPGRO UP
gmop:document				
gmop:response				
gmop:group-regroup-creation- response				
temporary-group-document- ETag	unique value arbitrarily selected by the SS			
Message-body				FD_HTTP

			1
file content	binarv data		
nie content	billary data		
	representing the file		
	representing the file		

# 5.5.4.7 HTTP 201 (Created)

### Table 5.5.4.7-1: HTTP 201 (Created)

Derivation Path: RFC 2616 [26]	Velve /nements	Commont	Deference	Condition
Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
HTTP-Version	"HTTP/1.1"			
Status-Code	"201"			
Reason-Phrase	"Created"			
Cache-Control			RFC 2616 [26]	
cache-directive	"no-store"			
Pragma			RFC 2616 [26]	
pragma-directive	"no-cache"			
ETag			RFC 2616 [26]	
entity-tag	unique value arbitrarily selected by the SS			
Location			RFC 7231 [118] clauses 4.3.3, 6.3.2, 7.1.2	
uri	tsc_MCX_GMSXCAPR ootURI & "/" & "org.openmobileallianc e.groups/global/byGrou pID/" & group-id	URI referring to the created group document		
	tsc_MCData_MSF_URI & "/file-location-1"	URL identifying the location of the stored file		FD_HTTP
group-id = px_MCV	TT_Group_B_ID for Conditic ideo_Group_B_ID for Condit ata_Group_B_ID for Condition	ion MCVIDEO		

# 5.5.4.7A HTTP 204 (No Content)

# Table 5.5.4.7A-1: HTTP 204 (No Content)

Derivation Path: RFC 2616 [26]				
Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
HTTP-Version	"HTTP/1.1"			
Status-Code	"204"			
Reason-Phrase	"No Content"			

# 5.5.4.8 HTTP 302 (Found)

### Table 5.5.4.8-1: HTTP 302 (Found)

Derivation Path: RFC 2616 [26]				
Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
HTTP-Version	"HTTP/1.1"			
Status-Code	"302"			
Reason-Phrase	"Found"			
Location				AUTH
Location-URI				
uri	px_MCX_OAuth_Redir ectURI_A	Identifier of the MCPTT client making the API request	TS 33.180 [94]	
query	As described in Table 5.5.4.10.2-1			

# 5.5.4.9 HTTP 409 (Conflict)

### Table 5.5.4.9-1: HTTP 409 (Conflict)

Derivation Path: RFC 2616 [26]					
Information Element	Value/remark	Comment	Reference	Condition	
Status-Line					
HTTP-Version	"HTTP/1.1"				
Status-Code	"409"				
Reason-Phrase	"URI constraint violated"	Conflict reason	TS 24.484 [14]		

- 5.5.4.10 HTTP Message Bodies
- 5.5.4.10.1 Authentication Request

Table 5.5.4.10.1-1: Authentication Request

Derivation Path: TS 33.180 [ Information Element	Value/remark	Comment	Reference	Condition
(NOTE 1)				
response-type	"code"	For native MCX clients the value shall be set to "code"	OpenID Connect 1.0 [95]	
client_id	px_MCX_OAuth_ClientId_ A	Identifier of the MCX client making the API request	OpenID Connect 1.0 [95]	
Scope	"openid"	Scope values are expressed as a list of space-delimited, case-sensitive strings which indicate which MCS resource servers the client is requesting access to. "openid" is defined by the OpenID Connect standard and is mandatory	TS 33.180 [94] OpenID Connect 1.0 [95]	
	"3gpp:mc:ptt_service" "3gpp:mc:ptt_key_manage ment_service" "3gpp:mc:ptt_config_mana gement_service" "3gpp:mc:ptt_group_manag ement_service" NOTE: The list may contain further scope values which are not checked	Additional authorization scopes when the UE supports MCPTT		MCPTT
	"3gpp:mc:video_service" "3gpp:mc:video_key_mana gement_service" "3gpp:mc:video_config_ma nagement_service" "3gpp:mc:video_group_ma nagement_service" NOTE: The list may contain further scope values which are not checked	Additional authorization scopes when the UE supports MCVideo		MCVIDEO
	"3gpp:mc:data_service" "3gpp:mc:data_key_manag ement_service" "3gpp:mc:data_config_man agement_service" "3gpp:mc:data_group_man agement_service" NOTE: The list may contain further scope values which are not checked	Additional authorization scopes when the UE supports MCData		MCDATA
redirect_uri	px_MCX_OAuth_RedirectU RI_A	The URI of the MCX client to which the IdM server will redirect the MCX client's user agent in order to return the authorization code	OpenID Connect 1.0 [95]	
state	any value as selected by the UE	An opaque value used by the MCX client to maintain state between the authentication request and authentication response	OpenID Connect 1.0 [95]	

acr-values	"3gpp:acr:password"	Space-separated string that specifies the acr values that the IdM server is being requested to use for processing this authentication request	TS 33.180 [94]	
code-challenge	any value	base64url-encoded SHA-256 challenge: hash of the code_verifier selected by the UE	TS 33.180 [94] RFC 7636 [100]	
codechallenge-method	"S256"	The hash method used to transform the code verifier to produce the code challenge	TS 33.180 [94] RFC 7636 [100]	
NOTE 1: The Authentication Request may contain other parameters in addition to the parameters specified in this column.				

# 5.5.4.10.2 Authentication Response

### Table 5.5.4.10.2-1: Authentication Response

Derivation Path: TS 33.180 [94], clause B.4.2.3					
Information Element	Value/remark	Comment	Reference	Condition	
code	"SplxIOBeZQQYbYS6 WxSbIA"	The authorization code generated by the authorization endpoint and returned to the MCX client via the authentication response	TS 33.180 [94]		
state	same value as in the Authentication Request	The value shall match the exact value used in the authorization request	TS 33.180 [94]		

## 5.5.4.10.3 Token Request

Information Element	Value/remark	Comment	Reference	Condition
(NOTE 1)	"outborization code"		DEC 2646 [26]	
grant-type	"authorization_code"	The such sub-stinution and s	RFC 2616 [26]	
code	same value as	The authorization code	TS 33.180 [94]	
	assigned by the SS in	generated by the		
	the Authentication	authorization endpoint		
	Response	and returned to the		
		MCX client via the		
		authentication		
aliant id	The MCX OAwth Oligant	response	TC 00 400 [04]	
client_id	px_MCX_OAuth_Client	Identifier of the MCX	TS 33.180 [94]	
	ld_A	client making the API		
	A A A A A A A A A A A A A A A A A A A	request	TO 00 400 [0.4]	
redirect_uri	px_MCX_OAuth_Redir	The URI of the MCX	TS 33.180 [94]	
	ectURI_A	client to which the IdM		
		server will redirect the		
and world an		MCX client's user agent	TC 00 400 [04]	
code_verifier	Value selected by the	A cryptographically	TS 33.180 [94]	
	UE: The SS shall check	random string that is	RFC	
	that the code-challenge in the Authentication	used to correlate the	7636 [100]	
		authorization request to		
	Request is the base64url-encoded	the token request; the minimum length is		
	SHA-256 hash of the	43 characters, the		
	code-verifier	maximum length of 128		
	code-vermen	characters		
NOTE 1: In contrast to the Aut	Pentication Request there is			1 that the
	t may contain additional para			
	orization Code Flow in RFC			
Authentication Reque				1 116
	Request shall contain exact	ly the parameters as specif	ied in TS 33 180 [	0/1 Table
$\rightarrow$ The Access Toker B.4.2.4-1 but no furth		iy the parameters as speci	ieu ili 10 00.100 [	

## Table 5.5.4.10.3-1: Token Request

5.5.4.10.4 Token Response

## Table 5.5.4.10.4-1: Token Response

Derivation Path: TS 33.180 [ Information Element	Value/remark	Comment	Reference	Condition
access_token		The access token. The access token is opaque	RFC 6749 [77] TS 33.180 [94]	
-		to the MCX client		
{		Llas dan Almanithur		
{ "kid"	"jws-rsa"	Header Algorithm hint indicating which key was used to secure	RFC 7515 [102]	
		the JWS: name of the RSA public key in case of RS256 Editor's note: value to be confirmed		
"alg"	"RS256"	identifies the cryptographic algorithm used to secure the JWS: RSASSA- PKCS1-v1_5 SHA-256 digital signature Editor's note: value to be confirmed	RFC 7515 [102]	
<u>}</u>		Payload Data	RFC 7519 [101]	
"mcptt_id"	px_MCPTT_ID_User_A		TS 24.380 TS 24.483 TS 24.380	MCPTT
			B.2.2.3	
"mcvideo_id"	px_MCVideo_ID_User_A		TS 33.180 B.2.2.3	MCVIDEO
"mcdata_id"	px_MCData_ID_User_A		TS 24.380 B.2.2.3	MCDATA
"scope"	"openid"	list of space-delimited, case-sensitive strings to inform the client of the scope of the access token issued and is OPTIONAL, if identical to the scope requested by the client otherwise REQUIRED "openid" is defined by the OpenID Connect standard and is mandatory regardless from the MCS context in which the message is used	RFC 6749 [77] TS 33.180 [94] B.2.2.2 OpenID Connect 1.0 [95]	MCPTT
	"3gpp:mc:ptt_service" "3gpp:mc:ptt_key_manag ement_service" "3gpp:mc:ptt_config_man agement_service" "3gpp:mc:ptt_group_man agement_service" "3gpp:mc:video_service" "3gpp:mc:video_key_ma nagement_service"			MCPTT MCVIDEO
	"3gpp:mc:video_config_ management_service" "3gpp:mc:video_group_m anagement_service"			

		1	1	
	"3gpp:mc:data_service" "3gpp:mc:data_key_man agement_service"			MCDATA
	"3gpp:mc:data_config_m anagement_service" "3gpp:mc:data_group_m anagement_service"			
"exp"	Current system time + 7199 seconds; the system time is the number of seconds since 00:00:00 UTC on 1 January 1970	Number containing a NumericData value identifies the expiration time on or after which the JWT MUST NOT be accepted for processing Editor's note: value to be confirmed	RFC 7519 [101] TS 33.180 [94]	
"client_id"	Same value as received in the token request	Identifier of the MCX client making the API request	TS 33.180 [94]	
} Signatura		Created by the beach	DEC 7545 [402]	
Signature	HASH [base64UrlEncode(heade r) + "." + base64UrlEncode(payloa d))	Created by the hash algorithm corresponding to the algorithm provided in the header	RFC 7515 [102]	
refresh_token	"Y7NSzUJuS0Jp7G4SKp BKSOJVHIZxFbxqsqCIZ hOEk9"	Arbitrarily selected string: The refresh token that can be used to refresh the access token and avoid having to prompt the user for authentication again	RFC 6749 [77]	
id_token		The MCX client may validate the user with the ID token and configure itself for the user	RFC 6749 [77] TS 33.180 [94]	
{		Llas dan Almanithma	DE0 7545 (400)	
kid"	"jws-rsa"	Header Algorithm hint indicating which key was used to secure the JWS Editor's note: value to be confirmed	RFC 7515 [102]	
"alg"	"RS256"	identifies the cryptographic algorithm used to secure the JWS Editor's note: value to be confirmed		
<u> </u>		Payload Data	RFC 7519 [101]	
"mcptt_id"	px_MCPTT_ID_User_A		TS 24.380 TS 24.483 TS 33.180 B.2.1.3	MCPTT
"mcvideo_id"	px_MCVideo_ID_User_A		TS 33.180 B.2.1.3	MCVIDEO
"mcdata_id"	px_MCData_ID_User_A		TS 24.380 B.2.1.3	MCDATA

"sub"	"1234567890"	Arbitrarily selected string: case-sensitive string containing a StringOrURI value which identifies the principal that is the subject of the JWT and is optional	RFC 7519 [101]
"aud"	client_id as received in token request	Audience: identifies the recipients that the JWT is intended for and is optional	RFC 7519 [101]
"iss"	tsc_MCX_IdMS_token_U riPath	Issuer: case-sensitive string containing a StringOrURI value which identifies the principal that issued the JWT and is optional	RFC 7519 [101]
"exp"	Current system time + 7199 seconds; the system time is the number of seconds since 00:00:00 UTC on 1 January 1970	Number containing a NumericData value identifies the expiration time on or after which the JWT MUST NOT be accepted for processing	RFC 7519 [101] TS 33.180 [94]
"iat"	Current system time Epoch time: number of seconds since 00:00:00 UTC on 1 January 1970	Numeric value which identifies the time at which the JWT was issued and is optional	RFC 7519 [101] TS 33.180 [94]
Signature	HASH (base64UrlEncode(heade r) + "." + base64UrlEncode(payloa d))	Created by the hash algorithm corresponding to the algorithm provided in the header	RFC 7515 [102]
token-type	"Bearer"	The token type for access	RFC 6749 [77]
expires-in	"7199"	Token expiry time	RFC 6749 [77]

- 5.5.4.10.5 Void
- 5.5.4.10.6 KMS Certificate

Table 5.5.4.10.6-1: KMS Certificate

	Value/remark	Comment	Reference	Condition
SignedKmsResponse				
Id	"kmsResponse"	arbitrarily selected id		
		which the Signature's		
		Reference URI refers to		
KmsUri	tsc_MCX_KMS_Hostna	The URI of the KMS		
	me	which issued the key		
		set		
UserUri	px_MCPTT_ID_User_A	The user's MCPTT ID		MCPTT
	px_MCVideo_ID_User_ A	The user's MCVideo ID		MCVIDEC
	px_MCData_ID_User_ A	The user's MCData ID		MCDATA
Time	Current system time of the SS	Time stamp of KMS message		
ClientReqUrl	same URI as used by the client as Request URI in the HTTP POST requesting the KMS Certificate (KMS Initialize request)			
KmsMessage				
KmsInit				
Version	"1.0.0"			1
KmsCertificate				
Version	"1.1.0"	The version number of		
		the certificate type		
Role	"Root"	This shall indicate		
T(OIC	11001	whether the certificate		
		is a "Root" or "External"		
		certificate		
CertUri	tsc_MCX_KMS_CertUri	The URI of the		
Centon		Certificate (this object)		
KmsUri	tsc_MCX_KMS_Hostna	The URI of the KMS		
KIIISUII		which issued the		
	me	Certificate		
laguar	Net present			
lssuer	Not present	(Optional) String		
		describing the issuing		
		entity		
ValidFrom	Not present	(Optional) Date from		
		which the Certificate		
		may be used		1
ValidTo	Not present	(Optional) Date at		
		which the Certificate		
		expires		
Revoked	false	(Optional) A Boolean		
		value defining whether		
		a Certificate has been		
		revoked		
UserIDFormat	"2"	Shall contain the value '2'		
UserKeyPeriod	"2592000"	The number of seconds		
		that each user key		
		issued by this KMS		
		should be used		
		(2592000 seconds are		
		30 days)		
UserKeyOffset	CurrentTimestamp	UserKeyOffset so that		1
OsenteyOnset	MODULO	KeyPeriod starts at		
	UserKeyPeriod			
	USEINEYFEIIUU	current system time; CurrentTimestamp is		
		L III AN III MASIAMO IS		1
		the current system time in seconds since 0h on		

PubEncKey	SAKKE Public Key Z_T	The SAKKE Public	RFC 6508 [99]
	derived from master	Key, "Z_T". This is an	[ ]
	secret z_T according to	OCTET STRING	
	RFC 6508	encoding of an elliptic	
		curve point	
PubAuthKey	ECCSI Public Key	The ECCSI Public Key,	RFC 6507 [98]
•	KPAK derived from	"KPAK". This is an	
	private key KSAK	OCTET STRING	
	according to RFC 6507	encoding of an elliptic	
	-	curve point	
ParameterSet	Not present	(Optional) The choice	
		of parameter set used	
		for SAKKE and ECCSI	
KmsDomainList	Not present	(Optional) List of	
		domains associated	
		with the certificate	
SignedInfo			
CanonicalizationAlgorithm	"xml-c14n"	XML Signature	
C C		processing	
SignatureAlgorithm	"HMAC-SHA-256"	Hashing algorithm to be	
		applied to sign the	
		SignedInfo with the key	
		given in the KeyInfo	
Reference			
URI	"#kmsResponse"	referring to the data	
		object for which the	
		hash is generatet (KMS	
		response element in	
		this case)	
DigestAlgorithm	"SHA-256"	Hashing algorithm to be	
		applied to sign the data	
		object	
DigestValue	Hash signing the data		
	object (referred to by		
	the URI)		
SignatureValue	Hash signing the	The signing key is	
	SignedInfo	derived from the InK	
		(px_MCX_InK)	
		according to TS 33.180	
		[94] Annex F.1.4 with	
		FC = 0x52	
		XPK-ID = InK-ID	
		(px_MCX_InK_ID) and	
		MC Service user ID	
		being the same as	
		used as UserUri in the	
		SignedKmsResponse	
KeyInfo			
KeyName	base64 encoded InK-ID (px_MCX_InK_ID)		

- 5.5.4.10.7 Void
- 5.5.4.10.8 KMS Key Set

Table 5.5.4.10.8-1: KMS Key Set

Derivation Path: TS 33.180 [94] Information Element	Value/remark	Comment	Reference	Condition
Signed KmsResponse				
ld	"kmsResponse"	arbitrarily selected id which the Signature's		
		Reference URI refers to		
KmsUri	tsc_MCX_KMS_Hostna me	The URI of the KMS which issued the key set		
UserUri	px_MCPTT_ID_User_A	The user's MCPTT ID		MCPTT
	px_MCVideo_ID_User_ A	The user's MCVideo ID		MCVIDEO
	px_MCData_ID_User_ A	The user's MCData ID		MCDATA
Time	Current system time of the SS	Time stamp of KMS message		
ClientReqUrl	same URI as used by the client as Request URI in the HTTP POST requesting the KMS Key Set (KMS KeyProvision request)			
KmsMessage				
KmsKeyProv				
Version	"1.0.0"	The version number of the key provision XML		
KmsKeySet[1]				
Version	"1.1.0"	The version number of the key set XML		
KmsUri	tsc_MCX_KMS_Hostna me	The URI of the KMS which issued the key set		
CertUri	Not present	(Optional) The URI of the Certificate which may be used to validate the key set		
Issuer	Not present	(Optional) String describing the issuing entity		
UserUri	px_MCPTT_ID_User_A	The user's MCPTT ID		MCPTT
	px_MCVideo_ID_User_ A	The user's MCVideo ID		MCVIDEC
	px_MCData_ID_User_ A	The user's MCData ID		MCDATA
UserID	Base64 encoded UID generated according to annex F.2.1 of TS 33.180 [94] with MCX-Id as identifier	UID corresponding to the key set	TS 33.180 [94]	
ValidFrom	Not present	(Optional) Date and time from which the key set may be used		
ValidTo	Not present	(Optional) Date and time at which the key set expires		
KeyPeriodNo	FLOOR((CurrentTimest amp - UserKeyOffset) / UserKeyPeriod)	Current Key Period: Current Timestamp is the current system time in seconds since 0h on 1 <sup>st</sup> Jan 1900; UserKeyOffset and UserKeyPeriod are given in the KMS Certificate (Table 5.5.4.10.6-1) in seconds	TS 33.180 [94]	

Information Element	Value/remark	Comment	Reference	Conditio
igned KmsResponse				Contaite
Revoked	"false"	(Optional) A Boolean value defining whether the key set has been revoked		
UserDecryptKey		The SAKKE "Receiver Secret Key" (RSK). This is an OCTET STRING encoding of an elliptic curve point	RFC 6508 [99]	
EncryptionAlgorithm	"AES256"	Encryption algorithm to use		
KeyInfo				
KeyName	base64 encoded TrK- ID (px_MCX_TrK_ID)			
CipherData				
CipherValue	encrypted RSK	The encryption key is derived from the TrK (px_MCX_TrK) according to TS 33.180 [94] Annex F.1.4 with FC = 0x51 XPK-ID = TrK-ID (px_MCX_TrK_ID)		
UserSigningKeySSK		The ECCSI private Key, "SSK". This is an OCTET STRING encoding of an integer; the PVT is generated using the UID as contained in the UserID of the KSM message	RFC 6507 [98]	
EncryptionAlgorithm	"AES256"	Encryption algorithm to use		
KeyInfo				
KeyName	base64 encoded TrK- ID (px_MCX_TrK_ID)			
CipherData				
CipherValue	encrypted SSK	The encryption key is derived from the TrK (px_MCX_TrK) according to TS 33.180 [94] Annex F.1.4 with FC = 0x51 XPK-ID = TrK-ID (px_MCX_TrK_ID)		
UserPubTokenPVT		The ECCSI public validation token, "PVT". This is an OCTET STRING encoding of an elliptic curve point; the PVT is generated using the UID as contained in the UserID of the KSM message	RFC 6507 [98]	
EncryptionAlgorithm	"AES256"	Encryption algorithm to use		
				1
KeyInfo				

.

Derivation Path: TS 33.180 [94]				
Information Element	Value/remark	Comment	Reference	Condition
Signed KmsResponse				
CipherValue	Encrypted PVT	The encryption key is derived from the TrK (px_MCX_TrK) according to TS 33.180 [94] Annex F.1.4 with FC = 0x51 XPK-ID = TrK-ID (px_MCX_TrK_ID)		
Signature				
SignedInfo				
CanonicalizationAlgorithm	"xml-c14n"	XML Signature processing		
SignatureAlgorithm	"HMAC-SHA-256"	Hashing algorithm to be applied to sign the SignedInfo with the key given in the KeyInfo		
Reference				
URI	"#kmsResponse"	referring to the data object for which the hash is generatet (KMS response element in this case)		
DigestAlgorithm	"SHA-256"	Hashing algorithm to be applied to sign the data object		
DigestValue	Hash signing the data object (referred to by the URI)			
SignatureValue	Hash signing the SignedInfo	The signing key is derived from the InK (px_MCX_InK) according to TS 33.180 [94] Annex F.1.4 with FC = 0x52 XPK-ID = InK-ID (px_MCX_InK_ID) and MC Service user ID being the same as used as UserUri in the SignedKmsResponse		
KeyInfo				
KeyName	base64 encoded InK-ID (px_MCX_InK_ID)			

## 5.5.4.10.9 Signed KMS Request

KeyInfo

KeyName

Derivation Path: TS 33.180 [94]. Information Element	Value/remark	Comment	Reference	Conditio
SignedKmsRequest				
KmsRequest				
Id attribute	any value	value as used as		
	5	reference in the		
		signature		
Version attribute	"1.1.0"			
UserUri	px_MCPTT_ID_User_A	The user's MCPTT ID		MCPTT
	px_MCVideo_ID_User_	The user's MCVideo ID		MCVIDEO
	A			
	px_MCData_ID_User_	The user's MCData ID		MCDATA
	A – – – –			
KmsUri	tsc_MCX_KMS_Hostna	The URI of the KMS to		
	me	which the request is		
		sent		
Time	any value	Date/time that the		
	,	request is made by the		
		client		
ClientId	any value if present	A string representing		
		the client		
DeviceId	any value if present	A string representing		
200000		the device		
ClientRegUrl	URI with same path as	The resource URI to		
Chona toqon	in the request URI of	which the HTTP POST		
	the HTTP request	request is sent		
KrrList	not present	Tequest is sent		
ClientError	not present			
Signature	not present			
SignedInfo				
		XML Cignature		
CanonicalizationAlgorithm	"http://www.w3.org/TR/	XML Signature		
	2001/REC-xml-c14n-	processing		
	20010315"			
SignatureAlgorithm	"http://www.w3.org/200	Hashing algorithm to be		
	1/04/xmldsig-	applied to sign the		
	more#hmac-sha256"	SignedInfo with the key		
		given in the KeyInfo		
Reference				
URI	URI referring to the Id	same value as the Id		
	of the request	attribute of the request		
		with leading "#"		
DigestAlgorithm	"http://www.w3.org/200	Hashing algorithm		
	1/04/xmlenc#sha256"	applied to sign the data		
		object		
DigestValue	Hash signing the data	-		
0	object (referred to by			
	the URI)			
SignatureValue	Hash signing the	The signing key is		
	SignedInfo;	derived from the InK		
	shall be validated by	(px_MCX_InK)		
	the SS	according to TS 33.180		
	the SS	[94] Annex F.1.4 with		
		FC = 0x52		
		XPK-ID = InK-ID		
		(px_MCX_InK_ID) and		
		MC Service user ID		
		being the same as		
		used as UserUri		
KeyInfo				1

## Table 5.5.4.10.9-1: Signed KMS Request

base64 encoded InK-ID (px\_MCX\_InK\_ID) 5.5.5 Default MCPTT call control Off-network messages and other information elements

## 5.5.5.1 GROUP CALL PROBE

## Table 5.5.5.1-1: GROUP CALL PROBE

Derivation Path: TS 24.379 [9] Table 15.1.2.1-1			
Information Element	Value/remark	Comment	Condition
MCPTT group ID	px_MCPTT_Group_A_ID		

## 5.5.5.2 GROUP CALL ANNOUNCEMENT

## 5.5.5.2.1 GROUP CALL ANNOUNCEMENT from the UE

## Table 5.5.5.2.1-1: GROUP CALL ANNOUNCEMENT from the UE

Derivation Path: TS 24.379 [9] Table 15.1.3.1-1			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65535) generated at the beginning of a call establishment		
Call type	"00000001"	Basic Group Call	
Refresh interval	10000	The Refresh interval contains a number denoting the minimum time interval (milliseconds) between two successive periodic announcements. NOTE: In release 13.7 of TS 24.379 [9], the refresh interval of the call is fixed to 10 seconds.	
Call start time	The Call start time value is an unsigned integer containing UTC time of the time when a call was started, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
Last call type change time	The Last call type change time value is an unsigned integer containing UTC time of the time when a call priority was changed, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
MCPTT group ID	px_MCPTT_Group_A_ID		
SDP	As described in Table 5.5.3.1.3-1		
Originating MCPTT user ID	px_MCPTT_ID_User_A	pre-set MCPTT user ID	
Last user to change call type	The ID of the last user to change contents		
Confirm mode indication	Present		
Probe response	Not Present		

## 5.5.5.2.2 GROUP CALL ANNOUNCEMENT from the SS

Derivation Path: TS 24.379 [9] Table 15.1.3.1-1			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65535) generated at the beginning of a call establishment		
Call type	"0000001"	Basic Group Call	
Refresh interval	10000	The Refresh interval contains a number denoting the minimum time interval (milliseconds) between two successive periodic announcements. NOTE: In release 13.7 of TS 24.379 [9], the refresh interval of the call is fixed to 10 seconds.	
Call start time	The Call start time value is an unsigned integer containing UTC time of the time when a call was started, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
Last call type change time	The Last call type change time value is an unsigned integer containing UTC time of the time when a call priority was changed, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
MCPTT group ID	px_MCPTT_Group_A_ID		
SDP	As described in Table 5.5.3.1.4-1		
Originating MCPTT user ID	px_MCPTT_ID_User_B	pre-set MCPTT user ID	
Last user to change call type	The ID of the last user to change contents		
Confirm mode indication	Present		
Probe response	Not Present		

## Table 5.5.5.2.2-1: GROUP CALL ANNOUNCEMENT from the SS

## 5.5.5.3 GROUP CALL ACCEPT

## 5.5.5.3.1 GROUP CALL ACCEPT from the UE

## Table 5.5.5.3.1-1: GROUP CALL ACCEPT from the UE

Derivation Path: TS 24.379 [9] Table 15.1.4.1-1			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Call type	"0000001"	Basic Group Call	
MCPTT group ID	px_MCPTT_Group_A_ID		
Sending MCPTT user ID	px_MCPTT_ID_User_A		

## 5.5.5.3.2 GROUP CALL ACCEPT from the SS

#### Table 5.5.5.3.2-1: GROUP CALL ACCEPT from the SS

Derivation Path: TS 24.379 [9] Table 15.1.4.1-1			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Call type	"0000001"	Basic Group Call	
MCPTT group ID	px_MCPTT_Group_A_ID		
Sending MCPTT user ID	px_MCPTT_ID_User_B		

## 5.5.5.4 GROUP CALL EMERGENCY END

## 5.5.5.4.1 GROUP CALL EMERGENCY END from the UE

#### Table 5.5.5.4.1-1: GROUP CALL EMERGENCY END from the UE

Derivation Path: TS 24.379 [9] Table 15.1.15.1	-1		
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Last call type change time	The Last call type change time value is an unsigned integer containing UTC time of the time when a call priority was changed, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
Last user to change call type	The ID of the last user to change contents		
MCPTT group ID	px_MCPTT_Group_A_ID		
Originating MCPTT user ID	px_MCPTT_ID_User_A		

## 5.5.5.4.2 GROUP CALL EMERGENCY END from the SS

## Table 5.5.5.4.2-1: GROUP CALL EMERGENCY END from the SS

Derivation Path: TS 24.379 [9] Table 15.1.15.1-	-1		
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Last call type change time	The Last call type change time value is an unsigned integer containing UTC time of the time when a call priority was changed, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
Last user to change call type	The ID of the last user to change contents		
MCPTT group ID	px_MCPTT_Group_A_ID		
Originating MCPTT user ID	px_MCPTT_ID_User_B		

## 5.5.5.5 GROUP CALL IMMINENT PERIL END

## 5.5.5.5.1 GROUP CALL IMMINENT PERIL END from the UE

## Table 5.5.5.5.1-1: GROUP CALL IMMINENT PERIL END from the UE

Derivation Path: TS 24.379 [9] Table 15.1.14.1-	1		
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Last call type change time	The Last call type change time value is an unsigned integer containing UTC time of the time when a call priority was changed, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
Last user to change call type	The ID of the last user to change contents		
MCPTT group ID	px_MCPTT_Group_A_ID		
Originating MCPTT user ID	px_MCPTT_ID_User_A		

## 5.5.5.5.2 GROUP CALL IMMINENT PERIL END from the SS

### Table 5.5.5.5.2-1: GROUP CALL IMMINENT PERIL END from the SS

Derivation Path: TS 24.379 [9] Table 15.1.14.1-1			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Last call type change time	The Last call type change time value is an unsigned integer containing UTC time of the time when a call priority was changed, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
Last user to change call type	The ID of the last user to change contents		
MCPTT group ID	px_MCPTT_Group_A_ID		
Originating MCPTT user ID	px_MCPTT_ID_User_B		

## 5.5.5.6 GROUP CALL BROADCAST

## 5.5.5.6.1 GROUP CALL BROADCAST from the UE

#### Table 5.5.5.6.1-1: GROUP CALL BROADCAST from the UE

Derivation Path: TS 24.379 [9] Table 15.1.20.1-1			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Call type	"0000010"	Broadcast Group Call	
Originating MCPTT user ID	px_MCPTT_ID_User_A		
MCPTT group ID	px_MCPTT_Group_A_ID		
SDP	As described in Table 5.5.3.1.3-1		

#### 5.5.5.6.2 GROUP CALL BROADCAST from the SS

#### Table 5.5.5.6.2-1: GROUP CALL BROADCAST from the SS

Derivation Path: TS 24.379 [9] Table 15.1.20.1-1			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Call type	"0000010"	Broadcast Group Call	
Originating MCPTT user ID	px_MCPTT_ID_User_B		
MCPTT group ID	px_MCPTT_Group_A_ID		
SDP	As described in Table 5.5.3.1.4-1		

## 5.5.5.7 GROUP CALL BROADCAST END

## 5.5.5.7.1 GROUP CALL BROADCAST END from the UE

## Table 5.5.5.7.1-1: GROUP CALL BROADCAST END from the UE

Derivation Path: TS 24.379 [9] Table 15.1.21.1-1			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCPTT group ID	px_MCPTT_Group_A_ID		
SDP	As described in Table 5.5.3.1.3-1		

## 5.5.5.7.2 GROUP CALL BROADCAST END from the SS

## Table 5.5.5.7.2-1: GROUP CALL BROADCAST END from the SS

Derivation Path: TS 24.379 [9] Table 15.1.21.1-	·1		
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCPTT group ID	px_MCPTT_Group_A_ID		
SDP	As described in Table 5.5.3.1.4-1		

## 5.5.5.8 PRIVATE CALL SETUP REQUEST

## 5.5.5.8.1 PRIVATE CALL SETUP REQUEST from the UE

#### Table 5.5.5.8.1-1: PRIVATE CALL SETUP REQUEST from the UE

Derivation Path: 24.379 [9], Table 15.1.5.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Commencement mode	"0000000"	Automatic Commencement Mode	
Call type	"00000101"	Private Call	
MCPTT user ID of the caller	px_MCPTT_ID_User_A		
MCPTT user ID of the callee	px_MCPTT_ID_User_B		
SDP offer	As described in Table 5.5.3.1.3-1		
User location	Not Present		

#### 5.5.5.8.2 PRIVATE CALL SETUP REQUEST from the SS

## Table 5.5.5.8.2-1: PRIVATE CALL SETUP REQUEST from the SS

Derivation Path: 24.379 [9], Table 15.1.5.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Commencement mode	"0000000"	Automatic Commencement Mode	
Call type	"00000101"	Private Call	
MCPTT user ID of the caller	px_MCPTT_ID_User_B		
MCPTT user ID of the callee	px_MCPTT_ID_User_A		
SDP offer	As described in Table 5.5.3.1.4-1		
User location	Not Present		

## 5.5.5.9 PRIVATE CALL RINGING

#### Table 5.5.5.9-1: PRIVATE CALL RINGING

Information Element	Value/remark	Comment	Condition
Call identifier	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the caller	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the callee	Same as the one in PRIVATE CALL SETUP REQUEST		

## 5.5.5.10 PRIVATE CALL ACCEPT

## Table 5.5.5.10-1: PRIVATE CALL ACCEPT

Derivation Path: 24.379 [9], Table 15.1.7.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the caller	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the callee	Same as the one in PRIVATE CALL SETUP REQUEST		
SDP answer	Same as the one in PRIVATE CALL SETUP REQUEST		

## 5.5.5.11 PRIVATE CALL REJECT

## 5.5.5.11.1 PRIVATE CALL REJECT from the UE

## Table 5.5.5.11.1-1: PRIVATE CALL REJECT from the UE

Derivation Path: 24.379 [9], Table 15.1.8.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	Same as the one in PRIVATE CALL SETUP REQUEST		
Reason	Any allowed value		
MCPTT user ID of the caller	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the callee	Same as the one in PRIVATE CALL SETUP REQUEST		
SDP answer	As described in Table 5.5.3.1.3-1		

## 5.5.5.11.2 PRIVATE CALL REJECT from the SS

Derivation Path: 24.379 [9], Table 15.1.8.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	Same as the one in PRIVATE CALL SETUP REQUEST		
Reason	"0000000"	Reason = REJECT	
MCPTT user ID of the caller	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the callee	Same as the one in PRIVATE CALL SETUP REQUEST		
SDP answer	As described in Table 5.5.3.1.4-1		

## Table 5.5.5.11.2-1: PRIVATE CALL REJECT from the SS

## 5.5.5.12 PRIVATE CALL RELEASE

## Table 5.5.5.12-1: PRIVATE CALL RELEASE

Derivation Path: 24.379 [9], Table 15.1.9.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the caller	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the callee	Same as the one in PRIVATE CALL SETUP REQUEST		

## 5.5.5.13 PRIVATE CALL RELEASE ACK

## Table 5.5.5.13-1: PRIVATE CALL RELEASE ACK

Derivation Path: 24.379 [9], Table 15.1.10.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the caller	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the callee	Same as the one in PRIVATE CALL SETUP REQUEST		

## 5.5.5.14 PRIVATE CALL ACCEPT ACK

#### Table 5.5.5.14-1: PRIVATE CALL ACCEPT ACK

Derivation Path: 24.379 [9], Table 15.1.11.1-1.			-
Information Element	Value/remark	Comment	Condition
Call identifier	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the caller	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the callee	Same as the one in PRIVATE CALL SETUP REQUEST		

## 5.5.5.15 PRIVATE CALL EMERGENCY CANCEL

## 5.5.5.15.1 PRIVATE CALL EMERGENCY CANCEL from the UE

#### Table 5.5.5.15.1-1: PRIVATE CALL EMERGENCY CANCEL from the UE

Derivation Path: 24.379 [9], Table 15.1.12.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCPTT user ID of the caller	px_MCPTT_ID_User_A		
MCPTT user ID of the callee	px_MCPTT_ID_User_B		

## 5.5.5.15.2 PRIVATE CALL EMERGENCY CANCEL from the SS

## Table 5.5.5.15.2-1: PRIVATE CALL EMERGENCY CANCEL from the SS

Derivation Path: 24.379 [9], Table 15.1.12.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCPTT user ID of the caller	px_MCPTT_ID_User_B		
MCPTT user ID of the callee	px_MCPTT_ID_User_A		

## 5.5.5.16 PRIVATE CALL EMERGENCY CANCEL ACK

## 5.5.5.16.1 PRIVATE CALL EMERGENCY CANCEL ACK from the UE

#### Table 5.5.5.16.1-1: PRIVATE CALL EMERGENCY CANCEL ACK from the UE

Information Element	Value/remark	Comment	Condition
Call identifier	Same as the one in		
	PRIVATE CALL		
	EMERGENCY CANCEL		
MCPTT user ID of the caller	px_MCPTT_ID_User_A		
MCPTT user ID of the callee	px_MCPTT_ID_User_B		

#### 5.5.5.16.2 PRIVATE CALL EMERGENCY CANCEL ACK from the SS

## Table 5.5.5.16.2-1: PRIVATE CALL EMERGENCY CANCEL ACK from the SS

Derivation Path: 24.379 [9], Table 15.1.13.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	Same as the one in		
	PRIVATE CALL		
	EMERGENCY CANCEL		
MCPTT user ID of the caller	px_MCPTT_ID_User_B		
MCPTT user ID of the callee	px_MCPTT_ID_User_A		

## 5.5.5.17 GROUP EMERGENCY ALERT

#### 5.5.5.17.1 GROUP EMERGENCY ALERT from the UE

#### Table 5.5.5.17.1-1: GROUP EMERGENCY ALERT from the UE

Derivation Path: TS 24.379 [9] Table 15.1.16.1-1			
Information Element	Value/remark	Comment	Condition
MCPTT group ID	px_MCPTT_Group_A_ID		
Originating MCPTT user ID	px_MCPTT_ID_User_A		
Organization name	Any allowed value		
User location	Not Present		

## 5.5.5.17.2 GROUP EMERGENCY ALERT from the SS

#### Table 5.5.5.17.2-1: GROUP EMERGENCY ALERT from the SS

Derivation Path: TS 24.379 [9] Table 15.1.16.1-1			
Information Element	Value/remark	Comment	Condition
MCPTT group ID	px_MCPTT_Group_A_ID		
Originating MCPTT user ID	px_MCPTT_ID_User_B		
Organization name	px_MCPTT_Group_A_O wner_Organization		
User location	Not Present		

## 5.5.5.18 GROUP EMERGENCY ALERT ACK

## 5.5.5.18.1 GROUP EMERGENC ALERT ACK from the UE

#### Table 5.5.5.18.1-1: GROUP EMERGENCY ALERT ACK from the UE

Derivation Path: TS 24.379 [9] Table 15.1.17.1-1			
Information Element	Value/remark	Comment	Condition
MCPTT group ID	px_MCPTT_Group_A_ID		
Originating MCPTT user ID	px_MCPTT_ID_User_B		
Sending MCPTT user ID	px_MCPTT_ID_User_A		

## 5.5.5.18.2 GROUP EMERGENC ALERT ACK from the SS

#### Table 5.5.5.18.2-1: GROUP EMERGENCY ALERT ACK from the SS

Derivation Path: TS 24.379 [9] Table 15.1.17.1-1			
Information Element	Value/remark	Comment	Condition
MCPTT group ID	px_MCPTT_Group_A_ID		
Originating MCPTT user ID	px_MCPTT_ID_User_A		
Sending MCPTT user ID	px_MCPTT_ID_User_B		

## 5.5.5.19 GROUP EMERGENCY ALERT CANCEL

#### 5.5.5.19.1 GROUP EMERGENCY ALERT CANCEL from the UE

#### Table 5.5.5.19.1-1: GROUP EMERGENCY ALERT CANCEL from the UE

Derivation Path: TS 24.379 [9] Table 15.1.18.1-1			
Information Element	Value/remark	Comment	Condition
MCPTT group ID	px_MCPTT_Group_A_ID		
Originating MCPTT user ID	px_MCPTT_ID_User_A		
Sending MCPTT user ID	px_MCPTT_ID_User_A		

#### 5.5.5.19.2 GROUP EMERGENCY ALERT CANCEL from the SS

#### Table 5.5.5.19.2-1: GROUP EMERGENCY ALERT CANCEL from the SS

Derivation Path: TS 24.379 [9] Table 15.1.18.1-1			
Information Element	Value/remark	Comment	Condition
MCPTT group ID	px_MCPTT_Group_A_ID		
Originating MCPTT user ID	px_MCPTT_ID_User_B		
Sending MCPTT user ID	px_MCPTT_ID_User_B		

## 5.5.5.20 GROUP EMERGENCY ALERT CANCEL ACK

## 5.5.5.20.1 GROUP EMERGENCY ALERT CANCEL ACK from the UE

#### Table 5.5.5.20.1-1: GROUP EMERGENCY ALERT CANCEL ACK from the UE

Derivation Path: TS 24.379 [9] Table 15.1.19.1-1			
Information Element	Value/remark	Comment	Condition
MCPTT group ID	px_MCPTT_Group_A_ID		
Originating MCPTT user ID	px_MCPTT_ID_User_B		
Sending MCPTT user ID	px_MCPTT_ID_User_A		

## 5.5.5.20.2 GROUP EMERGENCY ALERT CANCEL ACK from the SS

#### Table 5.5.5.20.2-1: GROUP EMERGENCY ALERT CANCEL ACK from the SS

Derivation Path: TS 24.379 [9] Table 15.1.19.1-1			
Information Element	Value/remark	Comment	Condition
MCPTT group ID	px_MCPTT_Group_A_ID		
Originating MCPTT user ID	px_MCPTT_ID_User_A		
Sending MCPTT user ID	px_MCPTT_ID_User_B		

# 5.5.6 Default MCPTT media plane control messages and other information elements

#### 5.5.6.1 General

The media plane control protocols messages specified in the present document are based on those specified in TS 24.380 [10] which in term are based on the RTCP Application Packets (RTCP: APP), as defined in IETF RFC 3550 [76].

The following conditions apply throughout clause 5.5.6:

#### Table 5.5.6.1-1: Conditions

Condition	Explanation
FA	IE for when an active Functional Alias is used
Multi-Talker	IE for when a Multi Talker call is active
ACK	Message requests a Floor Ack
NOTE: For further conditions	s see table 5.5.1-1

For MCPTT media plane control different SSRCs (Synchronization SouRCes) need to be distinguished. Table 5.5.6.1-2 specifies the SSRCs as used in the default MCPTT media plane control messages for the case that there is no multiplexing of media plane control channels.

NOTE 1: Multiplexing of media plane control channels has been introduced in Rel-18 of TS 24.379 [9] and TS 24.380 [10] and may be specified in Rel-18 and above test cases.

## Table 5.5.6.1-2: SSRCs in MCPTT media plane control messages (No multiplexing of media plane control channels)

	•	
SSRC (NOTE 1)	Description	Value
	•	

Audio SSRC of the client (NOTE 1)	SSRC to be used by the client (Client A) in the audio stream	Arbitrarily selected by the SS and assigned to the client when the floor is granted (NOTE 2) using the mc_ssrc fmtp attribute in case of implicit grant or by a Floor Granted message otherwise (NOTE 3)			
Audio SSRC of a remote client (NOTE 1)	SSRC of the audio stream of a remote client (Client B)	Arbitrarily selected by the SS (NOTE 2)			
RTCP SSRC of the client (NOTE 1)	SSRC used by the client (Client A) in the RTCP header of the MCPTT media plane control messages sent to the SS	The client may use any value, value is not checked by the SS (NOTE 4).			
RTCP SSRC of the SS (NOTE 1)	SSRC used by the SS in the RTCP header of the MCPTT media plane control messages sent to the client	Arbitrarily selected by the SS (NOTE 4)			
NOTE 2: Different SSRC valu $\Rightarrow$ There is no need	NOTE 1: The terms "Audio SSRC" and "RTCP SSRC" are as introduced in Rel-18 of TS 24.380 [10].				
NOTE 3: Even though the client may use the a=ssrc SDP attribute to indicate which SSRC it would like to use in the audio stream, according to TS 24.380 [10] the client has to use the value provided by the server in the "mc_ssrc" fmtp attribute of the SDP answer or in the "Audio SSRC of Granted Participant" field of the Floor Granted message.					
NOTE 4: In clause 4.3.3.1 TS 24.380 [10] clarifies in Rel-18 that "the SSRC of the RTCP header is used to enable multiplexing of media plane control channels"; in clauses 14.2.7 and 14.3.8 it is clarified that the "mc_floor_ssrc" fmtp attribute is used to indicate support of multiplexing and to exchange of the SSRC values to be used in the RTCP header. ⇒ It is assumed that RTCP SSRC values have no meaning in case of no multiplexing.					

5.5.6.2 Floor Request

```
Table 5.5.6.2-1: Floor Request
```

Derivation Path: 24.380 [10], Table 8.2.4-1.	· · · · ·		• ··· ·
Information Element	Value/remark	Comment	Condition
RTCP header	00000	Elear Derweet	
Subtype SSRC	00000 RTCP SSRC of the client	Floor Request	
33KU	The SSRC of the		OFF-
	message sender		NETWORK
name	MCPT		
Floor priority	Not present or Any allowed value	If present, a value between '0' and '255' where '0' is	
		the lowest priority	
		If the Floor Priority field is not included in the message the default priority (='0') is used as the Floor Priority value	
		The max floor priority that can be requested in a Floor Request message is negotiated between the MCPTT client and the controlling MCPTT function using the "mc_priority" fmtp parameter e.g. at	
lleer ID	Net present	call setup	
User ID User ID	Not present		OFF-
Osel ID			NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT User ID of the floor participant requesting the floor.	
Track Info	Not present	The MCPTT call	
		does not involve a non-controlling MCPTT function	
Floor Indicator Floor Indicator	10000-000000000	Normal calls in 4	
Floor Indicator	10000x000000000	Normal call: x:=1 if pc_MCPTT_Floor RequestQueueing = "true", x:=0 otherwise	
	01000x000000000	Broadcast group call: x:=1 if pc_MCPTT_Floor RequestQueueing = "true", x:=0 otherwise	BROADCAS T-CALL
	00010x000000000	Emergency call: x:=1 if pc_MCPTT_Floor RequestQueueing = "true", x:=0 otherwise	EMERGEN CY-CALL

Derivation Path: 24.380 [10], Table 8.2.4-1.			
Information Element	Value/remark	Comment	Condition
	00001x000000000	Imminent Peril call: x:=1 if pc_MCPTT_Floor RequestQueueing = "true", x:=0 otherwise	IMMPERIL- CALL
Functional Alias	Not present px_MCPTT_ID_FA_A	Functional Alias =	FA
		URI	
Location	optional		
Location Type	Any allowed value	See TS 24.380 [10] Table 8.2.3.21-3	
Location Value	Not present or Any allowed value	See TS 24.380 [10] Table 8.2.3.21-3. Not present if Location Type is set to "Not provided"	
Location			REL-15
Location Type	Any allowed value	See TS 24.380 [10] Table 8.2.3.21-3	
Location Value	Not present or Any allowed value	See TS 24.380 [10] Table 8.2.3.21-3. Not present if Location Type is set to "Not provided"	

Condition	Explanation
REL-15	In effect when PICS "PICS FFS" is in effect

## 5.5.6.3 Floor Granted

## Table 5.5.6.3-1: Floor Granted

Derivation Path: 24.380 [10], Table 8.2.5-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00001	Floor Granted with acknowledgment not required	
	10001	Floor Granted with acknowledgment required	ACK
SSRC	RTCP SSRC of the SS	The SSRC of the floor control server	
	The SSRC of the	The SSRC of the	OFF-
	message sender	floor arbitrator	NETWORK
name	MCPT		
Duration			
Duration	"00000000 10000000"	128 sec (an arbitrary value)	
Audio SSRC of Granted Participant	Audio SSRC of the client		

Derivation Path: 24.380 [10], Table 8.2.5-1. Information Element	Value/remark	Comment	Condition
			Condition
Floor priority	Not present	If the Floor Priority	
		field is not	
		included in the	
		message the	
		default priority (='0') is used as	
		the Floor Priority	
		value	
User ID	Not present	value	
User ID			OFF-
			NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT User	
		ID of the floor	
		participant	
		granted the floor.	
Queue Size	Not present		
Queue Size	"0"	the number of	OFF-
		queued MCPTT	NETWORK
		clients in the	
		MCPTT call	
SSRC of queued floor participant	Not present		
Queued User ID	Not present		
Queue Info	Not present		
Track Info	Not present	The MCPTT call	
		does not involve a	
		non-controlling	
		MCPTT function	
Floor Indicator	100001000000000	Normal call,	
FIOOI INDICATO	100001000000000	queueing	
		supported	
	010001000000000	Broadcast group	BROADCAS
	0100010000000000	call, queueing	T-CALL
		supported	I-OALL
	000101000000000	Emergency call,	EMERGEN
		queueing	CY-CALL
		supported	
	000011000000000	Imminent peril	IMMPERIL-
		call, queueing	CALL
		supported	

## 5.5.6.4 Floor Deny

Table	5.5.6.4-1:	Floor	Deny
-------	------------	-------	------

Derivation Path: 24.380 [10], Table 8.2.6-1.			0
Information Element	Value/remark	Comment	Condition
RTCP header	00011	Elean Denvisith	
Subtype	00011	Floor Deny with	
		acknowledgment not required	
	10011	Floor Deny with	ACK
	10011	acknowledgment	ACK
		required	
SSRC	RTCP SSRC of the SS	The SSRC of the	
		floor control	
		server	
	The SSRC of the	The SSRC of the	OFF-
	message sender	floor arbitrator	NETWORK
name	MCPT		
Reject Cause			
Reject Cause	"1"	Cause #1 -	
		Another MCPTT	
		client has	
		permission	
Reject Phrase	"Another MCPTT client	An additional text	
	has permission"	string explaining	
		the reason for	
		rejecting the floor	
		request.	
User ID	Not present		055
User ID			OFF-
		The MCPTT User	NETWORK
User ID	px_MCPTT_ID_User_A	ID of the floor	
		participant being	
		denied floor	
		request.	
Track Info	Not present	The MCPTT call	
		does not involve a	
		non-controlling	
		MCPTT function	
Floor Indicator			
Floor Indicator	100001000000000	Normal call,	
		queueing	
		supported	
	010001000000000	Broadcast group	BROADCAS
		call, queueing	T-CALL
		supported	
	000101000000000	Emergency call,	EMERGEN
		queueing	CY-CALL
		supported	
	00011000000000	Imminent peril	IMMPERIL-
		call, queueing	CALL
		supported	

## 5.5.6.5 Floor Release

## Table 5.5.6.5-1: Floor Release

Derivation Path: 24.380 [10], Table 8.2.7-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	x0100	Floor Release with x=0,1 depending on the UE implementation;	
		x=0: Acknowledgment is not required x=1: Acknowledgment is required	
SSRC	RTCP SSRC of the client	13 required	
	The SSRC of the message sender		OFF- NETWORK
name	MCPT		
User ID	Not present		
User ID			OFF- NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT User ID of the floor participant releasing the floor.	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	10000x000000000	Normal call x:=1 if pc_MCPTT_Floor RequestQueueing = "true", x:=0 otherwise	
	01000x000000000	Broadcast group call: x:=1 if pc_MCPTT_Floor RequestQueueing = "true", x:=0 otherwise	BROADCAS T-CALL
	00010x000000000	Emergency call: x:=1 if pc_MCPTT_Floor RequestQueueing = "true", x:=0 otherwise	EMERGEN CY-CALL
	00001x000000000	Imminent Peril call: x:=1 if pc_MCPTT_Floor RequestQueueing = "true", x:=0 otherwise	IMMPERIL- CALL

## 5.5.6.6 Floor Idle

Table	5.5.6.6	-1: Floor	Idle
-------	---------	-----------	------

Derivation Path: 24.380 [10], Table 8.2.8-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00101	Floor Idle with acknowledgment not required	
	10101	Floor Idle with acknowledgment required	ACK
SSRC	RTCP SSRC of the SS	The SSRC of the floor control server	
	The SSRC of the message sender	The SSRC of the floor arbitrator	OFF- NETWORK
name	MCPT		
Message Sequence Number			
Message Sequence Number	The value sent in the previous Floor Idle message, if any, increased with 1	Any value between '0' and '65535' When the '65535' value is reached, the <message Sequence Number&gt; value starts from '0' again</message 	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	100001000000000	Normal call, queueing supported	
	010001000000000	Broadcast group call, queueing supported	BROADCAS T-CALL
	0001010000000000	Emergency call, queueing supported	EMERGEN CY-CALL
	00011000000000	Imminent peril call, queueing supported	IMMPERIL- CALL

5.5.6.7 Floor Taken

```
Table 5.5.6.7-1: Floor Taken
```

Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00010	Floor Taken with acknowledgment not required	
	10010	Floor Taken with acknowledgment	ACK
SSRC	RTCP SSRC of the SS	required The SSRC of the floor control server	
	The SSRC of the message sender	The SSRC of the floor arbitrator	OFF- NETWORK
name	MCPT		
User ID	Not present		
User ID			OFF- NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT user ID of the floor participant sending the Floor Taken message	
Granted Party's Identity			
Granted Party's Identity	px_MCPTT_ID_User_B	The MCPTT User ID of the floor participant being granted the floor.	
Granted Party's Identity	Not Present		Multi-Talker
Permission to Request the Floor			
Permission to Request the Floor	"1"	The receiver is permitted to request floor	
Message Sequence Number			
Message Sequence Number	The value sent in the previous Floor Taken message, if any, increased with 1	Any value between '0' and '65535' When the '65535' value is reached, the <message Sequence Number&gt; value starts from '0' again</message 	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	100001000000000	Normal call, queueing supported	
	010001000000000	Broadcast group call, queueing supported	BROADCAS T-CALL
	0001010000000000	Emergency call, queueing supported	EMERGEN CY-CALL
	00011000000000	Imminent peril call, queueing supported	IMMPERIL- CALL
Floor Indicator			Multi-Talker
Floor Indicator	1000010010000000	Normal call, queueing supported, multi- talker	

Derivation Path: 24.380 [10], Table 8.2.9-1.			
Information Element	Value/remark	Comment	Condition
	010001000000000	Broadcast group call, queueing supported	BROADCAS T-CALL
	0001010010000000	Emergency call, queueing supported, multi- talker	EMERGEN CY-CALL
	0001100010000000	Imminent peril call, queueing supported, multi- talker	IMMPERIL- CALL
Audio SSRC of Granted Participant	Audio SSRC of a remote client (Client B)	The SSRC of the granted floor participant.	
Audio SSRC of Granted Participant	Not present		Multi-Talker
Functional Alias	Not present px_MCPTT_ID_FA_B	Functional Alias = URI	FA AND NOT Multi- Talker
List of Granted Users	Not present		
List of Granted Users			Multi-Talker
No of users	'10'		
User ID User ID	px_MCPTT_ID_User_A px_MCPTT_ID_User_B		
List of Audio SSRC of Granted Participants	Not present		
List of Audio SSRC of Granted Participants			Multi-Talker
Number of SSRCs	'10'		
SSRC	Audio SSRC of the client (Client A)		
SSRC	Audio SSRC of a remote client (Client B)		
List of Functional Aliases List of Functional Aliases	Not present		FA AND
No of FAs	'10'		HA AND Multi-Talker
Functional Alias	px_MCPTT_ID_FA_A		
Functional Alias	px_MCPTT_ID_FA_B		
Location			NOT Multi- Talker
Location Type	'0000000'	Not provided See TS 24.380 [10] Table 8.2.3.21-3	
Location Value	Not present	See TS 24.380 [10] Table 8.2.3.21-3. Not present if Location Type is set to "Not provided"	
Location	Not present		Multi-Talker
List of Locations	Not present		NOT Multi- Talker
List of Locations		The location information shall be maintained in the same order as the users in the List of Granted Users to allow location information to be matched to the correct user.	Multi-Talker
Number of Locations	'10'		

Derivation Path: 24.380 [10], Table 8.2.9-1.			
Information Element	Value/remark	Comment	Condition
Location Type	'0000000'	Not provided See TS 24.380	
		[10] Table 8.2.3.21-3	
Location Value	Not present	See TS 24.380 [10] Table 8.2.3.21-3. Not present if Location Type is set to "Not provided"	
Location Type	'0000000'	Not provided See TS 24.380 [10] Table 8.2.3.21-3	
Location Value	Not present	See TS 24.380 [10] Table 8.2.3.21-3. Not present if Location Type is set to "Not provided"	

## 5.5.6.8 Floor Revoke

Table	5.5.6	.8-1:	Floor	Revoke
-------	-------	-------	-------	--------

Derivation Path: 24.380 [10], Table 8.2.10.1-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00110	Floor Revoke	
SSRC	RTCP SSRC of the SS	The SSRC of the floor control server	
	The SSRC of the	The SSRC of the	OFF-
	message sender	floor arbitrator	NETWORK
name	MCPT		
Reject Cause			
Reject Cause	"4"	Cause#4 - Media Burst pre-empted	
Reject Phrase	"Media Burst pre- empted"	a text string encoded the text string in the SDES item CNAME as specified in IETF RFC 3550 [76], clause 6.5.1.	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	100001000000000	Normal call, queueing supported	
	010001000000000	Broadcast group call, queueing supported	BROADCAS T-CALL
	000101000000000	Emergency call, queueing supported	EMERGEN CY-CALL
	00011000000000	Imminent peril call, queueing supported	IMMPERIL- CALL

## 5.5.6.9 Floor Queue Position Request

Derivation Path: 24.380 [10], Table 8.2.11-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	01000	Floor Queue Position Request	
SSRC	RTCP SSRC of the client		
	The SSRC of the message sender		OFF- NETWORK
name	MCPT		
User ID	Not present		
User ID			OFF- NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT ID of the floor participant requesting the information.	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	

#### Table 5.5.6.9-1: Floor Queue Position Request

## 5.5.6.10 Floor Queue Position Info

Derivation Path: 24.380 [10], Table 8.2.12-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	01001	Floor Queue Position Info with acknowledgment not required	
	11001	Floor Queue Position Info with acknowledgment required	ACK
SSRC	RTCP SSRC of the SS	The SSRC of the floor control server	
	The SSRC of the message sender	The SSRC of the floor arbitrator	OFF- NETWORK
name	MCPT		
User ID	Not present		
User ID			OFF- NETWORK
User ID	px_MCPTT_ID_User_B	the MCPTT ID of the floor participant sending the Floor Queue Position Info message	
SSRC of queued floor participant	Not present		
	The SSRC of the message recepient	The SSRC field carries the SSRC of the queued floor participant	OFF- NETWORK
Queued User ID	Not present		
Queued User ID			OFF- NETWORK
Queued User ID	px_MCPTT_ID_User_A	the MCPTT ID of the queued floor participant	
Queue Info			
Queue Position Info	"1"		
Queue Priority Level	"0"		
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	100001000000000	Normal call, queueing supported	
	010001000000000	Broadcast group call, queueing supported	BROADCAS T-CALL
	0001010000000000	Emergency call, queueing supported	EMERGEN CY-CALL
	000110000000000	Imminent peril call, queueing supported	IMMPERIL- CALL

#### Table 5.5.6.10-1: Floor Queue Position Info

## 5.5.6.11 Floor Ack

Table	5.5.6.1	1-1:	Floor	Ack
-------	---------	------	-------	-----

Derivation Path: 24.380 [10], Table 8.2.13-1. Information Element	Value/remark	Comment	Condition
RTCP header	value/lemark	Comment	Condition
Subtype	01010	Floor Ack	
SSRC	RTCP SSRC of the SS	The SSRC of the floor control server for on- network and floor arbitrator for off- network.	DOWNLINK
	RTCP SSRC of the client		UPLINK
name	MCPT		
Source			
Source	"2"	The controlling MCPTT function is the sender of the message see TS 24.380[10] cl 4.2.1 and cl. 8.2.3.12	DOWNLINK
Source	"0"	The Floor participant is the sender of the message see TS 24.380[10] cl 6.2 and cl. 8.2.3.12	UPLINK
Message Type			
Message Type	'0000xxxx' with 'xxxx' being the lower four bits of the subtype of the message to be acknowledged	Message Type of the Floor Control message which requested the acknowledgment	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Location	Not present	Rel-16	DOWNLINK
Location	If present	Rel-16	UPLINK
Location Type	'00000000'	Not provided See TS 24.380 [10] Table 8.2.3.21-3	
Location Value	Not present	See TS 24.380 [10] Table 8.2.3.21-3. Not present if Location Type is set to "Not provided"	

Condition	Explanation
UPLINK	The message is sent from the UE
DOWNLINK	The message is sent from the SS
For further conditions see table 5.5.6.1-1	

#### 5.5.6.11A Floor Release Multi Talker

Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	01111	Floor Release Multi Talker	
SSRC	RTCP SSRC of the SS	The SSRC of the floor participant sending the message.	
	The SSRC of the		OFF-
	message sender		NETWORK
name	MCPT		
User ID			
User ID	px_MCPTT_ID_User_B	The MCPTT User ID of the floor participant releasing the floor.	
Floor Indicator			
Floor Indicator	1000010010000000	Normal call, queueing, multi- talker	
	010001000000000	Broadcast group call, queueing supported	BROADCAS T-CALL
	0001010010000000	Emergency call, queueing supported, multi- talker	EMERGEN CY-CALL
	0001100010000000	Imminent peril call, queueing supported, multi- talker	IMMPERIL- CALL

#### Table 5.5.6.11A-1: Floor Release Multi Talker

## 5.5.6.12 Connect

#### Table 5.5.6.12-1: Connect

Derivation Path: 24.380 [10], Table 8.3.4-1. Information Element	Value/remark	Comment	Condition
RTCP header	value/remark	Comment	Condition
Subtype	00000	Connect with	
Subtype	00000	acknowledgment	
		required	
	10000	Connect with	АСК
	10000	acknowledgment	AUK
		required	
SSRC	RTCP SSRC of the SS	required	
name	MCPC		
MCPTT Session Identity field			
Session Type	"0000000"	No session type	
	"0000001"	private	PRIVATE-
		Princip	CALL
	"00000011"	prearranged	GROUP-
		p	CALL
	"00000100"	chat	CHAT-
			GROUP-
			CALL
MCPTT Session Identity	tsc_MCX_SessionID_B	SIP URI, which	
- -		identifies the	
		MCPTT session	
		between the	
		MCPTT client and	
		the controlling	
		MCPTT function	
MCPTT Group Identity field	Not Present		PRIVATE-
			CALL
MCPTT Group Identity field			GROUP-
MODITIO			CALL
MCPTT Group Identity	px_MCPTT_Group_A_ID	a URI, which	
		identifies the	
Media Streams		MCPTT group	
Media Stream field	"1"	8 bit parameter	
	1	giving the number	
		of the" m=audio"	
		m-line negotiated	
		in the pre-	
		established	
		session	
Control Channel	"2"	8 bit parameter	
		giving the number	
		of the	
			1
		"m=application"	
		"m=application" m-line negotiated	
		m-line negotiated in the pre-	
		m-line negotiated in the pre- established	
		m-line negotiated in the pre- established session	
	"0"	m-line negotiated in the pre- established	WITHOUT_
	"0"	m-line negotiated in the pre- established session	FLOORCON
Morning Tayl (ial.)		m-line negotiated in the pre- established session	
Warning Text field	"0" Not Present	m-line negotiated in the pre- established session	FLOORCON
Answer State field	Not Present	m-line negotiated in the pre- established session no floor control	FLOORCON
Answer State field Answer State		m-line negotiated in the pre- established session	FLOORCON
Answer State field Answer State Inviting MCPTT User Identity field	Not Present	m-line negotiated in the pre- established session no floor control	FLOORCON
Answer State field Answer State	Not Present	m-line negotiated in the pre- established session no floor control confirmed URI, which	FLOORCON
Answer State field Answer State Inviting MCPTT User Identity field	Not Present	m-line negotiated in the pre- established session no floor control confirmed URI, which identifies the	FLOORCON
Answer State field Answer State Inviting MCPTT User Identity field	Not Present	m-line negotiated in the pre- established session no floor control confirmed URI, which identifies the inviting MCPTT	FLOORCON
Answer State field Answer State Inviting MCPTT User Identity field	Not Present	m-line negotiated in the pre- established session no floor control confirmed URI, which identifies the	FLOORCON

Condition	Explanation
WITHOUT_FLOORCONTROL	There shall be no floor control during the call
	(e.g. in case of private or first-to-answer call)
For further conditions see table 5.5.1-1	

#### 5.5.6.13 Disconnect

#### Table 5.5.6.13-1: Disconnect

Derivation Path: 24.380 [10], Table 8.3.5-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00001	Disconnect with acknowledgment not required	
	10001	Disconnect with acknowledgment required	ACK
SSRC	RTCP SSRC of the SS		
name	MCPC		
MCPTT Session Identity field	Same MCPTT Session Identity as used in the connect message at call establishment	TS 24.380 [10] clause 9.3.2.4.5	
Reason Cause	Not Present	Rel-17	

## 5.5.6.14 Acknowledge

#### Table 5.5.6.14-1: Acknowledge

Derivation Path: 24.380 [10], Table 8.3.6-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00010	Acknowledge	
SSRC	RTCP SSRC of the client		
name	MCPC		
Reason Code			
Reason Code	"0"	Accepted	

5.5.6.15 Map Group To Bearer

Table 5.5.6.15-1: Map Group To Bearer

Derivation Path: 24.380 [10], Table 8.4.4-1. Information Element	Value/remark	Comment	Condition
RTCP header			Condition
Subtype	00000	Map Group To Bearer	
SSRC	RTCP SSRC of the SS	The SSRC of the floor control server	
name	MCMC		
MCPTT Group ID	px_MCPTT_Group_A_ID	The group ID of the call	
TMGI			
MBMS Service ID	"0F0F0F"	The selected value is randomly chosen - a 6 digit hexadecimal number between 000000 and FFFFFF (see TS 23.003 [69] clause 15.2. The coding of the MBMS Service ID is the responsibility of each administration	
MCC	The same value as for PLMN1 specified in Table 5.5.8.1-x	Mobile Country Code	
MNC	The same value as for PLMN1 specified in Table 5.5.8.1-x	Mobile Network Code	
MBMS Subchannel			
Audio m-line Number	"1"	The number of the "m=audio" m-line in the SIP MESSAGE request announcing the MBMS bearer	
Floor m-line Number	"2"	The number of the "m=application" m-line in the SIP MESSAGE request announcing the MBMS bearer. The <floor m-line<br="">Number&gt; value is set to "0" when the same subchannel is used for media and for floor control.</floor>	
IP version	"0"	'0' = IP version 4 '1' = IP version 6 All other values are reserved for future use	

Derivation Path: 24.380 [10], Table 8.4.4-1.			
Information Element	Value/remark	Comment	Condition
Floor control Port Number	"9"	The port to be used if the <floor m-line Number&gt; value is greater than '0'. If the <floor m-line<br="">Number&gt; value is equal to '0', the <floor control<br="">Port Number&gt; value is not included in the MBMS Subchannel field</floor></floor></floor 	
Media Port Number	"9"		
IP Address	"0.0.0.0"		

## 5.5.6.16 Unmap Group To Bearer

#### Table 5.5.6.16-1: Unmap Group To Bearer

Derivation Path: 24.380 [10], Table 8.4.5-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00001	Unmap Group To Bearer	
SSRC	RTCP SSRC of the SS	The SSRC of the floor control server	
name	MCMC		
MCPTT Group ID	px_MCPTT_Group_A_ID	The group ID of the call	

## 5.5.6.17 Application Paging

#### Table 5.5.6.17-1: Application Paging

Derivation Path: 24.380 [10], Table 8.4.6-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00010	Application Paging	
SSRC	RTCP SSRC of the SS	The SSRC of the participating MCPTT function.	
name	MCMC		
MCPTT Group ID	px_MCPTT_Group_A_ID	The group ID of the call	

#### 5.5.6.18 Bearer Announcement

Value/remark	Comment	Condition
00011	Bearer	
	Announcement	
MCMC		
"0F0F0F"		
	chosen - a 6 digit	
	clause 15.2.	
	The coding of the	
	MBMS Service ID	
	is the	
	responsibility of	
	each	
	Code	
	Code	
	<b>TI NA 14 1</b>	
1		
	active	
	Value/remark         00011         MCMC         "0F0F0F"         "0F0F0F"         The same value as for PLMN1 specified in Table 5.5.8.1-x         The same value as for PLMN1 specified in Table 5.5.8.1-x         Not present         '1'	00011       Bearer Announcement         MCMC       "0F0F0F"         "0F0F0F"       The selected value is randomly chosen - a 6 digit hexadecimal number between 000000 and FFFFF (see TS 23.003 [69] clause 15.2. The coding of the MBMS Service ID is the 

#### Table 5.5.6.18-1: Bearer Announcement

## 5.5.7 Default MCX group management messages and other information elements

#### 5.5.7.1 MCPTT Group Configuration

The structure of a group configuration document is specified in TS 24.481 [11] clause 7, single MCPTT group configuration parameters are defined in TS 24.483 [13] clause 6.3.

The structure of the configuration document is based on several XML schemas. To distinguish the schemas the prefixes of their corresponding name spaces are used in the 'Information Element' column as according to table 7.2.2-2 of TS 24.481 [11].

Table 5.5.7.1-1: MCPTT Group Configuration Defaults

Information Element	lause 7.2.2 Value/remark	Comment	Reference	Condition
list-service[1]		Group 1		
uri attribute	px_MCPTT_Group_A_I D	Value is a "uri" attribute specified in OMA OMA- TS-XDM_Group-V1_1	TS 24.483 [13] clause 6.2.7	
display-name	px_MCPTT_Group_A_ Name	Value is a <display- name&gt; element specified in OMA OMA- TS-XDM_Group-V1_1</display- 	TS 24.483 [13] clause 6.2.8	
list				
entry[1]		group member 1		
uri attribute	px_MCPTT_ID_User_A	Indicates an MCPTT user identity (MCPTT ID) which is a globally unique identifier within the MCPTT service that represents the MCPTT user	TS 24.483 [13] clause 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"3"	Indicates the user priority of the MCPTT group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCX_User_A_Parti cipantType	Participant type of the MCPTT group	TS 24.483 [13] clause 6.2.13	
mcpttgi:multi-talker-allowed	Present	Presence of the <multi- talker-allowed&gt; element indicates that the MCPTT group member is authorized for multi- talker floor control in a MCPTT group call of the MCPTT group of the MCPTT group in on-network MCPTT procedures when the MCPTT group supports multi-talker-control. Absence of the <multi- talker-allowed&gt; element indicates that the MCPTT group member identified by the <entry> element is not authorized for multi- talker floor control group member 2</entry></multi- </multi- 		
uri attribute	px_MCPTT_ID_User_B	Indicates an MCPTT user identity (MCPTT ID) which is a globally unique identifier within the MCPTT service that represents the MCPTT user	TS 24.483 [13] clause 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"2"	Indicates the user priority of the MCPTT group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCX_User_B_Parti cipantType	Participant type of the MCPTT group	TS 24.483 [13] clause 6.2.13	

Derivation Path: TS 24.481 [11] cl				
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:multi-talker-allowed	Present	Presence of the <multi- talker-allowed&gt; element indicates that the MCPTT group member is authorized for multi- talker floor control in a MCPTT group call of the MCPTT group all of the MCPTT group in on-network MCPTT procedures when the MCPTT group supports multi-talker-control. Absence of the <multi- talker-allowed&gt; element indicates that the MCPTT group member identified by the <entry> element is not authorized for multi-</entry></multi- </multi- 		
		talker floor control		
entry[3] uri attribute	px_MCPTT_ID_User_C	group member 3 Indicates an MCPTT user identity (MCPTT ID) which is a globally unique identifier within the MCPTT service that represents the MCPTT user	TS 24.483 [13] clause 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"1"	Indicates the user priority of the MCPTT group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCX_User_C_Parti cipantType	Participant type of the MCPTT group	TS 24.483 [13] clause 6.2.13	
cp:ruleset	Present	Presence of the <multi- talker-allowed&gt; element indicates that the MCPTT group member is authorized for multi- talker floor control in a MCPTT group call of the MCPTT group call of the MCPTT group in on-network MCPTT procedures when the MCPTT group supports multi-talker-control. Absence of the <multi- talker-allowed&gt; element indicates that the MCPTT group member identified by the <entry> element is not authorized for multi- talker floor control</entry></multi- </multi- 		
cp:ruleset				l
cp:rule	"rule1"			<u> </u>
cp:id attribute	rulen			
cp:actions cp:on-network-allow- getting-member-list	"true"	Indicates that the identity is allowed to get the MCS group member list of the MCS group in on-network procedures		
cp:allow-initiate-conference	"true"			
cp:join-handling	"true"			

Value/remark "true" "true"	Comment Indicates whether an MCPTT emergency group call is permitted on the MCPTT group Indicates whether an MCPTT imminent peril	Reference TS 24.483 [13] clause 6.2.19	Condition
	MCPTT emergency group call is permitted on the MCPTT group Indicates whether an		
"true"	group call is permitted on the MCPTT group Indicates whether an	010000 012110	
"true"	on the MCPTT group Indicates whether an		
"true"	Indicates whether an		
		TS 24.483 [13]	
		clause 6.2.20	
	group call is permitted	012020	
	on the MCPTT group		
"true"	Indicates whether an	TS 24.483 [13]	
lide	MCPTT emergency	clause 6.2.21	
"4m - o "			
"true"			
	procedures		
"true"	indicates that the		
	identity is allowed to		
	subscribe to the		
	conference event		
	procedures		
		TS 24.481 [11]	
"urn:urn-7:3app-			
Present			
	Group's owner (Mission	TS 24 483 [13]	
	entioal erganication).	010000 012110	
px_MCPTT_Group_A_	Preferred voice codec	RFC 4566 [27]	
		0.0000 0.2.10	
"0"		TS 24 483 [13]	
Ĭ			
		UIQUSE U.Z.11	
	broadcast group).	TO OL LOC LICE	
"0"	Indicates the level	TS 24.483 [13]	
-	within user hierarchy	clause 6.2.18	
	(only applicable for		
	(only applicable for user-broadcast group).		
"true"	(only applicable for user-broadcast group). Indicates whether	TS 24.483 [13]	
	(only applicable for user-broadcast group). Indicates whether confidentiality and	TS 24.483 [13] clause 6.2.22	
	(only applicable for user-broadcast group). Indicates whether		
	(only applicable for user-broadcast group). Indicates whether confidentiality and integrity of media is		
	(only applicable for user-broadcast group). Indicates whether confidentiality and integrity of media is required on the MCPTT		
"true"	(only applicable for user-broadcast group). Indicates whether confidentiality and integrity of media is required on the MCPTT group	clause 6.2.22	
	(only applicable for user-broadcast group). Indicates whether confidentiality and integrity of media is required on the MCPTT group Indicates whether	clause 6.2.22 TS 24.483 [13]	
"true"	(only applicable for user-broadcast group). Indicates whether confidentiality and integrity of media is required on the MCPTT group Indicates whether confidentiality and	clause 6.2.22	
"true"	(only applicable for user-broadcast group). Indicates whether confidentiality and integrity of media is required on the MCPTT group Indicates whether	clause 6.2.22 TS 24.483 [13]	
	"true" "true" "true" "true" "urn:urn-7:3gpp- service.ims.icsi.mcptt" Present px_MCX_Group_A_Ow ner_Organization  px_MCPTT_Group_A_ preferred_VCodec "0"	identity is allowed to get the list of MCPTT users affiliated to the MCPTT group in on- network MCPTT procedures         "true"       indicates that the identity is allowed to subscribe to the conference event package of an MCPTT group session of the MCPTT group in on- network MCPTT procedures         "urn:urn-7:3gpp- service.ims.icsi.mcptt"	MCPTT group         "true"       Indicates that the identity is allowed to get the list of MCPTT users affiliated to the MCPTT group in on- network MCPTT procedures         "true"       indicates that the identity is allowed to subscribe to the conference event package of an MCPTT group session of the MCPTT group in on- network MCPTT procedures         "urn:urn-7:3gpp- service.ims.icsi.mcptt"       TS 24.481 [11]         "urn:urn-7:3gpp- service.ims.icsi.mcptt"       TS 24.483 [13] clause 6.2.15         Present       TS 24.483 [13] clause 6.2.15         px_MCX_Group_A_Ow ner_Organization       Preferred voice codec is a RTP payload. MCPTT clients shall support the AMR-WB codec.       RFC 4566 [27] TS 24.483 [13] clause 6.2.16         "0"       Indicates the level within a group hierarchy (only applicable for group-       TS 24.483 [13] clause 6.2.17

Derivation Path: TS 24.481 [11] cl Information Element	ause 7.2.2 Value/remark	Comment	Reference	Condition
mcpttgi:off-network-ProSe-	tsc_MCX_Group_A_Pr	Indicates the Prose	TS 23.303 [68]	Condition
layer-2-group-id	oSeLayer2GroupID	layer-2 group ID	TS 24.483 [13]	
layer-2-group-lu	00eLayer2010dpiD	ayer-z group ib	clause 6.2.27	
mcpttgi:off-network-IP-	"0.0.0.0"	Indicates the ProSe	TS 23.303 [68]	
multicast-address	0.0.0.0	group IP multicast	TS 24.483 [13]	
		address:the IP version	clause 6.2.28	
		is implicitly given by the	010000.2.20	
		notation of the IP		
		address		
mcpttgi:off-network-ProSe-	"123456"	Indicates the	TS 23.303 [68]	
relay-service-code		connectivity service	TS 24.483 [13]	
-		that the ProSe UE-to-	clause 6.2.29	
		network relay provides		
		to public safety		
		applications		
mcpttgi:off-network-in-	"PT18H12M15S"	Indicates the timeout	TS 24.483 [13]	
progress-emergency-state-		value for the	clause 6.2.31	
cancellation-timeout		cancellation of an in		
		progress emergency for		
		an MCPTT group call.		
		"PT18H12M15S"		
		corresponds to 65535		
		seconds what is		
		maximum allowed		
		value according to		
mental off network in		TS 24.483 [13]	TO 04 400 [40]	
mcpttgi:off-network-in-	"PT18H12M15S"	Indicates the timeout	TS 24.483 [13]	
progress-imminent-peril-state- cancellation-timeout		value for the cancellation of an in	clause 6.2.32	
cancenation-timeout				
		progress imminent peril for an MCPTT group		
		call. "PT18H12M15S"		
		corresponds to 65535		
		seconds what is		
		maximum allowed		
		value according to		
		TS 24.483 [13]		
mcpttgi:off-network-hang-	"PT5S"	Indicates the group call	TS 24.483 [13]	
timer		hang timer. "PT5S"	clause 6.2.33	
		corresponds to 5		
		seconds		
mcpttgi:off-network-	"PT1M"	Indicates the max	TS 24.483 [13]	
maximum-duration		duration of group calls.	clause 6.2.34	
		"PT1M" corresponds to		
		1 minute		
mcpttgi:off-network-queue-	"true"	Indicates if queuing is	TS 24.483 [13]	
usage		enabled or not	clause 6.2.34A	
mcpttgi:off-network-ProSe-	"1"	Indicates the default	TS 24.483 [13]	
signalling-PPPP		ProSe Per-Packet	clause 6.2.36	
···· •		Priority (PPPP) value		
mcpttgi:off-network-ProSe-	"1"	Indicates the default	TS 24.483 [13]	
media-PPPP		ProSe Per-Packet	clause 6.2.37	
		Priority (PPPP) value	TO 0 4 400 1101	
mcpttgi:off-network-ProSe-	"8"	Indicates the default	TS 24.483 [13]	
emergency-call-signalling-		ProSe Per-Packet	clause 6.2.38	
PPPP	"0"	Priority (PPPP) value	TO 04 400 [40]	
mcpttgi:off-network-ProSe-	"8"	Indicates the default	TS 24.483 [13]	
emergency-call-media-PPPP		ProSe Per-Packet	clause 6.2.39	
monthali off notwork Dr. O.	"7"	Priority (PPPP) value	TO 04 400 1401	
mcpttgi:off-network-ProSe-	"7"	Indicates the default	TS 24.483 [13]	
imminent-peril-call-signalling-		ProSe Per-Packet	clause 6.2.40	
PPPP mcpttgi:off-network-ProSe-		Priority (PPPP) value	TO 04 400 1401	
menteduott-notwork_UroSo_	"7"	Indicates the default	TS 24.483 [13]	
imminent-peril-call-media-		ProSe Per-Packet	clause 6.2.41	

Derivation Path: TS 24.481 [11] cl	ause 7.2.2			
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:multi-talker-control	"false"	"true" indicates that		
		multi-talker control is		
		enabled for the group		
		"false" indicates that		
		multi-talker control is		
		disabled for the group		
mcpttgi:max-number-	"1"	Indicates the maximum		
simultaneous-talkers		number of parallel		
		talkers in a MCPTT		
		group session in on-		
		network MCPTT		
		procedures		
mcpttgi:audio-mixing-entity	Not present	Absence of the <audio-< th=""><th></th><th></th></audio-<>		
		mixing-entity> element		
		indicates that audio		
		mixing is performed in		
		the network		

## 5.5.7.2 MCVideo Group Configuration

The structure of a group configuration document is specified in TS 24.481 [11] clause 7, single MCVideo group configuration parameters are defined in TS 24.483 [13] clause 6.

Table 5.5.7.2-1: MCVideo Group Configuration Defaults

Derivation Path: TS 24.481 [11] Information Element	Value/remark	Comment	Reference	Condition
	value/lelliark		Relefence	Condition
list-service[1] uri attribute		Group 1 Value is a "uri" attribute	TC 04 400 [40]	
un attribute	px_MCVideo_Group_A		TS 24.483 [13]	
	_ID	specified in OMA OMA-	clause 6.2.7	
		TS-XDM_Group-V1_1	<b>TO 04 400 [40]</b>	
display-name	px_MCVideo_Group_A	Value is a <display-< td=""><td>TS 24.483 [13]</td><td></td></display-<>	TS 24.483 [13]	
	_Name	name> element	clause 6.2.8	
		specified in OMA OMA-		
		TS-XDM_Group-V1_1		
list				
entry[1]		group member 1		
uri attribute	px_MCVideo_ID_User_	Indicates an MCVideo	TS 24.483 [13]	
	A	user identity (MCVideo	clause 6.2.11	
		ID) which is a globally		
		unique identifier within		
		the MCVideo service		
		that represents the		
		MCVideo user		
display-name	Not present			
mcpttgi:user-priority	"3"	Indicates the user	TS 24.483 [13]	
		priority of the MCVideo	clause 6.2.12	
		group member		
mcpttgi:participant-type	px_MCX_User_A_Parti	Participant type of the	TS 24.483 [13]	
	cipantType	MCVideo group	clause 6.2.13	
rl:mcvideo-mcvideo-id				1
uri attribute	px_MCVideo_ID_User_			
	A			
entry[2]		Group member 2		
uri attribute	px_MCVideo_ID_User_	Indicates an MCVideo	TS 24.483 [13]	
un utilibuto	B	user identity (MCVideo	clause 6.2.11	
	6	ID) which is a globally	010000 0.2.111	
		unique identifier within		
		the MCVideo service		
		that represents the		
		MCVideo user		
display-name	Not present			
mcpttgi:user-priority	"2"	Indicates the user	TS 24.483 [13]	
mepugiluser priority	2	priority of the MCVideo	clause 6.2.12	
		group member	012036 0.2.12	
monttai porticipont tupo	px_MCX_User_B_Parti	Participant type of the	TS 24.483 [13]	
mcpttgi:participant-type	cipantType	MCVideo group	clause 6.2.13	
rl:mcvideo-mcvideo-id	cipantiype		0.2.10	
uri attribute	px_MCVideo_ID_User_			
	B			
entry[3]		Group member 3		
uri attribute	px_MCVideo_ID_User_	Indicates an MCVideo	TS 24.483 [13]	
		user identity (MCVideo	clause 6.2.11	
			Jause 0.2.11	
		ID) which is a globally		
		unique identifier within		
		the MCVideo service		
		that represents the		
		MCVideo user		
display-name	Not present	la disets di	TO 04 400 1407	
mcpttgi:user-priority	"1"	Indicates the user	TS 24.483 [13]	
		priority of the MCVideo	clause 6.2.12	
		group member	TO 04 400 1401	
mcpttgi:participant-type	px_MCX_User_C_Parti	Participant type of the	TS 24.483 [13]	
	cipantType	MCVideo group	clause 6.2.13	
rl:mcvideo-mcvideo-id				
uri attribute	px_MCVideo_ID_User_			
	C			
cp:ruleset				
cp:rule	"nulo1"			
cp:id attribute	"rule1"			
cp:actions				

Derivation Path: TS 24.481 [11] c Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:on-network-allow-	"true"	Indicates that the		
getting-member-list		identity is allowed to		
		get the MCS group		
		member list of the MCS		
		group in on-network		
		procedures.		
mcpttgi:mcvideo-allow-	"true"	Indicates that the		
emergency-call		identity is allowed to		
		request an MCVideo-		
		emergency call on the		
		MCVideo group.		
mcpttgi:mcvideo-allow-	"true"	Indicates that the		
emergency-alert		identity is allowed to		
		request an MCVideo-		
		emergency alert on the		
		MCVideo group.		
mcpttgi:mcvideo-allow-	"true"	Indicates that the		
imminent-peril-call		identity is allowed to		
		request an MCVideo		
		imminent peril call on		
		the MCVideo group.		
mcpttgi:mcvideo-on-	"true"	Indicates that the		
network-allow-conference-state		identity is allowed to		
		subscribe to the		
		conference event		
		package of an		
		MCVideo group		
		session of the MCVideo		
		group in on-network		
		MCVideo procedures.		
mcpttgi:mcvideo-on-	"true"	Indicates that the		
network-allow-getting-affiliation-		identity is allowed to		
list		get the list of MCVideo		
		users affiliated to the		
		MCVideo group in on-		
		network MCVideo		
		procedures.		
oxe:supported-services				
oxe:service				
oxe:enabler	"urn:urn-7:3gpp-	String defining an		
	service.ims.icsi.mcvide	enabler		
	О"			
oxe:group-media				
oxe:mcvideo-video-media				
mcpttgi:off-network-ProSe-	tsc_MCX_Group_A_Pr	Indicates the Prose	TS 23.303 [68]	
layer-2-group-id	oSeLayer2GroupID	layer-2 group ID	TS 24.483 [13]	
			clause 6.2.27	
mcpttgi:off-network-IP-	"0.0.0.0"	Indicates the ProSe	TS 23.303 [68]	
multicast-address		group IP multicast	TS 24.483 [13]	
		address;the IP version	clause 6.2.28	
		is implicitly given by the		
		notation of the IP		
		address		
mcpttgi:off-network-ProSe-	"123456"	Indicates the	TS 23.303 [68]	
relay-service-code		connectivity service that	TS 24.483 [13]	
relay-service-code		the ProSe UE-to-	clause 6.2.29	
		network relay provides		
		to public safety		
		to public safety applications		
mcpttai:owner		applications	TS 24 483 [13]	
mcpttgi:owner	px_MCX_Group_A_Ow	applications Group's owner (Mission	TS 24.483 [13] clause 6 2 15	
	px_MCX_Group_A_Ow ner_Organization	applications Group's owner (Mission Critical Organisation).	clause 6.2.15	
mcpttgi:level-within-group-	ner_Organization	applications Group's owner (Mission Critical Organisation). Indicates the level	clause 6.2.15 TS 24.483 [13]	
	ner_Organization	applications Group's owner (Mission Critical Organisation). Indicates the level within a group	clause 6.2.15	
mcpttgi:level-within-group-	ner_Organization	applications Group's owner (Mission Critical Organisation). Indicates the level	clause 6.2.15 TS 24.483 [13]	

Derivation Path: TS 24.481 [11] cla		1		
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:level-within-user-	"0"	Indicates the level	TS 24.483 [13]	
hierarchy		within user hierarchy (only applicable for	clause 6.2.18	
		user-broadcast group).		
mcpttgi:mcvideo-on-	"true"		<u> </u>	
network-invite-members	100			
mcpttgi:mcvideo-on-	"1800"	Indicates the max	TS 24.483 [13]	
network-maximum-duration		duration of MCVideo	clause 6.2.56	
		group calls.		
mcpttgi:mcvideo-urgent-real-	"true"	Indicates that urgent		
time-video-mode		real-time video mode is allowed for the		
		MCVideo group.		
mcpttgi:mcvideo-non-urgent-	"true"	indicates that non		
real-time-video-mode	100	urgent real-time video		
		mode is allowed for the		
		MCVideo group.		
mcpttgi:mcvideo-non-real-	"true"	indicates that non real-		
time-video-mode		time video mode is		
		allowed for the		
mcpttgi:mcvideo-active-real-	"non-urgent-real-time"	MCVideo group. Indicates the the active		
time-video-mode	non-urgent-real-time	real time video mode of		
		the current group		
		session		
mcpttgi:mcvideo-maximum-	"1"	Indicates the allowed		
simultaneous-mcvideo-		maximum number of		
transmitting-group-members		simultaneous		
		transmitting MCVideo		
mcpttgi:mcvideo-on-	"1"	Group Members. Indicates the minimum		
network-minimum-number-to-	I	number of affiliated		
start		group members		
		acknowledging before		
		start of video		
		transmission specified		
		in 3GPP TS 23.281 [24]		
		in on-network MCVideo procedures.		
mcpttgi: mcvideo-on-	"1"	Indicates the priority		
network-group-priority		level of the group in on-		
		network MCVideo		
		procedures. Higher		
		value indicates higher		
		priority. Absence of the		
		<mcvideo-on-network- group-priority&gt; element</mcvideo-on-network- 		
		of the <list-service></list-service>		
		element of the		
		MCVideo group		
		document indicates the		
		lowest possible priority.		
mcpttgi:mcvideo-off-	"self"	This leaf node indicates	TS 24.483 [13]	
network-arbitration-approach		the arbitration approach used for off-network	clause 6.2.47	
		video tranmissions on		
		the group.		
mcpttgi:mcvideo-off-	"1"	indicates maximum	TS 24.483 [13]	
network-maximum-		number of	clause 6.2.48	
simultaneous-transmissions		simultaneous		
		transmissions for off-		
		network MCVideo		
mcpttgi:mcvideo-off-	"1"	procedures. Indicates the default	TS 24.483 [13]	
	I	ProSe Per-Packet	clause 6.2.50	
network-ProSe-signalling-				

Derivation Path: TS 24.481 [11] cl				
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:mcvideo-off- network-ProSe-emergency- call-signalling-PPPP	"8"	Indicates the default ProSe Per-Packet Priority (PPPP) value (as specified in 3GPP TS 23.303 [6]) for the MCVideo emerency group call signalling.	TS 24.483 [13] clause 6.2.52	
mcpttgi:mcvideo-off- network-ProSe-imminent- peril-call-signalling-PPPP	"7"	Indicates the default ProSe Per-Packet Priority (PPPP) value (as specified in 3GPP TS 23.303 [6]) for the MCVideo imminent peril group call signalling.	TS 24.483 [13] clause 6.2.54	
mcpttgi:mcvideo-off- network-ProSe-media-PPPP	"1"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 24.483 [13] clause 6.2.51	
mcpttgi:mcvideo-off- network-ProSe-emergency- call-media-PPPP	"8"		TS 24.483 [13] clause 6.2.53	
mcpttgi:mcvideo-off- network-ProSe-imminent- peril-call-media-PPPP	"7"	Indicates the default ProSe Per-Packet Priority (PPPP) value (as specified in 3GPP TS 23.303 [6]) for the MCVideo imminent peril group call media.	TS 24.483 [13] clause 6.2.55	
mcpttgi:mcvideo-off-	"60	Indicates the maximum		
network-maximum-duration		duration of group calls		
mcpttgi:mcvideo-off- network-in-progress- emergency-state-cancellation- timeout	"65535"	Indicates the timeout value for the cancellation of an in progress emergency in off-network MCVideo procedures		
mcpttgi:mcvideo-off- network-in-progress- imminent-peril-state- cancellation-timeout	"65535"	Indicates the timeout value for the cancellation of an in progress imminent-peril group call in off-network MCVideo procedures		

## 5.5.7.3 MCData Group Configuration

The structure of a group configuration document is specified in TS 24.481 [11] clause 7.

Single MCData group configuration parameters are defined in TS 24.483 [13] clause 6.3.

Table 5.5.7.3-1: MCData Group Configuration Defaults

Information Element	Value/remark	Comment	Reference	Condition
list-service[1]		Group 1		
uri attribute	px_MCDATA_Group_A	Value is a "uri" attribute	TS 24.483 [13]	
		specified in OMA OMA- TS-XDM_Group-V1_1	clause 6.2.7	
display-name	px_MCData _Group_A_Name	Value is a <display- name&gt; element</display- 	TS 24.483 [13] clause 6.2.8	
	_Group_A_Name	specified in OMA OMA- TS-XDM_Group-V1_1	ciause 0.2.0	
list				
entry[1]		group member 1		
uri attribute	px_MCData_ID_User_ A	Indicates an MCData user identity (MCData ID) which is a globally unique identifier within the MCData service that represents the MCData user	TS 24.483 [13] clause 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"3"	Indicates the user priority of the MCData group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCX _User_A_ParticipantTy pe	Participant type of the MCData group	TS 24.483 [13] clause 6.2.13	
rl:mcdata-mcdata-id				L
uri attribute	px_MCData_ID_User_ A			
entry[2]		Group member 2		
uri attribute	px_MCData_ID_User_ B	Indicates an MCData user identity (MCData ID) which is a globally unique identifier within the MCData service that represents the MCData user	TS 24.483 [13] clause 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"2"	Indicates the user priority of the MCData group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCX _User_B_ParticipantTy pe	Participant type of the MCData group	TS 24.483 [13] clause 6.2.13	
rl:mcdata-mcdata-id				
uri attribute	px_MCData_ID_User_ B		TS 24.483 [13] clause 6.2.11	
entry[3]		Group member 3	-	
uri attribute	px_MCData_ID_User_ C	Indicates an MCData user identity (MCData ID) which is a globally unique identifier within the MCData service that represents the MCData user	TS 24.483 [13] clause 6.2.11	
display-name	Not present			L
mcpttgi:user-priority	"1"	Indicates the user priority of the MCData group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCX _User_C_ParticipantTy pe	Participant type of the MCData group	TS 24.483 [13] clause 6.2.13	
rl:mcdata-mcdata-id	F -			
uri attribute	px_MCData_ID_User_ C		TS 24.483 [13] clause 6.2.11	
cp:ruleset				

Information Element cp:id attribute	clause 7.2.2	Commont	Doforance	Condition
	Value/remark	Comment	Reference	Condition
	"rule1"			
cp:actions	"true"	Indicates that the		
mcpttgi:on-network-allow- getting-member-list	liue	identity is allowed to		
getting-member-list		get the MCS group		
		member list of the MCS		
		group in on-network		
		procedures.		
mcpttgi:mcdata-on-	"true"	Indicates that the		
network-allow-getting-affiliation-	lide	identity is allowed to		
list		get the list of MCData		
		users affiliated to the		
		MCData group in on-		
		network MCData		
		procedures		
mcpttgi:mcdata-allow-	"true"	Indicates that the		
transmit-data-in-this-group		identity is allowed to		
		transmit data in this		
		group		
oxe:supported-services				
oxe:service				
oxe:enabler	"urn:urn-7:3gpp-	String defining an		
	service.ims.icsi.mcdata.	enabler		
	sds"			
mcpttgi:off-network-ProSe-	tsc_MCX_Group_A_Pr	Indicates the Prose	TS 23.303 [68]	
layer-2-group-id	oSeLayer2GroupID	layer-2 group ID	TS 24.483 [13]	
			clause 6.2.27	
mcpttgi:off-network-IP-	"0.0.0.0"	Indicates the ProSe	TS 23.303 [68]	
multicast-address		group IP multicast	TS 24.483 [13]	
		address;the IP version	clause 6.2.28	
		is implicitly given by the		
		notation of the IP		
		address		
mcpttgi:off-network-ProSe-	"123456"	Indicates the	TS 23.303 [68]	
relay-service-code		connectivity service that	TS 24.483 [13]	
		the ProSe UE-to-	clause 6.2.29	
		network relay provides		
		to public safety		
		applications		
mcpttgi:owner	px_MCX_Group_A_Ow	Group's owner (Mission	TS 24.483 [13]	
	ner_Organization	Critical Organisation).	clause 6.2.15	l
mcpttgi:level-within-group-	"0"	Indicates the level	TS 24.483 [13]	
hierarchy		within a group	clause 6.2.17	
		hierarchy (only		
		applicable for group-		
		broadcast group).		
		A list of operational		
mcpttgi:mcdata-enhanced-		values used for the		
mcpttgi:mcdata-enhanced- status-operational-values				
		enhanced status		
		enhanced status service and two text		
		enhanced status service and two text strings used to display		
		enhanced status service and two text strings used to display a meaningful message		
status-operational-values		enhanced status service and two text strings used to display		
status-operational-values mcpttgi:status	"0"	enhanced status service and two text strings used to display a meaningful message		
status-operational-values mcpttgi:status id	"0"	enhanced status service and two text strings used to display a meaningful message		
status-operational-values mcpttgi:status id mcpttgi:shortText		enhanced status service and two text strings used to display a meaningful message		
status-operational-values mcpttgi:status id mcpttgi:shortText langType	"English"	enhanced status service and two text strings used to display a meaningful message		
status-operational-values mcpttgi:status id mcpttgi:shortText langType langText		enhanced status service and two text strings used to display a meaningful message		
status-operational-values mcpttgi:status id mcpttgi:shortText langType langText mcpttgi:description	"English" "going"	enhanced status service and two text strings used to display a meaningful message		
status-operational-values mcpttgi:status id mcpttgi:shortText langType langText mcpttgi:description langType	"English" "going" "English"	enhanced status service and two text strings used to display a meaningful message		
status-operational-values mcpttgi:status id mcpttgi:shortText langType langText mcpttgi:description	"English" "going" "English" "going to the operation	enhanced status service and two text strings used to display a meaningful message		
status-operational-values mcpttgi:status id mcpttgi:shortText langType langText mcpttgi:description langType langType langText	"English" "going" "English"	enhanced status service and two text strings used to display a meaningful message		
status-operational-values mcpttgi:status id mcpttgi:shortText langType langText mcpttgi:description langType	"English" "going" "English" "going to the operation	enhanced status service and two text strings used to display a meaningful message		

Derivation Path: TS 24.481 [11] c Information Element	Value/remark	Comment	Reference	Condition
langType	"English"			
langText	"arrived"			
mcpttgi:description				
langType	"English"			
langText	"just arrived at the operation site"			
mcpttgi:level-within-user-	"0"	Indicates the level	TS 24.483 [13]	
hierarchy		within user hierarchy (only applicable for user-broadcast group).	clause 6.2.18	
mcpttgi:mcdata-on-network- group-priority	"1"	Indicates the priority level of the group in on- network MCData procedures. Higher value indicates higher priority		
mcpttgi:mcdata-on-network- max-data-size-for-SDS	"10000"	Indicates the maximum size of data (in bytes) that the originating MCData client is allowed to send to the MCData server for on- network SDS communications		
mcpttgi:mcdata-on-network-	"10000"	Indicates the maximum		
max-data-size-for-FD		size of data (in bytes) that the originating MCData client is allowed to send to the MCData server for on- network FD communications		
mcpttgi:mcdata-on-network- max-data-size-auto-recv	"2000"	Indicates the maximum size of data (in bytes) which the MCData server always requests the terminating MCData client to automatically download for on- network FD communications using HTTP		
mcpttgi:mcdata-off-network- ProSe-signalling-PPPP	"1"	Indicates the ProSe Per-Packet Priority value to be used when transmitting IP packets carrying signalling for a call on the MCData group in off-network MCData procedures		
mcpttgi:mcdata-off-network- ProSe-media-PPPP	"1"	Indicates the ProSe Per-Packet Priority value to be used when transmitting IP packets carrying media for a call on the MCData group in off-network MCData procedures		

## 5.5.7.4 MCX Group Creation Documents

Derivation Path: TS 24.481 [11] claus	e 7.2.2			
Information Element	Value/remark	Comment	Reference	Condition
list-service [1]				
uri-attribute	px_MCPTT_Grou p_B_ID	uri of the MCPTT group	TS 24.481 [11]	MCPTT
	px_MCVideo_Gro up_B_ID			MCVIDEO
	px_MCData_Grou p_B_ID			MCDATA
display-name	any value	group display name	TS 24.481 [11]	
list				
entry[1]		User-C		
uri-attribute	px_MCPTT_ID_U ser_C	User ID allowed to participate in this group	TS 24.481 [11]	MCPTT
	px_MCVideo_ID_ User_C			MCVIDEO
	px_MCData_ID_U ser_C			MCDATA
display-name	Not present	User display name	TS 24.481 [11]	
entry[2]		User-D		
uri-attribute	px_MCPTT_ID_U	User ID allowed to	TS 24.481 [11]	MCPTT
	ser_D	participate in this group		
	px_MCVideo_ID_ User_D			MCVIDEO
	px_MCData_ID_U ser_D			MCDATA
display-name	Not present	User display name	TS 24.481 [11]	
oxe:supported-services				
oxe:service			TS 24.481 [11]	
oxe:enabler	"urn:urn-7:3gpp- service.ims.icsi.m cptt"			MCPTT
	"urn:urn-7:3gpp- service.ims.icsi.m cvideo"			MCVIDEO
	"urn:urn-7:3gpp- service.ims.icsi.m cdata.sds"			MCDATA
oxe:group-media				
mcpttgi:mcptt-speech	Present			MCPTT
mcpttgi:mcvideo-video-media	Present			MCVIDEO

#### Table 5.5.7.4-1: MCX Group Creation Document

Information Element	Value/remark	Comment	Reference	Condition
gmop:document				
gmop:request				
gmop:group-regroup-creation				
group				
list-service[1]				
uri attribute	px_MCPTT_Group_T_I D	MCS temporary group identity		MCPTT
	px_MCVideo_Group_T ID			MCVIDEO
	px_MCData_Group_T_I			MCDATA
display-name	Not present			
list	Not present	Temporary group contains constituent groups but no group members		
mcpttgi:on-network- temporary			TS 24.481 [11]	
constituent-MCPTT- group-IDs				
constituent-MCPTT- group-ID[1]	px_MCPTT_Group_A_I D	MCS group ID of a constituent MCS group of the temporary MCS group		MCPTT
	px_MCVideo_Group_A _ID			MCVIDEO
	px_MCData_Group_A_ ID			MCDATA
constituent-MCPTT- group-ID[2]	px_MCPTT_Group_B_I D	MCS group ID of a constituent MCS group of the temporary MCS group		MCPTT
	px_MCVideo_Group_B ID			MCVIDEO
	 px_MCData_Group_B ID			MCDATA
oxe:supported-services				
oxe:service			TS 24.481 [11]	
oxe:enabler	"urn:urn-7:3gpp- service.ims.icsi.mcptt"			MCPTT
	"urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO
	"urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			MCDATA
oxe:group-media			1	
mcpttgi:mcptt-speech	Present			MCPTT
mcpttgi:mcvideo-video- media	Present			MCVIDEO

 Table 5.5.7.4-2: MCX Temporary Group Creation Document

# 5.5.8 Default MCS configuration management messages and other information elements

#### 5.5.8.1 MCX Initial UE Configuration

The structure of a initial UE configuration document is specified in TS 24.484 [14] clause 7.2, single MCX group configuration parameters are defined in TS 24.483 [13] clause 8.2.

Table 5.5.8.1-1: MCX Initial UE Configuration Defaults

Information Element	Value/remark	Comment	Reference	Condition
mcptt-UE-initial-configuration				
domain attribute	px_MCX_DomainName _Organization_A	Mandatory attribute: domain name of the mission critical organization		
Default-user-profile	not present			
on-network				
Timers				
T100	"2"	Values 0-255 sec	TS 24.483 [13] clause 8.2.11	
T101	"2"	Values 0-255 sec	TS 24.483 [13] clause 8.2.12	
T103	"5"	Values 0-255 sec	TS 24.483 [13] clause 8.2.13	
T104	"2"	Values 0-255 sec	TS 24.483 [13] clause 8.2.14	
T132	"3"	Values 0-255 sec	TS 24.483 [13] clause 8.2.15	
HPLMN				
PLMN attribute	PLMN-Id = MCC    MNC with MCC and MNC being the same as stored in EF <sub>IMSI</sub> on the test SIM card according to clause 4.9.2 in TS 36.508 [6]	PLMN on which the UE is allowed for MCX services. NOTE: Same PLMN as of the Cell on which the UE is camped during testing.	TS 23.003 [69] clause 12.1 TS 24.483 [13] clause 8.2.16	
service		MCX related services on a per HPLMN basis		
MCPTT-to-con-ref	px_MCX_APN	configuration parameter for establishment of the PDN connection for the <b>MCX service</b>	TS 24.483 [13] clause 8.2.21	
MC-common-core-to-con ref	- px_MCX_APN	configuration parameter for establishment of the PDN connection for the MC common core service	TS 24.483 [13] clause 8.2.24	
MC-ID-to-con-ref	px_MCX_APN	configuration parameter for establishment of the PDN connection for the MC identity management service	TS 24.483 [13] clause 8.2.27	
VPLM[1]	empty list			
App-Server-Info				
idms-auth-endpoint	"https://" & px_MCX_IdMS_auth_I PAddress & ":" & px_MCX_IdMS_auth_P ort & tsc_MCX_IdMS_auth_ UriPath	Identity management server authorisation endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41	IPv4
	"https://[" & px_MCX_IdMS_auth_I PAddress & "]:" & px_MCX_IdMS_auth_P ort & tsc_MCX_IdMS_auth_ UriPath	Identity management server authorisation endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41	IPv6

Information Element	, clause 7.2 Value/remark	Comment	Reference	Conditio
idms-token-endpoint	"https://" &	Identity management	TS 23.003 [69]	IPv4
	px_MCX_IdMS_token_I	server token endpoint	TS 24.483 [13]	
	PAddress & ":" &	identity information	clause 8.2.41A	
	px_MCX_IdMS_token_			
	Port &			
	tsc_MCX_IdMS_token_			
	UriPath			
	"https://[" &	Identity management	TS 23.003 [69]	IPv6
	px_MCX_IdMS_token_I	server token endpoint	TS 24.483 [13]	11 VO
	PAddress & "]:" &	identity information	clause 8.2.41A	
	px_MCX_IdMS_token_	identity information	Clause 0.2.41A	
	Port &			
	tsc_MCX_IdMS_token_			
	UriPath			
http-proxy	"https://" &	IP address and port	TS 23.003 [69]	IPv4
пар-рюху	px_MCX_HTTP_Proxy	used by the UE for the	TS 24.483 [13]	11 V <del>4</del>
	_IPAddress & ":" &	HTTP TCP connection	clause 8.2.41B	
	px_MCX_HTTP_Proxy		Clause 0.2.41D	
	_Port			
	"https://[" &	IP address and port	TS 23.003 [69]	IPv6
	px_MCX_HTTP_Proxy	used by the UE for the	TS 24.483 [13]	11 VO
	_IPAddress & "]:" &	HTTP TCP connection	clause 8.2.41B	
	px_MCX_HTTP_Proxy		51203C 0.2.41D	
	Port			
gms	tsc_MCX_GMS_Hostna	Indicates the group	TS 23.003 [69]	
gino		management server	TS 24.483 [13]	
	ine	identity information	clause 8.2.42	
cms	tsc_MCX_CMS_Hostna	Indicates the	TS 23.003 [69]	
CITIS	me	configuration	TS 24.483 [13]	
	me	management server	clause 8.2.43	
		identity information	Clause 0.2.45	
kms	tsc_MCX_KMS_Hostna	Indicates the key	TS 23.003 [69]	
NIID		management server	TS 23.003 [69]	
	me	identity information	clause 8.2.44	
tls-tunnel-auth-method			JIAUSE 0.2.44	
mutual-authentication	"false"	Indicates whether	TS 24.483 [13]	
matual admentication	14150	mutual authentication is	clause 8.2.44B	
		used for the TLS tunnel	0100000.2.110	
		authentication		
		false=one-way		
		authentication based		
		on the server certificate		
		is used		
x509	Not present	the X.509 certificate for	TS 24.483 [13]	
A003		mutual authentication	clause 8.2.44C	
		for the TLS tunnel	0.2.44U	
		authentication		
kov	Not present	pre-shared key for	TS 24.483 [13]	
key		mutual authentication	clause 8.2.44D	
		for the TLS tunnel	Uause 0.2.44D	
		authentication		
GMS-URI	tsc_MCX_GMSURI		TC 22 002 (60)	
		The group	TS 23.003 [69]	
		management service URI information which	TS 24.483 [13]	
			clause 8.2.9	
		contains the public		
		service identity for		
		performing subscription		
		proxy function of the		
		GMS	TO 00 000 1001	
group-creation-XUI	px_MCX_GroupCreatio	Indicates the group	TS 23.003 [69]	
	nXUI	creation XUI	TS 24.483 [13]	
		information for creation of groups	clause 8.2.9A	

Information Element	Value/remark	Comment	Reference	Conditio
GMS-XCAP-root-URI	tsc_MCX_GMSXCAPR	Indicates the group	TS 23.003 [69]	
	ootURI	management server	TS 24.483 [13]	
		XCAP Root URI	clause 8.2.9B	
		information	010000 0.2.00	
			TO 00 000 [00]	
CMS-XCAP-root-URI	tsc_MCX_CMSXCAPR	Indicates the	TS 23.003 [69]	
	ootURI	configuration	TS 24.483 [13]	
		management server	clause 8.2.9C	
		XCAP Root URI		
		information		
integrity-protection-enabled	"true"	Indicates whether	TS 24.483 [13]	
		integrity protection is	clause 8.2.44E	
		enabled		
	114 ··· · = 11		TO 04 400 [40]	
confidentiality-protection-	"true"	Indicates whether	TS 24.483 [13]	
enabled		integrity protection is	clause 8.2.44F	
		enabled		
anyExt				
MCPTT-Service-Details				
	false	indicates whether IPv6		<u> </u>
IPv6-Required	Iaise			
		shall be used to access		
		the MCPTT service		
Server-URI	tsc_MCPTT_PublicServ	URI used to contact the		
	iceId_A	MCPTT service server		
MCVideo-Service-Details				-
	false	indicates whether IPv6		
IPv6-Required	laise			
		shall be used to access		
		the MCVideo service		
Server-URI	tsc_MCVideo_PublicSe	URI used to contact the		
	rviceId_A	MCVideo service server		
MCData-Service-Details				
IPv6-Required	false	indicates whether IPv6		<u> </u>
·	laise			
		shall be used to access		
		the MCData service		
Server-URI	tsc_MCData_PublicSer	URI used to contact the		
	viceId_A	MCData service server		
off-network				
Timers				
	"150"		TO 04 400 [40]	
TFG1	"150"	Indicates the timer for	TS 24.483 [13]	
		wait for call	clause 8.2.47	
		announcement; Values:		
		0-65535 ms		
TFG2	"2000"	Indicates the timer for	TS 24.483 [13]	
		call announcement;	clause 8.2.48	
			JIAUSE 0.2.40	
		Values: 0-65535 ms	<b>TO O : 107 TO :</b>	
TFG3	"40"	Indicates the timer for	TS 24.483 [13]	
		call probe	clause 8.2.49	
		retransmission; Values:		
		0-65535 ms		
TFG4	"20"	Indicates the timer for	TS 24.483 [13]	
	20			
		waiting for the MCX	clause 8.2.50	
		user; Values: 0-60 s		
TFG5	"2"	Indicates the timer for	TS 24.483 [13]	
		not present incoming	clause 8.2.51	
		call announcements;		
		Values: 0-255 s		
TFG11	"3000"	Indicates the timer for	TS 24.483 [13]	L
	5000			
		MCX emergency end	clause 8.2.52	
		retransmission; Values:		
		0-65535 ms		
TFG12	"3000"	Indicates the timer for	TS 24.483 [13]	
		MCX imminent peril	clause 8.2.53	
			510056 0.2.00	
		end retransmission;		
		Values: 0-65535 ms		

Derivation Path: TS 24.484 [14] Information Element	Value/remark	Comment	Reference	Condition
TFG13	"1"	Indicates the timer for	TS 24.483 [13]	Condition
		implicit priority	clause 8.2.54	
		downgrade; Values: 0-		
		255 s		
TFG14 TFP1	"1"	Indicates the MCX	TS 24.483 [13]	
		timer for implicit priority	clause 8.2.54A	
		downgrade (imminent peril); Values: 0-255 s		
	"2000"	Indicates the timer for	TS 24.483 [13]	
	2000	private call request	clause 8.2.55	
		retransmission; Values:	0.00000.2.000	
		0-65535 ms		
TFP2	"50"	Indicates the timer for	TS 24.483 [13]	
		waiting for call	clause 8.2.56	
		response message;		
TED2	"2000"	Values: 0-60 s	TC 04 400 [40]	
TFP3	2000	Indicates the timer for private call release	TS 24.483 [13] clause 8.2.57	
		retransmission; Values:	0.2.07	
		0-65535 ms		
TFP4	"5000"	Indicates the timer for	TS 24.483 [13]	
		private call release	clause 8.2.58	
		retransmission; Values:		
		0-65535 ms		
TFP5 TFP6	"30"	Indicates the timer for	TS 24.483 [13]	
		call release; Values: 0-	clause 8.2.59	
	"3000"	600 s Indicates the timer for	TC 04 400 [40]	
IFPo	3000	MCX emergency	TS 24.483 [13] clause 8.2.60	
		private call cancel	ciause 0.2.00	
		retransmission; Values:		
		0-65535 ms		
TFP7	"6"	Indicates the timer for	TS 24.483 [13]	
		waiting for any	clause 8.2.61	
		message with same call		
		identifier; Values: 0-255		
TFB1	"300"	s Indicates the timer for	TS 24.483 [13]	
IFB1	300	max duration; Values:	clause 8.2.62	
		0-600 s	Clause 0.2.02	
TFB2	"10"	Indicates the timer for	TS 24.483 [13]	
		max duration; Values:	clause 8.2.63	
		0-10 s		
TFB3	"20"	Indicates the timer for	TS 24.483 [13]	
		waiting for the MCX	clause 8.2.64	
7004	4000	user; Values: 0-60 s	TO 04 400 [40]	
T201	"1000"	Indicates the timer for	TS 24.483 [13]	
		floor request; Values: 0-65535 ms	clause 8.2.65	
T203	"5"	Indicates the timer for	TS 24.483 [13]	
1200		end of RTP media;	clause 8.2.66	
		Values: 0-255 s		
T204	"5"	Indicates the timer for	TS 24.483 [13]	
		floor queue position	clause 8.2.67	
		request; Values: 0-255		
7005		S .	<b>TO</b> 04 400 1400	
T205	"1"	Indicates the timer for	TS 24.483 [13]	
		floor granted request; Values: 0-255 s	clause 8.2.68	
T230	"10"	Indicates the timer for	TS 24.380 [10]	
1200		inactivity; Values: 0-255	TS 24.581 [88]	
		S	10 27.001 [00]	
T233	"10"	Indicates the timer for	TS 24.483 [13]	
		pending user action;	clause 8.2.70	
		Values: 0-255 s	1	

	Derivation Path: TS 24.484 [14], clause 7.2				
Information Element	Value/remark	Comment	Reference	Condition	
TFE1	"30"	Indicates the timer for	TS 24.483 [13]		
		MCX emergency alert;	clause 8.2.71		
		Values: 0-65535 s			
TFE2	"10"	Indicates the timer for	TS 24.483 [13]		
		MCX emergency alert	clause 8.2.72		
		re-transmission;			
		Values: 0-10 s			
Counters			<b>TO</b> 0.4 400 [40]		
CFP1	"3"	Indicates the counter	TS 24.483 [13]		
		for private call request	clause 8.2.74		
0770		retransmission			
CFP3	"5"	Indicates the counter	TS 24.483 [13]		
		for private call release	clause 8.2.75		
0504		retransmission	<b>TO</b> 0.4 400 [40]		
CFP4	"2"	Indicates the counter	TS 24.483 [13]		
		for private call accept	clause 8.2.76		
		retransmission			
CFP6	"2"	Indicates the counter	TS 24.483 [13]		
		for private call accept	clause 8.2.77		
0770//		retransmission			
CFP11	"2"	Indicates the counter	TS 24.483 [13]		
		for MCX group call	clause 8.2.78		
		emergency end			
05540		retransmission	<b>TO</b> 0.4 400 [40]		
CFP12	"2"	Indicates the counter	TS 24.483 [13]		
		for MCX imminent peril	clause 8.2.79		
		call emergency end			
0001		retransmission	<b>TO</b> 0.4 400 [40]		
C201	"3"	Indicates the counter	TS 24.483 [13]		
0001		for floor request	clause 8.2.80		
C204	"2"	Indicates the counter	TS 24.483 [13]		
		for floor queue position	clause 8.2.81		
0005		request	<b>TO</b> 0.4.400 F/C		
C205	"4"	Indicates the counter	TS 24.483 [13]		
		for floor granted	clause 8.2.82		
		request			

Condition	Explanation
IPv4	IP address is IPv4 address
IPv6	IP address is IPv6 address

# 5.5.8.2 MCPTT UE Configuration

The structure of a group configuration document is specified in TS 24.484 [14] clause 8.2, single MCPTT group configuration parameters are defined in TS 24.483 [13] clause 4.2.

Information Element	Value/remark	Comment	Reference	Condition
mcptt-UE-configuration				
domain attribute	px_MCX_DomainName _Organization_A	Mandatory attribute: domain name of the mission critical organization		
common				
private-call				
Max-Simul-Call-N10	"2"	Indicates the maximum number of private calls	TS 24.483 [13] clause 4.2.7	
MCPTT-Group-Call				
Max-Simul-Call-N4	"3"	Indicates the maximum number of simultaneous group calls	TS 24.483 [13] clause 4.2.9	
Max-Simul-Trans-N5	"5"	Indicates the maximum number of transmissions in a group	TS 24.483 [13] clause 4.2.10	
Prioritized-MCPTT-Group				
MCPTT-Group-Priority[1]				
MCPTT-Group-ID	px_MCPTT_Group_A_I D	Value is a "uri" attribute specified in OMA OMA- TS-XDM_Group-V1_1 that indicates the group id.	TS 24.483 [13] clause 4.2.13	
group-priority-hierarchy	"7"	Indicates the requested presentation priority of group call; Values: 0-7 "7"=the top priority among groups	TS 24.483 [13] clause 4.2.14	
on-network				
IPv6Preferred	"false"	Indicates whether IPv6 is preferred over IPv4 for on-network operation when the UE has both IPv4 and IPv6 host configuration.	TS 24.483 [13] clause 4.2.17	
Relay-Service	"true"	Indicates the authorisation to use a relay service	TS 24.483 [13] clause 4.2.16	
Relayed-MCPTT-Group[1]				
MCPTT-Group-ID	px_MCPTT_Group_A_I D	One allowed relayed MCPTT group	TS 24.483 [13] clause 4.2.20	
Relay-Service-Code	"123456"	Identifies a connectivity service the ProSe UE- to-Network Relay provides to Public Safety applications; 24- bit value	TS 23.303 [68] TS 24.483 [13] clause 4.2.21	

### 5.5.8.3 MCPTT User Profile

The structure of a user profile document is specified in TS 24.484 [14] clause 8.3, single MCPTT group configuration parameters are defined in TS 24.483 [13] clause 5.2.

The structure of the configuration document is based on the XML Schema in clause 8.3.2.3 of TS 24.484 [14] and XML "ruleset" schema according to IETF RFC 4745 [103]. To distinguish the schemas the prefix "cp" ("common policy") is used for the ruleset.

#### Table 5.5.8.3-1: MCPTT User Profile Defaults

Information Element	clause 8.3 Value/remark	Comment	Reference	Condition
mcptt-user-profile				
XUI-URI attribute	"sip:" & px_MCPTT_ID_User_A	same as the XUI value of the Document URI		
user-profile-index attribute	"49"	value arbitrarily selected		
Status	true	MCPTT user profile is enabled		
ProfileName	"mcptt-user-profile-" & user-profile-index & ".xml"	name of the user profile document; user-profile- index is the value of the user-profile-index attribute	TS 24.483 [13] clause 5.2.7B	
Common				
index attribute	"0"	Index for the particular MCPTT user profile		
MCPTTUserID		•		
index attribute	"0"			
uri-entry	px_MCPTT_ID_User_A	MCPTT user identity (MCPTT ID) which is a globally unique identifier within the MCPTT service that represents the MCPTT user	TS 24.483 [13] clause 5.2.7	
UserAlias		Alphanumeric aliases of MCPTT user	TS 24.483 [13] clause 5.2.8	
alias-entry	px_MCPTT_User_A_Ali as			
ParticipantType	px_MCX_User_A_Parti cipantType			
MissionCriticalOrganization	px_MCX_DomainName _Organization_A	Indicates the organization an MCPTT user belongs to	TS 24.483 [13] clause 5.2.11	
PrivateCall				
PrivateCallList				
PrivateCallURI[1]				
index attribute	"0"			
uri-entry	px_MCPTT_ID_User_B	MCPTT user(s) who can be called in a MCPTT private call	TS 24.483 [13] clause 5.2.17	
display-name	"User B Name"	a human readable name for this User	TS 24.483 [13] clause 5.2.18	
PrivateCallURI[2]				
index attribute	"1"			
uri-entry	px_MCPTT_ID_User_C	MCPTT user(s) who can be called in a MCPTT private call	TS 24.483 [13] clause 5.2.17	
display-name	"User C Name"	a human readable name for this User	TS 24.483 [13] clause 5.2.18	
PrivateCallProSeUser[1]				
index attribute	"0"			
DiscoveryGroupID	'123456'O	Discovery group ID in the ProSe discovery procedures	TS 23.303 [68] TS 24.483 [13] clause 5.2.19	
User-Info-ID	'55555555555'O	Prose user Info ID in the ProSe discovery procedures	TS 23.303 [68] TS 24.483 [13] clause 5.2.19A	
PrivateCallProSeUser[2]				
index attribute	"1"	Discovery ID '	TO 00 000 [00]	
DiscoveryGroupID	'123456'O	Discovery group ID in the ProSe discovery procedures	TS 23.303 [68] TS 24.483 [13] clause 5.2.19	
User-Info-ID	'6666666666'O	Prose user Info ID in the ProSe discovery procedures	TS 23.303 [68] TS 24.483 [13] clause 5.2.19A	
EmergencyCall			514400 0.2.197	

Information Element	Value/remark	Comment	Reference	Condition
MCPTTPrivateRecipient				
entry				
entry-info attribute	"UsePreConfigured"	Indicates the criteria to	TS 24.483 [13]	
	eeer reeeringarea	determine when	clause 5.2.29F	
		initiation of an MCPTT	010000 0.2.201	
		emergency private call		
		uses the MCPTT		
		private recipient ID.		
index attribute	"0"			
uri-entry	px_MCPTT_ID_User_B	The MCPTT private	TS 24.483 [13]	
		recipient for an MCPTT	clause 5.2.29B	
		emergency private call		
display-name	"User B Name"	a human readable	TS 24.483 [13]	
		name for this User	clause 5.2.29E	
ProSeUserID-entry			0.0000 0.2.202	
index attribute	"0"			
	0		TC 04 400 [40]	
DiscoveryGroupID	'123456'O	Discovery group ID in	TS 24.483 [13]	
		the ProSe discovery	clause 5.2.29C	
		procedures		
User-Info-ID	'55555555555'O	ProSe user Info ID in	TS 24.483 [13]	
		the ProSe discovery	clause 5.2.29D	
		procedures		
CPTT-group-call				
MaxSimultaneousCallsN6	"3"	Indicates the maximum	TS 24.483 [13]	
	C	number of	clause 5.2.31	
		simultaneously received	012036 0.2.01	
		MCPTT group calls		
EmergencyCall				
MCPTTGroupInitiation				
entry				
entry-info attribute	"UseCurrentlySelected	Use currently selected	TS 24.483 [13]	
	Group"	MCPTT group for an	clause 5.2.34D	
		on-network MCPTT		
		emergency group call		
index attribute	"0"	energeney group can		
	•	The group used upon	TS 24.483 [13]	
uri-entry	px_MCPTT_Group_A_I			
	D	certain criteria on	clause 5.2.34B	
		initiation of an MCPTT		
		emergency group call		
display-name	px_MCPTT_Group_A_	The display name for	TS 24.483 [13]	
	Name	group used for	clause 5.2.34C	
		emergency		
mminentPerilCall	T			
MCPTTGroupInitiation				
•				
entry			TO 04 400 1401	
entry-info attribute	"UseCurrentlySelected	Use currently selected	TS 24.483 [13]	
	Group"	MCPTT group for an	clause 5.2.39D	
		on-network MCPTT		
		imminent peril group		
		call		
index attribute	"0"			
uri-entry	px_MCPTT_Group_A_I	the group used on	TS 24.483 [13]	
		initiation of an MCPTT	clause 5.2.39B	
		imminent peril group	5.4400 0.2.000	
		call.	TO 04 400 1401	
display-name	px_MCPTT_Group_A_	display name for group	TS 24.483 [13]	
	Name	used for the imminent	clause 5.2.39C	
		peril call		
EmergencyAlert				
MCPTTGroupInitiation				
entry		<u> </u>		
index attribute	"0"	+		
	•		TO 04 400 1401	
entry-info attribute	"UseCurrentlySelected	Use currently selected	TS 24.483 [13]	
	Group"	MCPTT group for	clause 5.2.43E	
		emergency alert	1	

erivation Path: TS 24.484 [14] Information Element	Value/remark	Comment	Reference	Conditio
uri-entry	px_MCPTT_Group_A_I	Indicates the MCPTT	TS 24.483 [13]	
	D	group used upon	clause 5.2.43B	
		certain criteria on		
		initiation of an MCPTT		
		emergency alert.		
display-name	px_MCPTT_Group_A_	Optional; name of	TS 24.483 [13]	
	Name	emergency alert group	clause 5.2.43D	
Priority	"10"	Indicates the priority of	TS 24.483 [13]	
1 Honey	10	the MCPTT group calls,	clause 5.2.43F	
		0-255	0100000.2.401	
OffNetwork		0-233		
	"0"			
index attribute				
MCPTTGroupInfo				
entry[1]				
index attribute	"0"			
uri-entry	px_MCPTT_Group_A_I	Indicates an off-network	TS 24.483 [13]	
	D	MCPTT group for use	clause 5.2.53	
		by an MCPTT user		
display-name	px_MCPTT_Group_A_	The display name	TS 24.483 [13]	
alopidy hamo	Name	corresponding to off-	clause 5.2.53A	
		network group id	514400 0.2.00A	
User-Info-ID	'555555555555'O	ProSe user info ID	TS 23.303 [68]	
USel-IIII0-ID	55555555555555 O	PIOSe user Inio ID		
			TS 24.483 [13]	
Orableture als			clause 5.2.58	
OnNetwork				
index attribute	"0"			
MCPTTGroupInfo				
entry[1]		Group 1 the MCPTT		
		user is allowed to		
		affiliate to		
index attribute	"0"			
uri-entry	px_MCPTT_Group_A_I	The MCPTT group ID	TS 24.483 [13]	
u o		for the on-network	clause 5.2.48B	
	2	MCPTT group that the	4	
		MCPTT user is allowed		
		to affiliate to.		
diaplay name		The display name for	TC 04 400 [40]	
display-name	px_MCPTT_Group_A_		TS 24.483 [13] clause 5.2.48B	
	Name	the group		
EVT			5	
anyEXT				
RulesForAffiliation			TS 24.483 [13]	
			clause 5.2.48B	
			4A	
ListOfLocationCriteria				
EnterSpecificArea				
EllipsoidArcArea				
Center				
Latitude	"3331608"	Latitude of 35.74428		
	0001000	degrees encoded		
		according to TS 23.032		
	"	[65] clause 6.1		
Longitude	"6510349"	Longitude of 139.69695		
		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
Radius	"10"			
Radius	"10"	[65] clause 6.1 Radius of 50 meters		
Radius	"10"	[65] clause 6.1 Radius of 50 meters encoded according to		
Radius	"10"	[65] clause 6.1 Radius of 50 meters encoded according to TS 23.032 [65] clause		
		[65] clause 6.1 Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6		
OffsetAngle	"0"	[65] clause 6.1 Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6 0 degrees		
		[65] clause 6.1 Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6 0 degrees Full circle: 360 degrees		
OffsetAngle	"0"	[65] clause 6.1 Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6 0 degrees Full circle: 360 degrees encoded according to		
OffsetAngle	"0"	[65] clause 6.1 Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6 0 degrees Full circle: 360 degrees		

Information Element	Value/remark	Comment	Reference	Conditio
EllipsoidArcArea				
Center				
Latitude	"3331608"	Latitude of 35.74428 degrees encoded according to TS 23.032 [65] clause 6.1		
Longitude	"6510401"	Longitude of 139.69806 degrees encoded according to TS 23.032 [65] clause 6.1		
Radius	"10"	Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6		
OffsetAngle	"0"	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees encoded according to TS 23.032 [65] clause 6.7		
RulesForDeaffiliation			TS 24.483 [13] clause 5.2.48B 4B	
ListOfLocationCriteria				
EnterSpecificArea		_		
EllipsoidArcArea				
Center	"2221600"	Latitude of 25 74429		
latitude	"3331608"	Latitude of 35.74428 degrees encoded according to TS 23.032 [65] clause 6.1		
longitude	"6510401"	Longitude of 139.69806 degrees encoded according to TS 23.032 [65] clause 6.1		
Radius	"10"	Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6		
OffsetAngle	"0"	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees encoded according to TS 23.032 [65] clause 6.7		
ExitSpecificArea EllipsoidArcArea				
Center				1
latitude	"3331608"	Latitude of 35.74428 degrees encoded according to TS 23.032 [65] clause 6.1		
longitude	"6510349"	Longitude of 139.69695 degrees encoded according to TS 23.032 [65] clause 6.1		
Radius	"10"	Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6		
OffsetAngle	"0"	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees encoded according to TS 23.032 [65] clause		

Derivation Path: TS 24.484 [14] c Information Element	Value/remark	Comment	Reference	Condition
manual-deaffiliation-not-	"false"		TS 24.483 [13]	Contantion
allowed-if-affiliation-rules-are-	10100		clause	
met			5.2.48B6	
MaxAffiliationsN2	20		0.2.1020	
	20			
MaxSimultaneousTransmissions N7				
ImplicitAffiliations		Group 1 the MCPTT		
		user is implicitly affiliated to		
entry				
index attribute	"0"			
uri-entry	px_MCPTT_Group_A_I	indicates a MCPTT	TS 24.483 [13]	
	D	group ID to which the MCPTT user is implicitly affiliated to	clause 5.2.48C 4	
display-name	px_MCPTT_Group_A_	display name for	TS 24.483 [13]	
	Name	implicitly affiliated group	clause 5.2.48C	
PrivateEmergencyAlert				
entry				
entry-info attribute	"UsePreConfigured"	Indicates the criteria to	TS 24.483 [13]	
		determine when	clause 5.2.48O	
		initiation of an MCPTT		
		emergency private call		
		uses the MCPTT		
indov ottribute	"0"	private recipient ID.		
index attribute	•		TO 04 400 [40]	
uri-entry	px_MCPTT_ID_User_B	Indicates the default	TS 24.483 [13]	
		MCPTT user ID to be	clause 5.2.48	
		used upon certain	М	
		criteria on initiation of an MCPTT private		
		emergency alert for on-		
		network		
display-name	"User B Name"	The display name	TS 24.483 [13]	
alopidy hamo		corresponding to private	clause 5.2.48N	
		emergency call id		
anyExt				
<b>/</b>			TS 24.483 [13]	
RemoteGroupSelectionURIList			clause	
•			5.2.48U2	
entry[1]	px_MCPTT_ID_User_A		TS 24.483 [13]	
			clause	
			5.2.48U4	
entry[2]	px_MCPTT_ID_User_B		TS 24.483 [13]	
			clause	
			5.2.48U4	
entry[3]	px_MCPTT_ID_User_C		TS 24.483 [13]	
			clause 5.2.48U4	
FunctionalAliasList				
FUNCTIONALAIIASLISU			TS 24.483 [13] clause 5.2.48	
			W6	
entry[1]				
uri-entry[1]	px_MCPTT_ID_FA_A			
anyExt				
LocationCriteriaForActivation				
EnterSpecificArea				
EllipsoidArcArea				
Center				

Derivation Path: TS 24.484 [14] c			Deferre	
Information Element	Value/remark	Comment	Reference	Condition
latitude	"3331608"	Latitude of 35.74428		
		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
longitude	"6510401"	Longitude of 139.69806		
		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
Radius	"10"	Radius of 50 meters		
		encoded according to		
		TS 23.032 [65] clause		
		6.6		
OffsetAngle	"0"	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees		
in or a do di la igro		encoded according to		
		TS 23.032 [65] clause		
		6.7		
ExitSpecificArea		0.7		
EllipsoidArcArea				
Center				+
	"2224600"	Latitude of 25 74400		
latitude	"3331608"	Latitude of 35.74428		
		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
longitude	"6510349"	Longitude of 139.69695		
		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
Radius	"10"	Radius of 50 meters		
		encoded according to		
		TS 23.032 [65] clause		
		6.6		
OffsetAngle	"0"	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees		
moradou, inglo	110	encoded according to		
		TS 23.032 [65] clause		
		6.7		
		0.7		
LocationCriteriaForDeactivation				
EnterSpecificArea				
EllipsoidArcArea				
Center	"0004000"			-
latitude	"3331608"	Latitude of 35.74428		
		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
longitude	"6510349"	Longitude of 139.69695		
-		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
Radius	"10"	Radius of 50 meters		
		encoded according to		
		TS 23.032 [65] clause		
		6.6		
OffsetAngle	"0"	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees		
includedAligie	1/3			
		encoded according to		
		TS 23.032 [65] clause		
E 110 17 1		6.7		+
ExitSpecificArea				+
EllipsoidArcArea				
Center				

Derivation Path: TS 24.484 [14] c Information Element	Value/remark	Comment	Reference	Condition
latitude	"3331608"	Latitude of 35.74428		
		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
longitude	"6510401"	Longitude of 139.69806		
longitude	0510401	degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
Radius	"10"	Radius of 50 meters		
		encoded according to		
		TS 23.032 [65] clause		
		6.6		
OffsetAngle	"0"	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees		
		encoded according to		
		TS 23.032 [65] clause		
		6.7	TO 04 400 [40]	
manual-deactivation-not-	"false"		TS 24.483 [13]	
allowed-if-location-criteria-met			clause 5.2.48	
			W6C	
cp:ruleset				
cp:rule				
cp:id attribute	"rule1"			
cp:actions				
allow-create-delete-user-	"true"	Indicates authorisation	TS 24.483 [13]	
alias	liue	to create and delete	clause 5.2.9	
allas			clause 5.2.9	
		aliases of other MCPTT		
		users		
allow-private-call	"true"	Indicates the	TS 24.483 [13]	
		authorisation to make a	clause 5.2.13	
		MCPTT private call		
allow-private-call-to-any-	"true"	indicates the	TS 24.483 [13]	
user		authorisation to make a	clause 5.2.14	
		MCPTT private call to		
		any MCPTT user		
	"true "		TC 04 400 [40]	
allow-manual-	"true"	Indicates the	TS 24.483 [13]	
commencement		authorisation to make a	clause 5.2.20	
		MCPTT private call with		
		manual commencement		
allow-automatic-	"true"	Indicates the	TS 24.483 [13]	
commencement		authorisation to make a	clause 5.2.21	
		MCPTT private call with		
		automatic		
		commencement		
allow force outo around	"truo"		TC 04 400 [40]	
allow-force-auto-answer	"true"	Indicates the	TS 24.483 [13]	
		authorisation of MCPTT	clause 5.2.22	
		user to force automatic		
		answer for a MCPTT		
		private call		
allow-failure-restriction	"false"	Indicates the	TS 24.483 [13]	
		authorisation to restrict	clause 5.2.23	
		the provision of a	514400 0.2.20	
		notification of call failure		
		reason for a MCPTT		
		private call	<b>TO</b> 0 1 100	
allow-private-call-media-	"true"	Indicates authorisation	TS 24.483 [13]	
protection		to protect confidentiality	clause 5.2.24	
		and integrity of media		
		for MCPTT private calls		
allow-private-call-floor-	"true"	Indicates authorisation	TS 24.483 [13]	
		to protect confidentiality	clause 5.2.25	
control-protection			Clause 3.2.23	
		and integrity of floor		
	1	control signalling for		
		MCPTT private calls.		

Derivation Path: TS 24.484 [14] cl Information Element	Value/remark	Comment	Reference	Condition
allow-emergency-private-	"true"	Indicates the	TS 24.483 [13]	
call		authorisation to make	clause 5.2.27	
		an MCPTT emergency		
		private call.		
allow-cancel-private-	"true"	Indicates the	TS 24.483 [13]	
emergency-call		authorisation to cancel	clause 5.2.28	
emergeney ean		emergency priority in an		
		MCPTT emergency		
		private call by an		
		authorised MCPTT user		
allow-emergency-group-call	"true"	Indicates the	TS 24.483 [13]	
anon onlongency group can		authorisation to make	clause 5.2.33	
		an MCPTT emergency	014400 012100	
		group call functionality		
		enabled for MCPTT		
		user		
allow-cancel-group-	"true"	Indicates the	TS 24.483 [13]	
emergency	1105	authorisation to cancel	clause 5.2.35	
emergency			Uause 3.2.30	
		an in progress MCPTT		
		emergency call associated with a		
		group.	TO 04 400 [40]	
allow-imminent-peril-call	"true"	Indicates the	TS 24.483 [13]	
		authorisation to make	clause 5.2.37	
		an Imminent Peril group		
		call		
allow-cancel-imminent-peril	"true"	Indicates the	TS 24.483 [13]	
		authorisation for in-	clause 5.2.38	
		progress MCPTT		
		imminent peril		
		cancelation		
allow-activate-emergency-	"true"	Indicates the	TS 24.483 [13]	
alert		authorisation to activate	clause 5.2.41	
		an MCPTT emergency		
		alert		
allow-cancel-emergency-	"true"	Indicates the	TS 24.483 [13]	
alert		authorisation to cancel	clause 5.2.42	
		an MCPTT emergency		
		alert		
allow-create-group-	"true"	Indicates the	TS 24.483 [13]	
broadcast-group		authorisation to create a	clause 5.2.46	
		group-broadcast group.		
allow-create-user-	"true"	Indicates the	TS 24.483 [13]	
broadcast-group		authorisation to create a	clause 5.2.48	
Č I		user-broadcast group	_	
allow-offnetwork	"true"	Indicates the	TS 24.483 [13]	
		authorisation for off-	clause 5.2.50	
		network services		
allow-listen-both-overriding-	"false"	Indicates whether the	TS 24.483 [13]	
and-overridden	laioo	MCPTT user is allowed	clause 5.2.54	
		to listen both overriding	0.0000 0.210	
		and override		
allow-transmit-during-	"false"	Indicates whether the	TS 24.483 [13]	
override		MCPTT user is allowed	clause 5.2.55	
		to transmit in case of	514400 0.2.00	
		override (overriding		
		and/or overridden)		
allow-off-network-group-	"true"	Indicates the	TS 24.483 [13]	
	1100	authorisation for a	clause 5.2.56	
call-change-to-emergency			UIAUSE 3.2.30	
		participant to change an		
		off-network group call		
		in-progress to an off-		
	1	network MCPTT	1	1
		emergency group call		

Derivation Path: TS 24.484 [14] cla Information Element	Value/remark	Comment	Reference	Condition
allow-imminent-peril-	"true"	Indicates the	TS 24.483 [13]	Sonation
change	lide	authorisation for a	clause 5.2.57	
0.1.3.1.90		participant to change an		
		off-network group call		
		in-progress to an off-		
		network MCPTT		
		imminent peril group		
		call		
allow-regroup	"true"	Indicates whether the	TS 24.483 [13]	
		MCPTT user is	clause 5.2.48D	
		authorised to perform		
		dynamic regrouping operations		
allow-presence-status	"true"	Indicates the presence	TS 24.483 [13]	
allow-presence-status	liue	status on the network of	clause 5.2.48E	
		this MCPTT user is	Clause 5.2.40L	
		available		
allow-request-presence	"true"	Indicates whether the	TS 24.483 [13]	
		MCPTT user is	clause 5.2.48F	
		authorised to obtain		
		whether a particular		
		MCPTT User is present		
		on the network		
allow-private-call-	"true"	Indicates whether the	TS 24.483 [13]	
participation		MCPTT user is allowed	clause 5.2.48G	
		to participate in MCPTT		
		private calls that they		
ollow override of	"truo"	are invited to	TO 04 400 1401	
allow-override-of-	"true"	Indicates whether the	TS 24.483 [13]	
transmission		MCPTT user is authorised to override	clause 5.2.48H	
		transmission in a		
		MCPTT private call		
allow-manual-off-network-	"true"	Indicates whether the	TS 24.483 [13]	
switch		MCPTT user is	clause 5.2.48l	
		authorised to manually		
		switch to off-network		
		operation while in on-		
		network operation		
anyExt				
allow-request-private-call-	"true"	Indicates whether the	TS 24.483 [13]	
call-back		MCPTT user is allowed	clause 5.2.48P	
		to request a private call		
allow-cancel private cell	"true"	call-back Indicates whether the	TC 21 COL 102 1421	
allow-cancel-private-call- call-back	uue	MCPTT user is allowed	TS 24.483 [13] clause 5.2.48Q	
сан-раск		to cancel an	Jiause J.2.40	
		outstanding private call		
		call-back request		
allow-request-remote-	"true"	Indicates whether the	TS 24.483 [13]	
initiated-ambient-listening		MCPTT user is allowed	clause 5.2.48R	
		to request a remote		
		initiated ambient		
		listening call		
allow-request-locally-	"true"	Indicates whether the	TS 24.483 [13]	
initiated-ambient -listening		MCPTT user is allowed	clause 5.2.48S	
		to request a locally		
		initiated ambient		
		listening call	TO 04 400 1401	
allow-request-first-to-	"true"	Indicates whether the	TS 24.483 [13]	
allow-request-first-to- answer-call	"true"		TS 24.483 [13] clause 5.2.48T	

Derivation Path: TS 24.484 [14] cl	ause 8.3			
Information Element	Value/remark	Comment	Reference	Condition
allow-request-remote-init- private-call	"true"	Indicates whether the MCPTT user is authorised to request remotely initiated private calls	TS 24.483 [13] clause 5.2.48 W1	
allow-request-remote-init- group-call	"true"	Indicates whether the MCPTT user is authorised to request a remotely initiated group call	TS 24.483 [13] clause 5.2.48W2	
allow-query-functional- alias-other-user	"true"	Indicates whether the MCPTT user is authorised to query the functional alias(es) activated by another MCPTT user	TS 24.483 [13] clause 5.2.48 W8	
allow-takeover-functional- alias-other-user	"true"	Indicates whether he MCPTT user is authorised to take over the functional alias(es) previously activated by another MCPTT user	TS 24.483 [13] clause 5.2.48 W9	
allow-location-info-when- talking	"false"	When set to "true" the MCPTT user is authorised to send its location information when it is requesting the floor. When set to "false" the MCPTT user is not authorised to send its location information when it is requesting the floor.	TS 24.483 [13] clause 5.2.48 W10	

# 5.5.8.4 MCPTT Service Configuration

The structure of a user profile document is specified in TS 24.484 [14] clause 8.4, single MCPTT group configuration parameters are defined in TS 24.483 [13] clause 7.2.

Table 5.5.8.4-1: MCPTT Service Configuration Defaults

Derivation Path: TS 24.484 [14], o Information Element	Value/remark	Comment	Reference	Condition
service configuration				Condition
domain attribute	px_MCX_DomainName _Organization_A	Mandatory attribute: domain name of the mission critical organization		
common				
min-length-alias	"2"	Indicates minimum length of an alphanumeric identifier (i.e., alias)	TS 24.483 [13] clause 7.2.9	
broadcast-group				
num-levels-group-hierarchy	"1"	Indicates the number of levels of group hierarchy for group- broadcast groups	TS 24.483 [13] clause 7.2.7	
num-levels-user-hierarchy	"1"	Indicates the number of levels of user hierarchy for user-broadcast groups	TS 24.483 [13] clause 7.2.8	
on-network				
emergency-call				
private-cancel-timeout	"PT30M"	30 minutes		
group-time-limit	"PT20M"	20 minutes		
private-call				
hang-time	"PT30S"	30 seconds		
max-duration-with-floor-	"PT30S"	30 seconds		
control				
max-duration-without-floor- control	"PT20M"	20 minutes		
num-levels-priority-hierarchy	10			
transmit-time				
time-limit	"PT30S"	30 seconds		
time-warning	"PT20M"	20 minutes		
hang-time-warning	"PT20M"	20 minutes		
floor-control-queue				
depth	5			
max-user-request-time	"PT20M"	20 minutes		
fc-timers-counters				
T1-end-of-rtp-media	"PT4S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T3-stop-talking-grace	"PT3S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T7-floor-idle	"PT2S"	Depends on the characteristic of the radio access network	TS 24.380 [10] clause 11	
T8-floor-revoke	"PT1S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T11-end-of-RTP-dual	"PT4S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T12-stop-talking-dual	"PT30S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T15-conversation	"PT30S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T16-map-group-to-bearer	"PT0.5S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T17-unmap-group-to-bearer	"PT0.2S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T20-floor-granted	"PT1S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T55-connect	"PT2S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T56-disconnect	"PT2S"	Default value Value in seconds	TS 24.380 [10] clause 11	
C7-floor-idle	10	Default value	TS 24.380 [10] clause 11	

Derivation Path: TS 24.484 [14], c		Commont	Poforonaa	Condition
Information Element	Value/remark	Comment	Reference	Condition
C17-unmap-group-to-bearer	3	Default value	TS 24.380 [10] clause 11	
C20-floor-granted	3	Default value	TS 24.380 [10] clause 11	
C55-connect	3	Default value	TS 24.380 [10] clause 11	
C56-disconnect	3	Default value	TS 24.380 [10] clause 11	
signalling-protection				
confidentiality-protection	true			
integrity-protection	true			
protection-between-mcptt- servers				
allow-signalling-protection	true			
allow-floor-control-protection	true			
emergency-resource-priority				
resource-priority-namespace	"mcpttp"		RFC 8101 [45]	
resource-priority-priority	"8"		RFC 8101 [45]	
imminent-peril-resource- priority				
resource-priority-namespace	"mcpttp"		RFC 8101 [45]	
resource-priority-priority	"5"		RFC 8101 [45]	
normal-resource-priority				
resource-priority-namespace	"mcpttp"		RFC 8101 [45]	
resource-priority-priority	"1"		RFC 8101 [45]	
anyExt				
functional-alias-list				
functional-alias-entry[1]				
functional-alias	px_MCPTT_ID_FA_A			
max-simultaneous-	"1"			
activations				
allow-takeover	"true"			
mcptt-user-list				
entry[1]				
uri-entry	px_MCPTT_ID_User_A			
off-network				
emergency-call				1
private-cancel-timeout	"PT5S"	5 seconds; Indicates timeout value for the cancellation of an in progress emergency for an MCPTT private call. Values: : 0-65535 s	TS 24.483 [13] clause 7.2.14	
group-time-limit	"PT5S"	5 seconds; Indicates time limit for an in progress MCPTT emergency call related to an MCPTT group. Values: 0-65535 s	TS 24.483 [13] clause 7.2.16	
private-call				
hang-time	"PT5S"	5 seconds; Indicates hang timer for private calls (with floor control). Values: 0- 65535 s	TS 24.483 [13] clause 7.2.13	
max-duration-with-floor- control	"PT60S"	60 seconds; Indicates max private call (with floor control) duration. Values: 0- 65535 s	TS 24.483 [13] clause 7.2.12	

Information Element	Value/remark	Comment	Reference	Condition
num-levels-priority-hierarchy	"4"	Indicates the number of levels of hierarchy for floor control override in off-network. Values: 4- 256	TS 24.483 [13] clause 7.2.17	
transmit-time				
time-limit	"PT60S"	60 seconds; Indicates transmit time limit from a single request to transmit in a group or private call. Values: 0-65535 s	TS 24.483 [13] clause 7.2.18	
time-warning	"PT50S"	50 seconds; Indicates configuration of warning time before time limit of transmission is reached (off-network). Values: 0-255 s	TS 24.483 [13] clause 7.2.19	
hang-time-warning	"PT4S"	4 seconds; Indicates configuration of warning time before hang time is reached (off-network). Values: Values: 0-255 s	TS 24.483 [13] clause 7.2.20	
default-prose-per-packet- priority				
mcptt-private-call-signalling	"1"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 23.303 [68] TS 24.483 [13] clause 7.2.22	
mcptt-private-call-media	"1"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 23.303 [68] TS 24.483 [13] clause 7.2.23	
mcptt-emergency-private- call-signalling	"8"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 23.303 [68] TS 24.483 [13] clause 7.2.24	
mcptt-emergency-private- call-media	"8"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 23.303 [68] TS 24.483 [13] clause 7.2.25	
allow-log-metadata	"true"	Indicates whether an MCPTT emergency group call is permitted on the MCPTT group	TS 24.483 [13] clause 7.2.26	
default-pqi	not present	Rel-18		

#### 5.5.8.5 Void

### 5.5.8.6 MCVideo UE Configuration

The structure of a UE configuration document is specified in TS 24.484 [14] clause 9.2. Single MCVideo group configuration parameters are defined in TS 24.483 [13] clause 12.2.

Derivation Path: TS 24.484 [14] c		Commont	Deference	Condition
Information Element	Value/remark	Comment	Reference	Condition
mcvideo-UE-configuration domain attribute	px_MCX_DomainName	Mandatory attribute:		
	_Organization_A	domain name of the mission critical		
		organization		
common				
Mcvideo-private-call				
Max-Simul-Call-N10	"2"	Indicates the maximum number of private calls		
MCVideo-Group-Call				
Max-Simul-Call-Nc4	"3"	Indicates the maximum number of simultaneous group calls		
Max-Simul-Trans-Nc5	"5"	Indicates the maximum number of transmissions in a group		
Prioritized-MCVideo-Group				
MCVideo-Group-Priority[1]				
MCVideo-Group-ID	px_MCVideo_Group_A _ID	Value is a "uri" attribute specified in OMA OMA- TS-XDM_Group-V1_1 that indicates the group id.		
group-priority-hierarchy	"7"	Indicates the requested presentation priority of group call; Values: 0-7 "7"=the top priority among groups		
on-network				
IPv6Preferred	"false"	Indicates whether IPv6 is preferred over IPv4 for on-network operation when the UE has both IPv4 and IPv6 host configuration.		
Relay-Service	"true"	Indicates the authorisation to use a relay service		
Relayed-MCVideo-Group[1]				
MCVideo-Group-ID	px_MCVideo_Group_A _ID	One allowed relayed MCVideo group		
Relay-Service-Code	"123456"	Identifies a connectivity service the ProSe UE- to-Network Relay provides to Public Safety applications; 24- bit value	TS 23.303 [68]	

Table 5.5.8.6-1: MCVideo	UE Configuration Defaults
--------------------------	---------------------------

## 5.5.8.7 MCVideo User Profile

The structure of a user profile document is specified in TS 24.484 [14] clause 9.3. Single MCVideo group configuration parameters are defined in TS 24.483 [13] clause 13.2.

#### Table 5.5.8.7-1: MCVideo User Profile Defaults

Derivation Path: TS 24.484 [14], Information Element	Value/remark	Comment	Reference	Condition
mcvideo-user-profile				
XUI-URI attribute	sip:" & px_MCVideo_ID_User_ A	same as the XUI value of the Document URI		
user-profile-index attribute	"42"	value arbitrarily selected		
Status	"true"	MCVideo user profile is enabled		
ProfileName	"mcvideo-user-profile-" & user-profile-index & ".xml"	name of the user profile document; user- profile-index is the value of the user- profile-index attribute	TS 24.483 [13] clause 13.2.3;	
Common				
index attribute	"0"	Index for the particular MCVideo user profile		
MCVideoUserID		Indicates an MCVideo user identity (MCVideo ID) which is a globally unique identifier within the MCVideo service that represents the MCVideo user	TS 24.483 [13] clause 13.2.7	
index attribute	"0"			
uri-entry	px_MCVideo_ID_User_ A	MCVideo user identity (MCVideo ID) which is a globally unique identifier within the MCVideo service that represents the MCVideo user		
UserAlias		Alah an una aria alia ana	TO 04 400 [40]	
alias-entry	px_MCVideo_User_A_ Alias	Alphanumeric aliases of MCVideo user	TS 24.483 [13] clause 13.2.11	
ParticipantType	px_MCX_User_A_Parti cipantType	The functional category of the participant (e.g., first responder, second responder, dispatch, dispatch supervisor), typically defined by the MCVideo administrators.	TS 24.483 [13] clause 13.2.15	
MissionCriticalOrganization	px_MCX_DomainName _Organization_A	Indicates the organization an MCVideo user belongs to	TS 24.483 [13] clause 13.2.16	
PrivateCall				
PrivateCallList				
PrivateCallOnNetwork[1]				
PrivateCallURI				
index attribute	0			
uri-entry	px_MCVideo_ID_User_ B			
display-name	"User B Name"			
PrivateCallKMSURI uri-entry	ни 	According to TS 24.484 [14] if the entry element is empty, the KMS URI present in the MCS initial configuration document is used		
PrivateCallOnNetwork[2]	1			
PrivateCallURI				
index attribute	1			
			•	

Information Element	clause 9.3 Value/remark	Comment	Reference	Condition
uri-entry	px_MCVideo_ID_User_	Comment	Reference	Condition
un-entry				
display-name	"User C Name"			
PrivateCallKMSURI				
uri-entry		According to TS 24.484		
an only		[14] if the entry element		
		is empty, the KMS URI		
		present in the MCS		
		initial configuration		
		document is used		
PrivateCallOffNetwork	not present			
EmergencyCall	not present			
MCVideoPrivateRecipient				
entry				
entry-info attribute	"UsePreConfigured"			
index attribute	"0"			
	px_MCVideo_ID_User_			
uri-entry	B			
display-pama	User B Name			+
display-name ProSeUserID-entry	USEI D INdille			+
index attribute	"0"			
	-	<u> </u>		
DiscoveryGroupID	'123456'O	<u> </u>		
User-Info-ID	'555555555555'O			
MCVideo-group-call				
MaxSimultaneousCallsN6	3			
EmergencyCall				
MCVideoGroupInitiation				
entry				
entry-info attribute	"UseCurrentlySelected			
	Group"			
index attribute	"0"			
uri-entry	px_MCVideo_Group_A			
	_ID			
display-name	px_MCVideo_Group_A			
	_Name			
ImminentPerilCall				
<b>MCVideoGroupInitiation</b>				
entry				
entry-info attribute	"UseCurrentlySelected			
	Group"			
index attribute	"0"			
uri-entry	px_MCVideo_Group_A			
	_ID			
display-name	px_MCVideo_Group_A			
	Name			
EmergencyAlert				
MCVideoGroupInitiation				
entry				
index attribute	"0"			
entry-info attribute	"UseCurrentlySelected			1
•	Group"			
uri-entry	px_MCVideo_Group_A			1
2				
display-name	px_MCVideo_Group_A			1
	_Name			
Priority	10			1
OnNetwork				
index	"1"			
MCVideoGroupInfo	1			
MCVideo-Group-ID	px_MCVideo_Group_A			1
	ID			
GMS-Serv-Id	tsc_MCX_GMS_Hostna			1
	me			1

Derivation Path: TS 24.484 [14], o		-		• • •
Information Element	Value/remark	Comment	Reference	Condition
IdMS-Token-Endpoint	"https://" & px_MCX_IdMS_token_I PAddress & ":" &	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv4
	px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath			
	"https://[" & px_MCX_IdMS_token_I PAddress & "]:" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv6
RelativePresentationPriority	UriPath "7"		TS 24.483 [13]	
GroupKMSURI	tsc_MCX_KMS_Hostna me		clause 13.2.51	
MaxAffiliationsN2	"10"		TS 24.483 [13] clause 13.2.67	
PrivateEmergencyAlert			TS 24.483 [13] clause 13.2.87	
entry				
entry-info attribute	"UsePreConfigured"			
index attribute	"0"			
uri-entry	px_MCVideo_ID_User_ B			
display-name	"User B Name"		TS 24.483 [13]	
RemoteGroupSelectionURIList			clause 13.2.87	
entry[1]	px_MCVideo_ID_User_ A			
entry[2]	px_MCVideo_ID_User_ B			
entry[3]	px_MCVideo_ID_User_ C			
anyExt	not present			
OffNetwork				
	"1"			
MCVideoGroupInfo MCVideo-Group-ID	px_MCVideo_Group_A			
GMS-App-Serv-Id	_ID tsc_MCX_GMS_Hostna			
GINS-App-Serv-Id				
IdMS-Token-Endpoint	"https://" & px_MCX_IdMS_token_I PAddress & ":" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv4
	"https://[" & px_MCX_IdMS_token_I PAddress & "]:" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv6
RelativePresentationPriority	"7"		TS 24.483 [13] clause 13.2.51	
User-Info-Id	'55555555555'O		TS 24.483 [13] clause 13.2.10 2	
cp:ruleset				1
cp:rule	1		1	

Derivation Path: TS 24.484 [14], c Information Element	Value/remark	Comment	Reference	Condition
cp:id attribute	"rule1"	Johnnent		
cp:actions				
allow-presence-status	"true"			
allow-request-presence	"true"			
allow-query-availability-for-	"true"			
private-calls				
allow-enable-disable-user	"true"			
allow-enable-disable-UE	"true"			
allow-private-call	"true"			
allow-manual-	"true"			
commencement				
allow-automatic-	"true"			
commencement				
allow-force-auto-answer	"true"			
allow-failure-restriction	"true"			
allow-emergency-group-call	"true"			
allow-emergency-private-	"true"			
call				
allow-cancel-group-	"true"			
emergency				
allow-cancel-private-	"true"			
emergency-call				
allow-imminent-peril-call	"true"			
allow-cancel-imminent-peril	"true"			
allow-activate-emergency-	"true"			
alert				
allow-cancel-emergency-	"true"			
alert				
allow-offnetwork	"true"			
allow-imminent-peril-	"true"			
change				
allow-private-call-media-	"true"			
protection	u. u			
allow-request-affiliated-	"true"			
groups				
allow-request-to-affiliate-	"true"			
other-users				
allow-recommend-to-	"true"			
affiliate-other-users	"tm			
allow-private-call-to-any-	"true"			
user	"true"			
allow-regroup allow-private-call-	"true"			
participation	liue			
allow-manual-off-network-	"true"			
switch	liue			
allow-off-network-group-	"true"			
call-change-to-emergency	liue			
allow-revoke-transmit	"true"			
allow-create-group-	"true"			
broadcast-group			1	
allow-create-user-	"true"			1
broadcast-group			1	
anyExt		<u> </u>		
allow-request-remote-	"true"	<u> </u>		
initiated-ambient-viewing				
allow-request-locally-	"true"			1
initiated-ambient-viewing				

Condition	Explanation
IPv4	IP address is IPv4 address
IPv6	IP address is IPv6 address

## 5.5.8.8 MCVideo Service Configuration

The structure of a service configuration document is specified in TS 24.484 [14] clause 9.4. Single MCVideo group configuration parameters are defined in TS 24.483 [13] clause 14.2.

Table 5.5.8.8-1: MCVideo Service Configuration Defaults

Derivation Path: TS 24.484 [14], c		Commont	Deferences	Condition
Information Element	Value/remark	Comment	Reference	Condition
service configuration				
domain attribute	px_MCX_DomainName	Mandatory attribute:		
	_Organization_A	domain name of the		
		mission critical		
Common		organization		
min-length-alias	"2"	Indicates minimum		
min-iengin-alias	2			
		length of an		
		alphanumeric identifier		
husedeest succes		(i.e., alias)		
broadcast-group	"1"			
num-levels-group-hierarchy		Indicates the number of		
		levels of group		
		hierarchy for group-		
		broadcast groups		
num-levels-user-hierarchy	"1"	Indicates the number of		
		levels of user hierarchy		
		for user-broadcast		
on notwork		groups		
on-network			<u> </u>	
signalling-protection	"truo"			
confidentiality-protection	"true"			-
integrity-protection	"true"			
protection-between-mcvideo-				
servers				
allow-signalling-protection	"true"			
allow-transmission-control-	"true"			
protection				
emergency-resource-priority				
resource-priority-namespace	"mcpttp"	MCVideo uses the	RFC 8101 [45]	
		MCPTT namespace		
		values of RFC 8101		
		[45]		
resource-priority-priority	"7"		RFC 8101 [45]	
imminent-peril-resource-				
priority				
resource-priority-namespace	"mcpttp"	MCVideo uses the	RFC 8101 [45]	
		MCPTT namespace		
		values of RFC 8101		
		[45]		
resource-priority-priority	"4"		RFC 8101 [45]	
normal-resource-priority				
resource-priority-namespace	"mcpttp"	MCVideo uses the	RFC 8101 [45]	
		MCPTT namespace		
		values of RFC 8101		
·		[45]	<b>DEO</b> 2121-1-1-	
resource-priority-priority	"0"		RFC 8101 [45]	
off-network				
default-prose-per-packet-				
priority				
mcvideo-private-call-	"1"	Indicates the default		
signalling		ProSe Per-Packet		
		Priority (PPPP) value		
mcvideo-private-call-media	"1"	Indicates the default		
		ProSe Per-Packet		
		Priority (PPPP) value		
mcvideo-emergency-private-	"8"	Indicates the default		
call-signalling		ProSe Per-Packet		
		Priority (PPPP) value		
mcvideo-emergency-private-	"8"	Indicates the default		
call-media		ProSe Per-Packet		
		Priority (PPPP) value		
private-call				
mcvideo-max-duration	"600"	Value in seconds	TS 24.483 [13]	
			clause 14.2.17	

Derivation Path: TS 24.484 [14], c	lause 9.4			
Information Element	Value/remark	Comment	Reference	Condition
num-levels-priority-hierarchy	"4"		TS 24.483 [13] clause 14.2.18	
default-pqi	not present	Rel-18		

#### 5.5.8.9 Void

# 5.5.8.10 MCData UE Configuration

The structure of a UE configuration document is specified in TS 24.484 [14] clause 10.2. Single MCVideo group configuration parameters are defined in TS 24.483 [13] clause 9.2.

Table 5.5.8.10-1: MCData UE Configuration Defaults

Information Element	Value/remark	Comment	Reference	Condition
ncdata-UE-configuration				
domain attribute	px_MCX_DomainName _Organization_A	Mandatory attribute: domain name of the mission critical organization		
common			TO 04 400	
short-data-service		Contains an integer indicating the maximum number of simultaneous SDS transactions (Nc4) allowed for an MCData UE for on-network or off-network group SDS	TS 24.483 clause 9.2.8	
Max-Simul-SDS-Txns-Nc4	"2"	Indicates the maximum number of SDS Transactions	TS 24.483 [13] clause 10.2	
SDS-Presentation-Priority			TS 24.483 clause 9.2.8	
MCData-Group-Priority				
MCData-Group-ID	px_MCData_Group_A_ ID	Value is a "uri" attribute specified in OMA OMA- TS-XDM_Group-V1_1 that indicates the group id.	TS 24.483 [13] clause 10.2	
group-priority-hierarchy	"7"	Indicates the requested presentation priority of group call; Values: 0-7 "7"=the top priority among groups	TS 24.483 [13] clause 9.2.11, 10.2	
File distribution				
Max-Simul-FD-Txns-Nc4	"4"	Contains an integer indicating the maximum number of simultaneous FD transactions (Nc4) allowed for an MCData UE for on-network or off-network group FD	TS 24.483 clause 9.2.12	
FD-Presentation-Priority		contains a list of <mcdata-group- Priority&gt; elements that contains the following elements shown below.</mcdata-group- 	TS 24.483 clause 9.2.13	
MCDATA-Group-Priority			TO 04 400	
MCDATA-Group-ID	px_MCData_Group_A_	Identifies a MCData	TS 24.483 clause 9.2.15	
group-priority-hierarchy	"7"	group Contains an integer that identifies the relative priority level of that MCData group with 0 being the lowest priority and 255 being the highest priority	Clause 9.2.15 TS 24.483 [13] clause 9.2.16, 10.2	
conversation-management				
Conversation-Presentation- Priority				
MCData-Group-Priority				
MCData-Group-ID	px_MCData_Group_A_ ID	Identifies a MCData group	TS 24.483 clause 9.2.15	
group-priority-hierarchy	"7"	Indicates the requested presentation priority of conversation management transactions	TS 24.483 clause 9.2.16	

	Derivation Path: TS 24.484 [14] clause 10.2					
Information Element	Value/remark	Comment	Reference	Condition		
transmission-control						
Max-Simul-Data- Transmissions-Nc4	"3"	Indicates the maximum number of simultaneous data transmissions.	TS 24.483 clause 9.2.21			
Max-Data-Transmissions-In- Group-Nc5	"3"	Indicates the maximum number of simultaneous data transmissions.	TS 24.483 clause 9.2.22			
Data-Presentation-Priority		lindicates the requested presentation priority of data received.	TS 24.483 clause 9.2.23			
MCData-Group-Priority						
MCData-Group-ID	px_MCData_Group_A_ ID					
group-priority-hierarchy	"7"	Indicates the requested presentation priority of data received.	TS 24.483 clause 9.2.26			
reception-control						
Max-Simul-Data_Reception- Nc4	"3"	Indicates the maximum number of simultaneous data receptions.				
Max-Simul- Data_Receptions-In-Group-Nc5	"5"	Indicates the maximum number of data receptions in a group.				
on-network						
IPv6Preferred	"false"	Indicates whether IPv6 is preferred over IPv4 for on-network operation when the UE has both IPv4 and IPv6 host configuration.	TS 24.483 [13] clause 9.2.31, 10.2			
Relay-Service	"true"	Indicates the authorisation to use a relay service. NOTE: When the <relay-service> element is set to "false" a list of <relayed- MCData-Group&gt; elements is not needed.</relayed- </relay-service>	TS 24.483 [13] clause 9.2.32, 10.2			

## 5.5.8.11 MCData User Profile

The structure of a user profile document is specified in TS 24.484 [14] clause 10.3.2.1. Single MCData configuration parameters are defined in TS 24.483 [13] clause 10.2.

#### Table 5.5.8.11-1: MCData User Profile Defaults

Value/remark	Comment	Reference	Condition
"sip:" & px_MCData_ID_User_ A	same as the XUI value of the Document URI		
	value arbitrarily selected		
"true"	MCData user profile is enabled		
"mcdata-user-profile-" & user-profile-index & ".xml"	name of the user profile document; user- profile-index is the value of the user- profile-index attribute	TS 24.483 [13] clause 5.2.7B	
"0"	Index for the particular MCData user profile	TS 24.483 [13] clause 10.2.6	
px_MCData_User_A_Al ias	Alphanumeric aliases of MCData user	TS 24.483 [13] clause 10.2.11	
px_MCData_ID_User_ A			
px_MCX_DomainName _Organization_A	Indicates the organization an MCData user belongs to	TS 24.483 [13] clause 10.2.16	
A	user identity (MCData ID) of an MCData user that the configured MCData user is authorised to initiate a one-to-one communication, and corresponds to the "MCDataID" element of clause 10.2.16E in 3GPP TS 24.483 [4];	clause 10.2.21 A	
me	for the security domain of the MCData user identity (MCData ID) of the MCData user and corresponds to the "MCDataUserIDKMSU RI" element of clause 10.2.9A in 3GPP TS 24.483 [4]. If this parameter is absent, the KMS URI is identified by the <kms- sec&gt; element of the <app-server-info> of the MCS UE initial configuration document as specified in</app-server-info></kms- 	clause 10.2.21 A	
	<ul> <li>"sip:" &amp; px_MCData_ID_User_A</li> <li>"49"</li> <li>"true"</li> <li>"mcdata-user-profile-" &amp; user-profile-index &amp; ".xml"</li> <li>"0"</li> <li>"px_MCData_User_A_AI ias</li> <li>px_MCData_ID_User_A</li> <li>px_MCX_DomainName _Organization_A</li> <li>px_MCData_ID_User_A</li> <li>px_MCData_ID_User_A</li> <li>px_MCData_ID_User_A</li> <li>tsc_MCX_KMS_Hostna</li> </ul>	Value/remarkComment"sip:" & px_MCData_ID_User_ Asame as the XUI value of the Document URI A"49"value arbitrarily selected"true"MCData user profile is enabled"mcdata-user-profile-index & ".xml"name of the user profile document; user- profile-index attribute"0"Index for the particular MCData user profilepx_MCData_User_A_AI iasAlphanumeric aliases of MCData user profilepx_MCData_ID_User_A AIndicates the organization_Apx_MCData_ID_User_A AIndicates the organization an MCData user belongs topx_MCData_ID_User_AContains the MCData user identity (MCData ID) of an MCData user itapx_MCData_ID_User_AContains the MCData user identity (MCData ID) of an MCData user itapx_MCData_ID_User_AContains the MCData user identity (MCData lib) of the configured MCData user is authorised to initiate a one-to-one communication, and corresponds to the "MCDataID" element of clause 10.2.16E in 3GPP TS 24.483 [4];tsc_MCX_KMS_Hostna meGottains the KMS URI for the security domain of the MCData user is authorised to the "MCDataUserIDKMSU RI" element of clause 10.2.9A in 3GPP TS 24.483 [4]. If this parameter is absent, the KMS URI is identified by the <kms- </kms-  sec> element of the clause 10.2.9A in 3GPP TS 24.483 [4]. If this parameter is absent, the KMS URI is identified by the <kms- </kms-  sec> element of the clause 10.2.9A in 3GPP TS 24.483 [4]. If this parameter is absent, the KMS URI is identified by the <kms- </kms-  sec> element of the clause 10.2.9A in 3GPP TS 24.483 [4]. If <td>Value/remark         Comment         Reference           "sip:" &amp; px_MCData_ID_User_ A         same as the XUI value of the Document URI A         same as the XUI value of the Document URI A           "49"         value arbitrarily selected         sale and modata-user-profile." analed         TS 24.483 [13] clause 5.2.7B           "modata-user-profile." &amp; user-profile-index &amp; ".xml"         name of the user profile document; user- profile-index is the value of the user- profile-index auser profile         TS 24.483 [13] clause 10.2.6           "0"         Index for the particular MCData user profile         TS 24.483 [13] clause 10.2.11           px_MCData_User_A_AI ias         Alphanumeric aliases of MCData user         TS 24.483 [13] clause 10.2.16           px_MCData_ID_User_A         Indicates the organization an MCData user belongs to         TS 24.483 [13] clause 10.2.16           px_MCData_ID_User_A         Contains the MCData user identity (MCData ID) of an MCData user authorised to initiate a one-to-one communication, and corresponds to the "MCData user is authorised to initiate a one-to-one communication, and corresponds to the "MCData user is absent, the KMS URI is identified by the <kms- sec- element of clause 10.2.94 in 3GPP TS 24.483 [4]. If this parameter is absent, the KMS URI is identified by the <kms- sec- element of the <apo-server-info> of the MCS UE initial configuration document as specified in         TS 24.483 [13] clause 1</apo-server-info></kms- </kms- </td>	Value/remark         Comment         Reference           "sip:" & px_MCData_ID_User_ A         same as the XUI value of the Document URI A         same as the XUI value of the Document URI A           "49"         value arbitrarily selected         sale and modata-user-profile." analed         TS 24.483 [13] clause 5.2.7B           "modata-user-profile." & user-profile-index & ".xml"         name of the user profile document; user- profile-index is the value of the user- profile-index auser profile         TS 24.483 [13] clause 10.2.6           "0"         Index for the particular MCData user profile         TS 24.483 [13] clause 10.2.11           px_MCData_User_A_AI ias         Alphanumeric aliases of MCData user         TS 24.483 [13] clause 10.2.16           px_MCData_ID_User_A         Indicates the organization an MCData user belongs to         TS 24.483 [13] clause 10.2.16           px_MCData_ID_User_A         Contains the MCData user identity (MCData ID) of an MCData user authorised to initiate a one-to-one communication, and corresponds to the "MCData user is authorised to initiate a one-to-one communication, and corresponds to the "MCData user is absent, the KMS URI is identified by the <kms- sec- element of clause 10.2.94 in 3GPP TS 24.483 [4]. If this parameter is absent, the KMS URI is identified by the <kms- sec- element of the <apo-server-info> of the MCS UE initial configuration document as specified in         TS 24.483 [13] clause 1</apo-server-info></kms- </kms- 

lause 10.3.2.1			
Value/remark	Comment	Reference	Condition
"65535"	Indicates the maximum amount of data (in megabytes) that an MCData user can transmit in a single request during one-to-	TS 24.483 [13] clause 10.2.25	
"65535"	Indicates the maximum amount of time that an MCData user can transmit for in a single request during one-to-	TS 24.483 [13] clause 10.2.26	
px_MCData_ID_User_ A	Indicates an MCData ID of an MCData user that this MCData user is allowed to request release of an ongoing	TS 24.483 [13] clause 10.2.30	
	Indicates the MCData group recipient for an MCData emergency Alert	TS 24.483 [13] clause 10.2.38	
px_MCData_ID_User_ A			
•		TO 04 400 [40]	
B		Clause 10.2.16	
		TS 24.483 [13] clause 10.2.16 J	
px_MCData_IPConnect ivityEndpointAddress_B			IPv4
px_MCData_IPConnect ivityEndpointAddress_B			IPv6
"0"			
'123456'O			
'555555555555'O			
"0"			
tsc_MCX_KMS_Hostna me		TS 24.483 [13] clause 10.2.16 H	
"O"	Is of type "token" and is included within some elements for uniqueness purposes, and does not appear in the user profile configuration managed object specified in 3GPP TS 24.483 [4].		
	"65535" "65535" "65535" "px_MCData_ID_User_ A "0" px_MCData_ID_User_ A "0" px_MCData_ID_User_ B "0" px_MCData_ID_User_ B "0" px_MCData_IPConnect ivityEndpointAddress_B px_MCData_IPConnect ivityEndpointAddress_B "0" '123456'O '5555555555550	"65535"       Indicates the maximum amount of data (in megabytes) that an MCData user can transmit in a single request during one-to-one communication.         "65535"       Indicates the maximum amount of time that an MCData user can transmit for in a single request during one-to-one communication.         "px_MCData_ID_User_A       Indicates the MCData user is allowed to request release of an ongoing transmission         MCData_ID_User_A       Indicates the MCData user is allowed to request group recipient for an MCData emergency Alert         px_MCData_ID_User_A       A         #       Indicates the MCData user is allowed to request group recipient for an MCData emergency Alert         px_MCData_ID_User_A       A         #       Indicates the MCData user is allowed to request group recipient for an MCData emergency Alert         px_MCData_ID_User_B       Indicates the MCData user is allowed to request group recipient for an MCData emergency Alert         px_MCData_ID_User_B       Indicates the MCData user is allowed to request group recipient for an MCData user is allowed to request group recipient for an MCData user is allowed to request that this MCData user is allowed to request u	"65535"       Indicates the maximum amount of data (in megabytes) that an MCData user can transmit in a single request during one-to-one communication.       TS 24.483 [13] clause 10.2.25         "65535"       Indicates the maximum amount of time that an MCData user can transmit for in a single request during one-to-one communication.       TS 24.483 [13] clause 10.2.26         px_MCData_ID_User_A       Indicates an MCData user that this MCData user that this MCData user is allowed to request release of an ongoing transmission       TS 24.483 [13] clause 10.2.30         px_MCData_ID_User_A       Indicates the MCData group recipient for an MCData emergency Alert       TS 24.483 [13] clause 10.2.38         px_MCData_ID_User_A       Indicates the MCData group recipient for an MCData emergency Alert       TS 24.483 [13] clause 10.2.38         "0"       TS 24.483 [13] clause 10.2.16 E       TS 24.483 [13] clause 10.2.16 E         px_MCData_ID_User_A       TS 24.483 [13] clause 10.2.16 E       TS 24.483 [13] clause 10.2.16 E         "0"       TS 24.483 [13] clause 10.2.16 E       TS 24.483 [13] clause 10.2.16 E         "0"       TS 24.483 [13] clause 10.2.16 E       TS 24.483 [13] clause 10.2.16 E         "0"       TS 24.483 [13] clause 10.2.16 E       TS 24.483 [13] clause 10.2.16 E         "0"       TS 24.483 [13] clause 10.2.16 E       TS 24.483 [13] clause 10.2.16 E         "0"       TS 24.483 [13] clause 10.2.16 E       TS 24.483 [13] clause 10.2.16 E         "0"<

Information Element         Value/remark         Comment         Reference         Condition           MCData-Group-ID         px. MCData.Group.A. ID         Indicates the MCData user is allowed to user allowed to user bit the MCData user is allowed to user bit the MCData user is allowed to user hosting the on-network MCData (by the -ACMData Group-ID)- element         T5 24.483 [13] clause 10.2.51           IdMS-Token-Endpoint         "https://" & p	Derivation Path: TS 24.484 [14], c				
ID         group ID for the on- network MCData user is allowed to user allowed		Value/remark			Condition
me         management server hosting the on-network MCData group-ID> element         clause 10.2.51           IdMS-Token-Endpoint         "https://" & IdMS.Token-Endpoint         TS 23 003 [69]         IPv4           IdMS-Token-Endpoint         "https://" & IdMS.Token- Prites://" & Identify information         TS 23 003 [69]         IPv4           IdMS-Token-Endpoint         "https://" & Identify information         TS 22 443 [13]         IPv4           Identify management pr.MCX.IdMS_token_ IDPath         Identify management identify information         TS 23 003 [60]         IPv4           GroupKMSURI         TS 24.483 [13]         IPv6         TS 24.483 [13]         IPv6           TS 24.483 [13]         TS 24.483 [13]         IPv6         TS 24.483 [13]         IPv6           GroupKMSURI         TS CALSTANCA         ISC MCX.IdMS_token_ IDPath         TS 24.483 [13]         IPv6           MaxAffiliations         "10"         contains an integer value between 0 and ZS indicating the presentation priority of relative to other of- network KOData emergency one-to-one alert         TS 24.483 Idause 10.2.71         TS 24.483 Idause 10.2.91           One-To-One-EmergencyAlert         mcCatas the MCData user recipient for an on- network MCData emergency one-to-one alert         TS 24.483 Idause 10.2.92         Iss.4433 Idause 10.2.91           entry         px_ MCData_ID_USer A         Absolute URI associated with media idause 10.		İD	group ID for the on- network MCData group that the MCData user is allowed to use.	clause 10.2.47	
px         MCX_1dMS_token_I PX_MCX_ldMS_token_ Dvr & Sc. MCX_ldMS_token_ UriPath         server token endpoint identity information         TS 24.483 [13] clause 8.2.41A           Port & tsc. MCX_ldMS_token_ UriPath         The ps/T & px_MCX_ldMS_token_ PX_MCX_ldMS_token_ Port & tsc_MCX_ldMS_token_ Port & tsc_MCX_ldMS_token_ Port & tsc_MCX_ldMS_token_ Port & tsc_MCX_ldMS_token_ UriPath         Identity management server token endpoint identity information         TS 24.483 [13] clause 8.2.41A           GroupKMSURI         tsc_MCX_KMS_token_ UriPath         TS 24.483 [13] clause 10.2.54A         TS 24.483 [13] clause 10.2.54A           Relativepresentation Priority         '7'         contains an integer value between 0 and 255 indicating the presentation priority of the off-network groups and off-network users         TS 24.483 clause 10.2.71           One-To-One-EmergencyAlert         px_MCData_ID_User_ A         Indicates the name of the MCData user recipient for an on-network MCData alert         TS 24.483 clause 10.2.91           entry         px_MCData_ID_User_ A         Indicates the name of tsc_MCData storage function of MCData content ServerURI         TS 24.483 clause 10.2.92           functionalAliasList         ''''''''''''''''''''''''''''''''''''	GMS-App-Serv-ID		management server hosting the on-network MCData group identified by the <mcdata-group-id></mcdata-group-id>		
px_MCX_IdMS_token_ Port & itsc_MCX_IdMS_token_ Port & itsc_MCX_IdMS_token_ UriPath       server token endpoint identity information       TS 24.483 [13] clause 8.2.41A         GroupKMSURI       itsc_MCX_IdMS_token_ UriPath       sc_MCX_IdMS_token_ UriPath       TS 24.483 [13] clause 10.2.54A         Relativepresentation Priority       "7"       contains an integer value between 0 and 256 indicating the presentation priority of the off-network group relative to other off- network groups and off-network users       TS 24.483 clause 10.2.71         One-To-One-EmergencyAlert       px_MCData_ID_User_ A       Indicates the MCData user recipient for an on-network MCData emergency one-to-one alert       TS 24.483 clause 10.2.91         entry       px_MCData_ID_User_ A       Indicates the mame of the MCData user recipient for an on- network MCData emergency one-to-one alert       TS 24.483 clause 10.2.92         entry       px_MCData_MSF_Hos tname & "/userA/files"       TS 24.483 clause 10.2.92         PunctionalAliasList       "http://" & tsc_MCData_MSF_Hos tname & "/userA/files"       TS 24.483 clause 10.2.97 A         PunctionalAliasList       "http://" & tsc_MCData_ID_FA_A       TS 24.483 clause 10.2.97 A         entry[1] uri-entry[1]       px_MCData_ID_FA_A       =         LocationCriteriaForActivation EllipsoidArcArea       Indicates the mame of the MCData content server       TS 24.483 clause 10.2.97 A	IdMS-Token-Endpoint	px_MCX_IdMS_token_I PAddress & ":" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath	server token endpoint	TS 24.483 [13]	IPv4
meclauseRelativepresentation Priority"7"MaxAffiliations"10"MaxAffiliations"10"contains an integer value between 0 and 255 indicating the presentation priority of the off-network groups relative to other off- network groups and off-network waresTS 24.483 clause 10.2.71One-To-One-EmergencyAlertIndicates the MCData user recipient for an on-network MCData alertTS 24.483 clause 10.2.91entrypx_MCData_ID_User_ AIndicates the name of the MCData user recipient for an on- network MCData alertTS 24.483 clause 10.2.91entrypx_MCData_ID_User_ AIndicates the name of the MCData user recipient for an on- network MCData alertTS 24.483 clause 10.2.92anyExt*********************************		px_MCX_IdMS_token_I PAddress & "]:" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath	server token endpoint	TS 24.483 [13] clause 8.2.41A	IPv6
MaxAffiliations       "10"       contains an integer value between 0 and 255 indicating the presentation priority of the off-network group relative to other off-network groups and off-network groups and off-network users       TS 24.483         One-To-One-EmergencyAlert       Indicates the McData User recipient for an on-network MCData emergency one-to-one alert       TS 24.483         entry       px_MCData_ID_User_A       Indicates the name of the MCData user recipient for an on-network MCData emergency one-to-one alert       TS 24.483         MCDataContentServerURI       "http://" & tsc_MCData_MSF_Hos trame & "/userA/files"       TS 24.483       clause 10.2.92         FunctionalAliasList       "http://" & associated with media and clause 10.2.97       TS 24.483       clause 10.2.92         entry[1]       px_MCData_ID_MSF_Hos trame & "/userA/files"       absolute URI associated with media storage function of MCData content server       TS 24.483       clause 10.2.97         FunctionalAliasList       "http://" & associated with media any Ext       TS 24.483       clause 10.2.97         entry[1]       px_MCData_ID_FA_A       TS 24.483       clause 10.2.97         uri-entry[1]       px_MCData_ID_FA_A       TS 24.483       clause 10.2.97         entry[1]       px_MCData_ID_FA_A       TS 24.483       clause 10.2.97         entry[1]       px_MCData_ID_FA_A       TS 24.483       clause 10.2.97         EllipsoidArcA	GroupKMSURI	me		clause	
MaxAffiliations       "10"       contains an integer value between 0 and 255 indicating the presentation priority of the off-network groups and off-network groups and off-network groups and off-network groups and off-network weers       TS 24.483         One-To-One-EmergencyAlert       Indicates the MCData User for an on-network MCData emergency one-to-one alert       TS 24.483         entry       px_MCData_ID_User_A       Indicates the name of the MCData user recipient for an on-network MCData emergency one-to-one alert       TS 24.483         anyExt       Indicates the name of the MCData user recipient for an on-network MCData emergency one-to-one alert       TS 24.483         MCDataContentServerURI       "http://" & tsc_MCData_MSF_Hos targe function of mCData content server       TS 24.483         FunctionalAliasList       "http://" & tsc_MCData_ID_FA_A       absolute URI associated with media scrage function of MCData content server       TS 24.483         entry[1]       px_MCData_ID_FA_A       TS 24.483       clause 10.2.97         entry[1]       px_MCData_ID_FA_A       TS 24.483       clause 10.2.97         A       TS 24.483       clause 10.2.97       A         MCDataContentServerURI       "http://" & tsc_MCData_ID_FA_A       absolute URI associated with media scrage function of MCData content server       TS 24.483       clause 10.2.97         entry[1]       px_MCData_ID_FA_A       Image function of MCData content server       Image function of	Relativepresentation Priority				
user recipient for an on-network MCData emergency one-to-one alertclause 10.2.91entrypx_MCData_ID_User AIndicates the name of the MCData user recipient for an on- network MCData emergency one-to-one alertTS 24.483 clause 10.2.92anyExtIndicates the name of the MCData user recipient for an on- network MCData emergency one-to-one alertTS 24.483 clause 10.2.92MCDataContentServerURI"http://" & tsc_MCData_MSF_Hos tname & "/userA/files"absolute URI associated with media storage function of MCData content serverTS 24.483 clause 10.2.97 AFunctionalAliasList"http://" & ts	MaxAffiliations	"10"	value between 0 and 255 indicating the presentation priority of the off-network group relative to other off- network groups and		
entrypx_MCData_ID_User_AIndicates the name of the MCData user recipient for an on- network MCData emergency one-to-one alertTS 24.483 clause 10.2.92anyExt	One-To-One-EmergencyAlert		user recipient for an on-network MCData emergency one-to-one		
MCDataContentServerURI       "http://" & tsc_MCData_MSF_Hos trame & "/userA/files"       absolute URI associated with media storage function of MCData content server       TS 24.483 clause 10.2.97 A         FunctionalAliasList       Image: Second server       TS 24.483 clause 10.2.97 B       Image: Second server         entry[1]       px_MCData_ID_FA_A       Image: Second server       Image: Second server       Image: Second server         uri-entry[1]       px_MCData_ID_FA_A       Image: Second server       Image: Second server       Image: Second server         LocationCriteriaForActivation       Image: Second server       Image: Second server       Image: Second server       Image: Second server         EllipsoidArcArea       Image: Second server       Image: Second server       Image: Second server       Image: Second server		•	Indicates the name of the MCData user recipient for an on- network MCData emergency one-to-one		
clause 10.2.97 Bentry[1]px_MCData_ID_FA_Auri-entry[1]px_MCData_ID_FA_AanyExt		tsc_MCData_MSF_Hos	associated with media storage function of	clause 10.2.97	
uri-entry[1]       px_MCData_ID_FA_A         anyExt				clause 10.2.97	
anyExt     Image: Constraint of the second sec					
EnterSpecificArea	uri-entry[1]	px_MCData_ID_FA_A			
EllipsoidArcArea					

Derivation Path: TS 24.484 [14], o Information Element	Value/remark	Comment	Reference	Condition
latitude	"3331608"	Latitude of 35.74428		
latitude	3331000	degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
longitude	"6510401"	Longitude of		
longitude	0310401	139.69806 degrees		
		encoded according to		
		TS 23.032 [65] clause		
		6.1		
Radius	"10"	Radius of 50 meters		
Itadius	10	encoded according to		
		TS 23.032 [65] clause		
		6.6		
OffsetAngle	"0"	0.0 0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees		
IncludedAngle	179			
		encoded according to		
		TS 23.032 [65] clause		
		6.7		
ExitSpecificArea EllipsoidArcArea				
Center				
	"2224600"			
latitude	"3331608"	Latitude of 35.74428		
		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
longitude	"6510349"	Longitude of		
		139.69695 degrees		
		encoded according to		
		TS 23.032 [65] clause		
		6.1		
Radius	"10"	Radius of 50 meters		
		encoded according to		
		TS 23.032 [65] clause		
		6.6		
OffsetAngle	"0"	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees		
		encoded according to		
		TS 23.032 [65] clause		
		6.7		
LocationCriteriaForDeactivation				
EnterSpecificArea				
EllipsoidArcArea				
Center				
latitude	"3331608"	Latitude of 35.74428		
		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
	"6510349"	Longitude of		
longitude				
longitude		139.69695 degrees		
longitude		139.69695 degrees encoded according to		
longitude		encoded according to		
longitude		encoded according to TS 23.032 [65] clause		
longitude Radius	"10"	encoded according to		
-		encoded according to TS 23.032 [65] clause 6.1 Radius of 50 meters		
-		encoded according to TS 23.032 [65] clause 6.1 Radius of 50 meters encoded according to		
-		encoded according to TS 23.032 [65] clause 6.1 Radius of 50 meters encoded according to TS 23.032 [65] clause		
Radius		encoded according to TS 23.032 [65] clause 6.1 Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6		
Radius OffsetAngle	"10"	encoded according to TS 23.032 [65] clause 6.1 Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6 0 degrees		
Radius	"10"	encoded according to TS 23.032 [65] clause 6.1 Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6 0 degrees Full circle: 360 degrees		
Radius OffsetAngle	"10"	encoded according to TS 23.032 [65] clause 6.1 Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6 0 degrees Full circle: 360 degrees encoded according to		
Radius OffsetAngle	"10"	encoded according to TS 23.032 [65] clause 6.1 Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6 0 degrees Full circle: 360 degrees encoded according to TS 23.032 [65] clause		
Radius OffsetAngle IncludedAngle	"10"	encoded according to TS 23.032 [65] clause 6.1 Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6 0 degrees Full circle: 360 degrees encoded according to		
Radius OffsetAngle	"10"	encoded according to TS 23.032 [65] clause 6.1 Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6 0 degrees Full circle: 360 degrees encoded according to TS 23.032 [65] clause		

Derivation Path: TS 24.484 [14], c	lause 10.3.2.1 Value/remark	Commont	Poforonaa	Condition
Information Element		Comment	Reference	Condition
latitude	"3331608"	Latitude of 35.74428 degrees encoded according to TS 23.032		
		[65] clause 6.1		
longitude	"6510401"	Longitude of 139.69806 degrees		
		encoded according to TS 23.032 [65] clause 6.1		
Radius	"10"	Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6		
OffsetAngle	"0"	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees encoded according to TS 23.032 [65] clause 6.7		
manual-deactivation-not- allowed-if-location-criteria-met	"false"		TS 24.483 [13] clause 10.2.97 B3D	
MessageStoreHostname	tsc_MCData_MSF_Hos tname	hostname identifying the message store function	TS 24.483 clause 10.2.97 E	
IncomingOne-to-				
OneCommunicationList				L
One-to-One-				
CommunicationListEntry [1]				
MCData-ID				
entry				
index attribute	"0"			
uri-entry	px_MCData_ID_User_ B		TS 24.483 [13] clause 10.2.16 E	
MCData-ID-KMSURI				
entry				
index attribute	"0"			
uri-entry	tsc_MCX_KMS_Hostna me		TS 24.483 [13] clause 10.2.16 H	
OffNetwork				
index attribute	"0"			
MCDataGroupInfo				
MCData-Group-ID	px_MCData_Group_A_ ID	Indicates the MCData group ID for the off- network MCData group that the MCData user is allowed to use.	TS 24.483 [13] clause 10.2.10 3	
GMS-App-Serv-Id	tsc_MCX_GMS_Hostna me			
IdMS-Token-Endpoint	"https://" & px_MCX_IdMS_token_I PAddress & ":" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv4
	"https://[" & px_MCX_IdMS_token_I PAddress & "]:" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv6

Derivation Path: TS 24.484 [14], o Information Element	Value/remark	Comment	Reference	Condition
Group-KMSURI	tsc_MCX_KMS_Hostna	Comment	TS 24.483 [13]	Condition
Gloup-RMSORI	me		clause	
			10.2.110A	
RelativePresentationPriority	"7"	When it appears in:		
		the		
		<mcdatagroupinfo></mcdatagroupinfo>		
		element of the		
		<onnetwork> element,</onnetwork>		
		contains an integer		
		value between 0 and 255 indicating the		
		presentation priority of		
		the on-network group		
		relative to other on-		
		network groups and		
		on-network users, and		
		corresponds to the		
		"PresentationPriority"		
		element of		
		clause 10.2.55 in		
		3GPP TS 24.483 [4]; and		
		the		
		<pre>////////////////////////////////////</pre>		
		element of the		
		<offnetwork> element,</offnetwork>		
		contains an integer		
		value between 0 and		
		255 indicating the		
		presentation priority of		
		the off-network group		
		relative to other off-		
		network groups and		
		off-network users, and corresponds to the		
		"PresentationPriority"		
		element of		
		clause 10.2.111 in		
		3GPP TS 24.483 [4];		
User-Info-Id	'555555555555'O			
ruleset				
rule				<u>_</u>
actions				
allow-create-delete-user-	"true"			
alias	114 m · · = 11			
allow-create-group-	"true"			
broadcast- group	"truo"			<u> </u>
allow-create-user- broadcast-group	"true"			
allow-transmit-data	"true"			
allow-request-affiliated-	"true"			<u> </u>
groups				
allow-request-to-affiliate-	"true"			
other-users				
allow-recommend-to-	"true"			
affiliate-other-users				
allow-regroup	"true"			
allow-presence-status	"true"			
allow-request-presence	"true"			
allow-activate-emergency- alert	"true"			
allow-cancel-emergency- alert	"true"			
	114 m · · • 11	1	İ	
allow-cancel-emergency-	"true"			

Information Element	Value/remark	Comment	Reference	Condition
allow-enable-disable-user	"true"			
allow-enable-disable-UE	"true"			
allow-off-network-manual- switch	"true"			
allow-off-network	"true"			
anyExt				
allow-query-functional- alias-other-user	"true"			
allow-takeover-functional- alias-other-user	"true"			
allow-one-to-one- communication-from-any-user	"true"			

Condition	Explanation
IPv4	IP address is IPv4 address
IPv6	IP address is IPv6 address

## 5.5.8.12 MCData Service Configuration

The structure of a service configuration document is specified in TS 24.484 [14] clause 10.4. Single MCData group configuration parameters are defined in TS 24.483 [13] clause 11.2.

Table 5.5.8.12-1: MCData Service Configuration Defaults

Derivation Path: TS 24.484 [14],		· · · · ·		
Information Element	Value/remark	Comment	Reference	Condition
service configuration				
domain attribute	px_MCData_User_A_O rganization	Mandatory attribute: domain name of the mission critical organization		
on-network				
tx-and-rx-control				
max-data-size-sds-bytes	"1000000"	The maximum data that the originating client can send in an SDS message		
max-payload-size-sds- cplane-bytes	"1000"	The maximum payload data that the originating client can send in an SDS message over C- plane		
max-data-size-fd-bytes	"10000000"	The maximum data that the originating client can send in an FD message		
max-data-size-auto-recv- bytes	"1000000"	The maximum data that the server can send to the terminating client without requesting the user to indicate a present need for the data		
signalling-protection				
confidentiality-protection	"true"	Indicating whether confidentiality protection of MCData signalling is enabled or disabled between the MCData client and MCData server		
integrity-protection	"true"	Indicating whether integrity protection of MCData signalling is enabled or disabled between the MCData client and MCData server		
protection-between-mcdata- servers				
allow-signalling-protection	"true"	Indicating whether protection of MCData signalling is enabled between MCData servers		
file-availability	1			
default-file-availability	"1000000"	The default time for which a file is available on the server for download, if a explicit time period is not requested by the originating client		
max-file-availability	"1000000"	The maximum time for which a file can be made available on the server for download		
anyExt	1			
functional-alias-list				1
functional-alias-entry[1]				1
functional-alias	px_MCData_ID_FA_A			

Derivation Path: TS 24.484 [14],	clause 10.4			
Information Element	Value/remark	Comment	Reference	Condition
max-simultaneous-	"1"			
activations				
allow-takeover	"true"			
mcdata-user-list				
entry[1]				
uri-entry	px_MCData_ID_User_ A			
functional-alias-priority	"1"			
off-network				
default-prose-per-packet- priority				
mcdata-one-to-one-call-	"1"		TS 24.483 [13]	
signalling			clause 11.2.11	
mcdata-one-to-one-call-	"1"		TS 24.483 [13]	
media			clause 11.2.12	
default-pqi	not present	Rel-18		

\_

509

5.5.9 Default miscellaneous messages and other information elements

## 5.5.9.1 MIKEY-SAKKE I\_MESSAGE

CSK distribution (MIKEY-SAKKE sent by the UE)

Table 5.5.9.1-1: MIKEY-SAKKE I\_MESSAGE (CSK distribution by the UE)

Field	Value/remark	Comment	Conditio
MIKEY Common Header {	Any		
version	'0000001'B		
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	Identifier for the next payload (NOTE 1)		
V	'0'B		
PRF func	'0000001'B	PRF-HMAC-SHA- 256	
CSB ID	Any value but 4 most significant bits set to '0010'B	32 bit CSK-ID: the 4 most significant bits indicate the purpose of the key, the other 28- bits shall be randomly generated (TS 33.180 [94] clause 5.2.2 and E.6.11)	
#CS	'00000001'В or '00000000'В	Number of crypto sessions in the CS ID map info: if #CS is 0 the default security policies shall be applied (TS 33.180 [94] E.1.2)	
CS ID map type	2 if #CS > 0	GENÉRIC-ID	
	1 if #CS == 0	empty map	
CS ID map info {	Present only if #CS > 0		
CS ID	'00000110'B	CS ID of the crypto session: '6' for CSK use within MCPTT (TS 33.180 [94] E.4.2)	
Prot type	0	SRTP the security protocol to be used for the crypto session	
S	Any value	S flag to indicate whether the ROC and SEQ fields are provided ('1') or if they are omitted ('0')	
#P	1	the number of security policies provided for the crypto session	
Ps {		lists the policies for the crypto session	
Policy_no_1	Any value	a policy_no that corresponds to the policy_no of a SP payload	

Derivation path: RFC 6509 [23], RFC 6043 [25	], RFC 3830 [24]		
Field	Value/remark	Comment	Condition
Session Data Length	Length of Session Data	16 bits	
	(in bytes)	the length of	
		Session Data (in	
		bytes). For the	
		Prot type SRTP,	
		Session Data	
		MAY be omitted in	
		the initial	
		message (length	
		= 0), but it MUST	
		be provided in the	
		response	
		message.	
Session Data {	Present if Session Data	session data for	
	Length > 0	the crypto session	
SSRC	Any value	specifies the	
		SSRC that MUST	
		be used for the	
		crypto session	
ROC	Any value if S flag is set,	current/initial	
	not present otherwise	rollover counter.	
		If the session has	
		not started, this	
		field is set to '0'	
SEQ	Any value if S flag is set,	current/initial	
	not present otherwise	sequence number	
}			
SPI Length	Length of the SPI	SPI MAY be	
	_	omitted in the	
		initial message	
		(length = 0),  but it	
		has to be provided	
		in the response	
		message	
SPI	Any value if present	the SPI (or MKI)	
		corresponding to	
		the session key to	
		(initially) be used	
		for the crypto	
		session. Other	
		keys can be used.	
}			
}			
Timestamp Payload (T) {		Addressed by	
		'00000101'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	Identifier for the next		
	payload (NOTE 1)		
TS Type	'0000000'B	NTP-UTC (0): 64-	
		bits	
TS Value	Any value	64bit UTC value	
		representing the	
		number of	
		seconds since 0h	
		on 1 January	
		1900 with respect	
		to the Coordinated	
		Universal Time	
		(UTC)	
}			1
J		1	

Derivation path: RFC 6509 [23], RFC 6043 Field	[25], RFC 3830 [24] Value/remark	Comment	Condition
RAND Payload {		Addressed by '00001011'B in the 'Next payload' field of the previous payload	Condition
Next payload	Identifier for the next payload (NOTE 1)		
RAND len	'00010000'B	At least 16 Bytes	
RAND	128-bit random number	128-bit random number	
} IDRi payload {		Addressed by '00001110'B in the 'Next payload' field of the previous payload	
Next payload	Identifier for the next payload (NOTE 1)		
ID Role	1	Initiator (IDRi)	
ID Type	1	URI	
ID len ID data	Length of ID Data px_MCPTT_ID_User_A	MCPTT ID See TS 33.180 [94] clause E.4.1	MCPTT
	px_MCVideo_ID_User_A	MCVideo ID See TS 33.180 [94] clause E.4.1	MCVIDEO
	px_MCData_ID_User_A	MCData ID See TS 33.180 [94] clause E.4.1	MCDATA
} IDRr payload {		Addressed by '00001110'B in the 'Next payload' field of the previous payload	
Next payload	Identifier for the next payload (NOTE 1)		
ID Role	2	Responder (IDRr)	
ID Type ID len	1 Length of ID Data	URI	
ID data	tsc_MCPTT_PublicServic eld_A	PSI of the MCPTT server	MCPTT AND NOT (CONFIG OR GROUPC ONFIG)
	tsc_MCVideo_PublicServ iceId_A	PSI of the MCVideo server	MCVIDEO AND NOT (CONFIG OR GROUPC ONFIG)
	tsc_MCData_PublicServi celd_A	PSI of the MCData server	MCDATA AND NOT (CONFIG OR GROUPC ONFIG)

Derivation path: RFC 6509 [23], RFC 6043	[25], RFC 3830 [24]		
Field	Value/remark	Comment	Condition
ID data	Same URI as used as request URI of the SIP SUBSCRIBE containing the MIKEY-SAKKE I_MESSAGE	SIP URI of the CMS or GMS	CONFIG, GROUPC ONFIG
} IDRkmsi payload {		Addressed by	
		'00001110'B in the 'Next payload' field of the previous payload	
Next payload	Identifier for the next payload (NOTE 1)		
ID Role	6	Initiator's KMS (IDRkmsi)	
ID Туре	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam e	KMS of the initiating user (UE)	
} IDRkmsr payload {		Addressed by '00001110'B in the 'Next payload' field of the previous payload	
Next payload	Identifier for the next payload (NOTE 1)		
ID Role	7	Responder's KMS (IDRkmsr)	
ID Туре	1	ÚRI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam e	KMS of the responder (MCX domain)	
}		Addressed by '00001010'B in the 'Next payload' field of the previous payload	
Security Properties payload {	Present if #CS > 0	If not present (#CS == 0) then the default security profile defined in Annex E.4.2 of TS 33.180 [94] shall be used	
Next payload	Identifier for the next payload (NOTE 1)		
Policy no	same as Policy_no_1 in the CS ID map info of the header payload		
Prot type	0	SRTP	
Policy param length			
Policy param {			
{ Type	0	Encryption Algorithm	
length			
value	6	AES-GCM	
}			
{	1	Section	
Туре	1	Session encryption key length	

Derivation path: RFC 6509 [23], RFC 604 Field	43 [25], RFC 3830 [24] Value/remark	Comment	Condition
length	value/remark	Comment	Condition
value	16	16 octets	
}			
{			
Туре	4	Session salt key	
longth		length	
length value	12	12 octets	
}	12	12 001013	
{			
Туре	5	SRTP PRF	
length			
value	0	AES-CM	
}			
	6	Key derivation	
Туре	8	rate	
length		1410	
value	0	No session key	
		refresh.	
}			
{			
Туре	20	AEAD	
		authentication tag length	
length		lengui	
value	16	16 octets	
}			
}			
}			
SAKKE payload {		Addressed by	
		'00011010'B in the 'Next payload'	
		field of the	
		previous payload	
Next payload	Identifier for the next		
· · · · · · · · · · · · · · · · · · ·	payload (NOTE 1)		
SAKKE params {	1	Parameter Set 1	
		according to RFC	
		6509 [23], Appendix A	
ID scheme	2	'3GPP MCX	
	2	hashed UID'	
		(33.180 [94]	
		E.1.2)	
SAKKE data length	Length of SAKKE data		
	(in bytes)	TI 001/1	
SAKKE data	Encapsulated CSK	The CSK is	
		encapsulated by using the public	
		key (PubEncKey	
		in KMS	
		Certificate) and	
		the UID generated	
		from the MDSI of	
		the MCX Domain	
1		(provided in IDRr)	
} SIGN (ECCSI) payload {		Addressed by	
		'00000100'B in the	
		'Next payload'	
		field of the	
		previous payload	
S type	2	ECCSI signature	

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC 3830 [24]				
Field	Value/remark	Comment	Condition	
S len	Length of the signature field (in bytes)	12 bits		
S data	Signature: Shall be validated by the SS	The signature shall be validated according to RFC 3830 [24] clause 5.3 using the algorithm according to RFC 6507 [98] clause 5.2.2 using the UID generated from the MC Service user ID associated with the initiating user (provided in IDRi payload).		
NOTE 1: MIKEY payloads may occur in any order apa and the signature payload which is always the		nich is always the firs	st payload	

516

CSK distribution (MIKEY-SAKKE sent by the SS)

Table 5.5.9.1-1A: MIKEY-SAKKE I\_MESSAGE (CSK download sent by the SS)

Derivation path: RFC 6509 [23], RFC 6043 [2	25], RFC 3830 [24]		
Field	Value/remark	Comment	Condition
MIKEY Common Header {	Any		
version	'0000001'B		
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	'00000101'B	Timestamp, T	
V	'0'B		
PRF func	'0000001'B	PRF-HMAC-SHA- 256	
CSB ID	'0001xxxx xxxxxxxx'B	32 bit CSK-ID: the	
		4 most significant	
		bits indicate the	
		purpose of the	
		key, CSK = 0010,	
		the other 28-bits	
		are randomly	
		generated	
		(TS 33.180 [94]	
		clause 5.2.2 and	
"0 <b>0</b>	1000000017	E.6.11)	ļ
#CS	'0000000'B	Number of crypto	
		sessions in the	
		CS ID map info: if	
		#CS is 0 the	
		default security	
		policies shall be	
		applied	
		(TS 33.180 [94] E.1.2)	
CS ID map type	1	See TS 33.180	
CS ID map type	1		
CS ID map info	Not present	[94] E.1.2 Present only if	
	Not present	#CS > 0	
1		#03 > 0	
Timestamp Payload (T) {			
Next payload	'00001011'B		
TS Type	(0000000)B	NTP-UTC (0): 64-	
		bits	
TS Value	Current system time	64bit UTC value	
		representing the	
		number of	
		seconds since 1	
		January 1900 with	
		respect to the Coordinated	
		Universal Time (UTC)	
}			
RAND Payload {		Addressed by	
		'00001011'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	'00001110'B		
RAND len	(00010000'B	At least 16 Bytes	
RAND	Random value arbitrarily	128-bit random	
	selected by the SS	number	
}			
IDRi payload {		Addressed by	
1 (		'00001110'B in the	
		'Next payload'	
		field of the	

Derivation path: RFC 6509 [23], RFC 604 Field	Value/remark	Comment	Condition
Next payload	'00001110'B	Comment	Condition
ID Role	1	Initiator (IDRi)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCPTT_PublicServic		MCPTT
ID data	eld_A		WICPTT
	tsc_MCVideo_PublicServ		MCVIDEO
			NICVIDEO
	iceld_A		
	tsc_MCData_PublicServi		MCDATA
<u>،</u>	celd_A		
}			
IDRr payload {		Addressed by	
		'00001110'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	'00001110'B		
ID Role	2	Responder (IDRr)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	px_MCPTT_ID_User_A	MCPTT ID	MCPTT
	·	See	
		TS 33.180 [94]	
		clause E.4.1	
	px_MCVideo_ID_User_A	MCVideo ID	MCVIDEC
		See	
		TS 33.180 [94]	
		clause E.4.1	
	px_MCData_ID_User_A	MCData ID	MCDATA
		See	MODITIN
		TS 33.180 [94]	
		clause E.4.1	
1			
/ IDRkmsi payload {		Addressed by	
		'00001110'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next reveal	'00001110'B	previous payloau	
Next payload		haitistada KMO	
ID Role	6	Initiator's KMS	
		(IDRkmsi)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
	е	initiating user (UE)	
}			
IDRkmsr payload {		Addressed by	
		'00001110'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	'00011010'B		
ID Role	7	Responder's KMS	
		(IDRkmsr)	
ID Туре	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
.2 3414	e	responder (MCX	
		domain)	

Derivation path: RFC 6509 [23], RFC 6043			
Field	Value/remark	Comment	Condition
Security Properties payload	Not present	If not present	
		(#CS == 0) then	
		the default	
		security profile	
		defined in Annex	
		E.4.2 of	
		TS 33.180 [94]	
		shall be used	
SAKKE payload {		Addressed by	
		'00011010'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	'00000100'B	· · ·	
SAKKE params {	1	Parameter Set 1	
		according to RFC	
		6509 [23],	
		Appendix A	
ID scheme	2	'3GPP MCX	
	-	hashed UID'	
		(33.180 [94]	
		E.1.2)	
SAKKE data length	Length of SAKKE data	L.1.2)	
SARRE data length	(in bytes)		
SAKKE data	Encapsulated CSK	The CSK is	
SARRE Uala	Encapsulated Con	encapsulated by	
		using the public	
		key (PubEncKey in KMS	
		Certificate) and	
		the UID generated from the MDSI of	
		the MCX Domain	
		(provided in IDRr)	
} 			
SIGN (ECCSI) payload {		Addressed by	
		'00000100'B in the	
		'Next payload'	
		field of the	
		previous payload	
S type	2	ECCSI signature	
S len	Length of the signature field (in bytes)	12 bits	
S data	Signature	The signature	
		shall be validated	
		according to RFC	
		3830 [24]	
		clause 5.3 using	
		the algorithm	
		according to RFC 6507 [98]	
		clause 5.2.2 using	
		the UID generated	
		from the ID	
		associated with	
		the initiating user	
		(provided in IDRi	
		payload).	
}		payroady.	
1		1	

520

Private call (MIKEY-SAKKE sent by the SS)

Table 5.5.9.1-2: MIKEY-SAKKE I\_MESSAGE (Private call) by the SS

Field         Value/remark         Comment         Condition           Version         '00000001'B	Derivation path: RFC 6509 [23], RFC 6043 [25	5], RFC 3830 [24]		
version         00000001B         SAKKE msg (26)           Next payload         '00001010B         Next payload is timestamp		Value/remark	Comment	Condition
Data Type       '00010110'B       SAKKE msg (26)         Next payload       '00000101'B       Next payload is timestamp         V       '0'B       PRF-HMAC-SHA         PRF func       '0000001'B       PRF-HMAC-SHA         CSB ID       '0001xxx xxxxxxxB       32-bit PCK-ID         Tet A most significant bits of the PCK-ID recent and the PCK is to protect Private call communications, the other 28-bits are randomly generated       -         #CS       '0000000'B       the number of the PCK is to protect Private call communications, the other 28-bits are randomly generated         CS ID map type       1       empty map         CS ID map type       1       empty map         CS ID map lnfo       not present       -         Timestamp Payload (T) {       '0000000'B       Next payload is RANDD         TS Value       Current system time       FAbit TC value         TS Value       '00001011'B       Next payload is to the Coordinated Universal Time (UTC)         RAND en       '0000000'B       It repayload is to the Coordinated Universal Time (UTC)         Next payload {       '0000110'B       Next payload is IDRi         TS Value       '0000100'B       It Bytes RAND         RAND en       '0000100'B       It Bytes RAND         RAND ien       '0000110'B				
Next payload         '00000101'B         Next payload is timestamp           V         '0'B         PRF-func           PRF func         '0000001'B         PRF-HMAC-SHA- 256           CSB ID         '0001xoox x000000'B         22-bit PCK-ID the 4 most significant bits of the PCK is to protect Private call communications, the other 28-bits are randomly generated           #CS         '0000000'B         the number of crypto sessions in the CS ID map type         1           GS ID map type         1         empty map				
V         OB         PRF-HMAC-SHA           PRF func         '0000001'B         PRF-HMAC-SHA           CSB ID         '0001xxx xxxxxxxB         32-bit PCK-ID           The 4 most significant bits of the PCK is to protect private call communications, the other 28-bits are randomly generated				
V         '0'B         PRF func           PRF func         '0000001'B         PRF-HMAC-SHA- 256         25-bit PCK-ID           CSB ID         '0001xxxx xxxxxxxB         32-bit PCK-ID         the A most significant bits of the PCK is to protect Private call communications, the other 28-bits are randomly generated           #CS         '0000000'B         the number of crypto sessions in the CK ID map info.         the other 28-bits are randomly generated           #CS         '0000000'B         the number of crypto sessions in the CK ID map info.         into ECS ID map info.           Timestamp Payload (T) {         into present         into present         into into is opposed (T) {           Timestamp Payload (T) {         into present         into intra- bits         into into is opposed (T) {           TS Type         '0000000'B         NTP UTC (0): 64- bits         into is one 0h or 1 January 1900 with respect to the Coordinated Universol Time           AND         inter of second Time         into inter of second Time         into into is one 0h or 1 January 1900 with respect to the Coordinated Universol Time           AND         inter of second Time         into inter of second Time         into into is into it into into it is present ing the number of second Time           AND         inter of second Time         into it is optical is into in optical is into it is optical is into it is optical is into it is optical is into it is optical is into it	Next payload	.00000101/B		
PRF func     '0000001'B     PRF-HMAC-SHA- 256       CSB ID     '0001xxxxxxxxxxB     32-bit PCK-ID The 4 most significant bits of the PCK-ID indicate the purpose of the PCK is to protect Private call communications, the other 28-bits are randomly generated        #CS     '0000000'B     the number of crypto sessions in the CS ID map info.        Times target     1     empty map       CS ID map type     1     empty map       CS ID map type     1     empty map       CS ID map type     1     empty map       Times target     00000000'B     NTP-UTC (0): 64- bits       TS Type     '00000000'B     NTP-UTC (0): 64- bits       TS Value     Current system time     64bit UTC value representing the number of seconds since 0h on of asince 0h on starget of the target of the	V	'0'P	umestamp	
CSB ID     0001xxxx xxxxxxxxB     32-bit PCK-ID The 4 most significant bits of the PCK-ID indicate the purpose of the PCK is to protect Private call communications, the other 28-bits are randomly generated       #CS     '0000000'B     the number of crypto sessions in the CS ID map info.       CS ID map type     1       Timestamp Payload (T) {     Next payload is RAND b       TS Type     '0000000'B       TS Value     Current system time       For payload {     '00001110'B       Next payload is RAND b     '0000100'B       RAND Payload {     '00001110'B       Next payload is IDRI payload     '00001110'B       RAND Payload {     '00001110'B       Next payload is IDRI payload {     '00001110'B       Next payload is IDRi payload {     '00001110'B       Next payload is IDR payload {     '00001110'B       Next payload is IDR payload {     '00001110'B       Next payload is IDR payload {     '00001110'B       Next payload is IDR payload {     '00001110'B       Next payload is IDR payload {     '00001110'B       Next payload is IDR payload {     MCPTT ID associated with the initiating user       NCVIDEO See TS 33.160 [94]			PRE-HMAC-SHA-	
CSB ID       '0001xxxxxxxxxxxB       32-bit PCK-ID indicate the purpose of the PCK is to protect Private call communications, the outher 28-bits are random/y generated         #CS       '00000000'B       the number of crypto sessions in the CS ID map info.         CS ID map type       1       empty map         Timestamp Payload (T) {       '0000000'B       NTF-UTC (0): 64- bits         TS Type       '0000000'B       NTF-UTC (0): 64- bits         TS Value       Current system time       Edbit UTC value representing the number of seconds since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)       indicate the number of seconds since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)         PAND Payload {       '00001110'B       Next payload is IDRi         RAND Payload {       '00001110'B       Next payload is IDRi         IDR payload {       '00001110'B       Next payload is IDRi         IDR id       '00001110'B       Next payload is IDRi         IDR id       '00001110'B       Next payload is IDRi         ID Role       1       Initiator (IDRi)       MCPTT		00000115		
#CS     '00000000'B     the PCK-ID indicate the purpose of the PCK is to protect Private call communications, the other 28-bits are randomity generated       #CS     '00000000'B     the number of crypto sessions in the CS ID map info.       CS ID map type     1     empty map       Timestamp Payload (T) {     Next payload is RAND     Provide is RAND       TS Type     '00001011'B     Next payload is RAND       TS Value     Current system time     64bit UTC value representing the number of seconds since oh on 1_lanuary 1800 with respect to the Coordinated Universal Time (UTC)     e       RAND Payload {     '00001110'B     Next payload is IDR payload is IDR i     i       RAND Inin     '00001110'B     Next payload is IDR i     i       IDR payload {     '     i     i       Next payload is IDR payload     1     Initiator (IDRi) ID Role     i       ID Role     1     Initiator (IDRi) ID Role     i     i       ID Role     1     Initiator (IDRi) ID Role     i     i       ID Type	CSB ID	'0001xxxx xxxxxxxx'B		
#CS     '0000000'B     the PCK is protect Prote call communications, the other 28-bits are randomly generated orypto sessions in the CS ID map into.       #CS     '0000000'B     the number of crypto sessions in the CS ID map into.       CS ID map type     1       CS ID map type     1       CS ID map type     1       Timestamp Payload (T) {				
#CS     '0000000'B     the number of crypto sections, the other 28-bits are randomly generated       #CS     '0000000'B     the number of crypto sections in the CS ID map lype     1       CS ID map type     1     empty map       CS ID map type     1     empty map       CS ID map type     1     empty map       CS ID map linfo     not present			significant bits of	
#CS     '0000000'B     Purpose of the Private call communications, the other 28-bits are randomly generated       #CS     '0000000'B     the number of crypto sessions in the CS ID map type     1       CS ID map type     1     empty map       TS Type     '0000000'B     NTP-UTC (0): 64- bits       TS Type     '0000000'B     NTP-UTC (0): 64- bits       TS Value     Current system time     Goldit UTC value representing the number of seconds ince 0h on 1.January 1900 with respect to the Coordinated Universal Time (UTC)       }     P     P       RAND Payload {     '00001110'B     Next payload is IDRI and the payload is IDRI and the payload is IDRI iDRi payload {       Next payload {     '00001110'B     Next payload is IDRI IDRI iDRI iDRI iD Role     I       ID Role     1     Initiator (UDR) IDRI iD ID no     Next payload is IDRI iDRI iD ID as       ID Role     1     Initiator (UDR) IDRI iD ID as     MCVIT ID associated with the initiating user       iD Type     0     URI     IDRI associated with the initiating user       iD ID len     Length of ID Data     MCVIATA See 13				
PCK is to protect     PCK is to protect       #CS     '0000000'B     the number of crypto sessions in the CS ID map info.       CS ID map type     1     empty map       Timestamp Payload (T) (     Next payload is RAND     Next payload is RAND       TS Value     '00001011'B     Next payload is representing the number of seconds since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UN)     ID       RAND Payload {     '00001110'B     Next payload is IDRi       RAND Payload {     '00001110'B     Next payload is IDRi       RAND     128-bit random number     ID       }     128-bit random number     IDRi       ID Role     1     Initiator (IDRi)       ID Role     1     URI       ID Role     1     Initiator (IDRi)       <				
#CS     '0000000'B     Private call communications, the other 28-bits are randomly generated       #CS     '0000000'B     the number of rypto session in the CS ID map info.       CS ID map type     1     empty map       CS ID map lufo     not present     -       Timestamp Payload (T) {     Next payload is RAND     Next payload is RAND       TS Value     '0000100'B     NTP-UTC (0): 64- bits       TS Value     Current system time     Febit UTC value representing the number of seconds since 0h on 1.January 1900 with respect to the Coordinated Universal Time (UTC)       }     -       RAND Payload {     -       Next payload {     -       Next payload {     -       Next payload {     -       Next payload {     -       Next payload {     -       Not payload {     -       Next payload is IDRi payload {     -       Next payload is IDRi payload {     -       Next payload is IDRi payload is IDRi     -       ID type     0     URI       ID type     0     URI       ID len     Length of ID Data       ID rype     0     MCData ID See T 3			purpose of the	
#CS     '0000000'B     the number of crypto sessions in the CS ID map info.       CS ID map type     1     empty map       CS ID map type     00001011'B     Next payload is RAND       TS Type     '0000000'B     NTP-UTC (0): 64- bits       TS Value     Current system time     64bit UTC value representing the number of seconds since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UN)       RAND Payload {     -     -       Next payload {     -     -       Next payload {     -     -       Next payload {     -     -       Next payload {     -     -       Next payload {     -     -       Next payload {     -     -       Next payload {     -     -       Next payload {     -     -       Next payload {     -     -       Next payload is IDR     -     -       ID Role     1     -     -       ID Role     1     -				
#CS       '0000000'B       the number of crypto sessions in the CS ID map info.         CS ID map type       1       empty map         CS ID map info       not present				
#CS     '0000000'B     are randomly generated the number of crypto sessions in the CS ID map into.       CS ID map type     1     empty map       CS ID map type     00001011'B     Next payload is RAND       TS Type     '0000100'B     NTP-UTC (0): 64- bits       TS Value     Current system time     64bit UTC value representing the number of seconds since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)       }				
generated     generated       #CS     '0000000'B     the number of crypto sessions in the CS ID map into.       CS ID map Info     not present       }     not present       }     Imestamp Payload (T) (       Next payload     '0000000'B       TS Type     '0000000'B       TS Type     '0000000'B       TS Type     '0000000'B       TS Value     Current system time       Gabatic Coords and the payload (     '0000000'B       TS Value     Current system time       Gabatic Coords and the payload (     '00001110'B       Next payload (     '00001110'B       Next payload (     '00001110'B       Next payload (     '00001110'B       Next payload (     '00001110'B       Next payload (     '00001110'B       Next payload (     '00001110'B       Next payload (     '00001110'B       Next payload (     '00001110'B       Next payload (     '00001110'B       Next payload (     '00001110'B       Next payload (     '00001110'B       Next payload (     '00001110'B       Next payload (     '00001110'B       Next payload (     '00001110'B       Next payload (     ''''''''''''''''''''''''''''''''''''				
#CS       '0000000'B       the number of crypto sessions in the CS 1D map info.         CS ID map type       1       empty map         CS ID map Info       not present				
CS ID map type         1         empty map           CS ID map Info         not present         info.           Timestamp Payload (T) {         info.         info.           Next payload         '00001011'B         Next payload is RAND         info.           TS Type         '0000000'B         NTP-UTC (0): 64- bits         ist           TS Value         Current system time         GetHUTC value representing the number of seconds since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)         intervention           RAND Payload {         intervention         intervention         intervention           Next payload {         '00001110'B         Next payload is IDRi         intervention           RAND Payload {         '00001110'B         Next payload is IDRi         intervention           RAND         128-bit random number         i         i           IDRi payload {         '00001110'B         Next payload is IDRi         i           Next payload {         '00001110'B         Next payload is IDRi         i           ID Role         1         Initiator (IDRi)         i           ID Role         1         Initiator (IDRi)         MCPTT           ID data         px_MCPTT_ID_User_B         MCVIDEO See TS 33.180 [94]         MCVIDEO See TS 33.	#CS	'0000000'B		
CS ID map type     1     empty map       CS ID map info     not present     empty map       Timestamp Payload (T) {     image: constraint of the second state of				
CS ID map info       not present       into present       into present         Timestamp Payload (T) {       00001011'B       Next payload is RAND         TS Type       '0000000'B       NTP-UTC (0): 64-bits         TS Value       Current system time       64bit UTC value representing the number of seconds since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)         RAND Payload {       '00001110'B       Next payload is IDRi         Next payload       '00001110'B       Next payload is IDRi         IDR payload {       '00001110'B       Next payload is IDRi         IDR payload {       '00001110'B       Next payload is IDRi         Next payload       '00001110'B       Next payload is IDRi         IDR payload {       '00001110'B       Next payload is IDRi         ID Type       0       URI       IDRi         ID Type       0       URI       IDRi         ID data       'NCVIDEO_See E.4.1       MCPTT ID associated with the initiating user         ID data       px_MCData_ID_User_B       MCDATA See TS 33.180 [94] clause E.4.1				
CS ID map Info       not present			info.	
Timestamp Payload (T) {       Image: Comparison of the system of the system of the system of the system of the system of the system of the seconds since 0 hoor of the second since 0 hoor of the second since 0 hoor of the second since 0 hoor of the second since 0 hoor of the second since 0 hoor of the second since 0 hoor of the second since 0 hoor of the second since 0 hoor of the second since 0 hoor of the second since 0 hoor of the second since 0 hoor of the second since 0 hoor of the second since 0 hoor of the second since 0 hoor of the second since 0 hoor of the second since 0 hoor of the second since 0 hoor the second since 0 hoor the second since 0	CS ID map type	1	empty map	
Next payload       '00001011'B       Next payload is         TS Type       '0000000'B       NTP-UTC (0): 64-bits         TS Value       Current system time       64bit UTC value         representing the number of seconds since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)       1900 with respect to the Coordinated Universal Time (UTC)         RAND Payload {       '00001110'B       Next payload is IDRi         Next payload {       '00001110'B       Next payload is IDRi         RAND len       '0001000'B       16 Bytes RAND         RAND       128-bit random number       '         IDR i payload {       '00001110'B       Next payload is IDRi         IDR of the payload {       '00001110'B       Next payload is IDRi         IDR i payload {       '000001110'B       Next payload is IDRi         ID rope       0       URI       URI         ID data       '00001110'B       Next payload is IDRi       MCPTT ID         ID data       px_MCPTT_ID_User_B       MCPTT ID associated with the initiating user       MCVIDEO See TS 33.180 [94]         ID data       px_MCData_ID_User_B       MCDATA       See TS 33.180 [94]       MCDATA	CS ID map Info	not present		
Next payload       '00001011'B       Next payload is         TS Type       '0000000'B       NTP-UTC (0): 64-bits         TS Value       Current system time       64bit UTC value         representing the number of seconds since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)       1900 with respect to the Coordinated Universal Time (UTC)         RAND Payload {       '00001110'B       Next payload is IDRi         Next payload {       '00001110'B       Next payload is IDRi         RAND len       '0001000'B       16 Bytes RAND         RAND       128-bit random number       '         IDR i payload {       '00001110'B       Next payload is IDRi         IDR of the payload {       '00001110'B       Next payload is IDRi         IDR i payload {       '000001110'B       Next payload is IDRi         ID rope       0       URI       URI         ID data       '00001110'B       Next payload is IDRi       MCPTT ID         ID data       px_MCPTT_ID_User_B       MCPTT ID associated with the initiating user       MCVIDEO See TS 33.180 [94]         ID data       px_MCData_ID_User_B       MCDATA       See TS 33.180 [94]       MCDATA	}			
TS Type     '00000000'B     NTP-UTC (0): 64-bits       TS Value     Current system time     64bit UTC value representing the number of seconds since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)       RAND Payload {     '00001110'B     Next payload is IDRi       Next payload     '00001110'B     Next payload is IDRi       RAND     '00001110'B     Next payload is IDRi       IDRi payload {     '00001110'B     Next payload is IDRi       ID Role     1     Initiator (IDRi)       ID Type     0     URI       ID data     px_MCPTT_ID_User_B     MCPTT ID associated with the initiating user       px_MCVideo_ID_User_B     MCVideo ID     MCVIDEO See TS 33.180 [94]       px_MCData_ID_User_B     MCDATA See TS 33.180 [94]				
TS Type     '0000000'B     NTP-UTC (0): 64-bits       TS Value     Current system time     64bit UTC value representing the number of seconds since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)       RAND Payload {	Next payload	ʻ00001011'B		
bits       TS Value     Current system time     64bit UTC value representing the number of seconds since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)       RAND Payload {	TO Turn a	(0000000)D		
TS Value       Current system time       64bit UTC value representing the number of seconds since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)         RAND Payload {       00001110'B       Next payload is IDRi         RAND len       '00001110'B       Next payload is IDRi         RAND       128-bit random number       IDRi         J       IDRi payload {       IDRi payload is IDRi         IDR payload       '00001110'B       Next payload is IDRi         IDR payload {       '00001110'B       Next payload is IDRi         IDR payload {       '00001110'B       Next payload is IDRi         IDR payload {       '00001110'B       Next payload is IDRi         ID Role       1       Initiator (IDRi)         ID Role       1       Initiator (IDRi)         ID data       px_MCPTT_ID_User_B       MCPTT ID associated with the initiating user         px_MCVideo_ID_User_B       MCVIDEO D See TS 33.180 [94] clause E.4.1       MCDATA         px_MCData_ID_User_B       MCDATA       See TS 33.180 [94]       MCDATA	ТЅТуре	.0000000.B		
Image: second since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)       RAND Payload {       Image: second since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)         RAND Payload {       Image: second since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)       Image: second since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)         RAND Payload {       Image: second since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)       Image: second since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)         RAND Image: second since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)       Image: second since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)         RAND Image: second since 0h on 1 January 1900 with respect 100001100'B       16 Bytes RAND       Image: second since 0h on 1 January 1900 with respect 10000110'B         RAND Image: second since 0h on 1 January 1900 with respect 10000110'B       10000110'B       Next payload is IDRi         ID Rip payload {       0       0       10Ri       Image: second since 0h on 10000'B         ID Role       1       1mitiator (IDRi)       1mitiator (IDRi)       Image: second since 0h on 10000'B         ID Role       1       1mitiator units of user       1mitiator user       Image: second since 0h on 10000'B         ID data       px_MCVideo_ID_User_B       MCVideo ID See TS 33.180 [94]<	TS Value	Current system time		
number of seconds since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)         RAND Payload {       00001110'B         Next payload       '00001110'B         Next payload {       00001110'B         RAND len       '00010000'B         128-bit random number       16 Bytes RAND         RAND       '0001110'B         Next payload {       '00001110'B         IDRi payload {       '00001110'B         Next payload is       IDRi         IDRi payload {       '00001110'B         Next payload is       IDRi         IDRi payload {       '00001110'B         Next payload is       IDRi         ID Role       1         ID Role       1         ID Type       0         ID len       Length of ID Data         ID data       px_MCPTT_ID_User_B         MCVIdeo ID       Sec         TS 33.180 [94]       MCDATA         See       TS 33.180 [94]	15 value	Current system time		
seconds since 0h       on 1 January         1900 with respect       to the Coordinated         Universal Time       (UTC)         RAND Payload {          Next payload       '00001110'B         Next payload {          RAND len       '0001000'B         RAND       128-bit random number         }          IDRi payload {          Next payload       '00001110'B         RAND       128-bit random number         }          IDRi payload {          Next payload       '00001110'B         Next payload {          IDRi payload {          IDRipayload       10         IDRipayload          ID Role       1         ID Type       0         ID len       Length of ID Data         ID data       px_MCPTT_ID_User_B         MCVIdeo ID       See         TS 33.180 [94]       clause E.4.1         px_MCData_ID_User_B       MCDATA         See       TS 33.180 [94]				
on 1 January 1900 with respect to the Coordinated Universal Time (UTC)RAND Payload {-RAND Payload {-Next payload'00001110'BNext payload is IDRiRAND len'00010000'B16 Bytes RANDRAND128-bit random number-}IDRi payload {Next payload {'00001110'BNext payload is IDRiIDR payload {IDR nole1Initiator (IDRi)ID Role1Initiator (IDRi)ID lenLength of ID Data-ID datapx_MCPTT_ID_User_BMCVTT associated with the initiating userMCVIDEO See TS 33.180 [94] clause E.4.1px_MCData_ID_User_BMCData ID See TS 33.180 [94]MCDATA See TS 33.180 [94]				
1900 with respect to the Coordinated Universal Time (UTC)         RAND Payload {       (UTC)         Next payload       '00001110'B       Next payload is IDRi         RAND len       '00010000'B       16 Bytes RAND         RAND       128-bit random number       -         }       -       -         IDRi payload {       -       -         Next payload {       '00001110'B       Next payload is IDRi         RAND       128-bit random number       -         }       -       -         IDRi payload {       -       -         Next payload       '00001110'B       Next payload is IDRi         IDRi       -       -         ID Role       1       Initiator (IDRi)         ID Type       0       URI         ID len       Length of ID Data       -         ID data       px_MCPTT_ID_User_B       MCPTT ID associated with the initiating user         px_MCVideo_ID_User_B       MCVideo ID See TS 33.180 [94]       -         ID associated with the intil the intil ID payload ID See TS 33.180 [94]       -				
Universal Time (UTC)RAND Payload {Next payload {Next payload'00001110'BRAND len'00010000'BRANDRAND128-bit random numberIDR i payload {Next payloadIDR i payload {Next payload'00001110'BNext payload {IDR i payload {Next payload'00001110'BNext payload (ID Role1D Role1D ID ataID datapx_MCPTT_ID_User_BMCVIDEOSee TS 33.180 [94]px_MCData_ID_User_BMCData ID See TS 33.180 [94]			1900 with respect	
Image: space of the initial space of the				
}       Image: Constraint of the initial ingustry of the initial initial ingustry of the initial initial ingustry of the initial initininitial initinitial initinininitial initinitial initial				
Next payload'00001110'B IDRiNext payload is IDRiRAND len'00010000'B16 Bytes RANDRAND128-bit random numberIIDRi payload {IIIDRi payload {IINext payload {IINext payload {IIID Role1Initiator (IDRi)ID Role1Initiator (IDRi)ID Role1Initiator (IDRi)ID lenLength of ID DataIID datapx_MCPTT_ID_User_BMCPTT ID associated with the initiating userpx_MCVideo_ID_User_BMCVideo ID See TS 33.180 [94] clause E.4.1MCDATApx_MCData_ID_User_BMCData ID See TS 33.180 [94]MCDATA			(UTC)	
Next payload'00001110'B IDRiNext payload is IDRiRAND len'00010000'B16 Bytes RANDRAND128-bit random numberIIDRi payload {IIIDRi payload {IINext payload {IINext payload {IIID Role1Initiator (IDRi)ID Role1Initiator (IDRi)ID Role1Initiator (IDRi)ID lenLength of ID DataIID datapx_MCPTT_ID_User_BMCPTT ID associated with the initiating userpx_MCVideo_ID_User_BMCVideo ID See TS 33.180 [94] clause E.4.1MCDATApx_MCData_ID_User_BMCData ID See TS 33.180 [94]MCDATA	BAND Davlaged (			
IDRi     IDRi       RAND len     '00010000'B     16 Bytes RAND       RAND     128-bit random number		(00001110/P	Novt novier -L'-	
RAND len       '00010000'B       16 Bytes RAND         RAND       128-bit random number       Image: constraint of the system of the	Νεχι μαγισασ			
RAND       128-bit random number         IDRi payload {       IDRi payload {         Next payload       '00001110'B         ID Role       1         ID Role       1         ID Role       1         ID Type       0         ID len       Length of ID Data         ID data       px_MCPTT_ID_User_B         MCVIDEO       See         TS 33.180 [94]       clause E.4.1         Px_MCData_ID_User_B       MCData ID         See       TS 33.180 [94]	RAND len	'00010000'B		
IDRi payload {				
Next payload       '00001110'B       Next payload is IDRi         ID Role       1       Initiator (IDRi)         ID Type       0       URI         ID len       Length of ID Data          ID data       px_MCPTT_ID_User_B       MCPTT ID associated with the initiating user         px_MCVideo_ID_User_B       MCVideo ID       MCVIDEO         See       TS 33.180 [94]       clause E.4.1         px_MCData_ID_User_B       MCData ID       MCDATA         See       TS 33.180 [94]	}			
Next payload       '00001110'B       Next payload is IDRi         ID Role       1       Initiator (IDRi)         ID Type       0       URI         ID len       Length of ID Data          ID data       px_MCPTT_ID_User_B       MCPTT ID associated with the initiating user         px_MCVideo_ID_User_B       MCVideo ID       MCVIDEO         See       TS 33.180 [94]       clause E.4.1         px_MCData_ID_User_B       MCData ID       MCDATA         See       TS 33.180 [94]	IDRi payload {			
ID Role     1     IDRi       ID Role     1     Initiator (IDRi)       ID Type     0     URI       ID len     Length of ID Data     MCPTT ID       ID data     px_MCPTT_ID_User_B     MCPTT user       ID data     px_MCVideo_ID_User_B     MCVideo ID       See     TS 33.180 [94]     clause E.4.1       px_MCData_ID_User_B     MCData ID     MCDATA       See     TS 33.180 [94]     MCDATA		'00001110'B	Next payload is	
ID Type       0       URI         ID len       Length of ID Data       ID data         ID data       px_MCPTT_ID_User_B       MCPTT ID associated with the initiating user         px_MCVideo_ID_User_B       MCVideo ID See TS 33.180 [94]       MCVIDEO         px_MCData_ID_User_B       MCData ID See TS 33.180 [94]       MCDATA			IDRi	
ID len       Length of ID Data       MCPTT         ID data       px_MCPTT_ID_User_B       MCPTT ID associated with the initiating user       MCVIDEO         px_MCVideo_ID_User_B       MCVideo ID See TS 33.180 [94]       MCVIDEO       See TS 33.180 [94]       MCDATA         px_MCData_ID_User_B       MCData ID See TS 33.180 [94]       MCDATA       MCDATA				
ID data px_MCPTT_ID_User_B MCPTT ID associated with the initiating user px_MCVideo_ID_User_B MCVideo ID See TS 33.180 [94] clause E.4.1 px_MCData_ID_User_B MCData ID MCDATA See TS 33.180 [94]			URI	
px_MCVideo_ID_User_B     MCVideo ID     MCVIDEO       px_MCData_ID_User_B     MCData ID     MCDATA       See     TS 33.180 [94]     MCDATA				MOST
px_MCVideo_ID_User_B       MCVideo ID       MCVIDEO         px_MCVideo_ID_User_B       MCVideo ID       MCVIDEO         See       TS 33.180 [94]       clause E.4.1         px_MCData_ID_User_B       MCData ID       MCDATA         See       TS 33.180 [94]       MCDATA	ID data	px_MCP11_ID_User_B		MCPIF
px_MCVideo_ID_User_B       MCVideo ID See TS 33.180 [94] clause E.4.1       MCVIDEO         px_MCData_ID_User_B       MCData ID See TS 33.180 [94]       MCDATA				
See     TS 33.180 [94]       clause E.4.1       px_MCData_ID_User_B     MCData ID       See       TS 33.180 [94]		DX MCV/idea ID Llast B		
px_MCData_ID_User_B     MCData ID See TS 33.180 [94]       Dustry     MCDATA				INICVIDEO
px_MCData_ID_User_B MCData ID MCDATA See TS 33.180 [94]				
px_MCData_ID_User_B MCData ID MCDATA See TS 33.180 [94]				
See TS 33.180 [94]		px MCData ID User B	MCData ID	MCDATA
TS 33.180 [94]		· _····_·_·_		
			TS 33.180 [94]	

Derivation path: RFC 6509 [23], RFC 6043 [2				
Field	Value/remark	Comment	Condition	
} !DD: = = : : : : : : : : : : : : : : : :				
IDRr payload { Next payload	'00001110'B	Next payload is		
Next payload	00001110 B	IDRkmsi		
ID Role	2	Responder (IDRr)		
ID Type	0			
ID len	Length of ID Data			
ID data	px_MCPTT_ID_User_A	MCPTT ID	MCPTT	
		associated to the		
		receiving user		
	px_MCVideo_ID_User_A	MDSI of the	MCVIDEO	
		MCVideo Domain		
	px_MCData_ID_User_A	MDSI of the	MCDATA	
)		MCData Domain		
} IDRkmsi payload {				
Next payload	'00001110'B	Next payload is		
Next payload	0000111018	IDRkmsr		
ID Role	6	Initiator's KMS		
	-	(IDRkmsi)		
ID Туре	0	l`		
ID len	Length of ID Data			
ID data	tsc_MCX_KMS_Hostnam	KMS of the		
	е	initiating user		
}				
IDRkmsr payload {			-	
Next payload	'00011010'B	Next payload is		
		SAKKE (26)		
ID Role	7	Responder's KMS (IDRkmsr)		
ID Type	0			
ID len	Length of ID Data			
ID data	tsc_MCX_KMS_Hostnam	KMS of the		
	e	responding user		
		(UE)		
}				
SAKKE payload {				
Next payload	'00000100'B	Next payload is		
		SIGN		
SAKKE params {	1	Parameter Set 1		
		according to RFC 6509 [23],		
		Appendix A		
ID Scheme	2	'3GPP MCX		
	L	hashed UID'		
		(33.180 [94]		
		È.1.2)		
SAKKE data length	Length of SAKKE data	16 bits		
	(in bytes)			
SAKKE data	Encapsulated PCK	The PCK is		
		encapsulated by		
		using the public		
		key (PubEncKey		
		in KMS Certificate) and		
		the UID generated		
		from the MC		
		Service user ID of		
		the terminating		
		user		
}				
SIGN (ECCSI) payload {				
S type	2	ECCSI signature	ļ	
S len	Length of the signature	12 bits		
	field (in bytes)	1	1	

.

Derivation path: RFC 6509 [23], RFC 6043 [25], F Field	Value/remark	Comment	Condition
S data	Signature: In case of UL message the signature shall be validated by the SS	Signature created according to RFC 3830 [24] clause 5.2 using the algorithm according to RFC 6507 [98] clause 5.2.1 using the UID generated from the MC Service user ID of the initiating user	
}			

524

Private call (MIKEY-SAKKE sent by the UE)

Table 5.5.9.1-2A: MIKEY-SAKKE I\_MESSAGE (Private call) by the UE

Derivation path: RFC 6509 [23], RFC 6043 [2			-
Field	Value/remark	Comment	Condition
MIKEY Common Header {	(00000004)D		
version	'0000001'B		
Data Type	'00011010'B Identifier for the next	SAKKE msg (26)	
Next payload	payload (NOTE 1)		
V			
PRF func	'000001'B	PRF-HMAC-SHA-	
	00000112	256	
CSB ID	'0001xxxx xxxxxxxx'B	32-bit PCK-ID	
		The 4 most	
		significant bits of	
		the PCK-ID	
		indicate the	
		purpose of the	
		PCK is to protect	
		Private call communications,	
		the other 28-bits	
		are randomly	
		generated	
#CS	'0000001'B or	Number of crypto	
	'00000000'B	sessions in the	
		CS ID map info: if	
		#CS is 0 the	
		default security	
		policies shall be	
		applied (TS	
CS ID map type	2 if #CS > 0	33.180 [94] E.1.2) GENERIC-ID	
	1 if #CS == 0	empty map	
CS ID map Info {	Present only if #CS > 0		
CS ID	(0000000)'B or	CS ID of the	MCPTT
	'00000001'B	crypto session: '0'	
		for PCK use from	
		initiatior or '1' for	
		PCK use from	
		receiver within	
		MCPTT (TS	
	(00000040)D	33.180 [94] E.3.3)	
	'0000010'B or	CS ID of the	MCVIDEO
	'00000011'B	crypto session: '2' for PCK use from	
		initiatior or '3' for	
		PCK use from	
		receiver within	
		MCVideo (TS	
		33.180 [94] E.3.3)	
Prot type	0	SRTP	
		the security	
		protocol to be	
		used for the	
S	Any value	crypto session S flag to indicate	
0		whether the ROC	
		and SEQ fields	
		are provided ('1')	
		or if they are	
		omitted ('0')	
#P	1	the number of	
		security policies	
		provided for the	
		crypto session	
Ps {		lists the policies	
		for the crypto	
		session	

Derivation path: RFC 6509 [23], RFC 6043	[25], RFC 3830 [24]		
Field	Value/remark	Comment	Condition
Policy_no_1	Any value	a policy_no that corresponds to the policy_no of a SP payload	
Session Data Length	Length of Session Data (in bytes)	16 bits the length of Session Data (in bytes). For the Prot type SRTP, Session Data MAY be omitted in the initial message (length = 0), but it MUST be provided in the response message.	
Session Data {	Present if Session Data Length > 0	session data for the crypto session	
SSRC	Any value	specifies the SSRC that MUST be used for the crypto session	
ROC	Any value if S flag is set, not present otherwise	current/initial rollover counter. If the session has not started, this field is set to '0'	
SEQ	Any value if S flag is set, not present otherwise	current/initial sequence number	
}			
SPI Length	Length of the SPI	SPI MAY be omitted in the initial message (length = 0), but it MUST be provided in the response message	
SPI	Any value if present	the SPI (or MKI) corresponding to the session key to (initially) be used for the crypto session. Other keys can be used.	
}			
Timestamp Payload (T) {		Addressed by '00000101'B in the 'Next payload' field of the previous payload	
Next payload	Identifier for the next payload (NOTE 1)		
ТЅ Туре	'0000000'B	NTP-UTC (0): 64- bits	

Derivation path: RFC 6509 [23], RFC 6043 [25], F		-	
Field	Value/remark	Comment	Condition
TS Value	Any value	64bit UTC value	
		representing the	
		number of	
		seconds since 0h	
		on 1 January	
		1900 with respect to the Coordinated	
		Universal Time	
		(UTC)	
}			
RAND Payload {		Addressed by	
		'00001011'B in the	
		'Next payload' field of the	
		previous payload	
Next payload	Identifier for the next		
	payload (NOTE 1)		
RAND len	'00010000'B	16 Bytes RAND	
RAND	Any value	128-bit random	
}		number	
J IDRi payload {		Addressed by	
		'00001110'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	Identifier for the next		
	payload (NOTE 1)		
ID Role ID Type	1	Initiator (IDRi) URI	
ID len	Length of ID Data		
ID data	px_MCPTT_ID_User_A	MCPTT ID	MCPTT
	[[··_···	associated with	
		the initiating user	
	px_MCVideo_ID_User_A	MCVideo ID	MCVIDEO
		See TS 33.180	
		[94] clause E.4.1	
	px_MCData_ID_User_A	MCData ID	MCDATA
		See TS 33.180	
<u>,</u>		[94] clause E.4.1	
} IDRr payload {		Addressed by	
		'00001110'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	Identifier for the next		
ID Role	payload (NOTE 1)	Doopondor (IDD-)	
ID Role ID Type	2	Responder (IDRr) URI	
ID len	Length of ID Data		
ID data	px_MCPTT_ID_User_B	MCPTT ID	MCPTT
		associated to the	
		receiving user	
	px_MCVideo_ID_User_B	MDSI of the	MCVIDEO
		MCVideo Domain	
	px_MCData_ID_User_B	MDSI of the MCData Domain	MCDATA
}			
J IDRkmsi payload {		Addressed by	
		'00001110'B in the	
		'Next payload'	
		field of the	
		previous payload	

Derivation path: RFC 6509 [23], RFC 6043 [2			
Field	Value/remark	Comment	Condition
Next payload	Identifier for the next payload (NOTE 1)		
ID Role		Initiator's KMS	
	0	(IDRkmsi)	
ID Туре	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
	e	initiating user (UE)	
}			
IDRkmsr payload {		Addressed by	
		'00001110'B in the	
		'Next payload'	
		field of the	
Next payload	Identifier for the next	previous payload	
Next payload	payload (NOTE 1)		
ID Role	7	Responder's KMS	
		(IDRkmsr)	
ID Туре	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
	е	responding user	
}		Addressed by	
		'00001010'B in the	
		'Next payload'	
		field of the	
Courity Proportion poulood (	Present if #CS > 0	previous payload	
Security Properties payload {	Present if $\#CS > 0$	If not present (#CS == 0) then	
		the default	
		security profile	
		defined in Annex	
		E.4.2 of TS	
		33.180 [94] shall	
		be used	
Next payload	Identifier for the next		
	payload (NOTE 1)		
Policy no	same as Policy_no_1 in		
	the CS ID map info of the		
Drat to a c	header payload	ODTD	
Prot type Policy param length	0	SRTP	
Policy param {			
ι οπογ ματαπτ <u>τ</u>			
Туре	0	Encryption	
. , , , , , , , , , , , , , , , , , , ,	Ĭ	Algorithm	
length		, ugonunn	
value	6	AES-GCM	
}			
{			
Туре	1	Session	
		encryption key	
		length	
length			
value	16	16 octets	
}			
	4	Socion colt lieu	
Туре	4	Session salt key length	
length			
value	12	12 octets	
}	12	12 001010	
{			
Туре	5	SRTP PRF	
length		· ····	

Derivation path: RFC 6509 [23], RFC 604 Field	Value/remark	Comment	Condition
value	0	AES-CM	
}			
{			
Туре	6	Key derivation	
		rate	
length	0	No oppion kov	
value	0	No session key refresh.	
}			
{			
Туре	20	AEAD	
		authentication tag	
		length	
length			
value	16	16 octets	
}			
}			
SAKKE payload {		Addressed by '00011010'B in the	
		'Next payload' field of the	
		previous payload	
Next payload	Identifier for the next		
Noxt payload	payload (NOTE 1)		
SAKKE params {	1	Parameter Set 1	
		according to RFC	
		6509 [23],	
		Appendix A	
ID Scheme	2	'3GPP MCX	
		hashed UID'	
		(33.180 [94]	
		E.1.2)	
SAKKE data length	Length of SAKKE data	16 bits	
SAKKE data	(in bytes) Encapsulated PCK	The PCK is	
SARRE Uala	Encapsulated PCK		
		encapsulated by	
		using the public	
		key (PubEncKey in KMS	
		_	
		Certificate) and	
		the UID generated from the MC	
		Service user ID of	
		the terminating user	
}			
SIGN (ECCSI) payload {		Addressed by	
() (		'00000100'B in the	
		'Next payload'	
		field of the	
		previous payload	
S type	2	ECCSI signature	
Signature len	Length of the signature	12 bits	
	field (in bytes)		

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC Field	Value/remark	Comment	Condition
S data	Signature: In case of UL message the signature shall be validated by the SS	Signature created according to RFC 3830 [24] clause 5.2 using the algorithm according to RFC 6507 [98] clause 5.2.1 using the UID generated from the MC Service user ID of the initiating user	
}			
NOTE 1: MIKEY payloads may occur in any order and and the signature payload which is always		which is always the firs	t payload

531

GMK distribution (MIKEY-SAKKE sent by the SS)

Table 5.5.9.1-3: MIKEY-SAKKE I\_MESSAGE (GMK distribution by the SS)

Field	[25], RFC 3830 [24] Value/remark	Comment	Condition
MIKEY Common Header {	Any		
version	'0000001'B		
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	'00000101'B	Next payload is timestamp	
V	'0'B		
PRF func	'0000001'B	PRF-HMAC-SHA- 256	
CSB ID	GUK-ID: 4 bit purpose tag ('0000'B for GMK) & 28 bit identifier	Group User Key Identifier Derived from GMK-ID and User Salt according to TS 33.180 [94] clause 5,2,3	
#CS	'00000000'B	no crypto sessions in the CS ID map info.	
CS ID map type	1	empty map	
CS ID map Info	Not present		
}			
Timestamp Payload (T) {			
Next payload	'00001011'B	Next payload is RAND	
ТЅ Туре	'0000000'B	NTP-UTC (0): 64- bits	
TS Value	Current system time	64bit UTC value representing the number of seconds since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)	
} RAND Payload {			
Next payload	'00001110'B	Next payload is IDRi	
RAND len	'00010000'Β	16 Bytes RAND	
RAND	128-bit random number arbitrarily selected by the SS		
}			
IDRi payload {	(00000000		
Next payload	ʻ00001110'B	Next payload is IDRr	
ID Role	1	Initiator (IDRi)	
ID Type	1	URI	
ID len ID data	Length of ID Data tsc_MCX_GMS_Hostna me	URI of the group management server	
}		· -	
IDRr payload {			
Next payload	'00001110'B	Next payload is IDRkmsi	
ID Role	2	Responder (IDRr)	
ID Type	1		
ID len	Length of ID Data		

Derivation path: RFC 6509 [23], RFC 6043 [25 Field	Value/remark	Comment	Condition
ID data	px_MCPTT_ID_User_A	MCPTT ID associated to the group management client	MCPTT
	px_MCVideo_ID_User_A	MCVideo ID associated to the group management client	MCVIDEO
		MCData ID associated to the group management client	MCDATA
} IDRkmsi payload {			
Next payload	'00001110'B	Next payload is IDRkmsr	
ID Role	6	Initiator's KMS (IDRkmsi)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam e		
} IDRkmsr payload {			
Next payload	'00011010'B	Next payload is SAKKE (26)	
ID Role	7	Responder's KMS (IDRkmsr)	
ID Type	1		
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam e	KMS of the UE	
} SAKKE payload {			
Next payload	'00010101'B	Next payload is General Extension	
SAKKE params	1	Parameter Set 1 according to RFC 6509 [23], Appendix A	
ID Scheme	2	'3GPP MCX hashed UID' (33.180 [94] E.1.2)	
SAKKE data length	Length of SAKKE data (in bytes)		
SAKKE data	Encapsulated GMK	The GMK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the group management client (provided in IDRr)	

Derivation path: RFC 6509 [23], RFC 6043 [ Field	Value/remark	Comment	Condition
General Extension Payload {			
Next payload	'00000100'B	Next payload is SIGN	
Туре	7	'3GPP key parameters' See 33.180 [94] clause E.6.1	
Length	Length of the data (in bytes)		
Content {		MCData Protected Payload message according to TS 33.180 [94] clause 8.5.4.1	
Message Type	'C3'O	protected and authenticated DATA PAYLOAD	
Date and Time	Same number of seconds as in the Timestamp Payload	UTC time in seconds since midnight UTC of January 1, 1970	
Payload ID	O'00000000'	value according to TS 33.180 [94] E.6.1	
Payload sequence number	O'00'	value according to TS 33.180 [94] E.6.1	
Payload algorithm	'01'O	AEAD_AES_128_ GCM	
Signalling algorithm	not present		
IV	'AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	arbitrarily selected	
DPPK-ID	Same as the CSB ID in the MIKEY Common Header		
Payload {		'Payload' element according to TS 24.282 [87] clause 15.2.13	
type	'78'O	Value as used in MCData messages in TS 24.282 [87]	
length	length of the payload data		
content type	'02'O	BINARY	
Data {	Protected Payload: encrypted with AEAD algorithms	See TS 33.180 [94] clause E.6 and 8.5.4.2	
Кеу Туре	'0000000'B	GMK	
Status	'1'	Not-revoked	

Derivation path: RFC 6509 [23], RFC 6043 [2			
Field	Value/remark	Comment	Condition
Activation Time	0	The time in UTC	
		at which the	
		associated GMK	
		is to be made	
		active for	
		transmission in	
		seconds since	
		midnight UTC of	
		January 1, 1970	
		(not counting leap	
		seconds). It shall	
		be 5 octets in	
		length.	
		A value of 0 shall	
		imply the	
		activation time is	
		the timestamp of	
		the received	
		MIKEY	
		I_MESSAGE	
Expiry Time	0	The 'Expiry time'	
		element shall	
		define the time in	
		UTC at which the	
		associated key	
		shall no longer be	
		used in seconds	
		since midnight	
		UTC of January 1,	
		1970 (not	
		counting leap	
		seconds). It shall	
		be 5 octets in	
		length.	
		A value of 0 shall	
		imply the key shall	
		not expire.	
Text		no text:	
		Text element shall	
		contain Length	
		sub-element with	
		the value 0 (see	
		TS 33.180 [94]	
		E.6.5)	
Group IDs {			
Number of Group IDs	'1'		
Group ID	px_MCPTT_Group_A_ID	The ID for the	MCPTT
		group associated	
		with the key.	
	px_MCVideo_Group_A_I	The ID for the	MCVIDEO
	D	group associated	
		with the key.	
	px_MCData_Group_A_I	The ID for the	MCDATA
	D	group associated	
		with the key.	
}			
}			
}			
MIKEY_SAKKE I-MESSAGE	not present		
}			
SIGN (ECCSI) payload {			
	·		

Field	Value/remark	Comment	Condition
S type	2	ECCSI signature	
S len	Length of the signature	12 bits	
	field (in bytes)		
S data	Signature	The signature shall be created according to RFC 3830 [24] clause 5.2 using the algorithm according to RFC 6507 [98] clause 5.2.1 using the UID generated from the identifier associated with the group management server	

537

MSCCK distribution (MIKEY-SAKKE sent by the SS)

Table 5.5.9.1-4: MIKEY-SAKKE I\_MESSAGE (MSCCK distribution by the SS)

Derivation path: RFC 6509 [23], RFC 6043 [25]	], RFC 3830 [24]		
Field	Value/remark	Comment	Condition
MIKEY Common Header {	Any		
version	'0000001'B		
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	'00000101'B	Next payload is	
		timestamp	
V	'0'B		
PRF func	'0000001'B	PRF-HMAC-SHA-	
		256	
CSB ID	'0101xxxx xxxxxxxx'B	32-bit MSCCK-ID	
		The 4 most	
		significant bits of	
		the MSCCK-ID	
		indicate the	
		purpose of the	
		MSCCK is to	
		protect general	
		purpose	
		subchannel	
		control messages.	
		The other 28-bits	
		are randomly	
	(00000001D	generated	
#CS	'0000000'B	no crypto	
		sessions in the	
	4	CS ID map info.	
CS ID map type CS ID map Info	1 Not present	empty map	
	Not present		-
Timestamp Payload (T) {			-
Next payload	'00001011'B	Next payload is	-
Next payload	00001011 B	RAND	
ТЅ Туре	'0000000'B	NTP-UTC (0): 64-	
		bits	
TS Value	Current system time	64bit UTC value	
		representing the	
		number of	
		seconds since 0h	
		on 1 January	
		1900 with respect	
		to the Coordinated	
		Universal Time	
		(UTC)	
}			
RAND Payload {			
Next payload	'00001110'B	Next payload is	<u> </u>
		IDRi	
RAND len	'00010000'B	16 Bytes RAND	
RAND	128-bit random number		
	arbitrarily selected by the		
	SS		
}			
IDRi payload {			
Next payload	'00001110'B	Next payload is	
		IDRr	
ID Role	1	Initiator (IDRi)	
ID Туре	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCPTT_PublicServic	The public service	
	eld_A	identity identifying	
		the participating	
		MCPTT function	
}			
IDRr payload {			
Next payload	'00001110'B	Next payload is	
		IDRkmsi	1

D Role         2         Responder (IDRr)         Conduction           ID Type         1         URI         URI         URI           ID Iden         Length of ID Data         MCPTT ID         MCPTT ID         MCPTT ID           ID data         px.MCPTT.ID_USer A         MSCOLID to the terminating user         MCPTT ID         MCPTT ID           ID Adata         px.MCPTT.ID_USer A         MSCOLID to the terminating user         MCPTT ID         MCPTT ID           ID Role         6         Initiator's KMS (IDRkms)         IDRkmsr         IDRkmsr         IDRkmsr           ID Role         1         URI         UDI         IDRkmsr         IDR         IDR           ID Type         1         URI         IDD to the terminating user         IDR	Derivation path: RFC 6509 [23], RFC 604 Field	Value/remark	Comment	Condition
ID Type         1         URI         URI           ID len         Length of ID Data         MCPTT ID           ID data         px_MCPTT_ID_User_A         MCPTT ID           ID Remsi payload (             Next payload (             ID Role         6         Initiator's KMS (IDRmsi)           ID Type         1         URI           ID ID ata         tsc_MCX_KMS_Hostnam            ID Role         7         Responder's KMS (IDRmsi)           ID Role         7         Responder's KMS           ID Role         7         Responder's KMS           ID Role         7         Responder's KMS           ID Type         1         URI            ID Role         7         Responder's KMS           ID Idata         tsc_MCX_KMS_Hostnam            SAKKE payload {              SAKKE payload {              S				Condition
ID len     Length of ID Data     MCPTT ID associated to the terminating user       ID data     px_MCPTT_ID_User_A     MCPTT ID associated to the terminating user       IDR.ms     00001110'B     Next payload is IDR.ms       Next payload {     '00001110'B     Next payload is IDR.ms       ID Type     1     UR       ID len     Length of ID Data     ID       ID data     tsc_MCX_KMS_Hostnam     ID       ID data     tsc_MCX_KMS_Hostnam     ID       e     ID     ID     Next payload is       ID Role     '00011010'B     Next payload is       ID Role     7     Responder's KMS (IDR.ms')       ID Type     1     UR       ID Role     7     Responder's KMS (IDR.ms')       ID Type     1     UR       ID Type     1     UR       ID data     tsc_MCX_KMS_Hostnam     KMS of the UE       e      Parameter Set 1 according to RFC 6509 [23]. Appendix A     SIGN       SAKKE payload {     '00000100'B     Next payload is SIGN     SIGN (ECCSI) payload {       SAKKE data     Encapsulated MSCCK     The MSCCK is encapsulated by using the SAKKE UD gene user ID of the terminating user       SIGN (ECCSI) payload {     2     ECCSI signature				
ID data       px_MCPTT_ID_User_A       MCPTT ID associated to the terminating user         ID Rote       00001110'B       Next payload is         IDRkmsi payload       '00001110'B       Next payload is         ID Role       6       Initiator's KMS         ID Type       1       URI         ID Type       1       URI         ID ata       tsc_MCX_IMS_Hostnam         e       -         JDRkmsr payload {       '00011010'B         Next payload {       '00011010'B         Next payload {       '00011010'B         Next payload {       '00011010'B         Next payload {       '00011010'B         Next payload {       '00011010'B         Next payload {       '00011010'B         Next payload {       '0001101'B         ID Role       7         Responder's KMS (IDRkmsr)       IDRkmsr)         ID Type       1       URI         ID ata       tsc_MCX_KMS_Hostnam         ID Ata       tsc_MCX_KMS_Hostnam         ID Ata       tsc_MCX_KMS_Hostnam         ID SAKKE payload {       '000000100'B         SAKKE payload {       '00000010'B         SAKKE payload {       '00000010'B         SAKK		-	URI	
IDR.msi payload {     associated to the terminating user       IDR.msi payload {     '00001110'B       Next payload {     '00001110'B       ID Role     6       ID Type     1       ID Type     1       ID data     tsc. MCX_KMS_Hostnam       e     -       ID Role     7       IDR.msr payload {     Next payload is       Next payload     '0001101'B       Next payload f     -       ID Role     7       IDR.msr payload (     Next payload is       SAKKE (26)     -       ID Type     1       UD Role     7       Responder's KMS     (URRmsr)       ID Type     1       UB class     tsc. MCX_KMS_Hostnam       e     -       SAKKE payload {     '00000100'B       SAKKE payload {     '00000100'B       SAKKE payload (     -       Next payload is     SIGN       SAKKE data length     Length of SAKKE data       ID Scheme     2       SAKKE data     Encapsulated MSCCK       SAKKE data     Encapsulated MSCCK       SAKKE data     Encapsulated MSCCK is encapsulated by using the SAKKE payload (       SAKKE data     Encapsulated MSCCK is encapsulated by using the SAKKE payload ( <t< td=""><td></td><td></td><td></td><td></td></t<>				
iterminating user     iterminating user       IDRkmsi payload {     00001110'B     Next payload is       IDRkmsi     100001110'B     Next payload is       IDRole     6     Initiator's KMS       ID Type     1     URI       ID Type     1     URI       ID data     tsc_MCX_KMS_Hostnam        e     1     IDRkmsr)        IDRkmsr payload {     '00011010'B     Next payload is       Next payload {     '00011010'B     SAKKE (26)       ID Role     7     Responder's KMS       ID Type     1     URI       ID Type     1 </td <td>ID data</td> <td></td> <td></td> <td></td>	ID data			
)     IDRkmsi payload {     Next payload is       IDRkmsi payload d     '00001110'B     Next payload is       ID Role     6     Initiator's KMS       ID Type     1     URI       ID len     Length of ID Data     URI       ID data     isc_MCX_KMS_Hostnam     e       }     e				
Next payload     '00001110'B     Next payload is IDRkmsr       ID Role     6     Initiator's KMS (IDRkmsi)       ID Type     1     URI       ID len     Length of ID Data     URI       ID data     tsc_MCX_KMS_Hostnam e     —       Didata     1     E       ID Role     7     Responder's KMS (IDRkmsr)       ID Type     1     URI       ID Role     7     Responder's KMS (IDRkmsr)       ID Type     1     URI       ID tata     tsc_MCX_KMS_Hostnam e     KMS of the UE       SAKKE payload {	}			
Next payload     '00001110'B     Next payload is IDRkmsr       ID Role     6     Initiator's KMS (IDRkmsi)       ID Type     1     URI       ID len     Length of ID Data     URI       ID data     tsc_MCX_KMS_Hostnam e     —       Didata     1     E       ID Role     7     Responder's KMS (IDRkmsr)       ID Type     1     URI       ID Role     7     Responder's KMS (IDRkmsr)       ID Type     1     URI       ID tata     tsc_MCX_KMS_Hostnam e     KMS of the UE       SAKKE payload {	IDRkmsi pavload {			
ID Role     ID Rkmsr       ID Type     1       ID Type     1       ID Type     1       ID Ion     Length of ID Data       ID data     tsc_MCX_KMS_Hostnam       e     1       IDRkmsr payload {     1       Next payload {     10011010'B       Next payload {     100110'B       Next payload {     100110'B       Next payload {     100110'B       SAKKE payload {     1       Next payload {     100000100'B       SAKKE payload {     1       Next payload {     100000100'B       SAKKE payload {     1       SAKKE payload {     <		(00001110'B	Next payload is	
ID Role       6       Initiator's KMS (IDRkmsi)         ID Type       1       UR         ID len       Length of ID Data       UR         ID data       tsc_MCX_KMS_Hostnam e       Image: Comparison of the signature         ID data       tsc_MCX_KMS_Hostnam e       Image: Comparison of the signature         ID Role       7       Responder's KMS (IDRkmsr)         ID Role       7       Responder's KMS (IDRkmsr)         ID Type       1       UR         ID Type       1       UR         ID Type       1       UR         ID Ion       Length of ID Data       Image: Comparison of the UE e         SAKKE payload {       'O0000100'B       Next payload is SIGN         SAKKE params       1       Parameter Set 1 according to RFC 6509 [23], Appendix A         ID Scheme       2       'GPP MCX hashed UID' (33.180 [94] E1.2)         SAKKE data       Encapsulated MSCCK       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         }       Image: CSI signature       'Sten	None payload			
ID Type     1     URkmsi)       ID Ion     Length of ID Data     ID       ID data     tsc_MCX_KMS_Hostnam     P       P     ID     ID       IDRkmsr payload {     '00011010'B     Next payload is SAKKE (26)       ID Role     7     Responder's KMS (IDRkmsr, ID)       ID Type     1     URI       ID Type     1     URI       ID Type     1     URI       ID Type     1     URI       ID ten     Length of ID Data     ID       ID data     tsc_MCX_KMS_Hostnam     KMS of the UE       e     -     -       SAKKE payload {     '00000100'B     Next payload is SIGN       SAKKE params     1     Parameter Set 1 according to RFC 6509 [23], Appendix A       ID Scheme     2     '3GPP MCX hashed UID' (33.180 [94]       SAKKE data length     Length of SAKKE data (in bytes)     The MSCCK is encapsulated MSCCK       SAKKE data     Encapsulated MSCCK     The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user       }     ID     ID     ID       SIGN (ECCSI) payload {     2     ECCSI signature       SIen     Length of the signature     12 bits	ID Role	6		
ID Type       1       URI         ID len       Length of ID Data       I         ID data       tsc. MCX_KMS_Hostnam       I         e       I       I       I         IDRkmsr payload {       00011010'B       Next payload is       SAKKE (26)         IDRkmsr payload       00011010'B       Next payload is       SAKKE (26)         ID Role       7       Responder's KMS (10Rkmsr)       IORkmsr)         ID Type       1       URI       IOR         ID data       tsc. MCX_KMS_Hostnam       KMS of the UE         e       IS       SAKKE payload is       SIGN         SAKKE payload {       '00000100'B       Next payload is       SIGN         SAKKE params       1       Parameter Set 1       according to RFC 6509 (23), Appendix A         ID Scheme       2       '3GPP MCX hashed UID'       (33.180 [94]       E1.2)         SAKKE data       Encapsulated MSCCK       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user       user       service user ID of the terminating user         SINPE       2       ECCSI signature       Signature       Signature       Signature		-		
ID len       Length of ID Data       ID data         ID data       Isc. MCX_KMS_Hostnam       ID Rost payload (         IDRkmsr payload {       '00011010'B       Next payload is SAKKE (26)         ID Role       7       Responder's KMS (IDRkmsr)         ID Type       1       URI         ID Type       1       URI         ID Type       1       URI         ID data       tsc_MCX_KMS_Hostnam       KMS of the UE         ID data       tsc_MCX_KMS_Hostnam       E         SAKKE payload {       '00000100'B       Next payload is SIGN         SAKKE payload {       '00000100'B       Next payload is SIGN         SAKKE params       1       Parameter Set 1 according to RFC 6509 [23], Appendix A         ID Scheme       2       '3GPP MCX hashed UID' (33.180 [94] E.1.2)         SAKKE data length       Length of SAKKE data (in bytes)       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         }	ID Type	1		
ID data       tsc_MCX_KMS_Hostnam         e          IDRkmsr payload {       00011010'B         Next payload       '00011010'B         Next payload       '00011010'B         ID Role       7         ID Type       1         ID Type       1         ID Ion       Length of ID Data         ID data       tsc_MCX_KMS_Hostnam         KKKE payload {          SAKKE payload {          Next payload       '00000100'B         Next payload is       SIGN         SAKKE payload {          SAKKE payload       '00000100'B         Next payload       '00000100'B         SAKKE params       1         Parameter Set 1       according to RFC         6509 [23],       Appendix A         ID Scheme       2         SAKKE data length       Length of SAKKE data         SAKKE data       Encapsulated MSCCK         SAKKE data       Encapsulated MSCCK         SAKKE data       Encapsulated MSCCK         SAKKE data       Encapsulated MSCCK         Soft (ECCSI) payload {	ID len	Length of ID Data		
e     Image: constraint of the signature       BRKmsr payload {     '00011010'B       Next payload is SAKKE (26)     SAKKE (26)       ID Role     7     Responder's KMS (IDRkmsr)       ID Type     1     UR       ID In     Length of ID Data     UR       ID data     tsc_MCX_KMS_Hostnam     KMS of the UE       e     e     Image: constraint of the signature     Image: constraint of the signature       SAKKE payload {     '00000100'B     Next payload is SIGN     SIGN       SAKKE params     1     Parameter Set 1 according to RFC 6509 [23], Appendix A     Image: constraint of the UE       ID Scheme     2     '3GPP MCX hashed UID' (33.180 [94] E.1.2)     Image: constraint of the UE       SAKKE data length     Length of SAKKE data (in bytes)     The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user     Image: constraint of the terminating user       }     Image: constraint of the signature     ECCSI signature				
)       IDRkmsr payload {				
Next payload     '00011010'B     Next payload is SAKKE (26)       ID Role     7     Responder's KMS (IDRkmsr)       ID Type     1     URI       ID In en     Length of ID Data     I       ID data     tsc_MCX_KMS_Hostnam e     KMS of the UE e       SAKKE payload {     Image: Comparison of the comparison of th	}			
Next payload     '00011010'B     Next payload is SAKKE (26)       ID Role     7     Responder's KMS (IDRkmsr)       ID Type     1     URI       ID In en     Length of ID Data     I       ID data     tsc_MCX_KMS_Hostnam e     KMS of the UE e       SAKKE payload {     Image: Comparison of the comparison of th	IDRkmsr payload {			
ID Role       7       Responder's KMS (UDRkmsr)         ID Type       1       URI         ID Ion       Length of ID Data       ID         ID data       tsc_MCX_KMS_Hostnam       KMS of the UE         e       e       ID         SAKKE payload {       ID       ID         SAKKE params       1       Parameter Set 1 according to RFC 6509 [23], Appendix A         ID Scheme       2       '3GPP MCX hashed UID' (33.180 [94] E.1.2)         SAKKE data length       Length of SAKKE data (in bytes)       In bytes)         SAKKE data       Encapsulated MSCCK       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         VID (ECCSI) payload {       ID       ID         Stope       2       ECCSI signature         S Ion       Length of the signature       12 bits		'00011010'B	Next payload is	
ID Role       7       Responder's KMS (IDRkmsr)         ID Type       1       URI         ID len       Length of ID Data       URI         ID data       tsc_MCX_KMS_Hostnam e       KMS of the UE         }       -       -         SAKKE payload {       -       -         Next payload       '00000100'B       Next payload is SIGN         SAKKE params       1       Parameter Set 1 according to RFC 6509 [23], Appendix A         ID Scheme       2       '3GPP MCX hashed UID' (33.180 [94] E.1.2)         SAKKE data length       Length of SAKKE data (in bytes)       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         SIGN (ECCSI) payload {       -       -       -         Stype       2       ECCSI signature       -         S type       2       ECCSI signature       -				
ID Type     1     UR       ID Io In     Length of ID Data     ID       ID data     tsc_MCX_KMS_Hostnam     KMS of the UE       e	ID Role	7		
ID Type       1       URI         ID len       Length of ID Data       KMS of the UE         ID data       tsc_MCX_KMS_Hostnam       KMS of the UE         SAKKE payload {				
ID len       Length of ID Data       Mext payload         ID data       tsc_MCX_KMS_Hostnam       KMS of the UE         e       e       e         SAKKE payload {       00000100'B       Next payload is SIGN         SAKKE params       1       Parameter Set 1 according to RFC 6509 [23], Appendix A         ID Scheme       2       '3GPP MCX hashed UID' (33.180 [94] E.1.2)         SAKKE data length       Length of SAKKE data (in bytes)       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         }       Sator (ECCSI) payload {       Encapsulated the signature         Stype       2       ECCSI signature         Stype       2       ECCSI signature	ID Type	1		
ID data       tsc_MCX_KMS_Hostnam e       KMS of the UE         }       -       -         SAKKE payload {       -       -         Next payload       '00000100'B       Next payload is SIGN       SIGN         SAKKE params       1       Parameter Set 1 according to RFC 6509 [23], Appendix A       -         ID Scheme       2       '3GPP MCX hashed UID' (33.180 [94] E.1.2)       -         SAKKE data length       Length of SAKKE data (in bytes)       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user       -         }       -       -       -         SIGN (ECCSI) payload {       2       ECCSI signature S type       -         S In N       2       ECCSI signature 12 bits       -		Length of ID Data		
e        SAKKE payload {		tsc MCX KMS Hostnam	KMS of the UE	
Next payload       '00000100'B       Next payload is SIGN         SAKKE params       1       Parameter Set 1 according to RFC 6509 [23], Appendix A         ID Scheme       2       '3GPP MCX hashed UID' (33.180 [94] E.1.2)         SAKKE data length       Length of SAKKE data (in bytes)       Encapsulated MSCCK         SAKKE data       Encapsulated MSCCK       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         }				
Next payload       '00000100'B       Next payload is SIGN         SAKKE params       1       Parameter Set 1 according to RFC 6509 [23], Appendix A         ID Scheme       2       '3GPP MCX hashed UID' (33.180 [94] E.1.2)         SAKKE data length       Length of SAKKE data (in bytes)       Encapsulated MSCCK         SAKKE data       Encapsulated MSCCK       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         }	}			
Next payload       '00000100'B       Next payload is SIGN         SAKKE params       1       Parameter Set 1 according to RFC 6509 [23], Appendix A         ID Scheme       2       '3GPP MCX hashed UID' (33.180 [94] E.1.2)         SAKKE data length       Length of SAKKE data (in bytes)       Encapsulated MSCCK         SAKKE data       Encapsulated MSCCK       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         }	SAKKE payload {			
SAKKE params       1       Parameter Set 1 according to RFC 6509 [23], Appendix A         ID Scheme       2       '3GPP MCX hashed UID' (33.180 [94] E.1.2)         SAKKE data length       Length of SAKKE data (in bytes)       E.1.2)         SAKKE data       Encapsulated MSCCK       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         }       SIGN (ECCSI) payload {       Encaps of the signature         S type       2       ECCSI signature	Next payload	'00000100'B	Next payload is	
ID Scheme       2       '3GPP MCX hashed UID' (33.180 [94] E.1.2)         SAKKE data length       Length of SAKKE data (in bytes)       Encapsulated MSCCK         SAKKE data       Encapsulated MSCCK       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         SIGN (ECCSI) payload {				
ID Scheme       2       '3GPP MCX hashed UID' (33.180 [94] E.1.2)         SAKKE data length       Length of SAKKE data (in bytes)       E.1.2)         SAKKE data       Encapsulated MSCCK       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         }       SIGN (ECCSI) payload {          Stype       2       ECCSI signature         S Ien       Length of the signature       12 bits	SAKKE params	1	Parameter Set 1	
ID Scheme       2       '3GPP MCX hashed UID' (33.180 [94] E.1.2)         SAKKE data length       Length of SAKKE data (in bytes)       E.1.2)         SAKKE data       Encapsulated MSCCK       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         }       Image: Comparison of the signature       Image: Comparison of the signature         SIGN (ECCSI) payload {       2       ECCSI signature         S type       2       ECCSI signature				
ID Scheme       2       '3GPP MCX hashed UID' (33.180 [94] E.1.2)         SAKKE data length       Length of SAKKE data (in bytes)       E.1.2)         SAKKE data       Encapsulated MSCCK       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         }       Image: Comparison of the signature       Image: Comparison of the signature         SIGN (ECCSI) payload {       2       ECCSI signature         S type       2       ECCSI signature				
SAKKE data length       Length of SAKKE data (in bytes)         SAKKE data       Encapsulated MSCCK         SAKKE data       Encapsulated MSCCK         SAKKE data       Encapsulated MSCCK         UID generated from the MC Service user ID of the terminating user         SIGN (ECCSI) payload {       Image: Comparison of the signature         S type       2       ECCSI signature         S len       Length of the signature       12 bits			Appendix A	
SAKKE data length       Length of SAKKE data (in bytes)       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         }       SIGN (ECCSI) payload {       ECCSI signature         S type       2       ECCSI signature         S len       Length of the signature       12 bits	ID Scheme	2		
SAKKE data length       Length of SAKKE data (in bytes)         SAKKE data       Encapsulated MSCCK         SAKKE data       Encapsulated MSCCK         SAKKE data       UID generated from the MC Service user ID of the terminating user         SIGN (ECCSI) payload {       2         Stype       2         Encapsulated of the signature       12 bits				
SAKKE data length       Length of SAKKE data (in bytes)       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         }				
(in bytes)       (in bytes)         SAKKE data       Encapsulated MSCCK       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         }			E.1.2)	
SAKKE data       Encapsulated MSCCK       The MSCCK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         }       Image: Comparison of the signature of th	SAKKE data length			
encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user         }       -         SIGN (ECCSI) payload {       -         S type       2         S len       Length of the signature         12 bits       -			TI MOOOK!	
Image: style styl	SAKKE data	Encapsulated MSCCK		
Image: space spac				
UID generated from the MC Service user ID of the terminating user         }				
from the MC         Service user ID of         the terminating         user         SIGN (ECCSI) payload {         S type       2         S len       Length of the signature         12 bits				
Image: Service user ID of the terminating user         Image: Sign (ECCSI) payload {       Image: Service user ID of the terminating user         Sign (ECCSI) payload {       Image: Service user ID of the terminating user         Sign (ECCSI) payload {       Image: Service user ID of the terminating user         Sign (ECCSI) payload {       Image: Service user ID of the terminating user         Sign (ECCSI) payload {       Image: Service user ID of the terminating user         Sign (ECCSI) payload {       Image: Service user ID of the terminating user         Sign (ECCSI) payload {       Image: Service user ID of the terminating user         Sign (ECCSI) payload {       Image: Service user ID of the terminating user         Sign (ECCSI) payload {       Image: Service user ID of the terminating user         Sign (ECCSI) payload {       Image: Service user ID of the terminating user         Sign (ECCSI) payload {       Image: Service user ID of the terminating user         Sign (ECCSI) payload {       Image: Service user ID of the terminating user         Sign (ECCSI) payload {       Image: Service user ID of the terminating user         Sign (ECCSI) payload {       Image: Service user ID of terminating user				
the terminating user       }     Image: Constraint of the signature       SIGN (ECCSI) payload {     Image: Constraint of the signature       S type     2       S len     Length of the signature       12 bits				
user       }     Image: second				
}     Image: Image			-	
S type2ECCSI signatureS lenLength of the signature12 bits	<u>)</u>		user	
S type2ECCSI signatureS lenLength of the signature12 bits				
S len Length of the signature 12 bits			FCCCI aimatum	
	S type			
	Sien		12 DITS	

.

Field	Value/remark	Comment	Condition
S data	Signature	The signature shall be created according to RFC 3830 [24] clause 5.2 using the algorithm according to RFC 6507 [98] clause 5.2.1 using the UID generated from the public service identity identifying the participating MCPTT function	

-

541

MuSiK distribution (MIKEY-SAKKE sent by the SS)

Table 5.5.9.1-5: MIKEY-SAKKE I\_MESSAGE (MuSiK distribution by the SS)

Field	[25], RFC 3830 [24] Value/remark	Comment	Condition
MIKEY Common Header {	Any		
version	'0000001'B		
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	'00000101'B	Next payload is	
		timestamp	
V	'0'B	•	
PRF func	'0000001'B	PRF-HMAC-SHA-	
		256	
CSB ID	'0110xxxx xxxxxxxx'B	32-bit MuSiK-ID	
		The 4 most	
		significant bits of	
		the MuSiK-ID	
		indicate the	
		purpose of the	
		MuSiK is to	
		protect floor	
		control messages	
		sent over MBMS.	
		The other 28-bits	
		are randomly	
		generated	
#CS	'0000000'B	no crypto	
		sessions in the	
		CS ID map info.	
CS ID map type	1	empty map	
CS ID map Info	Not present	•····•	
}			
, Timestamp Payload (T) {			
Next payload	'00001011'B	Next payload is	
hox payload	0000101112	RAND	
TS Туре	'0000000'B	NTP-UTC (0): 64-	
		bits	
TS Value	Current system time	64bit UTC value	
		representing the	
		number of	
		seconds since 0h	
		on 1 January	
		1900 with respect	
		to the Coordinated	
		Universal Time	
		(UTC)	
}			
RAND Payload {			
Next payload	'00001110'B	Next payload is	
		IDRi	
RAND len	'00010000'B	16 Bytes RAND	
RAND	128-bit random number		
	arbitrarily selected by the		
	SS		
}			
IDRi payload {			
Next payload	'00001110'B	Next payload is	
		IDRr	
ID Role	1	Initiator (IDRi)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCPTT_PublicServic	The public service	
	eld_A	identity identifying	
		the participating	
		MCPTT function	
}			
ÍDRr payload {			
Next payload	'00001110'B	Next payload is	
		IDRkmsi	
	2	Responder (IDRr)	

Derivation path: RFC 6509 [23], RFC 6043 Field	Value/remark	Comment	Condition
ID Type	1	URI	
ID len	Length of ID Data		
ID data	px_MCPTT_ID_User_A	MCPTT ID associated to the terminating user	
}			
IDRkmsi payload {	(00001110)		
Next payload	'00001110'B	Next payload is IDRkmsr	
ID Role	6	Initiator's KMS (IDRkmsi)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam e		
} IDRkmsr payload {			
Next payload	'00011010'B	Next payload is SAKKE (26)	
ID Role	7	Responder's KMS (IDRkmsr)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam e	KMS of the UE	
}			
SAKKE payload {	(00000100)D	Next a side set is	
Next payload	'00000100'B	Next payload is SIGN	
SAKKE params	1	Parameter Set 1 according to RFC 6509 [23], Appendix A	
ID Scheme	2	'3GPP MCX hashed UID' (33.180 [94] E.1.2)	
SAKKE data length	Length of SAKKE data (in bytes)	· · · · · · · · · · · · · · · · · · ·	
SAKKE data	Encapsulated MuSiK	The MuSiK is encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the terminating user	
} SIGN (ECCSI) payload {			
S type	2	ECCSI signature	
S len	Length of the signature field (in bytes)	12 bits	

Field	Value/remark	Comment	Condition
S data	Signature	The signature shall be created according to RFC 3830 [24] clause 5.2 using the algorithm according to RFC 6507 [98] clause 5.2.1 using the UID generated from the public service identity identifying the participating MCPTT function	

## 5.5.10 Common MCS test USIM parameters

## 5.5.10.1 General

The format and coding of elementary files of the USIM are defined in 3GPP TS 31.102 [73]. Those of the ISIM are defined in 3GPP TS 31.101 [79] and 3GPP TS 31.103 [80].

The present clause defines default MCS relevant parameters for programming the elementary files of the test USIM when running conformance test cases defined in TS 37.579-2 [2], TS 37.579-6 [84], or TS 37.579-7 [85].

For requirements to the test USIM/ISIM needed for the E-UTRA/EPC and MCS off-network ProSe operation see 3GPP TS 36.508 [6], clause 4.9. For NR5/GC see 3GPP TS 38.508-1 [132], clause 4.8.3.

## 5.5.10.2 Default settings for the Elementary Files (EFs)

#### EFUST (USIM Service Table)

Services Discription		Activated	Version
Service n°109 Mission Critical Services		Yes	
NOTE: Only t	ne relevant MCS related services indicated.		

#### EF<sub>MST</sub> (MCS Service Table)

This file shall be present. This EF indicates the coding of the MCS management objects and which MCS services are available.

Coding of the MCPTT management objects = '00' (XML format).

Services	Discription	Activated	Version
Service n°1:	MCPTT UE configuration data	Yes	
Service n°2:	MCPTT User profile data	Yes	
Service n°3:	MCS Group configuration data	a Yes	
Service n°4: MCPTT Service configuration data		Yes	
Service n°5: MCS UE initial configuration data		Yes	
Service n°6: MCData UE configuration data		Yes	
Service n°7: MCData user profile data		Yes	
Service n°8: MCData service configuration data		Yes	
Service n°9:	MCVideo UE configuration data	Yes	
Service n°10:	MCVideo user profile data	Yes	
Service n°11:	MCVideo service configuration data	Yes	

## EF<sub>MCS\_CONFIG</sub> (MCS configuration data)

This file shall be present.

Encoded in XML format (as specified in the MCS Service Table).

MCPTT configuration data objects	Tag Values	Condition
MCPTT UE configuration data	'80'	Shall be present. The content of the MCPTT UE configuration data object shall be as specified in Table 5.5.8.2-1.
MCPTT user profile data	'81'	Shall be present. The content of the MCPTT User configuration data object shall be as specified in Table 5.5.8.3-1.
MCS Group configuration data	'82'	Shall be present. The content of the MCS Group configuration data object shall be as specified in Table 5.5.7.1 for MCPTT, Table 5.5.7.2-1 for MCVideo, and Table 5.5.7.3-1 for MCData.
MCPTT Service configuration data	'83'	Shall be present. The content of the MCPTT Server configuration data object shall be as specified in Table 5.5.8.4-1.
MCS UE initial configuration data	'84'	Shall be present. The content of the MCS UE initial configuration data object shall be as specified in Table 5.5.8.1-1 for MCPTT, Table 5.5.8.5-1 for MCVideo, and Table 5.5.8.9-1 for MCData,
MCData UE configuration data	'85'	Shall be present. The content of the MCData UE configuration data object shall be as specified in Table 5.5.8.10-1.
MCData user profile data	'86'	Shall be present. The content of the MCData user profile data object shall be as specified in Table 5.5.8.11-1.
MCData service configuration data	'87'	Shall be present. The content of the MCData service configuration data object shall be as specified in Table 5.5.8.12-1.
MCVideo UE configuration data	'88'	Shall be present. The content of the MCVideo UE configuration data object shall be as specified in Table 5.5.8.6-1.
MCVideo user profile data	'89'	Shall be present. The content of the MCVideo user profile data object shall be as specified in Table 5.5.8.7-1.
MCVideo service configuration data	'8A'	Shall be present. The content of the MCVideo service configuration data object shall be as specified in Table 5.5.8.8-1.

## 5.5.11 Default MCVideo Transmission Control Messages and other Information Elements

## 5.5.11.0 General

The following conditions apply throughout clause 5.5.11:

#### Table 5.5.11.0-1: Conditions

Condition	Explanation
FA	IE for when an active Functional Alias is used
ACK	Message requests a Transmission control Ack
UPLINK	The message is sent from the UE
DOWNLINK	The message is sent from the SS
NOTE: For further cond	itions see table 5.5.1-1

For MCVideo media plane control different SSRCs (Synchronization SouRCes) need to be distinguished. Table 5.5.11.0-2 specifies the SSRCs as used in the default MCVideo media plane control messages for the case that there is no multiplexing of media plane control channels.

- NOTE 1: Multiplexing of media plane control channels has been introduced in Rel-18 of TS 24.281 [86] and TS 24.581 [88] and may be specified in Rel-18 and above test cases.
- NOTE 2: In contrast to Rel-18 where there are distinct SSRCs for the audio and video stream, in Before-Rel-18 releases there is still only one SSRC identifying a media stream. In Transmission Control Messages this Media SSRC effectively is the same as the Audio SSRC of Rel-18 as the Field ID is the same, but in Before-Rel-18 releases there is no field for a Video SSRC.
- NOTE 3: In test cases Before-Rel-18 behaviour is applied unless specified otherwise in the test case.

# Table 5.5.11.0-2: SSRCs in MCVideo media plane control messages (No multiplexing of media plane control channels)

SSRC (NOTE 1) Description Value
---------------------------------

Media/Aud client (NOT	lio SSRC of the TE 1)	Before-Rel18: SSRC identifying the media stream of the client (Client A)	Arbitrarily selected by the SS and assigned to the client when the transmission is granted by sending a Transmission Granted message (NOTE 2)
		Rel-18 and later: SSRC identifying the audio stream of the client (Client A)	
Video SSR (NOTE 1)	RC of the client	Before-Rel18: Not applicable - there is no Video SSRC in transmission control messages and no SDP fmtp attribute indicating such SSRC and the SSRC used in RTP packets of the video stream is not specified.	Before-Rel18: Not present in DL, not checked in UL
		Rel-18 and later: SSRC identifying the audio stream of the client (Client A)	Rel-18 and later: Arbitrarily selected by the SS and assigned to the client when the transmission is granted (NOTE 2)
	lio SSRC of a ent (NOTE 1)	Before-Rel18: SSRC identifying the media stream of a remote client (Client B, C) Rel-18 and later: SSRC identifying the audio stream of a remote client (Client B, C)	Arbitrarily selected by the SS (NOTE 2)
Video SSR client (NOT	RC of a remote TE 1)	Before-Rel18: Not applicable - there is no Video SSRC in transmission control messages and no SDP fmtp attribute indicating such SSRC and the SSRC used in RTP packets of the video stream is not specified.	Before-Rel18: Not present in DL, not checked in UL
		Rel-18 and later: SSRC identifying the video stream of a remote client (Client B, C)	Rel-18 and later: Arbitrarily selected by the SS (NOTE 2)
RTCP SSF (NOTE 1)	RC of the client	SSRC used by the client (Client A) in the RTCP header of the MCVideo media plane control messages sent to the SS	The client may use any value, value is not checked by the SS (NOTE 4).
RTCP SSF (NOTE 1)	RC of the SS	SSRC used by the SS in the RTCP header of the MCPTT media plane control messages sent to the client	Arbitrarily selected by the SS (NOTE 4)
	"Media SSRC" is us control messages, b	ed as in Rel-14 Rel-17 there is no "Audio out only a single SSRC value identifying the	
	Nevertheless it is no server in the Transm transmission grant =	nission Granted message and there is no w ⇒ In general collisions according to IETF R	reams from different clients. client uses the SSRC value provided by the ray to provide SSRC value(s) in case of implicit FC 3550 [76] may occur but collision resolution is
out of scope of this document. NOTE 3: For Before-Rel-18 releases the Media SSRC can only be assigned by sending a Transmission Grante message as there are no "mc_ssrc", "mc_audio_ssrc" or "mc_video_ssrc" fmtp attributes in Before-Rel releases (nevertheless there can still be implicit grants for Before-Rel-18 releases even though in this server has no control over the SSRC values used by the client). From Rel-18 onward the Audio and Video SSRCs can be assigned with an implicit grant using fmtp att "mc_audio_ssrc" and "mc_video_ssrc" or by sending a Transmission Granted message with Audio and			
NOTE 4:	SSRC (⇒ The serve In clause 4.3.3.1 TS multiplexing of medi "mc_transmission_s	er has control over the Audio and Video SS 24.581 [88] clarifies in Rel-18 that "the SS a plane control channels"; in clauses 14.2.7 src" fmtp attribute is used to indicate suppo	RCs used by the client). RC of the RTCP header is used to enable

# 5.5.11.1 Transmission Control Specific Messages Sent by the Transmission Participant

## 5.5.11.1.1 Transmission Request

#### Table 5.5.11.1.1-1: Transmission Request

Derivation Path: TS 24.581 [88				
Information Element	Value/remark	Comment	Reference	Condition
RTCP-header				
Subtype	"00000"	Transmission Request	TS 24.581 [88] clause 9.2.4 and Table 9.2.2.1-1	
	"10000"			ACK
SSRC	RTCP SSRC of the client The SSRC of the		IETF RFC 35 50 [76].	OFF-
	message sender			NETWORK
name	MCV0			
Transmission Priority	If present		TS 24.581 [88] clause 9.2.3.2	
Transmission Priority Value	Any allowed value	If present, a value between '0' and '255' where '0' is the lowest priority and '255' is the highest priority. If the Transmission Priority field is not included in the message the default priority is used as the Transmission Priority value. The value of the default priority is '0'. The default priority is sometimes referred to as normal priority.		
User ID	Not Present			
User ID		The User ID field is used in off-network only. The User ID field carries the MCVideo ID of the transmission participant sending the Transmission Release message.	TS 24.581 [88] clause 9.2.3.8	OFF- NETWORK
User ID	px_MCVideo_ID_User_ A			
Transmission Indicator			TS 24.581 [88] clause 9.2.3.1 1	
Transmission Indicator	"1000000000000000"	Normal call		
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL
	"000100000000000"	Emergency call		EMERGEN CY-CALL
	"000010000000000"	Imminent peril call		IMMPERIL- CALL
Functional Alias	Not present			
	px_MCVideo_ID_FA_B	functional alias URI of the transmitting user	TS 24.581 [88 ] clause 9.2.3.21	FA

#### 5.5.11.1.2 Transmission Release

	Derivation Path: TS 24.581 [88] Table 9.2.7-1				
Information Element	Value/remark	Comment	Reference	Condition	
RTCP-header					
Subtype	"00010"	Transmission Release	TS 24.581 [88] clause 9.2.7 and Table 9.2.2.1-1		
	"10010"			ACK	
SSRC	RTCP SSRC of the client		IETF RFC 35 50 [76].		
	The SSRC of the message sender			OFF- NETWORK	
name	MCV0				
User ID	Not Present				
User ID		The User ID field is used in off-network only. The User ID field carries the MCVideo ID of the transmission participant sending the Transmission Release message.	TS 24.581 [88] clause 9.2.3.8	OFF- NETWORK	
User ID	px_MCVideo_ID_User_ A				
Transmission Indicator					
Transmission Indicator	"1000000000000000"	Normal call	TS 24.581 [88] clause 9.2.3.1 1		
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL	
	"000100000000000"	Emergency call		EMERGEN CY-CALL	
	"000010000000000"	Imminent peril call		IMMPERIL- CALL	

## 5.5.11.1.3 Queue Position Request

Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00011"	Queue Position Request	TS 24.581 [88] clause 9.2.11 and 9.2.2.1-1	
	"10011"			ACK
SSRC	RTCP SSRC of the client		IETF RFC 355 0 [76],	
	The SSRC of the message sender			OFF- NETWOR K
name	MCV0			
User ID	Not Present			
User ID			TS 24.581 [88] clause 9.2.3.8	OFF- NETWOR K

Derivation Path: TS 24.581 [88] Table 9.2.11-1					
Information Element	Value/remark	Comment	Reference	Condition	
User ID	px_MCVideo_ID_User_ A				
Track Info	Not present	The MCVideo call does not involve a non- controlling MCVideo function	TS 24.581 [88] clause 9.2.3.13		

## 5.5.11.1.4 Receive Media Request

## Table 5.5.11.1.4-1: Receive Media Request

Derivation Path: TS 24.581 [88]				
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00100"	Receive Media Request	TS 24.581 [88] clause 9.2.14 and 9.2.2.1-1	
	"10100"			ACK
SSRC	RTCP SSRC of the client		IETF RFC 355 0 [76]	
	The SSRC of the message sender			OFF- NETWOR K
name	MCV0			
User ID	Not Present			
User ID		The User ID field is used in off-network only. The User ID field is used to carry the identity of the user who is requesting the reception of the media.	TS 24.581 [88] clause 9.2.3.8	OFF- NETWOR K
User ID	px_MCVideo_ID_User_ A			
User Id of the Transmitting User	any value if present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.6	
Audio SSRC of the Transmitting User	Media/Audio SSRC of the Transmitting User (client B) as provided by the SS in the Media Transmission Notification		TS 24.581 [88] clause 9.2.3.16	
Video SSRC of the Transmitting User	any value if present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.23	
Transmission Indicator			TS 24.581 [88] clause 9.2.3.11	
Transmission Indicator	"10000000000000000"	Normal call		
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL
	"000100000000000"	Emergency call		EMERGEN CY-CALL
	"000010000000000"	Imminent peril call		IMMPERIL -CALL

Derivation Path: TS 24.581 [88]	Derivation Path: TS 24.581 [88] Table 9.2.14-1				
Information Element	Value/remark	Comment	Reference	Condition	
Reception Priority	if present	Describes the level of	TS 24.581 [88]		
		reception priority	clause		
		requested in a	9.2.3.19 and		
		Reception Request	6.2.5.3.3		
		message or granted in			
		a Reception Granted			
		message. The max			
		reception priority that			
		can be requested in a			
		Reception Request			
		message is negotiated			
		between the			
		transmission control			
		participant and the			
		transmission control			
		server			
Reception Priority value	any allowed value	The reception priority (0			
		to 255) where 0 is the			
		lowest reception priority			
		and 255 is the highest			
		reception priority. If the			
		Reception Priority field			
		is not included in the			
		message the default			
		reception priority is			
		used as the Reception			
		Priority value. The			
		value of the default			
		reception priority is 0.			
		The default reception			
		priority is sometimes			
		referred to as normal			
		reception priority.			
Track Info	Not present	The MCVideo call does	TS 24.581 [88]		
		not involve a non-	clause		
		controlling MCVideo	9.2.3.13		
		function			
Functional Alias	Not present				
	px_MCVideo_ID_FA_B	functional alias URI of	TS 24.581 [88]	FA	
	·	the transmitting user	clause		
			9.2.3.21		

5.5.11.1.5 Void

## 5.5.11.1.6 Remote Transmission Request

Table 5.5.11.1.6-1: Remote	Transmission Request
----------------------------	----------------------

Derivation Path: TS 24.581 [88] Table 9.2.22-1						
Information Element	Value/remark	Comment	Reference	Condition		
RTCP						
Subtype	"00111"	Remote Transmission Request	TS 24.581 [88] clause 9.2.22 and Table 9.2.2.1-1			
	"10111"			ACK		
SSRC	RTCP SSRC of the client		IETF RFC 35 50 [76].			
	The SSRC of the message sender			OFF- NETWORK		

Derivation Path: TS 24.581 [88] Table 9.2.22-1					
Information Element	Value/remark	Comment	Reference	Condition	
name	MCV0				
Remote ID		Carries the identity of the user who remotely initiated the media transmission of another user.	TS 24.581 [88] clause 9.2.3.8		
User ID	px_MCVideo_ID_User_ B				
User ID		Carries the identity of the user whose media transmission is requested.	TS 24.581 [88] clause 9.2.3.8		
User ID	px_MCVideo_ID_User_ A				

## 5.5.11.1.7 Remote Transmission Cancel Request

#### Table 5.5.11.1.7-1: Remote Transmission Cancel Request

Derivation Path: TS 24.581 [8		-	1	
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"01000"	Remote transmission cancel request	TS 24.581 [88] clause 9.2.24 and Table 9.2.2.1-1	
	"11000"			ACK
SSRC	RTCP SSRC of the client		IETF RFC 35 50 [76].	
	The SSRC of the message sender			OFF- NETWORK
name	MCV0			
User ID		Carries the identity of the user whose media transmission is requested for cancellation.	TS 24.581 [88] clause 9.2.3.8	
User ID	px_MCVideo_ID_User_ A			

- 5.5.11.2 Transmission Control Specific Messages Sent by the Transmission Control Server
- 5.5.11.2.1 Transmission Granted

#### Table 5.5.11.2.1-1: Transmission Granted

Derivation Path: TS 24.581 [88] Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00000"	Transmission granted	TS 24.581 [8 8] clause 9.2.5 and 9.2.2.1-2	
	"10000"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 3550 [76].	
	The SSRC of the message sender	The SSRC of the transmission arbitrator		OFF- NETWORK
name	MCV1	Transmission Control messages sent by the transmission control server and transmission control participant		
Duration			TS 24.581 [8 8] clause 9.2.3.3	
Duration	"00000000 10000000"	128 sec (an arbitrary value)		
Audio SSRC of the Transmitting User	Media/Audio SSRC which should be used by the client in the header of RTP packets	Before-Rel-18: SSRC indentifying the media stream Rel-18 and later: SSRC to be used by the client in the audio stream	TS 24.581 [88] clause 9.2.3.16	
Video SSRC of the Transmitting User	Not present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.23	
Transmission priority	Not present	If the Transmission Priority field is not included in the message the default priority (='0') is used as the Floor Priority value	TS 24.581 [88] clause 9.2.3.2	
User ID	Not present			
User ID			TS 24.581 [88] clause 9.2.3.8	OFF- NETWORK
User ID	px_MCVideo_ID_User_ A			
Queue Size	Not present			
Queue Size	"0"	the number of queued MCVideo clients in the MCVideo call	TS 24.581 [88] clause 9.2.3.1 5	OFF- NETWORK
SSRC of queued floor participant	Not present			
	The SSRC of queued transmission participant		IETF RFC 3550 [76]	OFF- NETWORK
Queued User ID	Not present			

Derivation Path: TS 24.581 [88] Table 9.2.5-1					
Information Element	Value/remark	Comment	Reference	Condition	
	px_MCVideo_ID_User_	MCVideo ID of the	TS	OFF-	
	С	transmission participant	24.581 [88]	NETWORK	
		in the queue	clause 9.2.3.1		
			4		
Queue Info	Not present				
Queue Info		queue position and	TS 24.581	OFF-	
		granted transmission	[88] clause	NETWORK	
		priority in the queue	9.2.3.5		
queue position info	"0000001"				
queue priority level	"0000000"				
Transmission Indicator			TS 24.581 [8		
			8] Table		
			9.2.3.11-2		
Transmission Indicator	"10000000000000000"	Normal call			
	"0100000000000000"	Broadcast group call		BROADCAS	
		_		T-CALL	
	"000100000000000"	Emergency call		EMERGENC	
				Y-CALL	
	"000010000000000"	Imminent peril call		IMMPERIL-	
				CALL	

## 5.5.11.2.2 Transmission Rejected

## Table 5.5.11.2.2-1: Transmission Rejected

Derivation Path: TS 24.581 [88] Information Element	Value/remark	Comment	Reference	Condition
	value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00001"	Transmission rejected	TS 24.581 [88]	
			clause 9.2.6	
			and 9.2.2.1-2	
	"10001"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the	IETF RFC 355	
		Transmission Control	0 [76]	
		server		
	The SSRC of the			OFF-
	message sender			NETWOR
	meesage conder			K
name	MCV1			IX.
Reject Cause		Includes the reason for	TS 24.581 [88]	
Reject Gause		the rejecting the	clause 9.2.3.4	
		transmission request	Clause 3.2.3.4	
		and can be followed by		
		a text-string explaining		
		why the transmission		
		request was rejected.		
		Therefore the length of		
		the packet will vary		
		depending on the size		
		of the application		
		dependent field.		
Reject Cause	"255"	Th <reject cause=""></reject>	TS 24.581 [88]	
		value set to '255'	clause 9.2.6.2	
		indicates that the		
		transmission control		
		server does not grant		
		the transmission		
		request due to the		
		transmission control		
		server local policy.		
Reject Cause Phrase	"Other reason"	A text string encoded	IETF RFC 355	
Reject Oduse i fildse		the text string in the	0 [76]	
			0[/0]	
		SDES item CNAME.		1

Derivation Path: TS 24.581 [88] Table 9.2.6-1					
Information Element	Value/remark	Comment	Reference	Condition	
User ID	Not present				
User ID		The User ID field is used in off-network only. The User ID carries the MCVideo ID of the requesting transmission participant to which the Transmission Rejected message is sent.	TS 24.581 [88] clause 9.2.3.8	OFF- NETWOR K	
User ID	px_MCVideo_ID_User_ A				
Transmission Indicator			TS 24.581 [88] clause 9.2.3.11		
Transmission Indicator	"1000000000000000"	Normal call			
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL	
	"000100000000000"	Emergency call		EMERGEN CY-CALL	
	"000010000000000"	Imminent peril call		IMMPERIL -CALL	

## 5.5.11.2.3 Transmission Arbitration Taken

Derivation Path: TS 24.581 [88]	Table 9.2.8-1			
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00010"	Transmission Arbitration Taken	TS 24.581 [88] clause 9.2.8 and 9.2.2.1-2	
	"10010"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 355 0 [76]	
	The SSRC of the message sender			OFF- NETWOR K
name	MCV1			
User Id of the Transmitting User		MCVideo Id of the user who has been granted the right to transmit media.	TS 24.581 [88] clause 9.2.3.6	
User Id of the Transmitting User	px_MCVideo_ID_User_ A			
Permission to Request the Transmission		Indicates whether receiving parties are allowed to request the transmission.	TS 24.581 [88] clause9.2.3.7	
Permission to Request the Transmission	"1"	Coded as follows: 0 The receiver is not permitted to request transmission. 1 The receiver is permitted to request transmission		
User ID	Not Present			

Derivation Path: TS 24.581 [88] Table 9.2.8-1					
Information Element	Value/remark	Comment	Reference	Condition	
User ID		The User ID field is used in off-network only. The User ID carries the MCVideo ID of the transmission participant sending the Transmission Arbitration Taken message.	TS 24.581 [88] clause 9.2.3.8	OFF- NETWOR K	
User ID	px_MCVideo_ID_User_ A				
Message Sequence Number			TS 24.581 [88] clause 9.2.3.9		
Message Sequence Number	The value sent in the previous Transmission Arbitration Taken message, if any, increased by 1	The <message Sequence Number&gt; value can be between '0' and '65535'. When the '65535' value is reached, the <message Sequence Number&gt; value starts from '0' again.</message </message 			
Transmission Indicator			TS 24.581 [88] clause 9.2.3.11		
Transmission Indicator	"1000000000000000"	Normal call.			
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL	
	"000100000000000"	Emergency call		EMERGEN CY-CALL	
	"000010000000000"	Imminent peril call		IMMPERIL -CALL	
Audio SSRC of the Transmitting User	Media/Audio SSRC of the Transmitting User (client B)	Notation in accordance with clause 5.5.11.0.	TS 24.581 [88] clause 9.2.3.16		
Video SSRC of the Transmitting User	Not present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.23		

## 5.5.11.2.4 Transmission Arbitration Released

#### Table 5.5.11.2.4-1: Transmission Arbitration Released

Derivation Path: TS 24.581 [88]	Table 9.2.9-1			
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00011"	Transmission Arbitration Release	TS 24.581 [88] clause 9.2.9 and 9.2.2.1-2	
	"10011"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 3550 [76]	
	The SSRC of the message sender			OFF- NETWOR K
name	MCV1			
Granted Party's Identity		Identifies the MCVideo user that is granted to send media.	TS 24.581 [88] clause 9.2.3.6	
Granted Party's Identity	px_MCVideo_ID_User_ A			
User ID	Not Present			

Derivation Path: TS 24.581 [88] Table 9.2.9-1					
Information Element	Value/remark	Comment	Reference	Condition	
User ID		The User ID field is used in off-network only. The User ID carries the MCVideo ID of the transmission participant sending the Transmission Arbitration Release message.	TS 24.581 [88] clause 9.2.3.8	OFF- NETWOR K	
User ID	px_MCVideo_ID_User_ A				
Message Sequence Number			TS 24.581 [88] clause 9.2.3.9		
Message Sequence Number	The value sent in the previous Transmission Arbitration Release message, if any, increased by 1	The <message Sequence Number&gt; value can be between '0' and '65535'. When the '65535' value is reached, the <message Sequence Number&gt; value starts from '0' again.</message </message 			
Transmission Indicator			TS 24.581 [88] clause 9.2.3.11		
Transmission Indicator	"100000000000000"	Normal call			
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL	
	"000100000000000"	Emergency call		EMERGEN CY-CALL	
	"000010000000000"	Imminent peril call		IMMPERIL -CALL	
SSRC of Granted Transmission Participant	Media SSRC of the intended recipient of the message	Notation in accordance with clause 5.5.11.0.	IETF RFC 355 0 [76]		

## 5.5.11.2.5 Transmission Revoked

#### Table 5.5.11.2.5-1: Transmission Revoked

Derivation Path: TS 24.581 [88] Table 9.2.10-1					
Information Element	Value/remark	Comment	Reference	Condition	
RTCP					
Subtype	"00100"	Transmission Revoked	TS 24.581 [88] clause 9.2.10 and 9.2.2.1-2		
	"10100"			ACK	
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 355 0 [76]		
	The SSRC of the message sender			OFF- NETWOR K	
name	MCV1				

Derivation Path: TS 24.581 [88] Table 9.2.10-1				
Information Element	Value/remark	Comment	Reference	Condition
Reject Cause		Message includes	TS 24.581 [88]	
		<reject cause=""> cause</reject>	clause 9.2.3.4	
		value in the Reject		
		Cause field explaining		
		why the transmission		
		control server wants the		
		transmission participant		
		to stop sending media		
		and can be followed by		
		additional information.		
		Therefore the length of		
		the packet can vary		
		depending on the value		
		of the rejection cause.		
Reject Cause Value	7	The <reject cause=""></reject>	TS 24.581 [88]	
		value set to 7 indicates	clause	
		that the MCVideo	9.2.10.2	
		client's permission to		
		send a media is being		
		queued. No additional		
		information is included.		
Reject Cause Phrase	"Queue the	A text string encoded	TS 24.581 [88]	
	transmission"	the text string in the	clause	
		SDES item CNAME.	9.2.10.2	
Transmission Indicator			TS 24.581 [88]	
			clause	
			9.2.3.11	
Transmission Indicator	"1000000000000000"	Normal call		
	"010000000000000"	Broadcast group call		BROADCA
				ST-CALL
	"000100000000000"	Emergency call		EMERGEN
				CY-CALL
	"000010000000000"	Imminent peril call		IMMPERIL
				-CALL

## 5.5.11.2.6 Queue Position Info

#### Table 5.5.11.2.6-1: Queue Position Info

Derivation Path: TS 24.581 [88] Table 9.2.12-1					
Information Element	Value/remark	Comment	Reference	Condition	
RTCP					
Subtype	"00101"	Queue Position Info	TS 24.581 [88] clause 9.2.12 and 9.2.2.1-2		
	"10101"			ACK	
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 355 0 [76]		
	The SSRC of the message sender			OFF- NETWORK	
name	MCV1				
User ID	Not present				
User ID		The User ID field is used in off-network only. The User ID field carries the MCVideo user ID of the transmission participant sending the Queue Position Info message.	TS 24.581 [88] clause 9.2.3.8	OFF- NETWORK	
User ID	px_MCVideo_ID_User_ A				

Derivation Path: TS 24.581 [88]	Table 9.2.12-1			
Information Element	Value/remark	Comment	Reference	Condition
SSRC of Queued	Not present			
Transmission Participant				
SSRC of Queued Transmission Participant	The SSRC of the queued transmission participant	Applicable only in off- network and shall carry the SSRC of the queued transmission participant.	IETF RFC 355 0 [76].	OFF- NETWORK
Queued User ID	Not present			
Queued User ID	px_MCVIDEO_ID_User _B	Used in off-network only. The Queued User ID field carries the MCVideo ID of the queued transmission control participant.	TS 24.581 [88] clause 9.2.3.8	OFF- NETWORK
Queue Info		Defines the queue position and granted transmission control priority in the queue.	TS 24.581 [88] clause 9.2.3.5	
Queue Position Info	"1"	value is a binary value		
Queue Priority Level	"O"	value consists of 8 bit parameter giving the transmission priority. The value of the default priority is '0'. The default priority is sometimes referred to as normal priority.	TS 24.581 [88] clause 9.2.3.2	
Track Info	Not present	The MCVideo call does not involve a non- controlling MCVideo function	TS 24.581 [88] clause 9.2.3.13	
Transmission Control Indicator			TS 24.581 [88] clause 9.2.3.11	
Transmission Indicator	"1000000000000000"	Normal call		
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL
	"000100000000000"	Emergency call		EMERGEN CY-CALL
	"000010000000000"	Imminent peril call		IMMPERIL- CALL

## 5.5.11.2.7 Media Transmission Notification

## Table 5.5.11.2.7-1: Media Transmission Notification

Derivation Path: TS 24.581 [88]	Table 9.2.13-1			
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00110"	Media Transmission Notification	TS 24.581 [88] clause 9.2.13 and 9.2.2.1-2	
	"10110"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 355 0 [76]	
	The SSRC of the message sender			OFF- NETWORK
name	MCV1			
User Id of the Transmitting User (NOTE 1)		User ID of the user transmitting the media	TS 24.581 [88] clause 9.2.3.6	
User Id of the Transmitting User	px_MCVideo_ID_User_B			

Information Element	Value/remark	Comment	Reference	Condition
Audio SSRC of the	Media/Audio SSRC of	SSRC of the user	TS 24.581 [88]	
Transmitting User	remote client (Client B)	transmitting the media	clause 9.2.3.16	
Video SSRC of the	Not present	Rel-18 and later	TS 24.581 [88]	
Transmitting User			clause 9.2.3.23	
Permission to Request the		Indicates whether	TS 24.581 [88]	
Transmission		receiving parties are	clause 9.2.3.7	
		allowed to request the		
		transmission.		
Permission to Request the	1	The receiver is		
Transmission value		permitted to request		
		transmission		
	0	The receiver is not		BROADCA
		permitted to request		ST-CALL
		transmission		
Transmission Indicator			TS 24.581 [88]	
			clause 9.2.3.11	
Transmission Indicator	"100000000000000"	Normal Call		
	"010000000000000"	Broadcast group call		BROADCA
				ST-CALL
	"000100000000000"	Emergency call		EMERGEN
				CY-CALL
	"000010000000000"	Imminent peril call		IMMPERIL
				CALL
Track Info	Not present	The MCVideo call	TS 24.581 [88]	
		does not involve a	clause 9.2.3.13	
		non-controlling		
		MCVideo function		
Functional Alias	Not present			
	px_MCVideo_ID_FA_B	functional alias URI of	TS 24.581 [88]	FA
		the transmitting user	clause 9.2.3.21	
Reception Mode			TS 24.581 [88]	
		·	clause 9.2.3.22	
Reception Mode value	1	The receiver is not		
		granted permission to		
		automatically receive		
		media		
	0	The receiver is granted		EMERGE
		permission to		CY-CALL,
		automatically receive		IMMPERIL
		media		CALL,
				BROADCA
		been used instead of "Use	l	ST-CALL

## 5.5.11.2.8 Receive Media Response

Derivation Path: TS 24.581 [88] Table 9.2.15-1						
Information Element	Value/remark	Comment	Reference	Condition		
RTCP						
Subtype	"00111"	Receive Media Response	TS 24.581 [88] clause 9.2.15 and 9.2.2.1-2			
	"10111"			ACK		
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 355 0 [76],			

Derivation Path: TS 24.581 [88] Information Element	Value/remark	Comment	Reference	Condition
	The SSRC of the message sender			OFF- NETWOR K
name	MCV1			
Result		Indicates whether media reception is possible as per the request	TS 24.581 [88] clause 9.2.3.17	
Result	"1"	<ul> <li>0 - The receiver is not permitted (rejected) to receive the media transmission.</li> <li>1 - The receiver is permitted (granted) to receive the media transmission.</li> </ul>		
Reject Cause	Not present	Includes the reason for the rejecting the media receive request and can be followed by a text-string explaining why the media receive request was rejected. Therefore the length of the packet will vary depending on the size of the application dependent field		
User Id of the Transmitting User	Not present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.6	
Audio SSRC of the	Same value as in the	SSRC of the user	TS 24.581 [88]	
Transmitting User	corresponding Receive Media Request	transmitting the media Notation in accordance with clause 5.5.11.0.	clause 9.2.3.16	
Video SSRC of the Transmitting User	Not present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.23	
Transmission Indicator			TS 24.581 [88] clause 9.2.3.11	
Transmission Indicator	"10000000000000000"	Normal call		
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL
	"000100000000000"	Emergency call		EMERGEN CY-CALL
	"000010000000000"	Imminent peril call		IMMPERIL -CALL

#### 5.5.11.2.9 Media Reception Notification

Derivation Path: TS 24.581 [88]	Table 9.2.16-1			
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"01000"	Media Reception Notification	TS 24.581 [88] clause 9.2.16 and 9.2.2.1-2	
	"11000"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 355 0 [76]	
	The SSRC of the message sender			OFF- NETWOR K
name	MCV1			
User ID		The User ID field is used to carry the identity of the user who is receiving the media	TS 24.581 [88] clause 9.2.3.8	
User ID	px_MCVideo_ID_User_ B			
Audio SSRC of the Transmitting User	Not present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.16	
Video SSRC of the Transmitting User	Not present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.23	
Functional Alias	Not present			
	px_MCVideo_ID_FA_B	functional alias URI of the transmitting user	TS 24.581 [88] clause 9.2.3.21	FA

## Table 5.5.11.2.9-1: Media Reception Notification

## 5.5.11.2.10 Void

## 5.5.11.2.11 Transmission Cancel Request Notify

## Table 5.5.11.2.11-1: Transmission Cancel Request Notify

Derivation Path: TS 24.581 [88]	Table 9.2.19-1			
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"01010"	Transmission Cancel Request Notify	TS 24.581 [88 ]	
			clause 9.2.19	
			and 9.2.2.1-2	
	"11010"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the	IETF RFC	
		Transmission Control	3550 [76].	
		server		
	The SSRC of the	The SSRC of the		OFF-
	message sender	transmission arbitrator		NETWORK
name	MCV1	Transmission Control		
		messages sent by the		
		transmission control		
		server and transmission		
		control participant		

## 5.5.11.2.12 Remote Transmission Response

Derivation Path: TS 24.581 [88]	Table 9.2.23-1			
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"01011"	Remote Transmission Response	TS 24.581 [88 ] clause 9.2.23 and 9.2.2.1-2	
	"11011"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 3550 [76].	
	The SSRC of the message sender			OFF- NETWORK
name	MCV1			

#### Table 5.5.11.2.12-1: Remote Transmission Response

## 5.5.11.2.13 Remote Transmission Cancel Response

#### Table 5.5.11.2.13-1: Remote Transmission Cancel Response

Derivation Path: TS 24.581 [88	] Table 9.2.25-1			
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"01100"	Remote Transmission Cancel Response	TS 24.581 [88 ] clause 9.2.25 and 9.2.2.1-2	
	"11100"			ACK
SSRC	RTCP SSRC of the SS		IETF RFC 3550 [76].	
name	MCV1			

#### 5.5.11.2.14 Media Reception Override Notification

## Table 5.5.11.2.14-1: Media Reception Override Notification

Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"01101"	Media Reception Override Notification	TS 24.581 [88 ] clause 9.2.28 and 9.2.2.1-2	
	"11101"			ACK
SSRC	RTCP SSRC of the SS		IETF RFC 3550 [76].	
	The SSRC of the message sender			OFF- NETWORK
name	MCV1			
User ID		Carries the identity of the user who is requesting the reception of the media.	TS 24.581 [88 ] clause 9.2.3.8	
User ID	px_MCVideo_ID_User_ A			

Derivation Path: TS 24.581 [88] T	able 9.2.28-1			
Information Element	Value/remark	Comment	Reference	Condition
SSRC of transmitter Overriding ID	Same value as sent to the client in the Receive Media Response (Media SSRC of client B)	The SSRC of transmitter field carries the SSRC of the user transmitting the media Notation in accordance with clause 5.5.11.0. Carries the identity of the user of the	IETF RFC 3550 [76]. TS 24.581 [88 ] clause	
User ID	px_MCVideo_ID_User_ C	overriding media.	9.2.3.8	
Overridden ID		Carries the identity of the user of the overridden media.	TS 24.581 [88 ] clause 9.2.3.8	
User ID	px_MCVideo_ID_User_ B			

## 5.5.11.2.15 Transmission End Notify

Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"01110"	Transmission End Notify	TS 24.581 [88 ] clause 9.2.29	
			and 9.2.2.1-2	
	"11110"		anu 9.2.2.1-2	ACK
SSRC	RTCP SSRC of the SS	The SSRC of the transmission control server.	IETF RFC 3550 [76].	
	The SSRC of the message sender			OFF- NETWORK
name	MCV1			
Jser Id of the Transmitting Jser (NOTE 1)		Carries the identity of the user whose media transmission has been released	TS 24.581 [88 ] clause 9.2.3.6	
User Id of the Transmitting Jser	px_MCVideo_ID_User_ B			
udio SSRC of the ransmitting User	Media/Audio SSRC of remote client (Client B)	SSRC of the user transmitting the media	TS 24.581 [88] clause 9.2.3.16	
/ideo SSRC of the ransmitting User	Not present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.23	

#### 5.5.11.2.16 Transmission Idle

#### Table 5.5.11.2.16-1: Transmission Idle

Derivation Path: TS 24.581 [88] Table 9.2.30-1				
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"01111"		TS 24.581 [88 ] clause	
			9.2.2.1-2	

Derivation Path: TS 24.581 [88] T	able 9.2.30-1			
Information Element	Value/remark	Comment	Reference	Condition
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control	IETF RFC 3550 [76].	
		server	3550 [70].	
	The SSRC of the	The SSRC of the		OFF-
	message sender	transmission arbitrator.		NETWORK
name	"MCV1"	Transmission Control		
		messages sent by the		
		Transmission Control		
		Server and the		
		Transmission Control Participant.		
Message Sequence Number			TS 24.581	
			[88] clause	
			9.2.3.9	
Message Sequence Number	The value sent in the	value is a binary value.		
	previous Transmission	The <message< th=""><th></th><th></th></message<>		
	Idle message, if any,	Sequence Number>		
	increased with 1	value can be between		
		'0' and '65535'. When		
		the '65535' value is		
		reached, the <message< td=""><td></td><td></td></message<>		
		Sequence Number>		
		value starts from '0'		
Trenewiesien Indiaster		again	<b>T</b> O	
Transmission Indicator			TS	
			24.581 [88] clause 9.2.3.1	
			1	
Transmission Indicator	"1000000000000000"	Normal call		
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL
	"000100000000000"	Emergency call		EMERGEN CY-CALL
	"000010000000000"	Imminent peril call		IMMPERIL- CALL

# 5.5.11.3 Transmission control specific messages sent by both the transmission control server and transmission control participant

5.5.11.3.1 Transmission End Request

#### Table 5.5.11.3.1-1: Transmission End Request

Derivation Path: TS 24.581 [88]	Table 9.2.20-1		_	
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00000"	Transmission End Request	TS 24.581 [88 ] clause 9.2.20 and 9.2.2.1-3	
	"10000"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server for on-network and transmission arbitrator for off- network.	IETF RFC 3550 [76].	DOWNLINK
	RTCP SSRC of the client	The SSRC of transmission control participant		UPLINK
name	MCV2			

Derivation Path: TS 24.581 [88]			•	
Information Element	Value/remark	Comment	Reference	Condition
User Id of the Transmitting User (NOTE 1)		identity of the user whose media transmission is requested to be terminated.	TS 24.581 [88] clause 9.2.3.6	DOWNLINK
User Id of the Transmitting User User Id of the Transmitting	px_MCVideo_ID_User_ A if present	Rel-18 and later	TS 24.581	UPLINK
User		Rei- to and later	[88] clause 9.2.3.6	UPLINK
User Id of the Transmitting User	px_MCVideo_ID_User_ A			
User Id	Not present			DOWNLINK
User Id	if present	Before Rel-18		UPLINK
User Id	px_MCVideo_ID_User_ A			
Audio SSRC of the Transmitting User	Not present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.16	DOWNLINK
	Any value if present			UPLINK
Video SSRC of the Transmitting User	Not present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.23	DOWNLINK
	Any value if present	1		UPLINK
Reject Cause		Includes the reason explaining why the transmission control server wants the transmission participant to stop sending media	TS 24.581 [88 ] clause 9.2.3.4	DOWNLINK
Reject Cause Value	8			
Reject Cause Phrase	"No receiving participant"			
Reject Cause	not present			UPLINK
NOTE 1: Before Rel-18 the "Us (field ID 004). Neverth of the User Id.	er Id" field (field ID 006) has heless, it is assumed that the			

## 5.5.11.3.2 Transmission End Response

Derivation Path: TS 24.581 [88] T Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00001"	Transmission End Response	TS 24.581 [88 ] clause 9.2.21 and 9.2.2.1-3	
	"10001"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server for on-network and transmission arbitrator for off- network.	IETF RFC 3550 [76].	DOWNLIN K
	RTCP SSRC of the client			UPLINK
name	MCV2			
User Id of the Transmitting User (NOTE 1)		identity of the user whose media transmission is requested to be terminated.	TS 24.581 [88] clause 9.2.3.6	DOWNLIN K
User Id of the Transmitting User	px_MCVideo_ID_User_ A			
User Id of the Transmitting User	if present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.6	UPLINK
User Id of the Transmitting User	px_MCVideo_ID_User_ A			
User Id	Not present			DOWNLIN K
User Id	if present	Before Rel-18		UPLINK
User Id	px_MCVideo_ID_User_ A			
Audio SSRC of the Transmitting User	Not present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.16	DOWNLIN K
	Any value if present			UPLINK
Video SSRC of the Transmitting User	Not present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.23	DOWNLIN K
	Any value if present			UPLINK
NOTE 1: Before Rel-18 the "Use (field ID 004). Neverthe of the User Id.	er Id" field (field ID 006) has eless, it is assumed that the			

#### Table 5.5.11.3.2-1: Transmission End Response

## 5.5.11.3.3 Media Reception End Request

Derivation Path: TS 24.581 [88] Table 9.2.26-1					
Information Element	Value/remark	Comment	Reference	Condition	
RTCP					
Subtype	"00010"	Media Reception End Request	TS 24.581 [88 ] clause 9.2.26 and 9.2.2.1-3		
	"10010"			ACK	
SSRC	RTCP SSRC of the SS	The SSRC of the transmission control server	IETF RFC 35 50 [76]	DOWNLIN K	

## Table 5.5.11.3.3-1: Media Reception End Request

Derivation Path: TS 24.581 [88]	Derivation Path: TS 24.581 [88] Table 9.2.26-1			
Information Element	Value/remark	Comment	Reference	Condition
	RTCP SSRC of the client	The SSRC of the transmission control participant		UPLINK
name	MCV2			
User Id of the Transmitting User	Not present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.6	DOWNLIN K
	Any value if present			UPLINK
Audio SSRC of the Transmitting User	Media/Audio SSRC of remote client as provided in Media transmission notification message sent to the UE	SSRC of the user transmitting the media Notation in accordance with clause 5.5.11.0.	TS 24.581 [88] clause 9.2.3.16	
Video SSRC of the Transmitting User	Not present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.23	DOWNLIN K
	Any value if present			UPLINK
Transmission Indicator			TS 24.581 [88 ] clause 9.2.3.11	
Transmission Indicator	"1000000000000000"	Normal call		
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL
	"000100000000000"	Emergency call		EMERGEN CY-CALL
	"000010000000000"	Imminent peril call		IMMPERIL- CALL

## 5.5.11.3.4 Media Reception End Response

Derivation Path: TS 24.581 [88] Table 9.2.27-1				
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00011"	Media Reception End Response	TS 24.581 [88 ] clause 9.2.27 and 9.2.2.1-3	
	"10011"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the transmission control server	IETF RFC 35 50 [76]	DOWNLIN K
	RTCP SSRC of the client	The SSRC of the transmission control participant		UPLINK
name	MCV2			
User Id of the Transmitting User	Not present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.6	DOWNLIN K
	Any value if present	7		UPLINK
Audio SSRC of the Transmitting User	Media/Audio SSRC of remote client (same value as in the corresponding Media Reception End Request)	SSRC of the user transmitting the media	TS 24.581 [88] clause 9.2.3.16	
Video SSRC of the Transmitting User	Not present	Rel-18 and later	TS 24.581 [88] clause 9.2.3.23	DOWNLIN K
	Any value if present			UPLINK

#### 5.5.11.3.5 Transmission Control Ack

Derivation Path: TS 24.581 [88]				
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00100"	Transmission Control Ack	TS 24.581 [88 ] clause 9.2.31 and 9.2.2.1-3	
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server for on-network and transmission arbitrator for off-network.	IETF RFC 3550 [76]	DOWNLIN K
	RTCP SSRC of the client	The SSRC of the transmission control participant		UPLINK
name	MCV2			
Source			TS 24.581 [88 ] clause 9.2.3.12	
Source	"2"	the controlling MCVideo function is the sender of the message		DOWNLIN K
	"O"	the transmission participant is the sender of the message		UPLINK
Message name			TS 24.581 [88 ] clause 9.2.3.18	
Message Name	Message Name of the transmission control messages which requested the acknowledgement	value is as coded as an ascii name field of the RTCP APP packet containing the message to be acknowledged		
Message type			TS 24.581 [88 ] clause 9.2.3.10	
Message Type	'0000xxxx' with 'xxxx' being the lower four bits of the subtype of the message to be acknowledged	Message Type of the transmission control messages which requested the acknowledgement		

### Table 5.5.11.3.5-1: Transmission Control Ack

# 5.5.12 MSRP Messages for MCData

## 5.5.12.1 MSRP SEND

#### 5.5.12.1.1 MSRP SEND from the UE

#### Table 5.5.12.1.1-1: MSRP SEND from the UE

Derivation Path: RFC 4975 [12 Information Element	Value/remark	Comment	Reference	Condition
Transaction Identifier				
value	any allowed value			
To-Path				
value	MSRP URI as provided by the SS in its SDP message sent to the UE during call establishment			
From-Path				
value	MSRP URI as provided by the UE during call establishment			
Message-ID				
value	any allowed value	In case of chunking the same Message-ID shall be used for all chunks of the message		
Byte-Range				
range-start	1 for the first chunk of a message, length of all previous chunks for a second or later chunk of the message			
	1			EMPTY_S END_REQ
range-end	any allowed value 0			EMPTY_S END_REQ
total length	any allowed value	may be a specific length or "*"		
	0			EMPTY_S END_REQ
Content-Type	as specified by the test case		TS 24.582 [89] , clause 6.4	
	not present			EMPTY_S END_REQ
data	as specified by the test case			
	not present			EMPTY_S END_REQ
End-line				
transact-id	same value as used in Transaction Identifier field			
continuation-flag	"+" in case of chunking when further chunks will follow; "\$" in case of the message's last chunk or if the MSRP SEND request contains the entire message "\$"			EMPTY_S
	φ			END_REQ

Condition	Explanation
EMPTY_SEND_REQ	Empty SEND request to bind the TCP connection to an MSRP
	session
For further conditions see table 5.5.1-1	

Table 5.5.12.1.1-2..4: Void

#### 5.5.12.1.2 MSRP SEND from the SS

#### Table 5.5.12.1.2-1: MSRP SEND from the SS

Derivation Path: RFC 4975 [120 Information Element	Value/remark	Comment	Reference	Condition
Transaction Identifier				
value	value assigned by the SS	The SS shall use a different value for each SEND request sent to the UE during a test case		
To-Path				
value	MSRP URI as provided by the UE in its SDP message sent to the SS during call establishment			
From-Path				
value	MSRP URI as provided by the SS in its SDP message sent to the UE during call establishment			
Message-ID				
value	value assigned by the SS	The SS shall use a different value for each message sent to the UE during a test case (NOTE 1)		
Byte-Range				
range-start	1			
range-end	length of the message in bytes	NOTE 1		
	0			EMPTY_S END_REQ
total length	length of the message in bytes	NOTE 1		
	0			EMPTY_S END_REQ
Content-Type	as specified by the test case		TS 24.582 [89] , clause 6.4	
	not present			EMPTY_S END_REQ
data	as specified by the test case			
	not present			EMPTY_S END_REQ
End-line				
transact-id	same value as used in Transaction Identifier field			
continuation-flag	"\$"	NOTE 1		

Condition	Explanation
EMPTY_SEND_REQ	Empty SEND request to bind the TCP connection to an MSRP
	session
For further conditions see table 5.5.1-1	

#### Table 5.5.12.1.2-2: Void

## 5.5.12.2 MSRP 200 (OK)

## 5.5.12.2.1 MSRP 200 (OK) from the UE

## Table 5.5.12.2.1-1: MSRP 200 (OK) from the UE

Derivation Path: RFC 4975 [12	0] clause 9			
Information Element	Value/remark	Comment	Reference	Condition
Transaction Identifier				
value	same value as received in the MSRP SEND request			
To-Path				
value	Same value as received in the From- Path of the MSRP SEND request	According to Table 5.5.12.1.2-1 the SS sends only one URI in its SEND requests	RFC 4975 clause 7.2	
From-Path	·	· ·		
value	MSRP URI of the UE (as provided by the UE in its SDP message sent to the SS during call establishment)		RFC 4975 clause 7.2	
End-line				
transact-id	same value as used in Transaction Identifier field			
continuation-flag	"\$"			

## 5.5.12.2.2 MSRP 200 (OK) from the SS

Derivation Path: RFC 4975 [120] clause 9				
Information Element	Value/remark	Comment	Reference	Condition
Transaction Identifier				
value	same value as received in the MSRP SEND message			
To-Path				
value	same value as received in the From-Path of the MSRP SEND request	According to Table 5.5.12.1.1-1 it is assumed that the UE sends only one URI in its SEND requests	RFC 4975 clause 7.2	
From-Path		i i		
value	MSRP URI of the SS (as provided by the SS in its SDP message sent to the UE during call establishment)		RFC 4975 clause 7.2	
End-line				
transact-id	same value as used in Transaction Identifier field			
continuation-flag	"\$"			

## Table 5.5.12.2.2-1: MSRP 200 (OK) from the SS

# 5.5.13 Default XML messages and elements for XML security

## 5.5.13.1 XML signature for integrity protection of MIME bodies

## Table 5.5.13.1-1: XML signature MIME body from the UE

Derivation Path: TS 24.379 [9] annex F.6.2				
Information Element	Value/remark	Comment	Reference	Condition
Signatures		list of N signatures for		
		the signed XML bodies		
		of a SIP message		
Signature [n]		n ∈ {1N}		
id	any value if present			
SignedInfo				
CanonicalizationAlgorithm	any value	canonicalisation method e.g. "http://www.w3.org/TR/ 2001/REC-xml-c14n-		
SignatureAlgorithm	"HMAC-SHA-256"	20010315" Hashing algorithm to be applied to sign the SignedInfo with the key given in the KeyInfo		
Reference				
URI	same value as the Content-ID of the XML MIME body the signature belongs to			
DigestAlgorithm	"SHA-256"	Hashing algorithm to be applied to sign the data object		
DigestValue	Hash signing the data object (referred to by the URI)			
SignatureValue	Hash signing the SignedInfo	The signing key is derived from the CSK according to TS 33.180 [94] Annex F.1.4 with FC = 0x52 XPK-ID = CSK-ID		
KeyInfo				
KeyName	base64 encoded CSK- ID			

-

Derivation Path: TS 24.379 [9] at				-
Information Element	Value/remark	Comment	Reference	Condition
Signatures		list of N signatures for the signed XML bodies of a SIP message		
Signature [n]		n ∈ {1N}		
id	"signature" & n			
SignedInfo				
CanonicalizationAlgorithm	"http://www.w3.org/TR/ 2001/REC-xml-c14n- 20010315"	canonicalisation method		
SignatureAlgorithm	"HMAC-SHA-256"	Hashing algorithm to be applied to sign the SignedInfo with the key given in the KeyInfo		
Reference				
URI	same value as the Content-ID of the XML MIME body the signature belongs to			
DigestAlgorithm	"SHA-256"	Hashing algorithm to be applied to sign the data object		
DigestValue	Hash signing the data object (referred to by the URI)			
SignatureValue	Hash signing the SignedInfo	The signing key is derived from the CSK according to TS 33.180 [94] Annex F.1.4 with FC = 0x52 XPK-ID = CSK-ID		
KeyInfo				
KeyName	base64 encoded CSK- ID			

Table 5.5.13.1-2: XML	signature MIME body	from the SS
	Signature minite bou	y nom the SS

## 5.5.13.2 XML <EncryptedData> element for encryption of XML element content

Derivation Path: XML Encryption Syntax, Version 1.1 [108] clause 9.1				
Information Element	Value/remark	Comment	Reference	Condition
EncryptedData				
Type attribute	"http://www.w3.org/200 1/04/xmlenc#Content" if present			
EncryptionMethod	if present			
Algorithm attribute	"http://www.w3.org/200 9/xmlenc11#aes128- gcm"			
KeyInfo	if present			
KeyName	base64 encoded CSK- ID	The CSK-ID is provided by the UE at CSK distribution		
CipherData				
CipherValue	encrypted XML element content	The encryption key is derived from the CSK according to TS 33.180 [94] Annex F.1.4 with FC = 0x51 XPK-ID = CSK-ID	TS 33.180 [94] clause 9.3.4.2	

#### Table 5.5.13.2-1: XML < EncryptedData> element from the UE

#### Table 5.5.13.2-2: XML < EncryptedData> element from the SS

Derivation Path: XML Encryption	Syntax, Version 1.1 [108] cl	lause 9.1		
Information Element	Value/remark	Comment	Reference	Condition
EncryptedData				
Type attribute	"http://www.w3.org/200 1/04/xmlenc#Content"			
EncryptionMethod				
Algorithm attribute	"http://www.w3.org/200 9/xmlenc11#aes128- gcm"			
KeyInfo				
KeyName	base64 encoded CSK- ID	The CSK-ID is provided by the UE at CSK distribution		
CipherData				
CipherValue	encrypted XML element content	The encryption key is derived from the CSK according to TS 33.180 [94] Annex F.1.4 with FC = 0x51 XPK-ID = CSK-ID	TS 33.180 [94] clause 9.3.4.2	

## 5.5.13.3 Encrypted XML URI attribute

Delivery Path: RFC 3261 [22] c	lause 19.1			
Information Element	Value/remark	Comment	Reference	Condition
SIP URI				
scheme	"sip"			
user	semicolon separated list of:		TS 24.379 [9] clause 6.6.2.3.4	
	base64 encoded encrypted URI	The encryption key is derived from the CSK according to TS 33.180 [94] Annex F.1.4 with FC = 0x51 XPK-ID = CSK-ID		
	"iv=" & base64 encoded 96-bit random initialisation vector (IV)	IV as used by AES-128 encryption algorithm		
	"key-id=" & base64 encoded encryption key identifier (XPK-ID)	with XPK-ID = CSK-ID		
	"alg=128-aes-gcm"	AES-128 encryption algorithm		
password	not present			
host	"mc1- encryption.3gppnetwor k.org"		TS 24.379 [9] clause 6.6.2.3.4; TS 23.003 [69] clause 26.2	
port	not present			
uri parameters	not present			
headers	not present			

#### Table 5.5.13.3-1: Encrypted XML URI attribute

# 5.5.14 Default MCVideo Call Control Off-network Messages and Other Information Elements

#### 5.5.14.1 GROUP CALL PROBE

#### Table 5.5.14.1-1: GROUP CALL PROBE from the UE to Other UEs

Derivation Path: TS 24.281 [86] Table 17.1.2.1-1			
Information Element	Value/remark	Comment	Condition
Group call probe message identity	"10000001"		
MCVideo group ID	px_MCVideo_Group_A_I		
	D		

## 5.5.14.2 GROUP CALL ANNOUNCEMENT

#### Table 5.5.14.2-1: GROUP CALL ANNOUNCEMENT from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.3.1-1		Comment	Constitution
Information Element	Value/remark	Comment	Condition
Group call announcement message Identity	"10000010"		
Call identifier	a random number uniformly distributed		
	between (0, 65535)		
	generated at the		
	beginning of a call		
	establishment		
Call type	"00000001"	Basic Group Call	
Call type	"00000011"	Basic Group Call	EMERGEN
	0000011		CY-CALL
	"00000100"		IMMPERIL-
	00000100		CALL
Refresh interval	10000	The Refresh	UALL
Refresh interval	10000	interval contains a	
		number denoting	
		the minimum time	
		interval	
		(milliseconds)	
		between two	
		successive	
		periodic	
		announcements. NOTE:	
		-	
		TS 24.281 [26]	
		clause 9.3.2.4.3.1	
		states that the	
		refresh interval of	
		the call is fixed to	
		10 seconds	
Call start time		(10000 ms)	
Call start time	The Call start time value		
	is an unsigned integer		
	containing UTC time of		
	the time when a call was		
	started, in seconds since		
	midnight UTC of January		
	1, 1970 (not counting		
Lest call time changes these	leap seconds).		
Last call type change time	The Last call type change		
	time value is an unsigned		
	integer containing UTC		
	time of the time when a		
	call priority was changed,		
	in seconds since		
	midnight UTC of January		
	1, 1970 (not counting		
	leap seconds).		
MCVideo group ID	px_MCVideo_Group_A_I		
	D		
SDP	As described in Table		
	5.5.3.1.3-2		
Originating MCPTT user ID	px_MCVideo_ID_User_A	pre-set MCVideo user ID	
Last user to change call type	The ID of the last user to		
	change contents		
Confirm mode indication	Present		
Probe response	Not Present		

#### 5.5.14.3 GROUP CALL ACCEPT

#### Table 5.5.14.3-1: GROUP CALL ACCEPT from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.4.1-	1		
Information Element	Value/remark	Comment	Condition
Group call accept message identity	"10000011"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Call type	"0000001"	Basic Group Call	
	"00000011"		EMERGEN CY-CALL
	"00000100"		IMMPERIL- CALL
MCVideo group ID	px_MCVideo_Group_A_I D		
Sending MCVideo user ID	px_MCVideo_ID_User_A		

#### 5.5.14.4 GROUP CALL EMERGENCY END

#### Table 5.5.14.4-1: GROUP CALL EMERGENCY END from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.13.1-1			
Information Element	Value/remark	Comment	Condition
Group call emergency end message identity	"10000100"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Last call type change time	The Last call type change time value is an unsigned integer containing UTC time of the time when a call priority was changed, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
Last user to change call type	px_MCVideo_ID_User_A	The ID of the last user to change contents	
MCVideo group ID	px_MCVideo_Group_A_I D		
Originating MCVideo user ID	px_MCVideo_ID_User_A		

#### 5.5.14.5 GROUP CALL IMMINENT PERIL END

Derivation Path: TS 24.281 [86] Table 17.1.12.1-1			
Information Element	Value/remark	Comment	Condition
Group call imminent peril end message identity	"10000101"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Last call type change time	The Last call type change time value is an unsigned integer containing UTC time of the time when a call priority was changed, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
Last user to change call type	px_MCVideo_ID_User_A	The ID of the last user to change contents	
MCVideo group ID	px_MCVideo_Group_A_I D		
Originating MCVideo user ID	px_MCVideo_ID_User_A		

#### Table 5.5.14.5-1: GROUP CALL IMMINENT PERIL END from the UE to other UEs

#### 5.5.14.6 GROUP CALL BROADCAST

#### Table 5.5.14.6-1: GROUP CALL BROADCAST from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.18.1	1-1		
Information Element	Value/remark	Comment	Condition
Group call broadcast message identity	"10000110"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Call type	"00000010"	Broadcast Group Call	
Originating MCVideo user ID	px_MCVideo_ID_User_A		
MCVideo group ID	px_MCVideo_Group_A_I D		
SDP	As described in Table 5.5.3.1.3-2		

## 5.5.14.7 GROUP CALL BROADCAST END

#### Table 5.5.14.7.1-1: GROUP CALL BROADCAST END from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.19.1-1			
Information Element	Value/remark	Comment	Condition
Group Call Broadcast end message identity	"10000111"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCVideo group ID	px_MCVideo_Group_A_I D		
Originating MCVideo user ID	px_MCVideo_ID_User_A		

## 5.5.14.8 PRIVATE CALL SETUP REQUEST

#### Table 5.5.14.8-1: PRIVATE CALL SETUP REQUEST from the UE to another UE

Derivation Path: TS 24.281 [86] Table 17.1.5.1-1.			
Information Element	Value/remark	Comment	Condition
Private call setup request message identity	"10001000"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Commencement mode	"0000000"	Automatic Commencement Mode	
Call type	"00000101"	Private Call	
MCVideo user ID of the caller	px_MCVideo_ID_User_A		
MCVideo user ID of the callee	px_MCVideo_ID_User_B		
SDP offer	As described in Table 5.5.3.1.3-2 with condition PRIVATE_CALL		
User location	Not Present		

## 5.5.14.9 PRIVATE CALL RINGING

#### Table 5.5.14.9-1: PRIVATE CALL RINGING from the UE to another UE

Derivation Path: TS 24.281 [86] Table 17.1.6.1-	1.		
Information Element	Value/remark	Comment	Condition
Private call ringing message identity	"10001001"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCVideo user ID of the caller	px_MCVideo_ID_User_A		
MCVideo user ID of the callee	px_MCVideo_ID_User_B		

#### 5.5.14.10 PRIVATE CALL ACCEPT

#### Table 5.5.14.10-1: PRIVATE CALL ACCEPT from the UE to another UE

582

Derivation Path: TS 24.281 [86] Table 17.1.7.1-1			
Information Element	Value/remark	Comment	Condition
Private call accept message identity	"10001010"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCVideo user ID of the caller	px_MCVideo_ID_User_A		
MCVideo user ID of the callee	px_MCVideo_ID_User_B		
SDP answer	As described in Table 5.5.3.1.3-2 with condition PRIVATE_CALL		

#### 5.5.14.11 PRIVATE CALL REJECT

#### Table 5.5.5.11.1-1: PRIVATE CALL REJECT from the UE to another UE

Derivation Path: TS 24.281 [86] Table 17.1.8.1-1.			
Information Element	Value/remark	Comment	Condition
Private call reject message identity	"10001011"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Reason	"0000000"	00000000 = REJECT; 00000001 = MEDIA FAILURE; 00000010 = BUSY; 00000011 = E2E SECURITY CONTEXT FAILURE; 00000100 = FAILED	
MCVideo user ID of the caller	px_MCVideo_ID_User_A		
MCVideo user ID of the callee	px_MCVideo_ID_User_B		

#### 5.5.14.12 PRIVATE CALL RELEASE

#### Table 5.5.14.12-1: PRIVATE CALL RELEASE from the UE to another UE

Derivation Path: TS 24.281 [86] Table 17.1.9.1-1.			
Information Element	Value/remark	Comment	Condition
Private call release message identity	"10001100"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCVideo user ID of the caller	px_MCVideo_ID_User_A		
MCVideo user ID of the callee	px_MCVideo_ID_User_B		

#### 5.5.14.13 PRIVATE CALL RELEASE ACK

#### Table 5.5.14.13-1: PRIVATE CALL RELEASE ACK from the UE to another UE

Derivation Path: TS 24.281 [86] Table 17.1.10.1-	1.		
Information Element	Value/remark	Comment	Condition
Private call release ack message identity	"10001101"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCVideo user ID of the caller	px_MCVideo_ID_User_A		
MCVideo user ID of the callee	px_MCVideo_ID_User_B		

#### 5.5.14.14 PRIVATE CALL ACCEPT ACK

#### Table 5.5.14.14-1: PRIVATE CALL ACCEPT ACK from the UE to another UE

Derivation Path: TS 24.281 [86] Table 17.1.11.1-	1.		
Information Element	Value/remark	Comment	Condition
Private call accept ack message identity	"10001110"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCVideo user ID of the caller	px_MCVideo_ID_User_A		
MCVideo user ID of the callee	px_MCVideo_ID_User_B		

#### 5.5.14.15 GROUP EMERGENCY ALERT

#### Table 5.5.14.15.1-1: GROUP EMERGENCY ALERT from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.14.1-1	1		
Information Element	Value/remark	Comment	Condition
Group emergency alert message identity	"10001111"		
MCVideo group ID	px_MCVideo_Group_A_I D		
Originating MCVideo user ID	px_MCVideo_ID_User_A		
Organization name	px_MCX_DomainName_ Organization_A		
User location	Not Present		
User location			USER_LOC
Latitude	any allowed value		
Longitude	any allowed value		
Altitude	Not present, or any allowed value	Optional IE	
Accuracy	any allowed value		
Timestamp	any allowed value		

Condition	Explanation
USER_LOC	If requested, shall set the location IE with UE (MCPVideo Client)
	current location

## 5.5.14.16 GROUP EMERGENCY ALERT ACK

#### Table 5.5.14.16.1-1: GROUP EMERGENCY ALERT ACK from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.15.1-1			
Information Element	Value/remark	Comment	Condition
Group emergency alert ack message identity	"10010000"		
MCVideo group ID	px_MCVideo_Group_A_I		
	D		
Originating MCVideo user ID	px_MCVideo_ID_User_B		
Sending MCVideo user ID	px_MCVideo_ID_User_A		

## 5.5.14.17 GROUP EMERGENCY ALERT CANCEL

#### Table 5.5.14.17.1-1: GROUP EMERGENCY ALERT CANCEL from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.16.1-1			
Information Element	Value/remark	Comment	Condition
Group emergency alert cancel message identity	"10010001"		
MCVideo group ID	px_MCVideo_Group_A_I D		
Originating MCVideo user ID	px_MCVideo_ID_User_A		
Sending MCVideo user ID	px_MCVideo_ID_User_A		

## 5.5.14.18 GROUP EMERGENCY ALERT CANCEL ACK message

#### Table 5.5.14.18.1-1: GROUP EMERGENCY ALERT CANCEL ACK from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.17.1-1			
Information Element	Value/remark	Comment	Condition
Group emergency alert cancel ack message identity	"10010010"		
MCVideo group ID	px_MCVideo_Group_A_I		
	D		
Originating MCVideo user ID	px_MCVideo_ID_User_A		
Sending MCVideo user ID	px_MCVideo_ID_User_B		

## 5.5.14.19 PRIVATE REMOTE VIDEO PUSH REQUEST message

#### Table 5.5.14.19-1: PRIVATE REMOTE VIDEO PUSH REQUEST from the UE to another UE

Derivation Path: TS 24.381 [86] Table 17.1.20.1-1			
Information Element	Value/remark	Comment	Condition
Remote video push setup request message identity	"10010011"		
Call identifier	a random number uniformly distributed between (0, 65535) generated at the beginning of a call establishment		
MCVideo remote push requester	px_MCVideo_ID_User_A	TS 24.281, Section 13.3.2.2.1	
MCVideo remote push call originator	px_MCVideo_ID_User_A	The stored caller ID	
MCVideo remote push call recipient	px_MCVideo_ID_User_B	The stored callee	
Video Information	The Video Information IE is used to indicate the source (user/group) of the video being pushed.	TS 24.281, Sections 13.3.2.2.1 and 17.2.17, Figure 17.2.17-1, Tables 17.2.17-1 and 17.2.17-2.	
Source ID type	"0000000"	user ID	
Length of Source ID contents			
Source ID	px_MCVideo_ID_User_A		

## 5.5.14.20 GROUP REMOTE VIDEO PUSH REQUEST message

#### Table 5.5.14.20-1: GROUP REMOTE VIDEO PUSH REQUEST from the UE to another UE

Derivation Path: TS 24.281 [86] Table 17.1.21.1-1			
Information Element	Value/remark	Comment	Condition
Remote video push setup request message identity	"10010100"		
Call identifier	a random number		
	uniformly distributed		
	between (0, 65535)		
	generated at the		
	beginning of a call		
	establishment		
MCVideo remote push requester	px_MCVideo_ID_User_A		
MCVideo remote push call originator	px_MCVideo_ID_User_A	The stored caller	
		ID	
MCVideo remote push call recipient	px_MCVideo_Group_A_I	The stored group	
	D	recipient ID	
Video Information		The Video	
		Information IE is	
		used to indicate	
		the source	
		(user/group) of the	
		video being	
		pushed.	
Source ID type	"00000001"	group ID	
Length of Source ID contents			
Source ID	px_MCVideo_Group_A_I		
	D		

#### 5.5.14.21 VIDEO PUSH TRYING RESPONSE message

## Derivation Path: TS 24.281 [86] Table 17.1.22.1-1 Information Element Value/remark Comment Condition Remote video push trying response message identity "10010101" Call identifier a random number uniformly distributed between (0, 65535) generated at the beginning of a call establishment

#### Table 5.5.14.21-1: VIDEO PUSH TRYING RESPONSE from UE to other UE

#### 5.5.14.22 NOTIFY VIDEO PUSH message

#### Table 5.5.14.22-1: NOTIFY VIDEO PUSH message content

Derivation Path: TS 24.281 [86] Table 17.1.23.1-1			
Information Element	Value/remark	Comment	Condition
Remote video push notification message identity	"10010110"		
Call identifier	a random number		
	uniformly distributed		
	between (0, 65535)		
	generated at the		
	beginning of a call		
	establishment		
Result	"0000000"	0000000 =	
		SUCCESS	
		0000001	
		=FAILURE	
MCVideo remote push request notifier	px_MCVideo_ID_User_A	TS 24.281,	
		section 13.3.2.2.6	
MCVideo remote push request notification recipient	px_MCVideo_ID_User_B		
MCVideo remote push call recipient user	Not present		
	px_MCVideo_ID_User_A		PRIVATE-
			CALL
MCVideo remote push call recipient group	Not present		
	px_MCVideo_Group_A_I		GROUP-
	D		CALL
Reason	Not present		

## 5.5.15 Default MCData call control messages and other information elements

#### 5.5.15.1 General

The control messages specified in the present document are based on those specified in TS 24.582 [89] which in term are based on the RTCP Application Packets (RTCP: APP), as defined in IETF RFC 3550 [76].

## 5.5.15.2 Map Group To Bearer

Information Element	Value/remark	Comment	Conditio
RTCP header	Valao, felilari	Connent	Contantio
Subtype	00000	Map Group To	
Subtype	00000	Bearer	
SSRC	RTCP SSRC of the SS	The SSRC of the	
55110		participating	
		MCData function	
name	MCDM	WODdia fariciion	
MCData Group ID	px_MCData_Group_A_I	The group ID of	
		the call	
TMGI			
MBMS Service ID	"OFOFOF"	The selected	
		value is randomly	
		chosen - a 6 digit	
		hexadecimal	
		number between	
		000000 and	
		FFFFFF (see	
		TS 23.003 [69]	
		clause 15.2.	
		The coding of the	
		MBMS Service ID	
		is the	
		responsibility of	
		each	
1000	/ /	administration	
MCC	The same value as for	Mobile Country	
	PLMN1 specified in	Code	
	Table 5.5.8.1-x		
MNC	The same value as for	Mobile Network	
	PLMN1 specified in	Code	
	Table 5.5.8.1-x		
MBMS Subchannel			
Appl. m-line Number	"1"	The number of the	
		" m=application "	
		m-line in the SIP	
		MESSAGE	
		request	
		announcing the	
		MBMS bearer	
IP version	"0"	'0' = IP version 4	
		'1' = IP version 6	
		All other values	
		are reserved for	
		future use	
Media Port Number	"9"		
IP Address	"0.0.0.0"		

## Table 5.5.15.2-1: Map Group To Bearer

## 5.5.15.3 Unmap Group To Bearer

Table 5.5.15.16-1:	Unmap G	roup To	Bearer
--------------------	---------	---------	--------

Derivation Path: 24.582 [89], Table 11.2.5-1 Information Element	Value/remark	Comment	Condition
RTCP header	value/remark	Comment	Condition
Subtype	00001	Unmap Group To Bearer	
SSRC	RTCP SSRC of the SS	The SSRC of the participating MCData function	
name	MCDM		
MCData Group ID	px_MCData_Group_A_I D	The group ID of the call	
TMGI			
MBMS Service ID	"OFOFOF"	The selected value is randomly chosen - a 6 digit hexadecimal number between 000000 and FFFFFF (see TS 23.003 [69] clause 15.2. The coding of the MBMS Service ID is the responsibility of each administration	
MCC	The same value as for PLMN1 specified in Table 5.5.8.1-x	Mobile Country Code	
MNC	The same value as for PLMN1 specified in Table 5.5.8.1-x	Mobile Network Code	
MBMS Subchannel			
Appl. m-line Number	"1"	The number of the " m=application " m-line in the SIP MESSAGE request announcing the MBMS bearer	
IP version	"0"	'0' = IP version 4 '1' = IP version 6 All other values are reserved for future use	
Media Port Number	"9"		
IP Address	"0.0.0.0"		

## 5.5.15.4 Application Paging

## Table 5.5.15.17-1: Application Paging

Derivation Path: 24.582 [89], Table 11.2.6-1			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00010	Application Paging	
SSRC	RTCP SSRC of the SS	The SSRC of the participating MCData function	
name	MCDM		
MCData Group ID	px_MCData_Group_A_I D	The group ID of the call	

#### 5.5.15.5 Bearer Announcement

#### Table 5.5.15.18-1: Bearer Announcement

Derivation Path: 24.582 [89], Table 11.2.7-1			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00011	Bearer Announcement	
name	MCDM		
TMGI			
MBMS Service ID	"0F0F0F"	The selected value is randomly chosen - a 6 digit hexadecimal number between 000000 and FFFFFF (see TS 23.003 [69] clause 15.2. The coding of the MBMS Service ID is the responsibility of each administration	
MCC	The same value as for PLMN1 specified in Table 5.5.8.1-x	Mobile Country Code	
MNC	The same value as for PLMN1 specified in Table 5.5.8.1-x	Mobile Network Code	
Alternative TMGI	Not present		
Monitoring State	'1'	The <monitoring State&gt; value is a binary value where the following values are defined: '0' Monitoring is inactive '1' Monitoring is active</monitoring 	

#### 5.5.15.6 GROUP EMERGENCY ALERT

#### 5.5.15.6.1 GROUP EMERGENCY ALERT from the UE

#### Table 5.5.15.6.1-1: GROUP EMERGENCY ALERT from the UE

Derivation Path: TS 24.282 [87] Table 15.1.14.1	I-1		
Information Element	Value/remark	Comment	Condition
MCData group ID	px_MCData_Group_A_I D		
Originating MCData user ID	px_MCDAta_ID_User_A		
Organization name	Any allowed value		
User location	Not Present		

#### 5.5.15.6.2 GROUP EMERGENCY ALERT from the SS

#### Table 5.5.15.6.2-1: GROUP EMERGENCY ALERT from the SS

Derivation Path: TS 24.282 [87] Table 15.1.14.1-1			
Information Element	Value/remark	Comment	Condition
MCData group ID	px_MCData_Group_A_I		
	D		
Originating MCData user ID	px_MCData_ID_User_B		
Organization name	px_MCData_Group_A_O		
	wner_Organization		
User location	Not Present		

#### 5.5.15.7 GROUP EMERGENCY ALERT ACK

#### 5.5.15.7.1 GROUP EMERGENC ALERT ACK from the UE

#### Table 5.5.15.7.1-1: GROUP EMERGENCY ALERT ACK from the UE

Derivation Path: TS 24.282 [87] Table 15.1.15.1-1			
Information Element	Value/remark	Comment	Condition
MCData group ID	px_MCData_Group_A_I D		
Originating MCData user ID	px_MCData_ID_User_B		
Sending MCData user ID	px_MCData_ID_User_A		

#### 5.5.15.7.2 GROUP EMERGENC ALERT ACK from the SS

#### Table 5.5.15.7.2-1: GROUP EMERGENCY ALERT ACK from the SS

Derivation Path: TS 24.282 [87] Table 15.1.15.1-1			
Information Element	Value/remark	Comment	Condition
MCData group ID	px_MCData_Group_A_I D		
Originating MCData user ID	px_MCData_ID_User_A		
Sending MCData user ID	px_MCData_ID_User_B		

#### 5.5.15.8 GROUP EMERGENCY ALERT CANCEL

#### 5.5.15.8.1 GROUP EMERGENCY ALERT CANCEL from the UE

#### Table 5.5.15.8.1-1: GROUP EMERGENCY ALERT CANCEL from the UE

Derivation Path: TS 24.282 [87] Table 15.1.16.1-1			
Information Element	Value/remark	Comment	Condition
MCData group ID	px_MCData_Group_A_I		
	D		
Originating MCData user ID	px_MCData_ID_User_A		

#### 5.5.15.8.2 GROUP EMERGENCY ALERT CANCEL from the SS

#### Table 5.5.15.8.2-1: GROUP EMERGENCY ALERT CANCEL from the SS

Derivation Path: TS 24.282 [87] Table 15.1.16.1-1			
Information Element	Value/remark	Comment	Condition
MCData group ID	px_MCData_Group_A_I D		
Originating MCData user ID	px_MCData_ID_User_B		

## 5.5.15.9 GROUP EMERGENCY ALERT CANCEL ACK

#### 5.5.15.9.1 GROUP EMERGENCY ALERT CANCEL ACK from the UE

#### Table 5.5.15.9.1-1: GROUP EMERGENCY ALERT CANCEL ACK from the UE

Derivation Path: TS 24.282 [87] Table 15.1.17.1-1			
Information Element	Value/remark	Comment	Condition
MCData group ID	px_MCData_Group_A_I D		
Originating MCData user ID	px_MCData_ID_User_B		
Sending MCData user ID	px_MCData_ID_User_A		

#### 5.5.15.9.2 GROUP EMERGENCY ALERT CANCEL ACK from the SS

#### Table 5.5.15.9.2-1: GROUP EMERGENCY ALERT CANCEL ACK from the SS

Derivation Path: TS 24.282 [87] Table 15.1.17.1-1			
Information Element	Value/remark	Comment	Condition
MCData group ID	px_MCData_Group_A_I D		
Originating MCData user ID	px_MCData_ID_User_A		
Sending MCData user ID	px_MCData_ID_User_B		

## 5.6 Void

Annex A (informative): Change history

Date           2017-02           2017-05           2017-06           2017-08	Meeting R5#74 R5#75 RAN5#75	<b>TDoc</b> R5-171298 R5-172100	CR -	R ev	Gat	Subject/Comment	New version
2017-05	R5#75		-				
2017-06		R5-172100			-	Introduction of TS 36.579-1.	0.0.1
	RAN5#75		1-	-	-	Introduction of default message content for some media control	0.0.2
	RAN5#75					messages, some generic procedures from	
	RAN5#75					R5-172078 Default MCPTT media plane control messages R5-172079 Generic MCPTT procedures	
		-	-	-	-	lifted to v0.1.0 because of technical contents	0.1.0
	RAN5#76	R5-173766	-	-	-	Implemented approved:	0.2.0
						R5-173702 'Various updates of MCPTT TS 36579-1'	
						R5-173703 'Update of MCPTT generic procedures'	
						R5-173704 'New Generic procedures ProSe and MCPTT' R5-173705 'Update default media plane control messages'	
						R5-173706 Update of MCPTT Default MCPTT call control Off-	
						network messages'	
						R5-173707 'Update of MCPTT MIKEY-SAKKE I.MESSAGE'	
						R5-173766 'Update of TS 36.579-1 to version 0.2.0' R5-174599 'SIP message defaults for 36.579-1'	
						R5-174600 'MCPTT Off-Network Group Call Signaling Message	
						Defaults'	
2017-12	RAN5#77	R5-176835	-	-	-	Implemented approved:	0.3.0
						R5-177000 "Update of SIP Message Defaults for MCPTT"	
						R5-176345 "Update of Specific SIP messages in Generic procedures"	
						R5-177001 "Update of Generic procedures for SIP registration"	
						R5-176347 "New Generic Procedure for ProSe group calls	
						Announcing-Discoveree procedure for group member discovery"	
						R5-176348 "New Generic Procedure for ProSe group calls Monitoring/Discoverer procedure for group member discovery"	
						R5-177002 "Update with UE Configuration Defaults"	
						- References updates	
2017-12	RAN#78	RP-172182	-	-	-	Draft version for information purposes to the RAN Plneary	1.0.0
2018-03	RAN5#78	R5-180684	-	-	-	Implemented approved:	1.1.0
						R5-180534 "Update of Section 5.5.2 and 5.5.3 for TS 36.579-1" R5-180535 "Update of Section 5.5.5 for TS 36.579-1"	
						R5-180536 "Update of Section 5.5.6 for TS 36.579-1"	
						R5-181241 "Update of Section 5.5.9 TS 36.579-1"	
						R5-180633 "Update of Default HTTP message and other information	
						elements" R5-180634 "Update of Default MCPTT configuration management	
						messages"	
						R5-180635 "New Generic procedures for MCPTT	
						Authorization/Configuration and Key Generation"	
						R5-18063 "New Generic procedures for MCPTT communication in E-UTRA / Change of cells"	
						R5-180637 "Generic Test Procedure for MCPTT communication	
						over MBMS"	
						R5-180638 "Various updates to 36579-1"	
2018-03	RAN#79	RP-180126	-	-	-	Draft version for approval to move the spec under revision control to	2.0.0
2018-03	RAN#79		_	-	-	the RAN Plenary Editorial changes and promoted to v13.0.0	13.0.0
2018-06	RAN#80	R5-182418	0001	-	F	Addition and correction of GNSS information	13.1.0
2018-06	RAN#80	R5-182419	0002	1-	F	Editorial correction of typos and incorrect references	13.1.0
2018-06	RAN#80	R5-182430	0003	<u> -</u>	F	Editorial Update of 36.579-2 for style H6	13.1.0
2018-06	RAN#80	R5-182431	0004	-	F	Update of TC 5.1 for MCPTT APN	13.1.0
2018-06	RAN#80	R5-182432	0005		F	Updates of Location information messages in 36.579-2	13.1.0
2018-06 2018-06	RAN#80 RAN#80	R5-182489 R5-182510	0008	<u> -</u>	F F	Update of MCPTT TC 6.1.1.1 Correction to MCPTT TC of 6.1.1.8, 6.1.1.11, 6.1.2.5 and 6.1.2.7	13.1.0 13.1.0
2018-06	RAN#80 RAN#80	R5-182510 R5-183167	0009	-	F	Updates of TC 6.3.1	13.1.0
2018-06	RAN#80	R5-183168	0000	1	F	Updates of TC 6.3.2	13.1.0
2018-09	RAN#81	R5-185084	0009	1-	F	Update to TLS setup	13.2.0
2018-09	RAN#81	R5-185122	0007	1	F	Corrections to MCPTT Authorization	13.2.0
2018-09	RAN#81	R5-184685	8000	-	F	Update of default message contents for new Rel-14 TCs for Private	14.0.0
2018-12	RAN#82	R5-186878	0010	<u> </u>	F	Call Call-Back and Ambient listening call Correction to Generic Test Procedure for MCPTT pre-established	14.1.0
2010-12	17/11/#02	1.0-1000/0	0010	1-	l -	session establishment CO	14.1.0
2018-12	RAN#82	R5-186879	0011	1-	F	Editorial update of the default SDP and Resource-list Messages	14.1.0
2018-12	RAN#82	R5-186880	0012	1-	F	Update of default MCPTT media plane control messages and other	14.1.0
				<u> </u>		information elements to reflect latest Rel-13 core specs	<u> </u>
2018-12	RAN#82	R5-186881	0013	-	F	Update of XML schema for MCPTT location information to reflect	14.1.0
	RAN#82	R5-187709	0014	1	F	latest Rel-13 core specs Corrections to clause 5.5.9 of 36.579-1	14.1.0
2018-12						10011001013 10 01ause 0.0.3 01 00.07 3-1	U.I.F.I.U

			1		r		
2018-12	RAN#82	R5-187711	0016	1	F	Update for Resource-lists in 36.579-1	14.1.0
2018-12	RAN#82	R5-187712	0017	1	F	Correction to Table 5.5.1-1 in 36.579-1	14.1.0
2018-12	RAN#82 RAN#82	R5-187713 R5-187714	0018 0019	1 1	F	Correction to Table 5.5.4.10.1-1 in 36.579-1	14.1.0
2018-12	RAN#82	R5-187714 R5-187715	0019	1	F	Correction to Table 5.5.4.2-1 in 36.579-1 Correction to SIP NOTIFY message in 36.579-1	14.1.0 14.1.0
2018-12	RAN#82	R5-187716	0020	1	F	Correction to SIP SUBSCRIBE message in 36.579-1	14.1.0
2018-12	RAN#82	R5-187717	0022	1	F	Update of Generic Test 5.3.2 in 36.579-1	14.1.0
2019-03	RAN#83	R5-191210	0023	-	F	Correction of default contents in SIP INVITE from the UE	14.2.0
2019-03	RAN#83	R5-191902	0024	-	F	Update to MCPTT floor control default messages	14.2.0
2019-03	RAN#83	R5-192155	0025	-	F	Update 36.579-1 Section 4.2 and 4.3	14.2.0
2019-03	RAN#83	R5-192156	0026	-	F	Update 36.579-1 Delete clauses inside the present spec	14.2.0
2019-03	RAN#83	R5-192157	0027	-	F	Update 36.579-1 Blue text removal	14.2.0
2019-06	RAN#84	R5-194001	0028	-	F	Correction of default contents in the SIP INVITE from the UE	14.3.0
2019-06	RAN#84	R5-194665	0030	-	F	Typo for MCPTT in 36.579-1	14.3.0
2019-06	RAN#84	R5-195216	0029	1	F	Update of UE registration procedure for location info configuration	14.3.0
2019-06	RAN#84	R5-195217	0031	1	F	References and derivation path updates for SIP messages	14.3.0
2019-09	RAN#85	R5-196773	0045	-	F	Updates to conditions Table 5.5.1-1	14.4.0
2019-09	RAN#85	R5-196983	0046	-	F	Correction of SIP messages	14.4.0
2019-09	RAN#85	R5-197133	0044	1 1	F	Update for MCVideo and MCData services	14.4.0
2019-09 2019-09	RAN#85 RAN#85	R5-197229 R5-197293	0038 0043	2	F	Correction of default contents in the SIP REGISTER Update to Generic Procedure 5.3.3	14.4.0 14.4.0
2019-09	RAN#85	R5-197293	0043	-	F	Correction and addition of references or values and editorial	14.4.0
2013-03	1111100	101234	0047	[	'	comments	17.7.0
2019-09	RAN#85	R5-197295	0041	2	F	Corrections to MCPTT UE registration procedures	14.4.0
2019-12	RAN#86	R5-198159	0050	1	F	Corrections to SIP signalling for MCPTT CO and CT communication	14.5.0
						procedures	
2019-12	RAN#86	R5-199043	0049	1	F	Correction to default HTTP messages	14.5.0
2019-12	RAN#86	R5-199044	0051	1	F	Corrections to MCPTT UE registration procedures	14.5.0
2019-12	RAN#86	R5-199045	0052	1	F	Additions of further references	14.5.0
2019-12	RAN#86	R5-199046	0053	1	F	Corrections related to MIKEY protocol	14.5.0
2019-12	RAN#86	R5-199047	0054	1	F	Correction to default messages for MCPTT group management and	14.5.0
2019-12	RAN#86	R5-199048	0055	1	F	configuration management Correction of default SDP message and other information elements	1450
2019-12	RAN#86	R5-199048 R5-199051	0055	1	F	SDP Default for MCVideo and MCData	14.5.0 14.5.0
2019-12	RAN#86	R5-199052	0058	1	F	Adding MCVideo Transmission Control Messages	14.5.0
2019-12	RAN#86	R5-199053	0060	1	F	Updates TS 33.179 references to TS 33.180	14.5.0
2019-12	RAN#86	R5-199077	0048	2	F	Correction to default SIP messages	14.5.0
2020-03	RAN#87	R5-200264	0063	-	F	Corrections to default SIP message and other information elements	14.6.0
2020-03	RAN#87	R5-200265	0064	-	F	Addition of further references	14.6.0
2020-03	RAN#87	R5-200301	0065	-	F	Corrections to default HTTP message and other information	14.6.0
						elements	
2020-03	RAN#87	R5-200385	0066	-	F	Corrections to default MCPTT configuration management messages	14.6.0
					_	and other information elements	
2020-03	RAN#87	R5-201220	0062	1	F	Corrections to MCPTT UE registration procedures	14.6.0
		R5-202552	0069		F	Correcting core spec reference for APN requirements	14.7.0
2020-06	RAN#88	R5-202698	0073	1	F	SDP updates for MCVideo and MCData Default MCVideo Transmission Control Messages	14.7.0
2020-06 2020-06	RAN#88 RAN#88	R5-202699 R5-203001	0076 0077	1 1	F	SIP 202 (Accepted) message default	14.7.0 14.7.0
2020-00	RAN#88	R5-203001	0067	1	F	Updates to MCX generic test procedures and default message	14.7.0
2020-00	11/11/#00	10-203073	0007	l'	1	contents	14.7.0
2020-06	RAN#88	R5-203074	0068	1	F	Updates to generic test procedure for MCPTT	14.7.0
				-	-	Authorization/Configuration and Key Generation	
2020-09	RAN#89	R5-204226	0082	-	F	Addition of XML schema for MCVideo location information	14.8.0
2020-09	RAN#89	R5-204229	0083	-	F	MCVideo and MCData in Clause 4	14.8.0
2020-09	RAN#89	R5-204490	0084	1	F	MCVideo and MCData in Clause 5.5.7	14.8.0
2020-09	RAN#89	R5-204491	0085	1	F	Updates to UE configuration document	14.8.0
2020-09	RAN#89	R5-204492	0086	1	F	Update of content with Rel-14 requirements	14.8.0
2020-09	RAN#89	R5-204533	0078	1	F	New MCPTT Common Procedures for CT/CO session establishment	14.8.0
2020-09	RAN#89	R5-204534	0079	1	F	Updates to MCX generic test procedures and default message	14.8.0
		201001	0010	1	ľ	contents	1.0.0
2020-09	RAN#89	R5-204535	0081	1	F	Description of the distribution of MSCCK and MuSiK	14.8.0
2020-12	RAN#90	R5-206053	0094	1	F	PIDF body modifications	14.9.0
2020-12	RAN#90	R5-206084	0096	1	F	Condition updates for default MCS configuration management	14.9.0
						messages	
		R5-206108	0097		F	Update of MCPTT Floor Control Messages for Rel-14	14.9.0
2020-12	RAN#90	KJ-200108		1 -			1
2020-12 2020-12	RAN#90 RAN#90	R5-206108	0087	1	F	Correction to Generic Test Procedure for MCPTT pre-established	14.9.0
2020-12	RAN#90	R5-206445	0087			session establishment CO	
				1	F	session establishment CO Correction to MCPTT Common Procedures for CT/CO session	14.9.0 14.9.0
2020-12 2020-12	RAN#90 RAN#90	R5-206445 R5-206446	0087 0088	1	F	session establishment CO Correction to MCPTT Common Procedures for CT/CO session establishment	14.9.0
2020-12	RAN#90	R5-206445	0087			session establishment CO Correction to MCPTT Common Procedures for CT/CO session	

2020-12	RAN#90	R5-206449	0091	1	F	Updates for Group Communications Key retrieval	14.9.0
2020-12	RAN#90	R5-206450	0091	1	F	Second group configuration retrieval process modification	14.9.0
2020-12	RAN#90	R5-206451	0095	1	F	Existing Generic Test Procedures Updates	14.9.0
2020-12	RAN#90	R5-206422	0098	1	F	Update of MCPTT Floor Control Messages for Rel-15	15.0.0
2020-12	RAN#90	R5-206423	0099	1	F	MCPTT Configuration Doc Update for Rel-15 Location	15.0.0
2021-03	RAN#91	R5-210205	0101	-	F	Correction to Generic Test Procedure for MCPTT CT group call	15.1.0
						establishment, manual commencement	
2021-03	RAN#91	R5-210207	0103	-	F	New MCPTT generic test procedures	15.1.0
2021-03	RAN#91	R5-210208	0104	-	F	Update to Default HTTP message - POST	15.1.0
2021-03	RAN#91	R5-210210	0106	-	F	Update to Default Message Content - INVITE	15.1.0
2021-03	RAN#91	R5-210211	0107	-	F	Update to Default Message Content - Pidf	15.1.0
2021-03	RAN#91	R5-210213	0109	-	F	Update to Default Message Content - SDP	15.1.0
2021-03	RAN#91	R5-210214	0110	-	F	Update to Default Message Content - SIP 200 (OK)	15.1.0
2021-03	RAN#91	R5-210215	0111	-	F	Update to Default Message Content - UPDATE	15.1.0
2021-03	RAN#91	R5-210216	0112	-	F	Update to Default Message Content AFFILIATION-COMMAND	15.1.0
2021-03	RAN#91	R5-210217	0113	-	F	Update to Default Message Content MIKEY-SAKKE I_MESSAGE	15.1.0
2021-03	RAN#91	R5-210218	0114	-	F	Update to Default Message Content SIP 180 (Ringing) and SIP 183 (Session progress)	15.1.0
2021-03	RAN#91	R5-210219	0115	-	F	Update to Default Message Content SIP MESSAGE	15.1.0
2021-03	RAN#91	R5-210220	0116	-	F	Update to Default Message Content SUBSCRIBE	15.1.0
2021-03	RAN#91	R5-210221	0117	-	F	Update to the MCS GKTP document	15.1.0
2021-03	RAN#91	R5-210319	0118	-	F	Update to references clause	15.1.0
2021-03	RAN#91	R5-210994	0120	-	F	Update to default MCPTT media plane control messages	15.1.0
2021-03	RAN#91	R5-211354	0121	1	F	Update of References in 36.579-1	15.1.0
2021-03	RAN#91	R5-211517	0100	1	F	Addition of a generic procedure for MCPTT radio bearer establishment for use of pre-established session	15.1.0
2021-03	RAN#91	R5-211518	0102	1	F	Correction to generic test procedure for MCPTT pre-established	15.1.0
2021-03	KAN#91	K5-211516	0102	L.	г	session establishment	15.1.0
2021-03	RAN#91	R5-211519	0108	1	F	Update to Default Message Content - REFER and Resource-List	15.1.0
2021-03	RAN#91	R5-211520	0100	1	F	MCPTT Info Corrections	15.1.0
2021-05	RAN#92	R5-212145	0123	-	F	Removal of redundant references to TS 36.579-1	15.2.0
2021-00	RAN#92	R5-212146	0120	-	F	Addition of SIP 487 default message and update of User Profile for	15.2.0
2021 00	10.00	110 212140	0124			first-to-call and request remotely initiated call	10.2.0
2021-06	RAN#92	R5-212288	0128	-	F	Correction to generic test procedure 5.3.13	15.2.0
2021-06	RAN#92	R5-212289	0129	-	F	Correction to generic test procedure 5.3.16	15.2.0
2021-06	RAN#92	R5-212290	0130	-	F	Correction to generic test procedure 5.3.19	15.2.0
2021-06	RAN#92	R5-212291	0131	-	F	Correction to generic test procedure 5.3.22	15.2.0
2021-06	RAN#92	R5-212293	0133	-	F	Correction to generic test procedure 5.3.5	15.2.0
2021-06	RAN#92	R5-212294	0134	-	F	Correction to Resource List message content	15.2.0
2021-06	RAN#92	R5-212295	0135	-	F	Correction to SDP message content	15.2.0
2021-06	RAN#92	R5-212298	0138	-	F	Update to Default Message Content - Connect	15.2.0
2021-06	RAN#92	R5-212299	0139	-	F	Update to Default Message Content - INVITE	15.2.0
2021-06	RAN#92	R5-212301	0141	-	F	Update to Default Message Content - SIP MESSAGE	15.2.0
2021-06	RAN#92	R5-212302	0142	-	F	Update to Default Message Content - SIP PUBLISH	15.2.0
		R5-212303	0143	-	F F	Update to Default Message Content SIP 4xx	15.2.0
2021-06	RAN#92	R5-212304	0144	-	F	Update to general conditions	15.2.0
2021-06 2021-06	RAN#92 RAN#92	R5-212305 R5-212354	0145 0146	-	F	Update to references clause	15.2.0 15.2.0
2021-06	RAN#92 RAN#92	R5-212354 R5-212665	0140	-	F	Correction to default message content Location-Info Additions to MCPTT Group Configuration	15.2.0
2021-06	RAN#92 RAN#92	R5-212005 R5-213265	0140	-	F	Additions to MCPTT Floor Control Defaults 5.5.6	15.2.0
2021-06	RAN#92 RAN#92	R5-213265 R5-213266	0151	-	F	Additions to MCPTT Group Configuration Defaults 5.5.7	15.2.0
2021-06	RAN#92 RAN#92	R5-213266	0152	-	F	Update of MCVideo Transmission Control Default Messages 5.5.11	15.2.0
2021-06	RAN#92 RAN#92	R5-213207 R5-213588	0155	-	F	Addition of Functional Alias Generic Procedures	15.2.0
2021-06	RAN#92 RAN#92	R5-2135889	0149	1	F	Addition of Functional Alias to MCPTT Config Documents 5.5.8	15.2.0
2021-00	11/11/#32						
	RAN#92	R5-213653	0126	1	F	Correction to Default Message content HTTP POST, PUT and	15.2.0
	RAN#92			1	F	Correction to Default Message content HTTP POST, PUT and DELETE	15.2.0
2021-06	RAN#92			1 1	F	DELETE Correction to default message content MCPTT-Info	15.2.0
2021-06 2021-06	RAN#92 RAN#92	R5-213653	0126 0127 0132	1 1	F F	DELETE Correction to default message content MCPTT-Info Correction to generic test procedure 5.3.3	15.2.0 15.2.0
2021-06 2021-06 2021-06	RAN#92 RAN#92 RAN#92	R5-213653 R5-213654 R5-213655 R5-213656	0126 0127 0132 0137	1 1 1	F F F	DELETE Correction to default message content MCPTT-Info Correction to generic test procedure 5.3.3 New generic test procedure for group creation	15.2.0 15.2.0 15.2.0
2021-06 2021-06 2021-06 2021-06	RAN#92 RAN#92 RAN#92 RAN#92	R5-213653 R5-213654 R5-213655 R5-213656 R5-213657	0126 0127 0132 0137 0140	1 1	F F F	DELETE Correction to default message content MCPTT-Info Correction to generic test procedure 5.3.3 New generic test procedure for group creation Update to Default Message Content - REFER	15.2.0 15.2.0 15.2.0 15.2.0
2021-06 2021-06 2021-06	RAN#92 RAN#92 RAN#92	R5-213653 R5-213654 R5-213655 R5-213656	0126 0127 0132 0137	1 1 1	F F F	DELETE Correction to default message content MCPTT-Info Correction to generic test procedure 5.3.3 New generic test procedure for group creation Update to Default Message Content - REFER Addition of clause 5.3.27 - Generic Test Procedure for MCPTT CO	15.2.0 15.2.0 15.2.0
2021-06 2021-06 2021-06 2021-06	RAN#92 RAN#92 RAN#92 RAN#92	R5-213653 R5-213654 R5-213655 R5-213656 R5-213657	0126 0127 0132 0137 0140	1 1 1	F F F	DELETE         Correction to default message content MCPTT-Info         Correction to generic test procedure 5.3.3         New generic test procedure for group creation         Update to Default Message Content - REFER         Addition of clause 5.3.27 - Generic Test Procedure for MCPTT CO         Temporary Group Creation         Addition of clause 5.3.28 - Generic Test Procedure for MCPTT CO	15.2.0 15.2.0 15.2.0 15.2.0
2021-06 2021-06 2021-06 2021-06 2021-09 2021-09	RAN#92 RAN#92 RAN#92 RAN#92 RAN#93 RAN#93	R5-213653 R5-213654 R5-213655 R5-213656 R5-213657 R5-214625 R5-214626	0126 0127 0132 0137 0140 0154 0155	1 1 1	F F F F	DELETE Correction to default message content MCPTT-Info Correction to generic test procedure 5.3.3 New generic test procedure for group creation Update to Default Message Content - REFER Addition of clause 5.3.27 - Generic Test Procedure for MCPTT CO Temporary Group Creation Addition of clause 5.3.28 - Generic Test Procedure for MCPTT CO Temporary Group Tear Down	15.2.0 15.2.0 15.2.0 15.2.0 15.3.0 15.3.0
2021-06 2021-06 2021-06 2021-09 2021-09 2021-09 2021-09	RAN#92 RAN#92 RAN#92 RAN#93 RAN#93 RAN#93	R5-213653 R5-213654 R5-213655 R5-213656 R5-213657 R5-214625 R5-214626 R5-214630	0126 0127 0132 0137 0140 0154 0155 0159	1 1 1 - -	F F F F F	DELETE         Correction to default message content MCPTT-Info         Correction to generic test procedure 5.3.3         New generic test procedure for group creation         Update to Default Message Content - REFER         Addition of clause 5.3.27 - Generic Test Procedure for MCPTT CO         Temporary Group Creation         Addition of clause 5.3.28 - Generic Test Procedure for MCPTT CO         Temporary Group Tear Down         Correction of clause 5.3.24 - Generic Test Procedure for UE intitated         MCPTT functional alias status determination and subscription	15.2.0         15.2.0         15.2.0         15.2.0         15.3.0         15.3.0         15.3.0
2021-06 2021-06 2021-06 2021-06 2021-09 2021-09	RAN#92 RAN#92 RAN#92 RAN#92 RAN#93 RAN#93	R5-213653 R5-213654 R5-213655 R5-213656 R5-213657 R5-214625 R5-214626	0126 0127 0132 0137 0140 0154 0155	1 1 1	F F F F	DELETE         Correction to default message content MCPTT-Info         Correction to generic test procedure 5.3.3         New generic test procedure for group creation         Update to Default Message Content - REFER         Addition of clause 5.3.27 - Generic Test Procedure for MCPTT CO         Temporary Group Creation         Addition of clause 5.3.28 - Generic Test Procedure for MCPTT CO         Temporary Group Tear Down         Correction of clause 5.3.24 - Generic Test Procedure for UE intitated         MCPTT functional alias status determination and subscription         Correction of clause 5.3.25 - Generic Test Procedure for UE	15.2.0 15.2.0 15.2.0 15.2.0 15.3.0 15.3.0
2021-06 2021-06 2021-06 2021-09 2021-09 2021-09 2021-09	RAN#92 RAN#92 RAN#92 RAN#93 RAN#93 RAN#93	R5-213653 R5-213654 R5-213655 R5-213656 R5-213657 R5-214625 R5-214626 R5-214630	0126 0127 0132 0137 0140 0154 0155 0159	1 1 1 - -	F F F F F	DELETE         Correction to default message content MCPTT-Info         Correction to generic test procedure 5.3.3         New generic test procedure for group creation         Update to Default Message Content - REFER         Addition of clause 5.3.27 - Generic Test Procedure for MCPTT CO         Temporary Group Creation         Addition of clause 5.3.28 - Generic Test Procedure for MCPTT CO         Temporary Group Tear Down         Correction of clause 5.3.24 - Generic Test Procedure for UE intitated         MCPTT functional alias status determination and subscription         Correction of clause 5.3.25 - Generic Test Procedure for UE         inititated MCPTT functional alias status change         Correction of clause 5.3.26 - Generic Test Procedure for MCPTT CO	15.2.0         15.2.0         15.2.0         15.2.0         15.3.0         15.3.0         15.3.0
2021-06 2021-06 2021-06 2021-09 2021-09 2021-09 2021-09	RAN#92 RAN#92 RAN#92 RAN#93 RAN#93 RAN#93 RAN#93	R5-213653 R5-213654 R5-213655 R5-213656 R5-213657 R5-214625 R5-214626 R5-214630 R5-214631	0126 0127 0132 0137 0140 0154 0155 0159 0160	1 1 1 - -	F F F F F F	DELETE         Correction to default message content MCPTT-Info         Correction to generic test procedure 5.3.3         New generic test procedure for group creation         Update to Default Message Content - REFER         Addition of clause 5.3.27 - Generic Test Procedure for MCPTT CO         Temporary Group Creation         Addition of clause 5.3.28 - Generic Test Procedure for MCPTT CO         Temporary Group Tear Down         Correction of clause 5.3.24 - Generic Test Procedure for UE intitated         MCPTT functional alias status determination and subscription         Correction of clause 5.3.25 - Generic Test Procedure for UE         inititated MCPTT functional alias status change	15.2.0         15.2.0         15.2.0         15.3.0         15.3.0         15.3.0         15.3.0         15.3.0

2021-09	RAN#93	R5-214635	0164	-	F	Correction of clause 5.5.2.11 – SIP PUBLISH	15.3.0
	RAN#93	R5-214646	0175	-	F	Correction of clause 5.5.4.3 - HTTP POST	15.3.0
2021-09	RAN#93	R5-214918	0182	-	F	MCX IUT	15.3.0
2021-09	RAN#93	R5-215370	0183	-	F	Correction of General extension payload in Mikey message	15.3.0
2021-09	RAN#93	R5-215383	0184	-	F	Correction of XCAP Root URI in HTTP GET Requests	15.3.0
2021-09	RAN#93	R5-215728	0156	1	F	Addition of clause 5.3.29 - Generic Test Procedure for MCPTT Subscription and Notification	15.3.0
2021-09	RAN#93	R5-215729	0157	1	F	Correction of clause 5.3.15 – Generic Test Procedure for MCPTT CO session modification without implicit Floor Control	15.3.0
2021-09	RAN#93	R5-215730	0158	1	F	Correction of clause 5.3.22 - Generic Test Procedure for NW initiated temporary group creation	15.3.0
2021-09	RAN#93	R5-215731	0163	1	F	Correction of clause 5.5.1 – General	15.3.0
2021-03	RAN#93	R5-215732	0165	1	F	Correction of clause 5.5.2.14 – SIP SUBSCRIBE	15.3.0
2021-09	RAN#93	R5-215733	0166	1	F	Correction of clause 5.5.2.5 – SIP INVITE	15.3.0
	RAN#93	R5-215734	0167	1	F	Correction of clause 5.5.2.8 – SIP NOTIFY	15.3.0
2021-09	RAN#93	R5-215735	0168	1	F	Correction of clause 5.5.3.1 – SDP Message	15.3.0
2021-09	RAN#93	R5-215736	0169	1	F	Correction of clause 5.5.3.11 – PoC-Settings	15.3.0
2021-09	RAN#93	R5-215737	0170	1	F	Correction of clause 5.5.3.12 – XCAP-DIFF	15.3.0
2021-09	RAN#93	R5-215738	0171	1	F	Correction of clause 5.5.3.2 – MCS Info Lists	15.3.0
	RAN#93	R5-215739	0172	1	F	Correction of clause 5.5.3.3 – Resource Lists	15.3.0
2021-09	RAN#93	R5-215740	0173	1	F	Correction of clause 5.5.3.5 – PIDF	15.3.0
2021-09	RAN#93	R5-215741	0174	1	F	Correction of clause 5.5.4.1 – General conditions	15.3.0
2021-09	RAN#93	R5-215742	0176	1	F	Correction of clause 5.5.4.4 - HTTP PUT	15.3.0
2021-09	RAN#93	R5-215743	0177	1	F	Correction of clause 5.5.4.5 - HTTP DELETE	15.3.0
2021-09	RAN#93	R5-215745	0179	1	F	Correction of clause 5.5.4.7 - HTTP 201 (Created)	15.3.0
	RAN#93	R5-215746	0180	1	F	Correction of clause 5.5.6.7 - Floor Taken	15.3.0
	RAN#93	R5-215747	0181	1	F	Correction of clause 5.5.7.1 - MCPTT Group Configuration	15.3.0
2021-09	RAN#93	R5-216282	0185	1	F	Addition of MIKEY-SAKKE I_MESSAGE Table 5.5.9.1-1A CSK download sent by the SS	15.3.0
2021-09	RAN#93		-	-		Editorial fixes	15.3.1
	RAN#93 RAN#94	- R5-216663	0187	-	- F	Correction of clause 5.5.2.11 - SIP PUBLISH	15.4.0
	RAN#94	R5-216664	0187	E	F	Correction of clause 5.5.2.12 - SIP REFER	15.4.0
	RAN#94	R5-216665	0189	-	F	Correction of clause 5.5.2.12 - SIP REGISTER	15.4.0
2021-12	RAN#94	R5-216667	0100	-	F	Correction of clause 5.5.2.16.3 - SIP 183 (Session Progress)	15.4.0
	RAN#94	R5-216668	0192	-	F	Correction of clause 5.5.2.17.1 - SIP 200 (OK)	15.4.0
2021-12	RAN#94	R5-216669	0193	-	F	Correction of clause 5.5.2.2 - SIP BYE	15.4.0
	RAN#94	R5-216670	0194	-	F	Correction of clause 5.5.2.5 - SIP INVITE	15.4.0
	RAN#94	R5-216671	0195	-	F	Correction of clause 5.5.2.7 - SIP MESSAGE	15.4.0
2021-12	RAN#94	R5-216672	0196	-	F	Correction of clause 5.5.2.8 - SIP NOTIFY	15.4.0
2021-12	RAN#94	R5-216674	0198	-	F	Correction of clause 5.5.3.10 - MCData Protected Payload Message	15.4.0
2021-12	RAN#94	R5-216676	0200	-	F	Correction of clause 5.5.3.2 - MCPTT-Info from the UE	15.4.0
2021-12	RAN#94	R5-216677	0201	-	F	Correction of clause 5.5.3.3 - Resource-lists	15.4.0
2021-12	RAN#94	R5-216678	0202	-	F	Correction of clause 5.5.3.4 - Location-info	15.4.0
2021-12	RAN#94	R5-216679	0203	-	F	Correction of clause 5.5.3.6 - SIMPLE-FILTER	15.4.0
2021-12	RAN#94	R5-216680	0204	-	F	Correction of clause 5.5.3.8 - SDS Signalling Payload	15.4.0
2021-12	RAN#94	R5-216681	0205	-	F	Correction of clause 5.5.3.9 - MCData Data Payload	15.4.0
2021-12	RAN#94	R5-216682	0206	-	F	Correction of clause 5.5.4 - Default HTTP message and other information elements	15.4.0
2021-12	RAN#94	R5-216684	0208	-	F	Correction of clause 5.5.7 - Default MCPTT group management messages and other information elements	15.4.0
2021-12	RAN#94	R5-216686	0210	-	F	Correction of clause 5.5.9.1 - MIKEY-SAKKE I_MESSAGE	15.4.0
	RAN#94	R5-216687	0211	-	F	Correction of Generic Test Procedure for MCPTT CO call	15.4.0
						establishment using a pre-established session 5.3.9	
2021-12	RAN#94	R5-216689	0213	-	F	Correction of Generic Test Procedure for MCPTT CO call release keeping the pre-established session 5.3.11	15.4.0
2021-12	RAN#94	R5-216690	0214	-	F	Correction of Generic Test Procedure for MCPTT CO Group Creation 5.3.26	15.4.0
2021-12	RAN#94	R5-216691	0215	-	F	Correction of Generic Test Procedure for MCPTT CO session establishment/modification without provisional responses other than	15.4.0
2021-12	RAN#94	R5-216692	0216	-	F	100 Trying 5.3.7 Correction of Generic Test Procedure for MCPTT CO session modification without implicit Floor Control 5.3.15	15.4.0
2021-12	RAN#94	R5-216693	0217	-	F	Correction of Generic Test Procedure for MCPTT CO Temporary Group Creation 5.3.27	15.4.0
2021-12	RAN#94	R5-216694	0218	-	F	Correction of Generic Test Procedure for MCPTT CO Temporary Group Tear Down 5.3.28	15.4.0
2021-12	RAN#94	R5-216695	0219	-	F	Correction of Generic Test Procedure for MCPTT CT call release 5.3.12	15.4.0
2021-12	RAN#94	R5-216696	0220	-	F	Correction of Generic Test Procedure for MCPTT CT call release keeping the pre-established session 5.3.13	15.4.0
2021-12							

2021-12         RANR94         R5-216698         0.222         -         F         Correction of Generic Test Procedure for MCPTT CT ession         15.4.0           2021-12         RANR94         R5-216700         0.224         -         F         Correction of Generic Test Procedure for MCPTT Subscription and         15.4.0           2021-12         RANR94         R5-216702         0.225         -         F         Correction of Generic Test Procedure for MCPTT UE registration         15.4.0           2021-12         RANR94         R5-216702         0.222         -         F         Correction of Generic Test Procedure for UE Initiated MCPTT         15.4.0           2021-12         RANR94         R5-217667         0.222         -         F         Correction of Generic Test Procedure for UE Initiated MCPTT         15.4.0           2021-12         RANR94         R5-217667         0.199         1         F         Correction of Ganes 5.3.1.3.0         15.4.0         15.4.0           2021-12         RANR94         R5-217667         0.199         1         F         Correction of Ganes 5.3.1.5.0.6.13         Datu MCPTT med palae         15.4.0           2021-12         RANR94         R5-217667         0.201         1         F         Correction of Ganes 5.3.1.5.0.6.13         Datu MCPTT med palae <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>								
2021-12         RAN#94         R5-216701         0224         -         F         Correction of Generic Test Procedure for MCPTT Subscription and 15.4.0           2021-12         RAN#94         R5-216702         0225         -         F         Correction of Generic Test Procedure for MCPTT UE registration 15.4.0           2021-12         RAN#94         R5-216703         0227         -         F         Correction of Generic Test Procedure for UE Initiated MCPTT 15.4.0           2021-12         RAN#94         R5-217030         0226         -         F         Correction of Jacus 5.6.3 MCPTT UE Protein 15.4.0           2021-12         RAN#94         R5-217080         0190         1         F         Correction of Jacus 5.3.1.3 VEP Message         15.4.0           2021-12         RAN#94         R5-217961         0190         1         F         Correction of Jacus 5.3.1.3 VEP Message         15.4.0           2021-12         RAN#94         R5-217961         0201         1         F         Correction of Jacus 5.3.1.3 VEP Message         15.4.0           2021-12         RAN#94         R5-217961         0221         1         F         Correction of Jacus 5.3.1.5 CF 31.0 Ceall MCCPTT med paters 15.4.0           2021-12         RAN#94         R5-217961         0221         1         F	2021-12	RAN#94	R5-216698	0222	-	F	establishment/modification without provisional responses other than	15.4.0
Tende         Total         5.4.2         Total         Total <th< td=""><td>2021-12</td><td>RAN#94</td><td>R5-216700</td><td>0224</td><td>-</td><td>F</td><td>Correction of Generic Test Procedure for MCPTT Subscription and</td><td>15.4.0</td></th<>	2021-12	RAN#94	R5-216700	0224	-	F	Correction of Generic Test Procedure for MCPTT Subscription and	15.4.0
Interformation         Interformation         Interformation         Interformation         Interformation           2021-12         RAN#94         R5-217632         0227         F         Correction of Generic Test Procedure for UI initiated MCPTT         15.4.0           2021-12         RAN#94         R5-217632         0229         F         Initiated MCPTT         15.4.0           2021-12         RAN#94         R5-217665         0156         11         F         5.7.3 MCDATA Group Configuration Updates         15.4.0           2021-12         RAN#94         R5-217665         0159         1         F         Correction of diause 5.5.3.1 SDP Message         15.4.0           2021-12         RAN#94         R5-217686         0121         1         F         Correction of diause 5.5.6.1 - 5.6.13         Default MCPT metal plane         15.4.0           2021-12         RAN#94         R5-217986         0222         1         F         Correction of diause 5.5.3         Colume MCPT To colume lange for the test Procedure for MCPT To colume lange for the test Procedure for MCPT To colume lange         15.4.0           2021-12         RAN#94         R5-217986         0228         1         F         Correction of diause 5.1.1         Colume MCPT To re-established         15.0           2021-12         RAN#94	2021-12	RAN#94	R5-216701	0225	-	F		15.4.0
Control         Control of Cause 5.5.3         Control of Cause 5.5.3         Control of Cause 5.5.3         Control Cause 5.5.3	2021-12	RAN#94	R5-216702	0226	-	F		15.4.0
2021-12         RAN#94         R5-217905         0190         1         F         6.5.7.3 MCDATA Group Configuration Updates         15.4.0           2021-12         RAN#94         R5-217965         0199         1         F         Correction of clause 5.5.1.* SIP Message         15.4.0           2021-12         RAN#94         R5-217965         0199         1         F         Correction of clause 5.5.1.* SIP Message         15.4.0           2021-12         RAN#94         R5-217967         0207         1         F         Correction of clause 5.5.1.* SIP Message         15.4.0           2021-12         RAN#94         R5-217966         0212         1         F         Correction of Cenetic Test Procedure for MCPTT CO call release         15.4.0           2021-12         RAN#94         R5-217966         0221         1         F         Correction of Cenetic Test Procedure for MCPTT pre-established         15.4.0           2021-12         RAN#94         R5-217967         0228         1         F         Nermetic Test Procedure for MCPTT pre-established         15.4.0           2021-12         RAN#94         R5-217967         0228         1         F         Nermetic Test Procedure for MCPTT pre-established         15.6.0           2022-03         RAN#95         R5-20466	2021-12	RAN#94	R5-216703	0227	-	F		15.4.0
2021-12         RAN#94         R5-217964         0190         1         F         Correction of clause 5.5.2.1-SDP Message         15.4.0           2021-12         RAN#94         R5-217966         0197         1         F         Correction of clause 5.5.3.12 - Xcgp-diff documents         15.4.0           2021-12         RAN#94         R5-217966         0197         1         F         Correction of clause 5.5.3.12 - Xcgp-diff documents         15.4.0           2021-12         RAN#94         R5-217966         0212         1         F         Correction of Genetic Test Procedure for MCPTT CO call release         15.4.0           2021-12         RAN#94         R5-217967         0229         1         F         Correction of Genetic Test Procedure for MCPTT pre-established         15.4.0           2021-12         RAN#94         R5-217967         0221         F         Correction of Gause 5.4.3         Default MCVT pre-established         15.4.0           2022-03         RAN#95         R5-20460         0231         -         F         Correction of clause 5.4.4         Generic Test Procedure for MCPT pre-established         15.5.0           2022-03         RAN#95         R5-20460         0231         -         F         Correction of clause 5.4.1-106fault MCVIdeo Tramamission Conrol         15.5.0 <td>2021-12</td> <td></td> <td></td> <td></td> <td>-</td> <td>F</td> <td></td> <td>15.4.0</td>	2021-12				-	F		15.4.0
2021-12         RAN#94         R5217965         0199         1         F         Correction of clause 5.5.1-SDF Message         15.40           2021-12         RAN#94         R5217967         0207         1         F         Correction of clause 5.5.1-SDF Message         15.40           2021-12         RAN#94         R5217967         0207         1         F         Correction of clause 5.5.3-Default MCS configuration management         15.40           2021-12         RAN#94         R5217965         0209         1         F         Correction of clause 5.5.3-Default MCS configuration management         15.40           2021-12         RAN#94         R5-217986         0223         1         F         Correction of Ceneric Test Procedure for MCPTT pre-established         15.40           2021-12         RAN#94         R5217987         0228         1         F         New MCX genetic test procedures for SIP MESSAGE message         15.50           2022-03         RAN#95         R5220461         0231         F         Correction of clause 5.21-1         Forouction of clause 5.21-1         State Size Size Size Size Size Size Size Siz	-	-						
2021-12         RAN#94         R5-217966         0199         1         F         Correction of clause 5.5.12         X.Supdiff.documents         15.4.0           2021-12         RAN#94         R5-217968         0212         1         F         Correction of clause 5.5.1         25.1.3         Default MCPTT media plane         15.4.0           2021-12         RAN#94         R5-217985         0200         1         F         Correction of Cause 5.5.1         Default MCS configuration management         15.4.0           2021-12         RAN#94         R5-217985         0202         1         F         Correction of Generic Test Procedure for MCPTT pre-established session establishment CO 5.3.3         Tession of Cause 5.4         Default MCS configuration management         15.4.0           2021-12         RAN#95         R5-220461         0221         F         Correction of Cause 5.1.1         Default MCVideo Transmission Control         15.5.0           2022-03         RAN#95         R5-220461         0231         F         Correction of Cause 5.1.1         Station MC2aa         15.5.0           2022-03         RAN#95         R5-220462         0232         F         Correction of Cause 5.1.1         Station MC2aa         15.5.0           2022-03         RAN#95         R5-220464         0234		-						
2021-12         RAN#94         R5-217967         0207         1         F         Correction of clause 5.5.6.13 - Default MCPTT media plane         15.4.0           2021-12         RAN#94         R5-217968         0212         1         F         Correction of Generic Test Procedure for MCPTT CO call release         15.4.0           2021-12         RAN#94         R5-217985         0209         1         F         Correction of clause 5.5.3 - Default MCS configuration management         15.4.0           2021-12         RAN#94         R5-217987         0222         1         F         Correction of Cause 5.7.8 - Default MCS configuration management         15.4.0           2022-12         RAN#95         R5-220461         0231         F         Correction of clause 2 - References         15.5.0           2022-03         RAN#95         R5-220461         0231         F         Correction of clause 5.12.1 - SIP Messages for MCData         15.5.0           2022-03         RAN#95         R5-220462         0233         F         Correction of clause 5.1.1 - Default MCVideo Transmission Control         15.5.0           2022-03         RAN#95         R5-220467         0234         F         Correction of clause 5.2.1 - SIP Messages for MCData         15.5.0           2022-03         RAN#95         R5-220477								
Control messages from UE         Control of Generic Test Procedure for MCPTT CO call release           2021-12         RAN#94         R5-217986         0212         1         F         Correction of Generic Test Procedure for MCPTT CO call release         15.4.0           2021-12         RAN#94         R5-217986         0223         1         F         Correction of Generic Test Procedure for MCPTT pre-established         15.4.0           2021-12         RAN#94         R5-217987         0228         1         F         Correction of Gause 5.4.0         15.5.0           2021-12         RAN#95         R5-220462         0232         -         F         Correction of dause 5.4.0         15.5.0           2022-03         RAN#95         R5-220462         0233         -         F         Correction of dause 5.2.16SIP two         15.5.0           2022-03         RAN#95         R5-220462         0234         -         F         Correction of dause 5.2.16SIP two         15.5.0           2022-03         RAN#95         R5-220461         0234         -         F         Correction of dause 5.2.16SIP two         15.5.0           2022-03         RAN#95         R5-220470         0234         -         F         Correction of dause 5.2.16SIP two         15.5.0								
ALM#94         R5-217985         0209         1         F         Correction of clause 5.5.8 - Default MCS configuration management         15.4.0           2021-12         RAN#94         R5-217986         0223         1         F         Correction of Clause 5.5.8 - Default MCS configuration management         15.4.0           2021-12         RAN#94         R5-217986         0223         1         F         Correction of Generic Test Procedure for SIP MESSAGE message         15.4.0           2021-12         RAN#95         R5-220461         0231         F         Correction of clause 2 - References         15.5.0           2022-03         RAN#95         R5-220462         0232         F         Correction of clause 5.1.1 - Default MCVideo Transmission Control         15.5.0           2022-03         RAN#95         R5-220466         0235         F         Correction of clause 5.2.1.6 - SIP two         15.5.0           2022-03         RAN#95         R5-220466         0235         F         Correction of clause 5.2.1 - SIP Pack         15.5.0           2022-03         RAN#95         R5-220470         0240         F         Correction of clause 5.2.1 - SIP Pick         15.5.0           2022-03         RAN#95         R5-220470         0240         F         Correction of clause 5.3.1 - SIP SINTE							control messages from UE	
Construction         Construction<							5.3.10	
Session establishment C0 5.3.3         Session establishment C0 5.3.3           2021-12         RAN#95         R5-20461         0231         F         New KCX generic test procedures for SIP MESSAGE message         16.4.0           2022-03         RAN#95         R5-20462         0232         F         Correction of clause 2 - References         15.5.0           2022-03         RAN#95         R5-20462         0232         F         Correction of clause 5.5.1 - Dafault MCVideo Transmission Control           2022-03         RAN#95         R5-20463         0233         F         Correction of clause 5.5.1 - SIP TAX         15.5.0           2022-03         RAN#95         R5-20466         0236         F         Correction of clause 5.5.1 - SIP TAX         15.5.0           2022-03         RAN#95         R5-20466         0236         F         Correction of clause 5.2.1 - SIP TAX         15.5.0           2022-03         RAN#95         R5-20467         0247         F         Correction of clause 5.2.4 SIP NOTTFY         15.5.0           2022-03         RAN#95         R5-20470         0240         F         Correction of clause 5.2.4 SIP NOTTFY         15.5.0           2022-03         RAN#95         R5-20470         0242         F         Correction of clause 5.3.10         NOTTFY	-	_					messages and other information elements	
Invest         Invest         F         Correction of clause 2 - References         Invest           2022-03         RAN#95         R5-220462         0232         F         Correction of clause 5.4 - Generic test procedures for UE operation over E-UTRA/EPC         15.5.0           2022-03         RAN#95         R5-220463         0233         -         F         Correction of clause 5.5.17         MSR plass and other Information Elements           2022-03         RAN#95         R5-220466         0236         -         F         Correction of clause 5.5.17         SNR plass and other Information Elements           2022-03         RAN#95         R5-220466         0236         -         F         Correction of clause 5.5.2.17         SNR plass and other Information Elements         15.5.0           2022-03         RAN#95         R5-220467         0237         -         F         Correction of clause 5.5.2.7.15         PI Axx         15.5.0           2022-03         RAN#95         R5-220470         0240         -         F         Correction of clause 5.5.3.10         MCData Dta signalling messages         15.5.0           2022-03         RAN#95         R5-220470         0240         -         F         Correction of clause 5.5.3.10         MCData Dta signalling messages         15.5.0 <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td>session establishment CO 5.3.3</td><td></td></td<>							session establishment CO 5.3.3	
2022-03         RAN#95         R5-220462         0232         -         F         Correction of clause 5.5.11 - Default MCV/deo Transmission Control Messages and other information Elements         15.5.0           2022-03         RAN#95         R5-220463         0233         -         F         Correction of clause 5.5.11 - MSP Messages for MCData         15.5.0           2022-03         RAN#95         R5-220466         0236         -         F         Correction of clause 5.5.17 - MSP Messages for MCData         15.5.0           2022-03         RAN#95         R5-220466         0236         -         F         Correction of clause 5.5.2.17 - SIP 2xx         15.5.0           2022-03         RAN#95         R5-220467         0237         -         F         Correction of clause 5.5.2.7 - SIP 2xx         15.5.0           2022-03         RAN#95         R5-220470         0240         -         F         Correction of clause 5.5.3.10 - MCData Detasignaling messages         15.5.0           2022-03         RAN#95         R5-220472         0244         -         F         Correction of clause 5.5.3.10 - MCData Detasignaling messages         15.5.0           2022-03         RAN#95         R5-220476         0246         -         F         Correction of clause 5.5.3.10 - MCData Detasignaling messages         15.5.0 </td <td></td> <td></td> <td></td> <td></td> <td>1</td> <td></td> <td>flows</td> <td></td>					1		flows	
over E-UTRA/EPC         over E-UTRA/EPC           202-03         RN#95         R5-220463         Q233         -         F         Correction of clause 5.5.11 - Default MCVideo Transmission Control         15.5.0           2022-03         RAN#95         R5-220464         Q234         -         F         Correction of clause 5.5.2.17 - SIP 2xx         15.5.0           2022-03         RAN#95         R5-220467         Q237         -         F         Correction of clause 5.5.2.7 - SIP XXX         15.5.0           2022-03         RAN#95         R5-220468         Q238         -         F         Correction of clause 5.5.2.7 - SIP MESSAGE         15.5.0           2022-03         RAN#95         R5-220470         Q244         -         F         Correction of clause 5.5.3.10 - MCData Data signaling messages         15.5.0           2022-03         RAN#95         R5-220472         Q244         -         F         Correction of clause 5.5.4 - Default HTP message and other         15.5.0           2022-03         RAN#95         R5-220476         Q244         -         F         Correction of clause 5.5.4 - Default MCPT media plane control         15.5.0           2022-03         RAN#95         R5-220476         Q246         -         F         Correction of clause 5.6.3 - Default MCS configuration mana					-			
Image: Construction of the information Elements         Image: Construction of Clause 5.5.2. MSRP Messages for MCData         15.5.0           2022-03         RAN#95         R5-220466         0235         -         F         Correction of clause 5.5.2. NSRP Messages for MCData         15.5.0           2022-03         RAN#95         R5-220467         0237         -         F         Correction of clause 5.5.2. SIP INVITE         15.5.0           2022-03         RAN#95         R5-220468         0238         -         F         Correction of clause 5.5.2.17         SIP NUTTE         15.5.0           2022-03         RAN#95         R5-220470         0240         -         F         Correction of clause 5.5.2.1         SIP NUTLY         15.5.0           2022-03         RAN#95         R5-220470         0240         -         F         Correction of clause 5.5.3.1         SIP NUTLY         15.5.0           2022-03         RAN#95         R5-220472         0244         -         F         Correction of clause 5.5.4         Default MCPT media plane control         Information elements           2022-03         RAN#95         R5-220476         0246         -         F         Correction of clause 5.5.4         Default MCP message and other         Information elements           2022-03 <td< td=""><td>2022-03</td><td></td><td></td><td></td><td>-</td><td>-</td><td>over E-UTRA/EPC</td><td></td></td<>	2022-03				-	-	over E-UTRA/EPC	
2022-03         RAN#95         R5-220465         0235         -         F         Correction of clause 5.5.2.16 - SIP 1xx         15.5.0           2022-03         RAN#95         R5-220467         0237         -         F         Correction of clause 5.5.2.7         SIP NVITE         15.5.0           2022-03         RAN#95         R5-220467         0237         -         F         Correction of clause 5.5.2.7         SIP NVITE         15.5.0           2022-03         RAN#95         R5-220469         0239         -         F         Correction of clause 5.5.2.8         SIP NVITE         15.5.0           2022-03         RAN#95         R5-220470         0240         -         F         Correction of clause 5.5.3.4         NCData Data signalling messages         15.5.0           2022-03         RAN#95         R5-220470         0244         -         F         Correction of clause 5.5.4         NCData Data signalling messages         15.5.0           2022-03         RAN#95         R5-220476         0246         -         F         Correction of clause 5.5.6         Default MCT         message and other information elements         15.5.0           2022-03         RAN#95         R5-220470         0248         -         F         Correction of clause 5.5.3         <	2022-03	RAN#95	R5-220463	0233	-	F		15.5.0
2022-03         RAN#95         R5-220460         0236         -         F         Correction of clause 5.5.2.1 - SIP INVITE         15.5.0           2022-03         RAN#95         R5-220460         0238         -         F         Correction of clause 5.5.2.1 - SIP INVITE         15.5.0           2022-03         RAN#95         R5-220460         0239         -         F         Correction of clause 5.5.2.1 - SIP INESSAGE         15.5.0           2022-03         RAN#95         R5-220470         0240         -         F         Correction of clause 5.5.3.10 - MCData Protected Payload Message         15.5.0           2022-03         RAN#95         R5-220472         0244         -         F         Correction of clause 5.5.3.10 - MCData Protected Payload Message         15.5.0           2022-03         RAN#95         R5-220476         0244         -         F         Correction of clause 5.5.4 - Default MCPTT media plane control         15.5.0           2022-03         RAN#95         R5-220476         0246         -         F         Correction of clause 5.5.4 - Default MCPTT media plane control         15.5.0           2022-03         RAN#95         R5-220470         0247         -         F         Correction of clause 5.5.8 - Default MCS configuration management         messages and other information elements					-			
2022-03         RAN#95         R5-220467         0237         -         F         Correction of clause 5.5.2.7 - SIP MESAGE         15.5.0           2022-03         RAN#95         R5-220468         0238         -         F         Correction of clause 5.2.7 - SIP MESAGE         15.5.0           2022-03         RAN#95         R5-220470         0240         -         F         Correction of clause 5.5.2.8 - SIP NOTIFY         15.5.0           2022-03         RAN#95         R5-220472         0242         -         F         Correction of clause 5.5.3.10 - MCData signalling messages         15.5.0           2022-03         RAN#95         R5-220477         0244         -         F         Correction of clause 5.5.4 - Default HTTP message and other         15.5.0           2022-03         RAN#95         R5-220476         0246         -         F         Correction of clause 5.5.4 - Default MCPT media plane control         messages and other information elements           2022-03         RAN#95         R5-220477         0247         -         F         Correction of clause 5.5.3 - Default MCX group management         15.5.0           2022-03         RAN#95         R5-220478         0248         -         F         Correction of clause 5.5.3.1 SDP Message         15.5.0           2022-03					-			
2022-03         RAN#95         R5-220468         0238         -         F         Correction of clause 5.5.2r SIP MESAGE         15.50           2022-03         RAN#95         R5-220470         0240         -         F         Correction of clause 5.5.2r SIP NOTIFY         15.50           2022-03         RAN#95         R5-220472         0242         -         F         Correction of clause 5.5.2r SIP NOTIFY         15.50           2022-03         RAN#95         R5-220476         0244         -         F         Correction of clause 5.5.3.e. MCData Protected Payload Message         15.50           2022-03         RAN#95         R5-220477         0245         -         F         Correction of clause 5.5.6. Default MCPTT media plane control information elements         15.50           2022-03         RAN#95         R5-220477         0247         -         F         Correction of clause 5.5.6. Default MCPT media plane control messages and other information elements         15.50           2022-03         RAN#95         R5-220477         0247         -         F         Correction of clause 5.5.1 - Default MCS configuration management messages and other information elements         15.50           2022-03         RAN#95         R5-220470         0249         -         F         Correction of clause 5.5.1 - CSK download b					-			
2022-03         RAN#95         R5-220469         0239         -         F         Correction of clause 5.5.2-1 - SIP PUBLISH         15.5.0           2022-03         RAN#95         R5-220470         0242         -         F         Correction of clause 5.5.2-1 - SIP NOTIFY         15.5.0           2022-03         RAN#95         R5-220472         0242         -         F         Correction of clause 5.5.3.10 - MCData Data signalling messages         15.5.0           2022-03         RAN#95         R5-220475         0245         -         F         Correction of clause 5.5.4 - Default MCPT media plane control information elements           2022-03         RAN#95         R5-220476         0246         -         F         Correction of clause 5.5.7 - Default MCPT media plane control messages and other information elements           2022-03         RAN#95         R5-220477         0247         -         F         Correction of clause 5.5.7 - Default MCX group management messages and other information elements         15.5.0           2022-03         RAN#95         R5-220478         0248         -         F         Correction of clause 5.5.3 - Default MCX configuration management messages and other information elements         15.5.0           2022-03         RAN#95         R5-220470         0249         -         F         Correction of clause 5.5.					-			
2022-03         RAN#95         R5-220470         0240         -         F         Correction of clause 5.5.2*8 - SIP NOTIFY         15.5.0           2022-03         RAN#95         R5-220474         0244         -         F         Correction of clause 5.5.3*6 - MCData Protected Payload Message         15.5.0           2022-03         RAN#95         R5-220475         0244         -         F         Correction of clause 5.5.3*6 - MCData Data signalling messages         15.5.0           2022-03         RAN#95         R5-220476         0246         -         F         Correction of clause 5.5.4 - Default MCPTT media plane control information elements           2022-03         RAN#95         R5-220477         0247         -         F         Correction of clause 5.5.7 - Default MCX group management messages and other information elements         15.5.0           2022-03         RAN#95         R5-220470         0247         -         F         Correction of clause 5.5.3 - Default MCX group management messages and other information elements         15.5.0           2022-03         RAN#95         R5-220479         0249         -         F         Correction of clause 5.5.1 - Default MCX incup messages         15.5.0           2022-03         RAN#95         R5-220470         0249         -         F         Correction of clause 5.3.1 - SDM M					-			
2022-03         RAN#95         R5-220472         0242         -         F         Correction of clause 5.5.3.10 - MCData Data signalling messages         15.5.0           2022-03         RAN#95         R5-220475         0245         -         F         Correction of clause 5.5.3.10 - MCData Data signalling messages         15.5.0           2022-03         RAN#95         R5-220476         0245         -         F         Correction of clause 5.5.4 - Default MCPTT media plane control         15.5.0           2022-03         RAN#95         R5-220477         0247         -         F         Correction of clause 5.5.6 - Default MCX group management         15.5.0           2022-03         RAN#95         R5-220478         0248         -         F         Correction of clause 5.5.8 - Default MCX group management         15.5.0           2022-03         RAN#95         R5-220479         0249         -         F         Correction of clause 5.5.3.13         0240         15.5.0           2022-03         RAN#95         R5-220479         0249         -         F         Removal clause 5.5.3.13         Correction of clause 5.5.3.13         0240         15.5.0           2022-03         RAN#95         R5-22047         0249         -         F         Correction of clause 5.5.3.13         Correction cfause					-			
2022-03         RAN#95         R5-220474         0244         -         F         Correction of clause 5.5.3.8 - MCData Data signalling messages         15.5.0           2022-03         RAN#95         R5-220475         0245         -         F         Correction of clause 5.5.3.8 - MCData Data signalling messages         15.5.0           2022-03         RAN#95         R5-220476         0246         -         F         Correction of clause 5.5.6 - Default MCPTT media plane control messages and other information elements           2022-03         RAN#95         R5-220477         0247         -         F         Correction of clause 5.5.7 - Default MCX group management messages and other information elements           2022-03         RAN#95         R5-220479         0244         -         F         Correction of clause 5.5.3.1 - SCK download by the SS         15.5.0           2022-03         RAN#95         R5-220479         0249         -         F         Correction of clause 5.5.3.1 - SCK download by the SS         15.5.0           2022-03         RAN#95         R5-220480         0250         -         F         Removal of clause 5.5.3.1 - SCK download by the SS         15.5.0           2022-03         RAN#95         R5-222027         0241         1         F         Correction of clause 5.3.3 - SIMECE-FILTER         15.6.0     <					-			
2022-03         RAN#95         R5-220475         0245         -         F         Correction of clause 5.5.4 - Default HTTP message and other information elements         15.5.0           2022-03         RAN#95         R5-220477         0247         -         F         Correction of clause 5.5.6 - Default MCPTT media plane control messages and other information elements         15.5.0           2022-03         RAN#95         R5-220478         0247         -         F         Correction of clause 5.5.7 - Default MCX group management messages and other information elements         15.5.0           2022-03         RAN#95         R5-220478         0248         -         F         Correction of clause 5.5.9.1 - CSK download by the SS         15.5.0           2022-03         RAN#95         R5-220479         0249         -         F         Correction of clause 5.5.3.1 - SDK download by the SS         15.5.0           2022-03         RAN#95         R5-220400         0250         F         Removal of clause 5.5.3.1 - SDP Message         15.5.0           2022-03         RAN#95         R5-220207         0243         1         F         Correction of clause 5.5.3.1 - SDP Message         15.5.0           2022-03         RAN#95         R5-222141         0252         F         New MCDtata off-network signalling messages for UE MCS         15.6.0 </td <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td>					-			
2022-03         RAN#95         R5-220476         O246         ·         F         Correction of clause 5.5.6 · Default MCPTT media plane control messages and other information elements         15.0           2022-03         RAN#95         R5-220477         0247         ·         F         Correction of clause 5.5.7 · Default MCX group management messages and other information elements         15.5.0           2022-03         RAN#95         R5-220478         0248         ·         F         Correction of clause 5.5.8 · Default MCS configuration management messages and other information elements         15.5.0           2022-03         RAN#95         R5-220479         0249         ·         F         Correction of clause 5.5.3.1         15.5.0           2022-03         RAN#95         R5-220480         0250         ·         F         Removal of clause 5.3.3.1         15.5.0           2022-03         RAN#95         R5-220480         0251         1         F         Correction of clause 5.3.1.5 DP Message         15.5.0           2022-03         RAN#95         R5-22026         0241         1         F         Correction of clause 5.3.4.5 SIMPLE-FILTER         15.5.0           2022-03         RAN#95         R5-220280         0251         1         F         New MCVideo 0f-network signalling messages in 5.5.3.8         15					-			
2022-03         RAN#95         R5-220477         0247         -         F         Correction of clause 5.5.7 - Default MCX group management messages and other information elements         15.5.0           2022-03         RAN#95         R5-220478         0248         -         F         Correction of clause 5.5.8 - Default MCX group management messages and other information elements         15.5.0           2022-03         RAN#95         R5-220479         0249         -         F         Correction of clause 5.5.9.1 - CSK download by the SS         15.5.0           2022-03         RAN#95         R5-221545         0230         1         F         Additional Rel-15 parameters for MCVideo User Profile 5.5.8.7         15.5.0           2022-03         RAN#95         R5-221026         0241         1         F         Correction of clause 5.5.3.1 - SDP Message         15.5.0           2022-03         RAN#95         R5-220206         0241         1         F         Correction of clause 5.3.3.6 - SIMPLE-FILTER         15.5.0           2022-03         RAN#95         R5-220208         0251         1         F         Restructuring of clause 5.3.1 - SDP Message in 5.5.3.8         15.6.0           2022-06         RAN#96         R5-222142         0253         -         F         New MCData off-network Message Defaults 5.5.14					-		information elements	
Construction         messages and other information elements           2022-03         RAN#95         R5-220478         0248         -         F         Correction of clause 5.5.8 - Default MCS configuration management messages and other information elements         15.0           2022-03         RAN#95         R5-220479         0249         -         F         Correction of clause 5.5.9.1 - CSK download by the SS         15.5.0           2022-03         RAN#95         R5-220480         0250         -         F         Removal of clause 5.5.3.13         15.5.0           2022-03         RAN#95         R5-220260         0241         1         F         Correction of clause 5.5.3.1 - SDP Message         15.5.0           2022-03         RAN#95         R5-22027         0243         1         F         Correction of clause 5.3.3.1 - SDP Message         15.5.0           2022-03         RAN#95         R5-22027         0243         1         F         Correction of clause 5.3.3.1 - SDP Message         15.5.0           2022-03         RAN#96         R5-222028         0251         1         F         Restructuring of clause 5.3.6 - SIMPLE-FILTER         15.6.0           2022-06         RAN#96         R5-222142         0253         -         F         New MCVideo Off-network Message Defaults 5.5.14 <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td>messages and other information elements</td> <td></td>					-		messages and other information elements	
2022-03         RAN#95         R5-220479         0249         F         Correction of clause 5.5.9.1 - CSK download by the SS         15.5.0           2022-03         RAN#95         R5-220480         0250         F         Removal of clause 5.5.9.1 - CSK download by the SS         15.5.0           2022-03         RAN#95         R5-221545         0230         1         F         Additional Rel-15 parameters for MCVideo User Profile 5.5.8.7         15.5.0           2022-03         RAN#95         R5-221026         0241         1         F         Correction of clause 5.5.3.1 - SDP Message         15.5.0           2022-03         RAN#95         R5-222027         0243         1         F         Correction of clause 5.5.3.6 - SIMPLE-FILTER         15.5.0           2022-03         RAN#95         R5-222028         0251         1         F         Restructuring of clause 5.3.3.6 - SIMPLE-FILTER         15.6.0           2022-06         RAN#96         R5-222141         0252         -         F         New MCData off-network Message Defaults 5.5.14         15.6.0           2022-06         RAN#96         R5-222392         0254         -         F         Addition of clause 5.5.3.15 - Conference-info         15.6.0           2022-06         RAN#96         R5-222396         0258 <td< td=""><td></td><td></td><td></td><td></td><td>-</td><td></td><td>messages and other information elements</td><td></td></td<>					-		messages and other information elements	
2022-03         RAN#95         R5-220480         0250         -         F         Removal of clause 5.5.3.13         15.5.0           2022-03         RAN#95         R5-221545         0230         1         F         Additional Rel-15 parameters for MCVideo User Profile 5.5.8.7         15.5.0           2022-03         RAN#95         R5-222026         0241         1         F         Correction of clause 5.5.3.1 - SDP Message         15.5.0           2022-03         RAN#95         R5-222027         0243         1         F         Correction of clause 5.5.3.6 - SIMPLE-FILTER         15.5.0           2022-03         RAN#95         R5-222028         0251         1         F         Restructuring of clause 5.5.3.6 - SIMPLE-FILTER         15.5.0           2022-06         RAN#96         R5-222142         0252         -         F         New MCData off-network signalling messages in 5.5.3.8         15.6.0           2022-06         RAN#96         R5-222392         0254         -         F         Addition of clause 5.5.3.15 - Conference-info         15.6.0           2022-06         RAN#96         R5-222392         0258         -         F         Correction of clause 5.5.3.1 - SDF Message         15.6.0           2022-06         RAN#96         R5-222398         0260					-		messages and other information elements	
2022-03         RAN#95         R5-221545         0230         1         F         Additional Rel-15 parameters for MCVideo User Profile 5.5.8.7         15.5.0           2022-03         RAN#95         R5-222026         0241         1         F         Correction of clause 5.5.3.1 - SDP Message         15.5.0           2022-03         RAN#95         R5-222027         0243         1         F         Correction of clause 5.5.3.6 - SIMPLE-FILTER         15.5.0           2022-03         RAN#95         R5-222028         0251         1         F         Restructuring of clause 5.3.3 - Generic test procedures for UE MCS operation         15.5.0           2022-06         RAN#96         R5-222141         0252         -         F         New MCData off-network signalling messages in 5.5.3.8         15.6.0           2022-06         RAN#96         R5-222392         0254         -         F         Addition of clause 5.5.3.15 - Conference-info         15.6.0           2022-06         RAN#96         R5-222394         0256         -         F         Correction of clause 5.5.3.2 - MCS Info Lists         15.6.0           2022-06         RAN#96         R5-222394         0256         -         F         Correction of clause 5.5.3 - MCS Info Lists         15.6.0           2022-06         RAN#96					-			
2022-03         RAN#95         R5-222026         0241         1         F         Correction of clause 5.5.3.1 - SDP Message         15.0           2022-03         RAN#95         R5-222027         0243         1         F         Correction of clause 5.3.6 - SIMPLE-FILTER         15.5.0           2022-03         RAN#95         R5-222028         0251         1         F         Restructuring of clause 5.3.6 - SIMPLE-FILTER         15.5.0           2022-06         RAN#96         R5-222141         0252         -         F         New MCData off-network signalling messages in 5.5.3.8         15.6.0           2022-06         RAN#96         R5-222142         0253         -         F         New MCData off-network Message Defaults 5.5.14         15.6.0           2022-06         RAN#96         R5-222392         0254         -         F         Addition of clause 5.5.3.15 - Conference-info         15.6.0           2022-06         RAN#96         R5-222394         0256         -         F         Correction of clause 5.5.2.14 - SIP SUBSCRIBE         15.6.0           2022-06         RAN#96         R5-222394         0260         -         F         Correction of clause 5.5.3.1 - SDP message         15.6.0           2022-06         RAN#96         R5-222399         0261					-			
2022-03         RAN#95         R5-222027         0243         1         F         Correction of clause 5.5.3.6 - SIMPLE-FILTER         15.5.0           2022-03         RAN#95         R5-222028         0251         1         F         Restructuring of clause 5.3.3         Generic test procedures for UE MCS operation         15.5.0           2022-06         RAN#96         R5-222141         0253         -         F         New MCVideo Off-network signalling messages in 5.5.3.8         15.6.0           2022-06         RAN#96         R5-222392         0254         -         F         New MCVideo Off-network Message Defaults 5.5.14         15.6.0           2022-06         RAN#96         R5-222392         0254         -         F         Addition of clause 5.5.3.15 - Conference-info         15.6.0           2022-06         RAN#96         R5-222394         0256         -         F         Correction of clause 5.5.3.1 - SDP SUBSCRIBE         15.6.0           2022-06         RAN#96         R5-222398         0260         -         F         Correction of clause 5.5.3.1 - SDP message         15.6.0           2022-06         RAN#96         R5-222400         0262         -         F         Extensions of clause 5.3.3 - SDP message         15.6.0           2022-06         RAN#96								
2022-03         RAN#95         R5-222028         0251         1         F         Restructuring of clause 5.3 - Generic test procedures for UE MCS operation         15.5.0           2022-06         RAN#96         R5-222141         0252         -         F         New MCData off-network signalling messages in 5.5.3.8         15.6.0           2022-06         RAN#96         R5-222142         0253         -         F         New MCVideo Off-network Message Defaults 5.5.14         15.6.0           2022-06         RAN#96         R5-222392         0254         -         F         Addition of clause 5.5.3.15 - Conference-info         15.6.0           2022-06         RAN#96         R5-222392         0256         -         F         Correction of clause 5.5.3.15 - Conference-info         15.6.0           2022-06         RAN#96         R5-222396         0258         -         F         Correction of clause 5.5.3.2 - MCS Info Lists         15.6.0           2022-06         RAN#96         R5-222398         0260         -         F         Corrections of clause 5.5.3.1 - SDP message         15.6.0           2022-06         RAN#96         R5-222399         0261         -         F         Extensions of clause 5.5.3.1 - SDP message         15.6.0           2022-06         RAN#96         R5								
2022-06         RAN#96         R5-222141         0252         -         F         New MCData off-network signalling messages in 5.5.3.8         15.6.0           2022-06         RAN#96         R5-222142         0253         -         F         New MCVideo Off-network Message Defaults 5.5.14         15.6.0           2022-06         RAN#96         R5-222392         0254         -         F         Addition of clause 5.5.3.15 - Conference-info         15.6.0           2022-06         RAN#96         R5-222394         0256         -         F         Correction of clause 5.5.2.14 - SIP SUBSCRIBE         15.6.0           2022-06         RAN#96         R5-222396         0258         -         F         Correction of clause 5.5.3.2 - MCS Info Lists         15.6.0           2022-06         RAN#96         R5-222398         0260         -         F         Correction of clause 5.5.3.1 - SDP message         15.6.0           2022-06         RAN#96         R5-222349         0261         -         F         Extensions of clause 5.5.3.1 - SDP message         15.6.0           2022-06         RAN#96         R5-223477         0255         1         F         Correction of clause 5.3.3 - Generic test procedures for UE MCS         15.6.0           2022-09         RAN#96         R5-223478							Restructuring of clause 5.3 - Generic test procedures for UE MCS	
2022-06         RAN#96         R5-222142         0253         -         F         New MCVideo Off-network Message Defaults 5.5.14         15.6.0           2022-06         RAN#96         R5-222392         0254         -         F         Addition of clause 5.5.3.15 - Conference-info         15.6.0           2022-06         RAN#96         R5-222394         0256         -         F         Correction of clause 5.5.2.14 - SIP SUBSCRIBE         15.6.0           2022-06         RAN#96         R5-222396         0258         -         F         Correction of clause 5.5.3.2 - MCS Info Lists         15.6.0           2022-06         RAN#96         R5-222398         0260         -         F         Correction of clause 5.5.3.1 - SDP message         15.6.0           2022-06         RAN#96         R5-222399         0261         -         F         Corrections of clause 5.5.3.1 - SDP message         15.6.0           2022-06         RAN#96         R5-222400         0262         -         F         Extensions of clause 5.3 - Generic test procedures for UE MCS         15.6.0           2022-06         RAN#96         R5-223477         0255         1         F         Correction of clause 5.3 - Generic test procedures for UE MCS         15.6.0           2022-09         RAN#96         R5-223478	2022.06	PAN#06	P5-222144	0252	-	F		15 6 0
2022-06         RAN#96         R5-222392         0254         -         F         Addition of clause 5.5.3.15 - Conference-info         15.6.0           2022-06         RAN#96         R5-222394         0256         -         F         Correction of clause 5.5.2.14 - SIP SUBSCRIBE         15.6.0           2022-06         RAN#96         R5-222396         0258         -         F         Correction of clause 5.5.3.2 - MCS Info Lists         15.6.0           2022-06         RAN#96         R5-222398         0260         -         F         Correction of clause 5.5.8 - Default MCS configuration management inservation measages and other information elements         15.6.0           2022-06         RAN#96         R5-222399         0261         -         F         Corrections of clause 5.5.3.1 - SDP message         15.6.0           2022-06         RAN#96         R5-222400         0262         -         F         Extensions of clause 5.3.1 - SDP message         15.6.0           2022-06         RAN#96         R5-223477         0255         1         F         Correction of clause 5.5.3.6 - SIMPLE-FILTER         15.6.0           2022-09         RAN#96         R5-223478         0259         1         F         Correction of clause 5.3.6 - SIMPLE-FILTER         15.6.0           2022-09         R					<del>-</del>			
2022-06         RAN#96         R5-222394         0256         -         F         Correction of clause 5.5.2.14 - SIP SUBSCRIBE         15.6.0           2022-06         RAN#96         R5-222396         0258         -         F         Correction of clause 5.5.3.2 - MCS Info Lists         15.6.0           2022-06         RAN#96         R5-222398         0260         -         F         Correction of clause 5.5.8 - Default MCS configuration management messages and other information elements         15.6.0           2022-06         RAN#96         R5-222399         0261         -         F         Corrections of clause 5.5.3.1 - SDP message         15.6.0           2022-06         RAN#96         R5-222400         0262         -         F         Extensions of clause 2 - References         15.6.0           2022-06         RAN#96         R5-223477         0255         1         F         Correction of clause 5.3.6 - SIMPLE-FILTER         15.6.0           2022-09         RAN#96         R5-223478         0259         1         F         Correction of clause 5.3.6 - SIMPLE-FILTER         15.6.0           2022-09         RAN#97         R5-223478         0253         1         F         Correction of clause 5.3.6 - SIMPLE-FILTER         15.7.0           2022-09         RAN#97 <td< td=""><td></td><td></td><td></td><td></td><td> -  -</td><td></td><td></td><td></td></td<>					-  -			
2022-06         RAN#96         R5-222396         0258         -         F         Correction of clause 5.5.3.2 - MCS Info Lists         15.6.0           2022-06         RAN#96         R5-222398         0260         -         F         Correction of clause 5.5.8 - Default MCS configuration management         15.6.0           2022-06         RAN#96         R5-222399         0261         -         F         Corrections of clause 5.5.3.1 - SDP message         15.6.0           2022-06         RAN#96         R5-222400         0262         -         F         Extensions of clause 2 - References         15.6.0           2022-06         RAN#96         R5-223477         0255         1         F         Correction of clause 5.3.6 - SIMPLE-FILTER         15.6.0           2022-09         RAN#96         R5-223478         0259         1         F         Correction of clause 5.5.3.6 - SIMPLE-FILTER         15.6.0           2022-09         RAN#97         R5-223478         0259         1         F         Correction of clause 5.3.6 - SIMPLE-FILTER         15.6.0           2022-09         RAN#97         R5-223942         0263         -         F         Correction of clause 5.3.8 - Generic test procedures for UE MCPTT         15.7.0           2022-09         RAN#97         R5-223943					-			
2022-06         RAN#96         R5-222398         0260         -         F         Correction of clause 5.5.8 - Default MCS configuration management messages and other information elements         15.6.0           2022-06         RAN#96         R5-222399         0261         -         F         Corrections of clause 5.5.3.1 - SDP message         15.6.0           2022-06         RAN#96         R5-222400         0262         -         F         Extensions of clause 2 - References         15.6.0           2022-06         RAN#96         R5-223477         0255         1         F         Correction of clause 5.3.3 - Generic test procedures for UE MCS         15.6.0           2022-06         RAN#96         R5-223478         0259         1         F         Correction of clause 5.3.6 - SIMPLE-FILTER         15.6.0           2022-09         RAN#97         R5-223942         0263         -         F         Correction of clause 5.3.6 - SIMPLE-FILTER         15.7.0           2022-09         RAN#97         R5-223943         0264         -         F         Correction of clause 5.3B - Generic test procedures for UE MCVideo         15.7.0           2022-09         RAN#97         R5-223944         0265         -         F         Correction of clause 5.3.11 - Default MCVideo Transmission Control         15.7.0 <td></td> <td></td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td>					-			
Image: Second					-			
2022-06         RAN#96         R5-222399         0261         -         F         Corrections of clause 5.5.3.1 - SDP message         15.6.0           2022-06         RAN#96         R5-222400         0262         -         F         Extensions of clause 2 - References         15.6.0           2022-06         RAN#96         R5-223477         0255         1         F         Correction of clause 5.3.6 - SIMPLE-FILTER         15.6.0           2022-06         RAN#96         R5-223478         0259         1         F         Correction of clause 5.5.3.6 - SIMPLE-FILTER         15.6.0           2022-09         RAN#97         R5-223478         0259         1         F         Correction of clause 5.3.3.6 - SIMPLE-FILTER         15.6.0           2022-09         RAN#97         R5-223942         0263         -         F         Correction of clause 5.3.4 - Generic test procedures for UE MCPTT         15.7.0           2022-09         RAN#97         R5-223943         0264         -         F         Correction of clause 5.3B - Generic test procedures for UE MCVideo         15.7.0           2022-09         RAN#97         R5-223944         0265         -         F         Correction of clause 5.5.11 - Default MCVideo Transmission Control         15.7.0						ľ		
2022-06         RAN#96         R5-222400         0262         -         F         Extensions of clause 2 - References         15.6.0           2022-06         RAN#96         R5-223477         0255         1         F         Correction of clause 5.3 - Generic test procedures for UE MCS         15.6.0           2022-06         RAN#96         R5-223478         0259         1         F         Correction of clause 5.5.3.6 - SIMPLE-FILTER         15.6.0           2022-09         RAN#97         R5-223942         0263         -         F         Correction of clause 5.3.4 - Generic test procedures for UE MCPTT         15.7.0           2022-09         RAN#97         R5-223943         0264         -         F         Correction of clause 5.3B - Generic test procedures for UE MCVideo         15.7.0           2022-09         RAN#97         R5-223944         0265         -         F         Correction of clause 5.3L - Default MCVideo Transmission Control         15.7.0	2022-06	RAN#96	R5-222399	0261	-	F		15.6.0
Image: Constraint of the state of							Extensions of clause 2 - References	15.6.0
2022-09RAN#97R5-2239420263-FCorrection of clause 5.3A - Generic test procedures for UE MCPTT15.7.02022-09RAN#97R5-2239430264-FCorrection of clause 5.3B - Generic test procedures for UE MCVideo15.7.02022-09RAN#97R5-2239440265-FCorrection of clause 5.5.11 - Default MCVideo Transmission Control15.7.0	2022-06	RAN#96	R5-223477		1	F		15.6.0
2022-09RAN#97R5-2239420263-FCorrection of clause 5.3A - Generic test procedures for UE MCPTT15.7.02022-09RAN#97R5-2239430264-FCorrection of clause 5.3B - Generic test procedures for UE MCVideo15.7.02022-09RAN#97R5-2239440265-FCorrection of clause 5.5.11 - Default MCVideo Transmission Control15.7.0	2022-06	RAN#96	R5-223478	0259	1	F		15.6.0
2022-09       RAN#97       R5-223943       0264       -       F       Correction of clause 5.3B - Generic test procedures for UE MCVideo       15.7.0         2022-09       RAN#97       R5-223944       0265       -       F       Correction of clause 5.5.11 - Default MCVideo Transmission Control       15.7.0	2022-09	RAN#97	R5-223942		-	F		
2022-09 RAN#97 R5-223944 0265 - F Correction of clause 5.5.11 - Default MCVideo Transmission Control 15.7.0	2022-09	RAN#97	R5-223943	0264	-	F	Correction of clause 5.3B - Generic test procedures for UE MCVideo	15.7.0
	2022-09	RAN#97	R5-223944	0265	-	F		15.7.0

2022-09	RAN#97	R5-223945	0266	-	F	Correction of clause 5.5.2 - Default SIP message and other information elements	15.7.0
2022-09	RAN#97	R5-223946	0267	-	F	Correction of clause 5.5.3.1 - SDP Message	15.7.0
2022-09	RAN#97	R5-223940	0268	-	F	Correction of clause 5.5.6 - Default MCPTT media plane control messages and other information elements	15.7.0
2022-09	RAN#97	R5-223948	0269	-	F	Correction of clause 5.5.8 - Default MCS configuration management messages and other information elements	15.7.0
2022-09	RAN#97	R5-223949	0270	-	F	Correction of clause 5.5.9 - Default miscellaneous messages and other information elements	15.7.0
2022-09	RAN#97	R5-225275	0271	1	F	Correction of KMS Request URIs in HTTP POST	15.7.0
2022-12	RAN#98	R5-226060	0272		F	Correction of clause 5.3.3 - MCX pre-established session establishment CO	15.8.0
2022-12	RAN#98	R5-226061	0273		F	Correction of clause 5.3B.3 - MCVideo Media Transmission Notification and Request CT	15.8.0
2022-12	RAN#98	R5-226062	0274		F	Correction of clause 5.5.1 - General	15.8.0
2022-12	RAN#98	R5-226064	0276		F	Correction of clause 5.5.12 - MSRP Messages for MCData	15.8.0
2022-12	RAN#98	R5-226065	0277		F	Correction of clause 5.5.2 - Default SIP message and other information elements	15.8.0
2022-12	RAN#98	R5-226066	0278		F	Correction of clause 5.5.3.2 - MCS Info Lists	15.8.0
2022-12 2022-12	RAN#98 RAN#98	R5-226067 R5-226068	0279 0280		F F	Correction of clause 5.5.3.4 - Location-info Correction of clause 5.5.3.8 - MCData Data signalling messages	15.8.0 15.8.0
2022-12	RAN#98	R5-226068	0280		F	Correction of clause 5.5.6 - Default MCPTT media plane control	15.8.0
2022-12	RAN#98	R5-226070	0282		' F	messages and other information elements Correction of clause 5.5.8 - Default MCS configuration management	15.8.0
2022 12	117111#50	10 220070	0202		ľ	messages and other information elements	10.0.0
2022-12	RAN#98	R5-226532	0283		F	Editorial correction of 5.3B.7	15.8.0
2022-12	RAN#98	R5-226683	0284		F	Correction of clause 5.3A.1 - MCPTT CO session	15.8.0
						establishment/modification without provisional responses other than 100 Trying	
2022-12	RAN#98	R5-226685	0285		F	Correction of clause 5.3B.1 - MCVideo CO session establishment/modification without provisional responses other than 100 Trying	15.8.0
2022-12	RAN#98	R5-227614	0275	1	F	Correction of clause 5.5.11 - Default MCVideo Transmission Control Messages and other Information Elements	15.8.0
2023-03	RAN#99	R5-230126	0288	-	F	Correction of clause 5.3A - Generic test procedures for UE MCPTT operation	15.9.0
2023-03	RAN#99	R5-230128	0290	-	F	Correction of clause 5.3C - Generic test procedures for UE MCData operation	15.9.0
2023-03	RAN#99	R5-230131	0293	-	F	Correction of clause 5.5.3.2 - MCS Info Lists	15.9.0
2023-03	RAN#99	R5-230133	0295	-	F	Correction of clause 5.5.3.4 - Location-info	15.9.0
2023-03	RAN#99	R5-230134	0296	-	F	Correction of clause 5.5.7 - Default MCX group management messages and other information elements	15.9.0
2023-03		R5-230135	0297	-	F	Correction of clause 5.5.8 - Default MCS configuration management messages and other information elements	15.9.0
2023-03		R5-230295	0298	-	F	Correction of clause 5.5.4.6 - HTTP 200 OK	15.9.0
2023-03	RAN#99	R5-231936	0287	1	F	Correction of clause 5.3 - Generic test procedures for UE MCS operation	15.9.0
2023-03	RAN#99	R5-231937	0289	1	F	Correction of clause 5.3B - Generic test procedures for UE MCVideo operation	15.9.0
2023-03	RAN#99	R5-231938	0291	1	F	Correction of clause 5.4 - Generic test procedures for UE operation over E-UTRA/EPC	15.9.0
2023-03	RAN#99	R5-231939	0292	1	F	Correction of clause 5.5.2 - Default SIP message and other information elements	15.9.0
2023-03	RAN#99	R5-231940	0294	1	F	Correction of clause 5.5.3.3 - Resource-lists	15.9.0
2023-03		R5-231917	0299	1	F	New Rel-16 parameters for MCPTT User Profile	16.0.0
2023-06 2023-06		R5-232214 R5-232215	0301 0302	-	F	Correction of clause 5.5.11.3.5 Correction of clause 5.5.4.10.1	16.1.0
2023-06		R5-232215 R5-232216	0302	-	F	Correction of clause 5.5.6.11	16.1.0 16.1.0
2023-00		R5-232210 R5-232218	0305	-	F	Correction of clause 5.5.8.3	16.1.0
2023-06		R5-233293	0313	-	F	Addition of generic Functional Alias Generic Procedures	16.1.0
2023-06		R5-233294	0311	1	F	Updates to SDP Message from the SS for MCData	16.1.0
2023-06	RAN#100	R5-233488	0306	1	F	Updates to MCData UE Configuration and User Profile	16.1.0
2023-06		R5-233489	0308	1	F	Updates to MCData PIDF for functional alias	16.1.0
2023-06		R5-233490	0309	1	F	Updates to 5.3.3 Pre-Established Session Establishment Generic TC	
2023-06		R5-233491	0310	1	F	Updates to MCData-Info from the UE	16.1.0
2023-06 2023-09		R5-233492 R5-233848	0312 0314	1	F	Updates to SDP Message from the UE for MCData Correction of clause 5.5.3.1.1	16.1.0 16.2.0
2023-09		R5-233849	0314	1-	F	Correction of clause 5.5.3.2.1	16.2.0
2023-09		R5-233850	0315	-	F	Correction of clause 5.5.4.3	16.2.0
2023-09		R5-233851	0317	-	F	Correction of clauses 5.3.36 and 5.3.37	16.2.0
2023-09		R5-233852	0318	-	F	Removal of clauses 5.3A.9 and 5.3A.10	16.2.0
2023-09		R5-234572	0319	-	F	Updates to 5.3.3 Pre-Established Session Establishment Generic TC	16.2.0
2023-09	RAN#101	R5-234585	0320		F	Updates for Resource-lists for MCData	16.2.0

0000.00	DANUMARA	D.5. 005 400	0004	4	-		40.0.0
2023-09	RAN#101	R5-235403	0321	1	F	Addition of new generic procedure CO MCData call establishment using a pre-established session	16.2.0
2023-09	RAN#101	R5-235404	0322	1	F	Addition of new generic procedure MCData CO call release keeping	16.2.0
						the pre-established session	
2023-12		R5-236320	0323		F	Correction of clause 5.5.11	16.3.0
2023-12		R5-236321	0324		F	Correction of clause 5.5.3.1	16.3.0
2023-12		R5-236322	0325		F	Correction of clause 5.5.3.2	16.3.0
2023-12		R5-236323	0326		F F	Correction of clause 5.5.6	16.3.0
2023-12		R5-236324	0327		F	Corrections of generic test procedures in clause 5.3 and clause 5.3C Addition of MCPTT User Profile Rules for Affiliation	16.3.0
2023-12 2023-12		R5-236601 R5-237437	0328 0329	1	F	Addition of MCPTT_Regoup Default	16.3.0 16.3.0
2023-12		R5-240555	0329	· ·	F	Corrections of clause 5.3.2	16.4.0
2024-03		R5-240555	0331	<u> -</u>	F	Corrections of clause 5.3.29	16.4.0
2024-03		R5-240557	0332	-	F	Corrections of clause 5.3.29	16.4.0
2024-03		R5-240558	0333	-	F	Corrections of clause 5.4.2	16.4.0
2024-03		R5-240559	0334	-	F	Corrections of clause 5.5.1	16.4.0
2024-00		R5-240560	0335	-	F	Corrections of clause 5.5.2.11	16.4.0
2024-03		R5-240561	0336	-	F	Corrections of clause 5.5.2.13	16.4.0
2024-03		R5-240562	0337	-	F	Corrections of clause 5.5.2.19.4	16.4.0
2024-03		R5-240563	0338	-	F	Corrections of clause 5.5.2.7.2	16.4.0
2024-03		R5-240564	0339	1-	F	Corrections of clause 5.5.3.3.1A	16.4.0
2024-03		R5-240565	0340	-	F	Corrections of clause 5.5.9.1	16.4.0
2024-03		R5-240566	0341	1-	F	Corrections of references to 24.282	16.4.0
2024-03		R5-240897	0342	1-	F	Corrections to Table 5.5.3.3.1-3 MCData Resource-lists	16.4.0
2024-03		R5-240898	0343	-	F	Addition of Location-info for MCData	16.4.0
2024-06		R5-242337	0344	-	F	Clarification of initial conditions and RRC/NAS signalling in clause 5.3	16.5.0
2024-06	RAN#104	R5-242338	0345	-	F	Clarification of initial conditions and RRC/NAS signalling in clause 5.3A	16.5.0
2024-06	RAN#104	R5-242339	0346	-	F	Clarification of initial conditions and RRC/NAS signalling in clause 5.3B	16.5.0
2024-06	RAN#104	R5-242340	0347	-	F	Clarification of initial conditions and RRC/NAS signalling in clause 5.3C	16.5.0
2024-06	RAN#104	R5-242341	0348	-	F	Clarifying the System Under Test	16.5.0
2024-06		R5-242342	0349	-	F	Corrections of clause 2	16.5.0
2024-06	RAN#104	R5-242343	0350	-	F	Corrections of clause 5.5.2.15.2	16.5.0
2024-06	RAN#104	R5-242344	0351	-	F	Corrections of clause 5.5.2.2.2	16.5.0
2024-06	RAN#104	R5-242345	0352	-	F	Corrections of clause 5.5.2.4	16.5.0
2024-06	RAN#104	R5-242346	0353	-	F	Corrections of clause 5.5.2.5.2	16.5.0
2024-06		R5-242347	0354	-	F	Corrections of clause 5.5.2.7.1	16.5.0
2024-06	RAN#104	R5-242348	0355	-	F	Editorial corrections of clauses 1 and 4	16.5.0
2024-06		R5-242349	0356	-	F	Improvement of clause 5.2	16.5.0
2024-06		R5-242350	0357	-	F	Improvement of clause 5.4	16.5.0
2024-06		R5-242398	0358	-	F	Correction of URI scheme in HTTP POST	16.5.0
2024-06		R5-242400	0359	-	F	Corrections of clause 5.5.9.1	16.5.0
2024-06		R5-243273	0360	<u> -</u>	F	Correction to clause 5.5.3.4.2	16.5.0
2024-09		R5-244417	0361	-	F	Updates to default message and other information elements content	16.6.0
2024-09		R5-244440	0362		F	Correction of generic procedures 5.4.3 and 5.4.4	16.6.0
2024-09		R5-244539	0363		F	Clarifications for conditions in several default message contents	16.6.0
2024-09		R5-244953	0364	-	F	Addition of New Generic Test Case 5.3C.14 Message Store Function Upload	16.6.0
2024-09		R5-244954	0365	-	F	Addition of New Generic Test Case 5.3C.15 Message Store Function Delete	16.6.0
2024-09	RAN#105	R5-244955	0366	-	F	Addition of New Generic Test Case 5.3C.16 Message Store Function Retrieve	16.6.0
2024-09	RAN#105	R5-244956	0367	-	F	Addition of New Generic Test Case 5.3C.17 Message Store Function Post Request	16.6.0
2024-09	RAN#105	R5-244957	0368	-	F	Addition of New Generic Test Case 5.3C.18 Message Store Function Put Request	16.6.0
2024-09	RAN#105	R5-244958	0369	-	F	Addition of New Generic Test Case 5.3C.19 Message Store Function Post Notification	16.6.0
2024-09	RAN#105	R5-244960	0371	-	F	Addition of One-to-One-Communication for MCData User Profile	16.6.0
2024-09		R5-244961	0372	-	F	Addition of clause 5.5.15 Default MCData call control messages and other information elements	16.6.0
2024-09	RAN#105	R5-245670	0374	1	F	Correction to Resource-lists from the UE for initial configuration	16.6.0
2024-09		R5-245671	0370	1	F	Addition of HTTP 204 for Clause 5.5.4	16.6.0
2024-09	RAN#105	R5-245753	0373	1	F	Correction to HTTP messages	16.6.0

NOTE: The table above will not be further updated in the future. It shows all TS 36.579-1 CRs taken over into TS 37.579-1 v0.0.1.

						nge history of TS 37.579-1	
Date	Meeting	TDoc	CR	R	Cat	Subject/Comment	New
2024-11	RAN5#105	R5-247090	-	<u>ev</u> -	-	TS 36.579-1 v16.6.0 content was transferred into this new TS 37.579-1 as by definition 36 series specifications cover LTE only aspects and multi-RAT aspects need to be covered in 37 series specifications. The only changes, compared to TS 36.579-5 v16.6.0, are: - "over LTE" has been removed from the TS title as beginning with Rel-17 the present document needs to cover also NR/5GC. - every instance of 36.579 has been replaced by 37.579, except in the Change history table of TS 36.579-1. - every instance of 36.579-3 has been either deleted or voided. - the CR history table of TS 36.579-1 was kept for easier reference of all changes included in TS 36.579-1, but a new Change history table was added for TS 37.579-1.	version 0.0.1
2024-11	RAN5#105	R5-247095	-	-	-	<ul> <li>the 3GPP TS-TR template version 1.18.1 has been used.</li> <li>RAN5 agreed 0.1.0 version</li> <li>R5-246416 Removal of clause 5.6 (TS 36.579-1 CR 0378)</li> <li>R5-246417 Support of MCData IPCONN in SIP default</li> <li>message contents (TS 36.579-1 CR 0379)</li> <li>R5-246423 Cancellation of non-backward compatible</li> <li>changes in core specifications (TS 36.579-1 CR 0380)</li> <li>R5-246642 Correction of clause 5.5.4.10.3 (TS 36.579-1 CR 0381)</li> <li>R5-246643 Correction and clarification of UserUri in clauses</li> <li>5.5.4.10.6, 5.5.4.10.8 and 5.5.4.10.9 (TS 36.579-1 CR 0382)</li> <li>R5-246644 Correction of clause 5.5.8.11 (TS 36.579-1 CR 0383)</li> <li>R5-246645 Clarifications regarding non-backward</li> <li>compatible changes in MCVideo transmission control</li> <li>messages (TS 36.579-1 CR 0384)</li> </ul>	0.1.0
2024-12	RAN#106	RP-242643	-	-	-	For one-step approval at RAN#106	1.0.0
2024-12	RAN#106	-	-	-	-	raised to v17.0.0 with no change	17.0.0
2025-03	RAN#107	R5-250310	0001	-	F	NR5GC extension of clause 2	17.1.0
2025-03	RAN#107	R5-250311	0002	-	F	NR5GC extension of clause 5.4	17.1.0
2025-03	RAN#107	R5-250356	0003	-	F	Addition of Host header field to HTTP requests in clause 5.5.4	17.1.0
2025-03	RAN#107	R5-250357	0004	-	F	Correction of references to Table 5.5.12.1.1-1 in clauses 5.3C.2, 5.3C.3 and 5.3C.12	17.1.0
2025-03	RAN#107	R5-250358	0005	-	F	Editorial correction of clause 5.5.2.5.1	17.1.0
2025-03	RAN#107	R5-250359	0006	-	F	Editorial corrections in 5.5.11	17.1.0
2025-03	RAN#107	R5-250840	0007	-	F	Addition of 5G support for Test configuration for on-network UE testing	17.1.0
2025-03	RAN#107	R5-251325	0008	1	F	Addition of 5G support for USIM parameters	17.1.0

## History

	Document history										
V17.0.0	February 2025	Publication									
V17.1.0	April 2025	Publication									