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## Contents

Intelle	ectual Property Rights	2
Legal	Notice	2
Moda	al verbs terminology	2
Forew	word	10
1	Scope	11
2	References	11
3	Definitions, symbols and abbreviations	15
3.1	Definitions	
3.2	Symbols	16
3.3	Abbreviations	16
4	General	
4.1	MCPTT Conformance testing test points overview	
4.2	MCPTT Conformance testing test environment overview	
4.3	MCPTT Conformance testing players and roles assumptions	
4.4	References to TS 33.179 and TS 33.180	
4.5	MCVideo Conformance testing test points overview	
4.6	MCVideo Conformance testing test environment overview	
4.7	MCVideo Conformance testing players and roles assumptions	
4.8	MCData Conformance testing test points overview	
4.9	MCData Conformance testing test environment overview	
4.10	MCData Conformance testing players and roles assumptions	
5	Common Test Environment	
5.1	General	
5.2	Reference test conditions	
5.2.1	General	
5.2.2	On-network	
5.2.3	Off-network	
5.3	Generic test procedures for UE MCS operation	
5.3.1	General	
5.3.2	Generic Test Procedure for MCPTT Authorization/Configuration and Key Generation	
5.3.2A	$\mathcal{E}$	
5.3.2B	Generic Test Procedure for MCData Authorization/Configuration and Key Generation	
5.3.3 5.3.3A	•	
5.3.4 5.3.4	Generic Test Procedure for MCPTT CT session establishment/modification without provisional	41
J.J. <del>4</del>	responses other than 100 Trying	12
5.3.5	Generic Test Procedure for MCPTT CT group call establishment, manual commencement	
5.3.6	Generic Test Procedure for MCPTT CT group can establishment, manual commencement	
5.3.7	Generic Test Procedure for MCPTT CO session establishment/modification without provisional	
- 1- 1.	responses other than 100 Trying	46
5.3.8	Generic Test Procedure for MCPTT CO private call establishment, manual commencement	
5.3.9	Generic Test Procedure for MCPTT CO call establishment using a pre-established session	
5.3.10		
5.3.11	Generic Test Procedure for MCPTT CO call release keeping the pre-established session	50
5.3.12	Generic Test Procedure for MCPTT CT call release	51
5.3.13	Generic Test Procedure for MCPTT CT call release keeping the pre-established session	
5.3.14	Generic Test Procedure for MCPTT CO session modification with implicit Floor Control	52
5.3.15		
5.3.16		
5.3.17		
5.3.18		
5.3.19		
5.3.20	Generic Test Procedure for MCPTT Floor Release – Floor Idle	56

5.3.21	Generic Test Procedure for MCPTT Floor Release – Floor Taken	57
5.3.22	Generic Test Procedure for NW initiated temporary group creation	
5.3.23	Generic Test Procedure for MCPTT CT Call establishment automatic commencement using a pre-	
0.0.20	established session.	62
5.3.24	Generic Test Procedure for UE intitated MCPTT functional alias status determination and	
0.0.2	subscription	63
5.3.25	Generic Test Procedure for UE inititated MCPTT functional alias status change	66
5.3.26	Generic Test Procedure for MCPTT CO Group Creation	
5.3.20 5.4	Generic test procedures for UE operation over EUTRA/EPS	
5.4.1	General General	
5.4.1 5.4.1A	UE APN/PDN support assumptions	
	Generic Test Procedure for MCPTT UE registration	
5.4.2		
5.4.2A	Generic Test Procedure for MCVideo UE registration	
5.4.2B	Generic Test Procedure for MCData UE registration	86
5.4.3	Generic Test Procedure for MCPTT CO communication in E-UTRA	
5.4.3A	Generic Test Procedure for MCVideo CO communication in E-UTRA	
5.4.3B	Generic Test Procedure for MCData CO communication in E-UTRA	
5.4.4	Generic Test Procedure for MCPTT CT communication in E-UTRA	
5.4.4A	Generic Test Procedure for MCVideo CT communication in E-UTRA	
5.4.4B	Generic Test Procedure for MCData CT communication in E-UTRA	90
5.4.5	Generic Test Procedure for MCPTT CO communication over ProSe direct one-to-one	
	communication out of E-UTRA coverage-establishment	90
5.4.6	Generic Test Procedure for MCPTT CT communication over ProSe direct one-to-one	
	communication out of E-UTRA coverage-establishment	93
5.4.7	Generic Test Procedure for MCPTT communication over ProSe direct one-to-one communication	
	out of E-UTRA coverage - release by the SS	96
5.4.8	Generic Test Procedure for MCPTT communication over ProSe direct one-to-one communication	
0.1.0	out of E-UTRA coverage - release by the UE	97
5.4.9	Generic Test Procedure for MCPTT communication in E-UTRA / Change of cells	
5.4.10	Generic Test Procedure for MCPTT Communication over ProSe direct one-to-many	
3.4.10		
	communication out of E-UTRA coverage / Announcing/Discoveree procedure for group member discovery	100
5 <i>1</i> 1 1		100
5.4.11	Generic Test Procedure for MCPTT CO communication over ProSe direct one-to-many	
	communication out of E-UTRA coverage / Monitoring/Discoverer procedure for group member	100
	discovery / One-to-many communication	
5.4.12	Generic Test Procedure for MCPTT communication over MBMS	
5.4.13	Generic Test Procedure for MCPTT radio bearer establishment for use of pre-established session	
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	109
5.5.2.1.2	SIP ACK from the SS	110
5.5.2.2	SIP BYE	111
5.5.2.2.1	SIP BYE from the UE	111
5.5.2.2.2	SIP BYE from the SS	
5.5.2.3	SIP CANCEL	
5.5.2.4	SIP INFO	
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		
5.5.2.11	SIP PUBLISH	
5 5 2 12	SID DEEED	156

5.5.2.13	SIP REGISTER	164
5.5.2.14	SIP SUBSCRIBE	
5.5.2.15	SIP UPDATE	
5.5.2.15.1	SIP UPDATE from the UE	
5.5.2.15.1	SIP UPDATE from the SS	
5.5.2.16	SIP 1xx	
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)	192
5.5.2.17.2	SIP 202 (Accepted)	199
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)	
	SIP 480 (Temporarily unavailable)	
5.5.2.19.4		
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)	205
5.5.2.21	SIP 6xx	205
5.5.2.21.1	SIP 606 (Not Acceptable)	205
5.5.3	Default SDP message and other information elements	
5.5.3.1	SDP Message	
5.5.3.1.1	SDP Message from the UE	
-	MCPTT	
	MCVideo	
_	MCData	
5.5.3.1.2		
3.3.3.1.2	SDP Message from the SS	
=	MCPTT	
-	MCVideo	
-	MCData	
5.5.3.1.3	SDP Message from the UE - Off-network	
-	MCPTT	
_	MCVideo	234
-	MCData	238
5.5.3.1.4	SDP Message from the SS - Off-network	239
_	MCPTT	239
_	MCVideo	
_	MCData	
5.5.3.2	MCS Info Lists	-
5.5.3.2.1	MCS Info Lists from the UE	
3.3.3.2.1	MCPTT	
-	-	
-	MCVideo	
-	MCData	
5.5.3.2.2	MCS Info Lists from the SS	
-	MCPTT	
-	MCVideo	
-	MCData	
5.5.3.3	Resource-lists	257
5.5.3.3.1	Resource-lists from the UE	257
-	MCPTT	
_	MCVideo	261
=	MCData	
5.5.3.3.2	Resource-lists from the SS	
-	MCPTT	
	1/1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	

_	MCData	263
5.5.3.4	Location-info	264
5.5.3.4.1	Location-info (Report from the UE)	264
=	MCPTT	
_	MCVideo	267
5.5.3.4.2	Location-info (Configuration sent by the SS)	269
-	MCPTT	
_	MCVideo	
5.5.3.4.3	Location-info (Request sent by the SS)	
_	MCPTT	
_	MCVideo	
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	
_	MCPTT	
_	MCVideo	
_	MCData	
5.5.3.7	AFFILIATION-COMMAND	
-	MCPTT	
_	MCVideo	
_	MCData	
5.5.3.8	SDS Signaling Payload	
5.5.3.8.1	SDS Signaling Payload from the UE	
5.5.3.8.2	SDS Signaling Payload from the SS	
5.5.3.9	MCData Data Payload	
5.5.3.10	MCData Protected Payload Message	
5.5.3.11	PoC Settings	
5.5.3.12	Xcap-diff documents	
5.5.3.13	MCDATA FD SIGNALLING PAYLOAD FROM THE UE	
	D SIGNALLING PAYLOAD FROM THE UE	
	D SIGNALLING PAYLOAD FROM THE SS	
	D SIGNALLING PAYLOAD USING THE MEDIA PLANE FROM THE UE	
	D SIGNALLING PAYLOAD USING THE MEDIA PLANE FROM THE SS	
5.5.3.14	MCS group key transport payloads (GKTP) document	
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)	
5.5.4.8	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	
5.5.4.10.6	KMS Certificate	
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	323
5.5.5.2	GROUP CALL ANNOUNCEMENT	324
5.5.5.2.1	GROUP CALL ANNOUNCEMENT from the UE	324
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	
5.5.5.4	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 REJECT	
5.5.5.11 5.5.5.11.1	PRIVATE CALL REJECT PRIVATE CALL REJECT from the UE	
5.5.5.11.1	PRIVATE CALL REJECT from the SS	
5.5.5.11.2	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	334
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 5.5.5.20	GROUP EMERGENCY ALERT CANCEL from the SS	
5.5.5.20 5.5.5.20.1	GROUP EMERGENCY ALERT CANCEL ACK from the UE	
5.5.5.20.1	GROUP EMERGENCY ALERT CANCEL ACK from the SS	
5.5.5.20.2 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	348
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	350

5.5.6.13	Disconnect	354
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 MCPTT group management messages and other information elements	
5.5.7.1	MCPTT Group Configuration	
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	MCPTT 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	MCVideo Initial UE Configuration	
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	MCDATA Initial UE Configuration	
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)	
=	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	
5.5.11.1	Transmission Control Specific Messages Sent by the Transmission Participant	
5.5.11.1.1	Transmission Request	
5.5.11.1.2	Transmission Release	
5.5.11.1.3	Queue Position Request	
5.5.11.1.4	Receive Media Request	
5.5.11.1.5	Transmission Cancel Request	
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 Granted	
5.5.11.2.2	Transmission Rejected	
5.5.11.2.3	Transmission Arbitration Taken	
5.5.11.2.4	Transmission Arbitration Release	
5.5.11.2.5	Transmission Revoked	
5.5.11.2.6	Queue Position Info	
5.5.11.2.7	Media Transmission Notification	
5.5.11.2.8	Receive Media Response	
5.5.11.2.9	Media Reception Notification	
5.5.11.2.10	Transmission Cancel Response	
5.5.11.2.11	Transmission Cancel Request Notify	
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	
	transmission control participant	513

5.5.11.3.1	Transmission End Request	513
5.5.11.3.2	Transmission End Response	515
5.5.11.3.3	Media Reception End Request	515
5.5.11.3.4	Media Reception End Response	517
5.5.11.3.5	Transmission Control Ack	517
5.5.12	MSRP Messages for MCData	519
5.5.12.1	MSRP SEND	
5.5.12.1.1	MSRP SEND from the UE	519
_	MSRP SEND from the UE with No Chunking Used	519
-	Empty MSRP SEND from the UE for Binding	521
-	MSRP SEND from the UE with Chunking Used	522
-	MSRP SEND from the UE with Chunking Used – Last Chunk	
5.5.12.1.2	MSRP SEND from the SS	528
_	MSRP SEND from the SS	528
_	Empty MSRP SEND from the SS for Binding	529
5.5.12.2	MSRP 200 (OK)	
5.5.12.2.1	MSRP 200 (OK) from the UE	
5.5.12.2.2	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	
5.5.13.2	XML < Encrypted Data > element for encryption of XML element content	
5.6 F	Reference configurations	534
5.6.1	General	
5.6.2	Key material for provisioning of End-to-end communication security	
5.6.3	XML schema for MCPTT location information	
5.6.4	XML schema for MCVideo location information	541
Annex A (	informative): Change history	547
History		551

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

## 3GPP TS 36.579-1: "Mission Critical (MC) services over LTE; Part 1: Common test environment" (the present document)

3GPP TS 36.579-2 [2]: "Mission Critical (MC) services over LTE; Part 2: Mission Critical Push To Talk (MCPTT) User Equipment (UE) Protocol conformance specification"

3GPP TS 36.579-3 [3]: "Mission Critical (MC) services over LTE; Part 3: Mission Critical Push To Talk (MCPTT) Server Application test specification"

3GPP TS 36.579-4 [4]: "Mission Critical (MC) services over LTE; Part 4: Test Applicability and Implementation Conformance Statement (ICS)"

3GPP TS 36.579-5 [5]: "Mission Critical (MC) services over LTE; Part 5: Abstract test suite (ATS)"

3GPP TS 36.579-6 [84]: "Mission Critical (MC) services over LTE; Part 6: Mission Critical Video (MCVideo) User Equipment (UE) Protocol conformance specification"

3GPP TS 36.579-7 [85]: "Mission Critical (MC) services over LTE; Part 7: Mission Critical Data (MCData) User Equipment (UE) Protocol conformance specification"

## 1 Scope

The present document defines the common test environment required for testing Client and Server implementations for compliance to the Mission Critical Services over LTE 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 over LTE protocol conformance testing specification e.g. TS 36.579-2 [2], TS 36.579-3 [3], 3GPP TS 36.579-6 [84], 3GPP TS 36.579-7 [85].

The present document does not define the common test environment required for testing the implementation of the underlying LTE protocols, i.e. the LTE 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

[13]

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*.

Keieuse us ii	Release as the present accument.		
[1]	3GPP TR 21.905: "Vocabulary for 3GPP Specifications".		
[2]	3GPP TS 36.579-2: "Mission Critical (MC) services over LTE; Part 2: Mission Critical Push To Talk (MCPTT) User Equipment (UE) Protocol conformance specification".		
[3]	3GPP TS 36.579-3: "Mission Critical (MC) services over LTE; Part 3: Mission Critical Push To Talk (MCPTT) Server Application test specification".		
[4]	3GPP TS 36.579-4: "Mission Critical (MC) services over LTE; Part 4: Test Applicability and Implementation Conformance Statement (ICS)".		
[5]	3GPP TS 36.579-5: " Mission Critical (MC) services over LTE; 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".		

3GPP TS 24.483: "Mission Critical Services (MCS) Management Object (MO)".

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[19]	Void
[20]	Void
[21]	Void
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[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)".
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[36]	IETF RFC 4488 (May 2006): "Suppression of Session Initiation Protocol (SIP) REFER Method Implicit Subscription".
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[41]	Void

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[45]	IETF RFC 8101 "IANA Registration of New Session Initiation Protocol (SIP) Resource-Priority Namespace for Mission Critical Push To Talk service".
[46]	Void
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[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".
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[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".
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[64]	3GPP TS 26.114: "IP Multimedia Subsystem (IMS); Multimedia telephony; Media handling and interaction".
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[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".
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[84]	3GPP TS 36.579-6: "Mission Critical (MC) services over LTE; Part 6: Mission Critical Video (MCVideo) User Equipment (UE) Protocol conformance specification"
[85]	3GPP TS 36.579-7: "Mission Critical (MC) services over LTE; Part 7: Mission Critical Data (MCData) User Equipment (UE) Protocol conformance specification"
[86]	3GPP TS 24.281: "Mission Critical Video (MCVideo) signalling control; Protocol specification".
[87]	3GPP TS 24.282: "Mission Critical Data (MCData) signalling control; Protocol specification".
[88]	3GPP TS 24.581: "Mission Critical Video (MCVideo) media plane control; Protocol 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".
[92]	3GPP TS 22.281: "Mission Critical Video over LTE".
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[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: <a href="https://www.w3.org/TR/html401/">https://www.w3.org/TR/html401/</a> .
[106]	IETF RFC 4122: "A Universally Unique IDentifier (UUID) URN Namespace".
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[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".
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[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

## 3 Definitions, 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 Definitions

For the purposes of the present document, the terms and definitions 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 3GPP 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 3GPP 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 3GPP 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

MCPTT Mission Critical Push To Talk
MCPTT group ID MCPTT group IDentity
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

OCI OoS 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

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.

## 4.1 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.

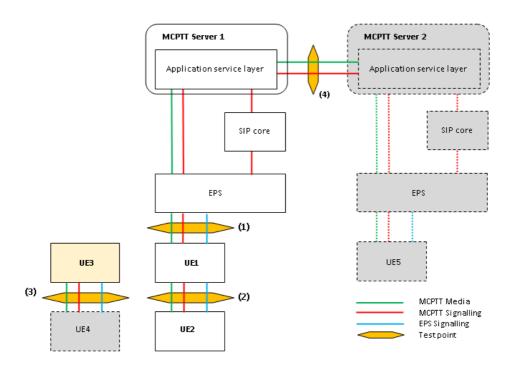


Figure 4.1.1: MCPTT Conformance testing test points model

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 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].

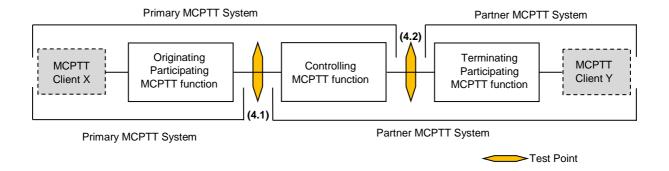


Figure 4.1.2: MCPTT Conformance testing Client-to-Client test points model

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 LTE 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 LTE 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)).

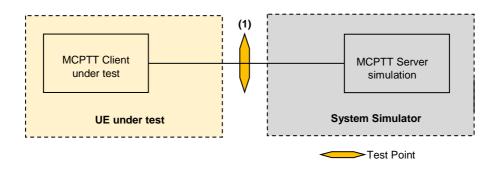


Figure 4.2.1: Testing the MCPTT Client (on-network)

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.

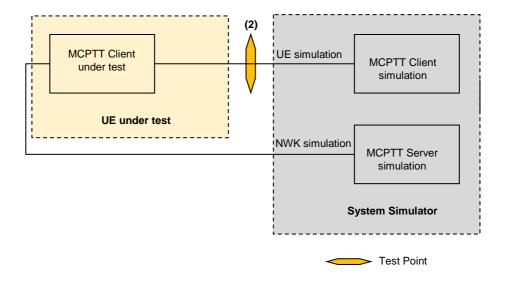


Figure 4.2.2: Testing the MCPTT Client (on-network) Relay side

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 LTE NWK and Server to which the Relay relays the data will be needed. This could be implemented by the SS simulating both.

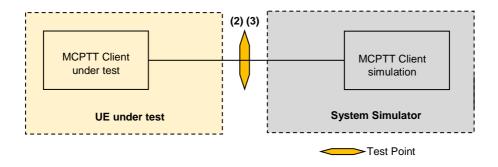


Figure 4.2.3: Testing the MCPTT Client (off-network)

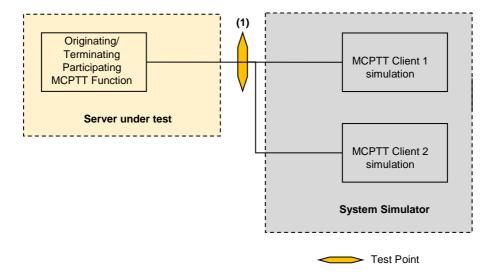


Figure 4.2.4: Testing the MCPTT Server (server-to-client)

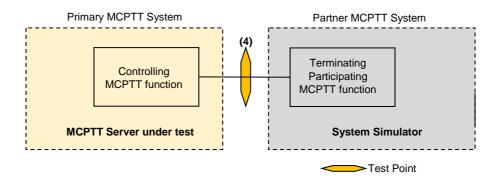


Figure 4.2.5: Testing the MCPTT Server (server-to-server), Controlling function

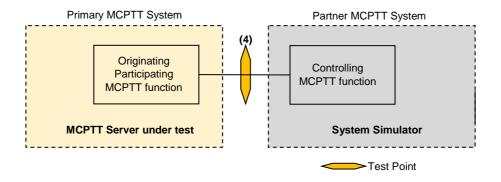


Figure 4.2.6: Testing the MCPTT Server (server-to-server), Originating function

## 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.

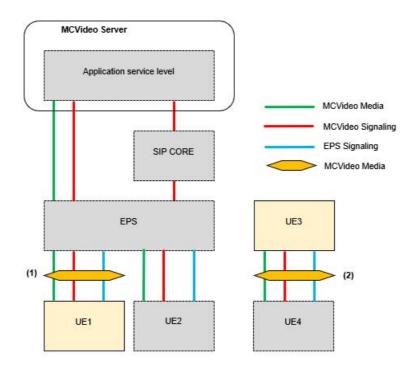


Figure 4.5.1: MCVideo Conformance testing test points model

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.
- 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 LTE radio interface (test points (1) and (2)).

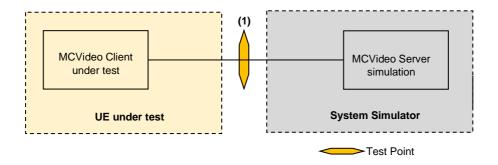


Figure 4.6.1: Testing the MCVideo Client (on-network)

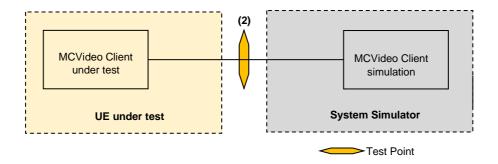


Figure 4.6.2: Testing the MCVideo Client (off-network)

## 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.

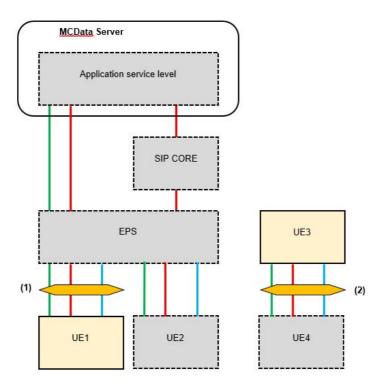


Figure 4.8.1: MCData Conformance testing test points model

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.
- 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 LTE radio interface (test points (1) and (2)).

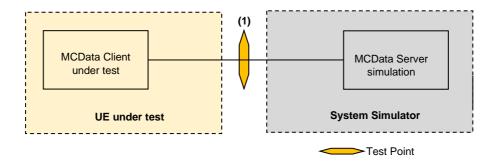


Figure 4.9.1: Testing the MCData Client (on-network)

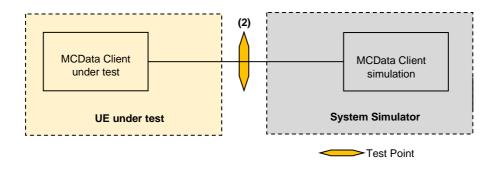


Figure 4.9.2: Testing the MCData Client (off-network)

## 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

Any E-UTRA 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

There are no specific requirements to the UE on which the MCS client is installed when operating in on-network environment. The basic E-UTRA/EPC procedures shall be supported.

#### 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 TCs specified e.g. in 3GPP TS 36.579-2 [2], 3GPP TS 36.579-3 [3], 3GPP TS 36.579-6 [84], 3GPP TS 36.579-7 [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.

## 5.3.2 Generic Test Procedure for MCPTT Authorization/Configuration and Key Generation

#### 5.3.2.1 Initial conditions

System Simulator:

- SS (MCPTT server)
  - For the underlying "transport bearer" over which the SS and the UE will communicate Parameters are set to the default parameters for the basic E-UTRA Single cell network scenarios, as defined in TS 36.508 [6] clause 4.4. The simulated Cell 1 shall belong to PLMN1 (the PLMN specified for MCPTT operation in the MCPTT configuration document).

Implementation Under Test (IUT):

- UE (MCPTT client)
  - The MCPTT Client has been provisioned with the Initial UE Configuration Data as specified in clause 5.5.8.1 allowing for the location of the configuration management server for configuration of the MCPTT UE initial configuration management object (MO) and the default MCPTT user profile configuration management object (MO).
  - 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\_MCPTT\_User\_A\_username, px\_MCPTT\_User\_A\_password as provided in TS 36.579-5 [5], Table 9.2-1: MCPTT Client Common PIXIT)
  - The test USIM set as defined in clause 5.5.10 is inserted.

The UE is attached to EPS services.

- 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 Definition of system information messages

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

5.3.2.3 Procedures

Table 5.3.2.3-1: MCPTT user authentication

St	Procedure		Message Sequence		Verdict
		U - S	Message	TP	
1	Void	-	-	-	ı
2	Void	-	-	-	-
-	EXCEPTION: Depending on the UE capabilities, the UE	-	-	-	-
	(MCX client) executes the sequence described in Table				
	5.3.2.3-1A				
-	EXCEPTION: The messages below up to and including	-	-	-	-
	step 7 are transmitted over a secure TLS tunnel that has				
	been established by the UE (MCPTT 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</x>				
	node, Table 5.5.8.1-1.				
-	EXCEPTION: Steps 3a1-3b1 describe behaviour that	-	-	-	-
	depends on UE implementation of the OpenID Connect				
	protocol; the "lower case letter" identifies a step sequence				
	that takes place when one or the other is the case.				
3a1	The UE (MCPTT client) sends an OpenID Connect	>	HTTP GET (Authorization)	-	Р
	Authentication Request using HTTP GET.				
3b1	The UE (MCPTT client) sends an OpenID Connect	>	HTTP POST (Authorization)	-	Р
	Authentication Request using HTTP POST.				
4	The SS sends a HTTP 200 (OK) including the HTML form	<	HTTP 200 (OK)	-	-
	requesting username and password.				
5	Make the UE user provide user credentials: username and	-	-	-	-
	password (px_MCX_User_A_username,				
	px_MCX_User_A_password).				
	NOTE 2				
6	The UE (MCPTT client) sends an HTTP POST Request	>	HTTP POST	-	Р
	message to the SS containing user name and password.		LITTE COO (E. I)		
7	The SS sends a HTTP 302 (Found) as the OpenID	<	HTTP 302 (Found)	-	-
	Connect Authentication Response containing an				
0	authorization code.				
8	Void EXCEPTION: The messages in steps 9 to 10 are	-	-	-	-
-	transmitted over a secure TLS tunnel that has been	-	-	-	_
	established by the UE (MCPTT 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</x>				
	node, Table 5.5.8.1-1.				
9	The UE (MCPTT client) sends an HTTP POST Request	>	HTTP POST	-	Р
	message to the SS (OIDC Token Request message),				
	passing the authorization code obtained in step 7.				
10	The SS sends a HTTP 200 (OK) providing id_token,	<	HTTP 200 (OK)	-	-
	access_token and refresh token.				
-	EXCEPTION: The messages in steps 11 to 14 are	-	-		
	transmitted over a secure TLS tunnel that has been				
	established by the UE (MCPTT 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,</x>				
11	Table 5.5.8.1-1. The UE (MCPTT client) sends a HTTP POST message		HTTP POST		Р
''	presenting the access token obtained in step 10 to the SS	>	11115 5031	-	F
	over HTTP for Key Management Initialisation.				
	Over the first wanagement initialisation.				
	NOTE: Step 11 is the start of the second stage which was				
	started in Step 2. Steps 11 through 14 involve Key				
	Management Authorization. The MCPTT Client/Key				
	Management Client presents the access token to the Key				
	Management Server. The end result is the user gets				
	specific key material.	<u>L</u>		<u>L</u>	
-	• • •	•	*		

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message	1	
12	The SS replies to the UE with identity specific key information.	<	HTTP 200 (OK)	-	-
13	The UE (MCPTT client) sends a HTTP POST message presenting an access token to the SS over HTTP for Key Material Request.	>	HTTP POST	-	Р
14	The SS replies to the UE with identity specific key information.	<	HTTP 200 (OK)	-	-
15- 32	Void	-	-	-	-

NOTE 1: Void.

NOTE 1A: Void.

NOTE 2: The UE is expected to prompt the MCPTT user for their 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.

Table 5.3.2.3-1A: MCPTT Initial UE Configuration Request

St	Procedure		Message Sequence	TP	Verdict
		U-S	Message		
1	The UE (MCPTT client) sends an HTTP GETrequestto retrieve the initial UE configuration from the Server	>	HTTP GET (initial UE configuration)	-	Р
2	The SS sends a HTTP 200 (OK) including the initial UE configuration document	<	HTTP 200 (OK)	-	-

Table 5.3.2.3-2: MCPTT Service Authorization and Key Generation

St	Procedure		Message Sequence		Verdict
		U-S	Message		
-	EXCEPTION: In parallel to procedure of all steps below the behaviour of table 5.3.2.3-2A, the behaviour of table 5.3.2.3-2B and the behaviour of table 5.3.2.3-2C takes place.	-	-	-	-
	EXCEPTION: Steps 1a1-1b2 describe behaviour that depends on UE implementation; the "lower case letter" identifies a step sequence that takes place when one or the other is the case.  NOTE: Step 1a1 is the start of the third stage which was started in Step 3 of table 5.3.2.3-1. Steps 1a1 and 1b1 involve User Service Authorization.	-	-	-	
1a1	The UE (MCPTT client) sends a SIP REGISTER request for service authorisation.	>	SIP REGISTER	-	Р
1a2	The SS (MCPTT server) sends SIP 200 (OK).  NOTE: The user is now authorized for MCPTT service.	<	SIP 200 (OK)	-	-
1a3	The UE (MCPTT client) sends a SIP PUBLISH request for update of PoC-settings (NOTE 1).	>	SIP PUBLISH	-	Р
1a4	The SS (MCPTT server) sends SIP 200 (OK).	<	SIP 200 (OK)	-	-
1b1	The UE (MCPTT client) sends a SIP PUBLISH request for service authorisation and update of PoC-settings (NOTE 1).	>	SIP PUBLISH		Р
1b2	The SS (MCPTT server) sends SIP 200 (OK).  NOTE: The user is now authorized for MCPTT service.	<	SIP 200 (OK)		-

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 not before it has retrieved the user profile at step 8 in Table 5.3.2.3-2A.

Table 5.3.2.3-2A: Configuration management subscription and notification procedure

St	St Procedure		Message Sequence		Verdict
		U-S	Message	TP	
1	The UE (MCPTT client) sends a SIP SUBSCRIBE - subscription to multiple documents simultaneously - to the SS containing the access token and a resource list mime body containing a list of the following documents: MCPTT UE Configuration document, MCPTT User Profile Configuration Document, and the MCPTT Service configuration document. The base URI of each list entry is set to the CMS XCAP-ROOT-URI.  NOTE: Step 1 is the start of the fourth stage which was	>	SIP SUBSCRIBE	-	Р
	started in Step 3 of table 5.3.2.3-1. Steps 1 through 10 involve Configuration Management Authorization. The end result of the fourth stage is that the MCPTT Client receives 3 configuration documents: UE Configuration Document, User Profile Configuration Document, and the Service Configuration Document.				
2	The SS sends a SIP 200 (OK) message.	<	SIP 200 (OK)	-	-
3	The SS sends a SIP NOTIFY message to the UE that contains the XCAP-URI of the documents.	<	SIP NOTIFY	-	-
-	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 (MCPTT client) sends a SIP 200 (OK) message.	>	SIP 200 (OK)	-	P
5	The UE (MCPTT client) sends an HTTP GET Request message to the SS that contains the access token and the XCAP-URI of the MCPTT UE Configuration Document.  NOTE: The MCPTT Client is requesting the MCPTT UE Configuration Document.	>	HTTP GET		Р
6	The SS sends the HTTP 200 (OK) message including the MCPTT UE Configuration Document.	<	HTTP 200 (OK)	-	-
7	The UE (MCPTT client) sends an HTTP GET Request message to the SS that contains the access token and the XCAP-URI of the MCPTT User Profile Configuration Document.  NOTE: The MCPTT Client is requesting the MCPTT	>	HTTP GET	-	P
8	User Profile Configuration Document.  The SS sends the HTTP 200 (OK) message including the MCPTT User Profile Configuration Document.	<	HTTP 200 (OK)	-	-
	NOTE: The MCPTT User Profile Configuration Document includes information on MCPTT groups including for which groups the MCPTT Client is a member. The MCPTT User Profile Configuration Document includes Group A as a group for which the MCPTT Client is a member and is implicitly affiliated. Group A is used as the default group for all test cases in TS 36.579-2 and TS 36.579-3.				
9	The UE (MCPTT client) sends an HTTP GET Request message to the SS that contains the access token and the XCAP-URI of the MCPTT Service Configuration Document.  NOTE: The MCPTT Client is requesting the MCPTT Service Configuration Document.	>	HTTP GET	-	P
10	The SS sends the HTTP 200 (OK) message including the MCPTT Service Configuration Document.	<	HTTP 200 (OK)	-	

Table 5.3.2.3-2B: Group document subscription and notification procedure

St	Procedure		Message Sequence		Verdict
			U - S Message		
1	The UE (MCPTT client) sends a SIP SUBSCRIBE to the SS, containing the access token and a resource list mime body and a list of the Groups to be obtained. The base URI of each list entry is set to the GMS XCAP-ROOT-URI, and the MCPTT group ID identifies a group document.  NOTE: Step 1 is the start of the fifth stage which was started in Step 2 of table 5.3.2.3-1. Steps 1 through 6 involve Group Management Authorization. The end result is the MCPTT Client will receive group information for Group A. The MCPTT Client will also get the Group Master Key (GMK) for the group which will be used to derive keys for the group. There will also be a Group User Key Identifier (GUK-ID), and a Group Master Key Identifier (GWK-ID). According TS 33.180 [94], clause 7.4.1, the GMK shall be used as the MIKEY Traffic Generating Key (TGK) and the GUK-ID shall be used as the MIKEY CSB ID. These shall be used to generate the SRTP Master Key and SRTP Master Salt as specified in IETF RFC 3830 [24].	^	SIP SUBSCRIBE		P
2	The SS sends a SIP 200 (OK) message.	<	SIP 200 (OK)		_
3	The SS sends a SIP NOTIFY message to the UE that contains the XCAP-URI of the Group documents.	<	SIP NOTIFY	-	-
-	EXCEPTION: The order of steps 4 and 5 depends on UE and SS implementation and is not checked by the implementation	-	-	-	-
4	The UE (MCPTT client) sends a SIP 200 (OK) message.	>	SIP 200 (OK)	-	Р
5	The UE (MCPTT client) sends an HTTP GET Request message to the SS that contains the access token and the XCAP-URI of the Group Configuration document.	>	HTTP GET	-	Р
6	The SS sends the HTTP 200 (OK) message including the Group Document 'MCPTT UE Configuration document'.  NOTE 1	<b>&lt;</b>	HTTP 200 (OK)	-	-
-	EXCEPTION: Steps 7a1-7a2 describe behaviour that depends on UE implementation; the "lower case letter" identifies a step sequence that takes place when one or the other is the case.	-	-		
7a1	IF the Resource-Lists received from the UE at step 1 contains an entry referring to an MCPTT-GKTP document THEN the SS sends a SIP NOTIFY message to the UE containing the group key transport payloads (GKTP) document.	<b>&lt;</b>	SIP NOTIFY		
7a2	The UE (MCPTT client) sends a SIP 200 (OK) message.	>	SIP 200 (OK)		
NOTE			1	I.	ı

Table 5.3.2.3-2C: Group communication key retrieval procedure

St	Procedure		Message Sequence		Verdict
		U-S	Message		
1	The SS starts timer Timer_1 = 5 seconds.	-	-	-	-
-	EXCEPTION: Steps 2a5-3a1 describe behaviour that depends on UE implementation; the "lower case letter" identifies a step sequence that takes place when one or the other is the case.	-	-	-	-
2a1	The UE (MCPTT client) sends a SIP SUBSCRIBE to the SS, creating a new dialog and containing the access token and a resource list mime body containing an entry to request group key transport payloads (GKTP) document.	>	SIP SUBSCRIBE	-	Р
2a2	The SS sends a SIP 200 (OK) message	<	SIP 200 (OK)	-	-
2a3	The SS sends a SIP NOTIFY message to the UE containing the group key transport payloads (GKTP) document.	<	SIP NOTIFY	-	-
2a4	The UE (MCPTT client) sends a SIP 200 (OK) message.	>	SIP 200 (OK)	-	Р
2a5	The SS stops Timer_1.	-	-	-	-
2b1	Timer_1 expires	-	-		
NOTE:	This key retrieval from the GMS is necessary for the in group communications.	MCX UE	under test to enable ciphering	g exchange	ed media

#### 5.3.2.4 Specific message contents

Table 5.3.2.4-1: HTTP GET (Step 3a1, Table 5.3.2.3-1)

Derivation Path: Table 5.5.4.2-1, condition AUTH

Table 5.3.2.4-2: HTTP POST (Step 3b1, Table 5.3.2.3-1)

Derivation Path: Table 5.5.4.3-1, condition AUTH

Table 5.3.2.4-3: HTTP 200 (OK) (Step 4, Table 5.3.2.3-1)

Derivation Path: Table 5.5.4.6-1 Information Element	Value/remark	Comment	Reference	Condition
Content-Type			11010101100	
media-type	"text/html"		RFC 2854 [111]	
Message-body				
HTML form	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>	"/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 5.3.2.4-4: HTTP POST (Step 6, Table 5.3.2.3-1)

Derivation Path: Table 5.5.4.3-1, condition USERAUTH

### Table 5.3.2.4-5: HTTP 302 (Found) (Step 7, Table 5.3.2.3-1)

Derivation Path: Table 5.5.4.8-1, condition AUTH.

### Table 5.3.2.4-6: HTTP POST (Step 9, Table 5.3.2.3-1)

Derivation Path: Table 5.5.4.3-1, condition TOKEN

### Table 5.3.2.4-7: HTTP 200 (OK) (Step 10, Table 5.3.2.3-1)

Derivation Path: Table 5.5.4.6-1, condition TOKEN

### Table 5.3.2.4-8: HTTP POST (Step 11, Table 5.3.2.3-1)

Derivation Path: Table 5.5.4.33-1, condition KMSINIT.

### Table 5.3.2.4-9: HTTP 200 (OK) (Step 12, Table 5.3.2.3-1)

Derivation Path: Table 5.5.4.6-1, condition KMSINIT.

### Table 5.3.2.4-10: HTTP POST (Step 13, Table 5.3.2.3-1)

Derivation Path: Table 5.5.4.3-1, condition KMSKEY.

Table 5.3.2.4-11: HTTP 200 (OK) (Step 14, Table 5.3.2.3-1)

Derivation Path: Table 5.5.4.6-1, condition KMSKEY.

Table 5.3.2.4-12: SIP REGISTER (Step 1a1, Table 5.3.2.3-2)

Derivation Path: Table 5.5.2.13-1, condition CONFIG

Table 5.3.2.4-13: SIP PUBLISH (Step 1b1, Table 5.3.2.3-2)

Derivation Path: Table 5.5.2.11-1, condition CONFIG

Table 5.3.2.4-13A: SIP PUBLISH (Step 1a3, Table 5.3.2.3-2)

Derivation Path: Table 5.5.2.11-1, condition POC-SETTINGS-EVENT

Table 5.3.2.4-14: SIP SUBSCRIBE (Step 1, Table 5.3.2.3-2A)

Derivation Path: Table 5.5.2.14-1, condition CONFIG

Table 5.3.2.4-15: SIP NOTIFY (Step 3, Table 5.3.2.3-2A)

Derivation Path: Table 5.5.2.8-1, condition CONFIG

Table 5.3.2.4-16: HTTP GET (Step 5, Table 5.3.2.3-2A)

Derivation Path: Table 5.5.4.2-1, condition UECONFIG.

Table 5.3.2.4-17: HTTP GET (Step 7, Table 5.3.2.3-2A)

Derivation Path: Table 5.5.4.2-1, condition UEUSERPROF.

Table 5.3.2.4-18: HTTP GET (Step 9, Table 5.3.2.3-2A)

Derivation Path: Table 5.5.4.2-1, condition UESERVCONFIG.

Table 5.3.2.4-19: HTTP 200 (OK) (Step 6, Table 5.3.2.3-2A)

Derivation Path: Table 5.5.4.6-1, condition UECONFIG.

Table 5.3.2.4-20: HTTP 200 (OK) (Step 8, Table 5.3.2.3-2A)

Derivation Path: Table 5.5.4.6-1, condition UEUSERPROF.

Table 5.3.2.4-21: HTTP 200 (OK) (Step 10, Table 5.3.2.3-2A)

Derivation Path: Table 5.5.4.6-1, condition UESERVCONFIG.

Table 5.3.2.4-22: SIP SUBSCRIBE (Step 1, Table 5.3.2.3-2B)

Derivation Path: Table 5.5.2.14-1, condition GROUPCONFIG

### Table 5.3.2.4-22A: VoidTable 5.3.2.4-22B: SIP NOTIFY (Step 3, Table 5.3.2.3-2B)

Derivation Path: Table 5.5.2.8-1, condition GROUPCONFIG

### Table 5.3.2.4-23: HTTP GET (Step 5, Table 5.3.2.3-2B)

Derivation Path: Table 5.5.4.2-1, condition GROUPCONFIG

### Table 5.3.2.4-24: HTTP 200 (OK) (Step 6, Table 5.3.2.3-2B)

Derivation Path: Table 5.5.4.6-1, condition GROUPCONFIG.

### Table 5.3.2.4-25: Void

### Table 5.3.2.4-26: SIP 200 (OK) (Steps 1a2, 1a4, 1b2, Table 5.3.2.3-2, step 2, Table 5.3.2.3-2A, step 2, Table 5.3.2.3-2B)

Derivation Path: Table 5.5.2.17.1.2-1

### Table 5.3.2.4-27: SIP 200 (OK) (Step 4, Table 5.3.2.3-2A, step 4, Table 5.3.2.3-2B)

Derivation Path: Table 5.5.2.17.1.1-1

### Table 5.3.2.4-28: HTTP GET (Step 1, Table 5.3.2.3-1A)

Derivation Path: Table 5.5.4.2-1, condition UEINITIALCONFIG

### Table 5.3.2.4-29: HTTP 200 (OK) (Step 2, Table 5.3.2.3-1A)

Derivation Path: Table 5.5.4.6-1, condition UEINITIALCONFIG

### Table 5.3.2.4-30: SIP SUBSCRIBE (Step 1, Table 5.3.2.3-2C)

Derivation Path: Table 5.5.2.14-1, condition GROUPCONFIG						
Message-body						
MIME body part		Resource-lists				
MIME-part-headers						
Content-Type	"application/resource- lists+xml"					
MIME-part-body	Resource-lists as described in Table 5.3.2.4-31					

### Table 5.3.2.4-31: Resource-Lists in SIP SUBSCRIBE (Table 5.3.2.4-30)

Derivation Path: Table 5.5.3.3.1-1 condition GROUPKEY

### Table 5.3.2.4-32: SIP NOTIFY (Step 7a, Table 5.3.2.3-2B and Step 3, Table 5.3.2.3-2C)

Derivation Path: Table 5.5.2.14-1, condition GROUPCONFIG					
Message-body					
xcap-diff document	xcap-diff document as described in Table 5.3.2.4-33				

### Table 5.3.2.4-33: Xcap-Diff Document (Table 5.3.2.4-32)

Derivation Path: Table5.5.3.12-2, condition GROUPKEY

# 5.3.2A Generic Test Procedure for MCVideo Authorization/Configuration and Key Generation

The same as the procedure described in 5.3.2 with the following exception(s):

- The term "MCPTT" is replaced with "MCVideo"
- FFS

# 5.3.2B Generic Test Procedure for MCData Authorization/Configuration and Key Generation

**FFS** 

## 5.3.3 Generic Test Procedure for MCPTT pre-established session establishment CO

### 5.3.3.1 Initial conditions

System Simulator:

- SS (MCPTT server)
- For the underlying "transport bearer" over which the SS and the UE will communicate Parameters are set to the default parameters for the basic E-UTRA Single cell network scenarios, as defined in TS 36.508 [6] clause 4.4. The simulated Cell 1 shall belong to PLMN1 (the PLMN specified for MCPTT operation in the MCPTT configuration document)

IUT:

- UE (MCPTT client)
  - The UE has performed the Generic Test Procedure for MCPTT Authorization/Configuration and Key Generation as specified in clause 5.3.2 and thereby the MCPTT client is authorised for and able to use the MCPTT service including making group and private calls on- and off-network, and, the MCPTT user is registered for receiving MCPTT service through the MCPTT Client.

### 5.3.3.2 Definition of system information messages

### 5.3.3.3 Procedure

Table 5.3.3.3-1: MCPTT pre-established session establishment CO

St	Procedure		Message Sequence	TP	Verdict
		U-S	Message		
1	Void	-	-	-	-
1A	E-UTRA/EPC signalling according to steps 2 - 8 of clause 5.4.13 'Generic Test Procedure for MCPTT radio bearer establishment for use of pre-established session' takes place	-	-	-	-
2-7	Void	-	-	-	-
8	Check: Does the UE (MCPTT Client) send a SIP INVITE message in order to create a pre-established session?	>	SIP INVITE	-	P
8A	The SS sends SIP 100 Trying	<	SIP 100 Trying	-	-
9	Void	-	-	-	-
10	The SS (MCPTT server) responds with a SIP 200 (OK) message.	<	SIP 200 (OK)	-	-
10A	Check: Does the UE (MCPTT Client) respond with a SIP ACK message?	>	SIP ACK	-	Р
11	Void	-	-	-	-
11A	The SS waits 2 seconds to ensure that lower layer signalling (TCP) is finished.	-	-	-	-
12	The SS transmits an RRCConnectionRelease message.	<	RRC: RRCConnectionRelease	-	-

### 5.3.3.4 Specific message contents

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

Information Element	Value/remark	Comment	Reference	Condition
Contact			RFC 3261 [22	
			RFC 3840 [33]	
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)		
facture narom	"audio"	communication.		
feature-param	audio	This feature tag indicates that the		
		device supports audio		
		as a streaming media		
		type.		
Accept		type.	RFC 3261 [22]	
media-range[1]	"application/sdp"		11. 0 0201 [22]	
Accept-Contact			RFC 3841 [29]	
ac-value[1]				
feature-param	"+g.3gpp.mcptt"			
req-param	"require"			
explicit-param	"explicit"			
Answer-Mode	not present			
Content-Type				
media-type	"application/sdp"			
Message-body				
SDP Message	SDP message as	Editor's note: If ice		
	described in Table	candidates need to be		
	5.5.3.1.1-1	included in the SDP		
		message for pre-		
		established session		
		(only) a condition		
		PRE_ESTABLISHED_		
		SESSION may be		
		needed		

Table 5.3.3.4-2: SIP 200 (OK) (step 10, Table 5.3.3.3-1)

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

# 5.3.3A Generic Test Procedure for MCVideo pre-established session establishment CO

The same as the procedure described in 5.3.3 with the following exception(s):

- The term "MCPTT" is replaced with "MCVideo"

# 5.3.4 Generic Test Procedure for MCPTT CT session establishment/modification without provisional responses other than 100 Trying

### 5.3.4.1 Initial conditions

As specified in the test case which calls the procedure in its entirety or refers to parts of it.

### 5.3.4.2 Definition of system information messages

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

### 5.3.4.3 Procedure

Table 5.3.4.3-1: MCPTT CT 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 E-UTRA RRC state at the time				
	the present procedure is called.				
1a1	IF in RRC_IDLE state, the E-UTRA/EPC actions	-	-	-	-
	which are related to the MCPTT call				
	establishment described in clause 5.4.4 'Generic				
	Test Procedure for MCPTT CT communication in				
	E-UTRA' take place.				
2	The SS (MCPTT Server) sends a SIP INVITE	<	SIP INVITE	-	-
	requesting the establishment/modification of an				
	MCPTT 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 (MCPTT client) sends SIP 100 (Trying)	>	SIP 100 (Trying)	-	-
4	Check: Does the UE (MCPTT client) respond to	>	SIP 200 (OK)	-	P
	the SIP INVITE with SIP 200 (OK)?				
5	The SS (MCPTT 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:

Table 5.3.4.4-1: SIP 200 (OK) (step 4, Table 5.3.4.3-1)

Derivation Path: Table 5.5.2.17.1.1-1 with condition INVITE-RSP and MCPTT

### 5.3.5 Generic Test Procedure for MCPTT CT group call establishment, manual commencement

#### 5.3.5.1 Initial conditions

As specified in the test case which calls the procedure in its entirety or refers to parts of it.

### 5.3.5.2 Definition of system information messages

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

### 5.3.5.3 Procedure

Table 5.3.5.3-1: MCPTT CT group call establishment, manual commencement

St	Procedure		Message Sequence	TP	Verdict
		U-S	Message		
-	EXCEPTION: Steps 1a1-1b1 describe behaviour	-	-	-	-
	that depends on the E-UTRA RRC state at the				
	time the present procedure is called.				
1a1	IF in RRC_IDLE state, the E-UTRA/EPC actions	-	-	-	-
	which are related to the MCPTT call				
	establishment described in clause 5.4.4 'Generic				
	Test Procedure for MCPTT CT communication in				
	E-UTRA' take place.				
1b1	IF in RRC_IDLE state having a pre-established	-	-	-	-
	session, the E-UTRA/EPC actions which are				
	related to the MCPTT call establishment				
	described in clause 5.4.13 Generic Test				
	Procedure for MCPTT radio bearer				
	establishment for use of pre-established session'				
	take place.		CID INIVITE		
2	The SS (MCPTT Server) sends an initial SIP INVITE requesting the establishment of an	<	SIP INVITE	-	-
	MCPTT group 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 (MCPTT 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 (MCPTT client) send SIP	>	SIP 183 (Session Progress)	-	Р
	183 (Session Progress) unreliably?				
5a2	The SS stops Timer_1.	-	-	-	-
5b1	Check: Does the UE (MCPTT client) send SIP	>	SIP 183 (Session Progress)	-	Р
	183 (Session Progress) reliably?				
5b2	The SS stops Timer_1.	-	-	-	-
5b3	The SS (MCPTT Server) acknowledges the	<	PRACK	-	-
	receipt of SIP 183 (Session Progress)				
5b4	The UE (MCPTT Client) responds PRACK with	>	SIP 200 (OK)	-	-
<u> </u>	SIP 200 (OK)				<u> </u>
5c1	Check: Does Timer_1 expire?	-	-	-	Р
5A	Check: Does the UE (MCPTT client) notify the	-	-	-	Р
	User of the incoming call request? (NOTE 1)				
6	Make UE (MCPTT User) accept the call (NOTE	-	-	-	-
	1)		OID COO (OIC)		_
7	Check: Does the UE (MCPTT client) respond to	>	SIP 200 (OK)	-	Р
	the SIP INVITE with SIP 200 (OK)?		CID ACK		
8	The SS (MCPTT server) sends a SIP ACK to	<	SIP ACK	-	-
NOTE	acknowledge the session establishment	notation de	n and ant MMI		1
NOTE	1: This expected to be done via a suitable implement	entation de	pendent wiwi.		

### 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:

### Table 5.3.5.4-1: SIP INVITE (step 2, Table 5.3.5.3-1)

Derivation Path: Table 5.5.2.5.2-1 with condition MANUAL and GROUP-CALL and MCPTT

### Table 5.3.5.4-1A: SIP 183 (Session Progress) (step 5a1, Table 5.3.5.3-1)

Derivation Path: Table 5.5.2.16.3.1-1 with condition MCPTT

### Table 5.3.5.4-2: SIP 183 (Session Progress) (step 5b1, Table 5.3.5.3-1)

Derivation Path: Table 5.5.2.16.3.1-1 with condition 100rel and MCPTT

### Table 5.3.5.4-3: SIP 200 (OK) (step 7, Table 5.3.5.3-1)

Derivation Path: Table 5.5.2.17.1.1-1 with condition INVITE-RSP and MCPTT

# 5.3.6 Generic Test Procedure for MCPTT CT private call establishment, manual commencement

### 5.3.6.1 Initial conditions

The same initial conditions apply as specified in clause 5.3.3.1.

### 5.3.6.2 Definition of system information messages

### 5.3.6.3 Procedure

Table 5.3.6.3-1: MCPTT CT private call establishment, manual commencement

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that	-	-	-	-
	depends on the E-UTRA RRC state at the time				
	the present procedure is called.				
1a1	IF in RRC_IDLE state, the E-UTRA/EPC actions	-	-	-	-
	which are related to the MCPTT call				
	establishment described in clause 5.4.4 'Generic				
	Test Procedure for MCPTT CT communication in				
	E-UTRA' take place.				
2	The SS (MCPTT Server) sends an initial SIP	<	SIP INVITE	-	-
	INVITE requesting the establishment of an				
	MCPTT 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				
2-4	SIP 100 (Trying)		CID 400 (Truin a)		
3a1	The UE (MCPTT client) sends 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 (MCPTT client) send a SIP	>	SIP 180 (Ringing)		Р
	180 (Ringing) unreliably?		on roo (runging)		'
4b1	Check: Does the UE (MCPTT client) send a SIP	>	SIP 180 (Ringing)	-	Р
	180 (Ringing) reliably?		3 3,		
4b2	The SS (MCPTT Server) acknowledges the	<	PRACK	-	-
	receipt of SIP 180 (Ringing)				
4b3	The UE (MCPTT Client) responds PRACK with	>	SIP 200 (OK)	-	-
	SIP 200 (OK)				
4A	Check: Does the UE (MCPTT client) notify the	-	-	-	Р
	User of the incoming call request? (NOTE 1)				
5	Make UE (MCPTT User) accept the call	-	-	-	-
6	Check: Does the UE (MCPTT client) respond to	>	SIP 200 (OK)	-	Р
	the SIP INVITE with SIP 200 (OK)?				
7	The SS (MCPTT 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	pendent 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 with the following clarifications:

### Table 5.3.6.4-1: SIP INVITE (step 2, Table 5.3.6.3-1)

Derivation Path: Table 5.5.2.5.2-1 with condition MANUAL and PRIVATE-CALL and MCPTT

### Table 5.3.6.4-1A: SIP 180 (Ringing) (step 4a1, Table 5.3.6.3-1)

Derivation Path: Table 5.5.2.16.2.1-1 with condition MCPTT

### 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 with condition 100rel and MCPTT

### Table 5.3.6.4-3: SIP 200 (OK) (step 6, Table 5.3.6.3-1)

Derivation Path: Table 5.5.2.17.1.1-1 with condition INVITE-RSP and MCPTT

# 5.3.7 Generic Test Procedure for MCPTT CO session establishment/modification without provisional responses other than 100 Trying

#### 5.3.7.1 Initial conditions

As specified in the test case which calls the procedure in its entirety or refers to parts of it.

### 5.3.7.2 Definition of system information messages

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

### 5.3.7.3 Procedure

Table 5.3.7.3-1: MCPTT CO session establishment/modification without provisional responses other than 100 Trying

St	Procedure		Message Sequence	TP	Verdict
		U-S	Message	1	
-	EXCEPTION: Step 1a1 describes behaviour that	-	-	-	-
	depends on the E-UTRA RRC state at the time				
	the present procedure is called.				
1a1	IF in RRC_IDLE state, the E-UTRA/EPC actions	-	-	-	-
	which are related to the MCPTT call				
	establishment described in clause 5.4.3 'Generic				
	Test Procedure for MCPTT CO communication in				
	E-UTRA' take place.		OID INVITE		<u> </u>
2	Check: Does the UE (MCPTT Client) send a SIP	>	SIP INVITE	-	Р
	INVITE requesting the				
	establishment/modification of an MCPTT call?		CID 400 (Truin r)	+	
3	The SS sends SIP 100 Trying	<	SIP 100 (Trying)	-	-
4	The SS (MCPTT server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
5	(- )		SIP ACK	-	Р
5	Check: Does the UE (MCPTT Client) send a SIP ACK to acknowledge the session	>	SIP ACK	-	P
	establishment/modification?				
_	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				
	(NOTE1)				
6a1	The SS (MCPTT server) sends a Floor Granted	<	Floor Granted	-	-
	message.				

NOTE1: Possibilities in SDP-offer/answer depend on the test case requirements

- a. UE sends SDP offer without implicit floor request
- b. UE sends SDP offer with implicit floor request
  - i. SDP answer from SS contains "mc\_implicit\_request" and "mc\_granted" (Floor is implicitly granted)
  - ii. SDP answer from SS contains "mc\_implicit request" and but no "mc\_granted" (Floor needs to be explicitly granted ar step 6a1)
  - iii. SDP answer from SS contains no "mc\_implicit\_request"and no "mc\_granted" (the UE needs to explicitly request the floor)

### 5.3.7.4 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 5.3.7.4-1: SIP INVITE (step 2, Table 5.3.7.3-1)

Derivation Path: Table 5.5.2.5.2-1 with condition MCPTT

### Table 5.3.7.4-2: SIP 200 (OK) (step 4, Table 5.3.7.3-1)

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

# 5.3.8 Generic Test Procedure for MCPTT CO private call establishment, manual commencement

### 5.3.8.1 Initial conditions

The same initial conditions apply as specified in clause 5.3.3.1.

### 5.3.8.2 Definition of system information messages

### 5.3.8.3 Procedure

Table 5.3.8.3-1: MCPTT CO private call establishment, manual commencement

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the E-UTRA RRC state at the time the present procedure is called.	-	-	-	-
1a1	IF in RRC_IDLE state, the E-UTRA/EPC actions which are related to the MCPTT call establishment described in clause 5.4.3 'Generic Test Procedure for MCPTT CO communication in E-UTRA' take place.	-	-	-	-
2	Check: Does the UE (MCPTT Client) send a SIP INVITE requesting the establishment of an MCPTT call?	>	SIP INVITE	-	P
3	The SS sends SIP 100 Trying	<	SIP 100 (Trying)	-	-
4	The SS (MCPTT server) responds with a SIP 180 (Ringing)	<	SIP 180 (Ringing)	-	-
5	The SS (MCPTT server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
6	Check: Does the UE (MCPTT Client) send a SIP ACK to acknowledge the session establishment/modification?	>	SIP ACK	-	P
-	EXCEPTION: Steps 7a1 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 (NOTE1)	-	-	-	-
7a1	The SS (MCPTT server) sends a Floor Granted message.	<	Floor Granted	-	-

NOTE1: Possibilities in SDP-offer/answer depend on the test case requirements

- a. UE sends SDP offer without implicit floor request
- b. UE sends SDP offer with implicit floor request
  - i. SDP answer from SS contains "mc\_implicit\_request" and "mc\_granted" (Floor is implicitly granted)
  - ii. SDP answer from SS contains "mc\_implicit request" and but no "mc\_granted" (Floor needs to be explicitly granted ar step 7a1)
  - iii. SDP answer from SS contains no "mc\_implicit\_request" and no "mc\_granted" (the UE needs to explicitly request the floor)

### 5.3.8.4 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 5.3.8.4-1: SIP INVITE (step 2, Table 5.3.8.3-1)

Derivation Path: Table 5.5.2.5.2-1 with condition MANUAL and PRIVATE-CALL and MCPTT

Table 5.3.8.4-2: SIP 200 (OK) (step 5, Table 5.3.8.3-1)

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

# 5.3.9 Generic Test Procedure for MCPTT CO call establishment using a pre-established session

### 5.3.9.1 Initial conditions

As specified in the test case which calls the procedure.

### 5.3.9.2 Definition of system information messages

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

### 5.3.9.3 Procedure

Table 5.3.9.3-1: 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 E-UTRA RRC state at the				
	time the present procedure is called.				
1a1	IF in RRC_IDLE state, the E-UTRA/EPC	-	-	-	-
	actions which are related to the MCPTT call				
	establishment described in clause 5.4.4				
	'Generic Test Procedure for MCPTT CT				
	communication in E-UTRA' take place.				
2	Check: Does the UE (MCPTT Client) send a	>	SIP REFER	-	Р
	SIP REFER message to request the				
	establishment of an MCPTT call using a pre-				
	established session?				
3	The SS (MCPTT Server) responds with a SIP	<	SIP 200 (OK)	-	-
	200 (OK) message indicating that the MCPTT				
	call has been established				
4	The SS sends a Connect message	<	Connect	-	-
5	Check: Does the UE (MCPTT Client) send an	>	Acknowledge	-	Р
	Acknowledgement in response to the Connect				
	message?				

### 5.3.9.4 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:

none

### 5.3.10 Generic Test Procedure for MCPTT CO call release

### 5.3.10.1 Initial conditions

As specified in the test case which calls the procedure.

### 5.3.10.2 Definition of system information messages

### 5.3.10.3 Procedure

Table 5.3.10.3-1: MCPTT CO call release

St	Procedure		Message Sequence	TP	Verdict
		U-S	Message		
1	Check: Does the UE (MCPTT Client) send a SIP BYE request to terminate the MCPTT session?	>	SIP BYE	-	Р
2	The SS (MCPTT Server) responds with a SIP 200 (OK) message?	<	SIP 200 (OK)	-	-
-	EXCEPTION: The SS waits 2 seconds before the SS deactivates the dedicated EPS bearer and releases the RRC connection.  NOTE: The specified wait period of 2s shall ensure that lower layer signalling (TCP) is finished and any not allowed behaviour captured.	-	-	-	

### 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 Generic Test Procedure for MCPTT CO call release keeping the pre-established session

### 5.3.11.1 Initial conditions

As specified in the test case which calls the procedure.

### 5.3.11.2 Definition of system information messages

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

### 5.3.11.3 Procedure

Table 5.3.11.3-1: 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 preestablished session?	>	SIP REFER	-	Р
2	The SS (MCPTT Server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
-	EXCEPTION: The SS waits 2 seconds before the SS releases the RRC connection.  NOTE: The specified wait period of 2s shall ensure that lower layer signalling (TCP) is finished and any not allowed behaviour captured.	-	-	-	-

### 5.3.11.4 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 5.3.11.4-1: SIP REFER (step 1, Table 5.3.11.3-1)

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

### 5.3.12 Generic Test Procedure for MCPTT CT call release

### 5.3.12.1 Initial conditions

As specified in the test case which calls the procedure.

### 5.3.12.2 Definition of system information messages

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

### 5.3.12.3 Procedure

Table 5.3.12.3-1: MCPTT CT call release

St	Procedure		Message Sequence		Verdict
		U-S	Message		
1	The SS (MCPTT Server) sends a SIP BYE	<	SIP BYE	-	-
	request to terminate the MCPTT session.				
2	Check: Does the UE (MCPTT Client) respond	>	SIP 200 (OK)	-	Р
	with a SIP 200 (OK) message?				
-	EXCEPTION: The SS waits 2 seconds before	-	-	-	-
	the SS deactivates the dedicated EPS bearer				
	and releases the RRC connection.				
	NOTE: The specified wait period of 2s shall				
	ensure that lower layer signalling (TCP) is				
	finished.				

### 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 Generic Test Procedure for MCPTT CT call release keeping the preestablished session

### 5.3.13.1 Initial conditions

As specified in the test case which calls the procedure.

### 5.3.13.2 Definition of system information messages

### 5.3.13.3 Procedure

Table 5.3.13.3-1: MCPTT CT call release keeping the pre-established session

St	Procedure	Message Sequence		TP	Verdict
		U-S	Message		
1	SS (MCPTT Server) releases the call by sending a Disconnect message	<	Disconnect	-	-
2	Check: Does the UE (MCPTT Client) send an Acknowledgement to accept the release of the call?	>	Acknowledge	-	Р
-	EXCEPTION: the SS waits 2 seconds before the SS releases the RRC connection.  NOTE: The specified wait period of 2s shall ensure that lower layer signalling (TCP) is finished and any not allowed behaviour captured.	-	-	-	-

### 5.3.13.4 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

# 5.3.14 Generic Test Procedure for MCPTT CO session modification with implicit Floor Control

### 5.3.14.1 Initial conditions

As specified in the test case which calls the procedure in its entirety or refers to parts of it.

### 5.3.14.2 Definition of system information messages

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

### 5.3.14.3 Procedure

Table 5.3.14.3-1: MCPTT CO session modification with implicit Floor Control

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	Check: Does the UE (MCPTT Client) send a SIP INVITE requesting the establishment/modification of an MCPTT call?	>	SIP re-INVITE	-	Р
2	The SS sends SIP 100 Trying	<	SIP 100 (Trying)	-	-
3	The SS (MCPTT server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	1	-
4	Check: Does the UE (MCPTT Client) send a SIP ACK to acknowledge the session establishment/modification?	>	SIP ACK	-	Р
5	The SS (MCPTT Server) sends a Floor Granted message with an acknowledgement required.	<	Floor Granted	-	-
6	Check: Does the UE (MCPTT Client) sends a Floor Ack message in response to the Floor Granted message?	>	Floor Ack	-	Р

### 5.3.14.4 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:

Table 5.3.14.4-1: SIP 200 (OK) (step 2, Table 5.3.14.3-1)

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

# 5.3.15 Generic Test Procedure for MCPTT CO session modification without implicit Floor Control

### 5.3.15.1 Initial conditions

As specified in the test case which calls the procedure in its entirety or refers to parts of it.

### 5.3.15.2 Definition of system information messages

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

#### 5.3.15.3 Procedure

Table 5.3.15.3-1: MCPTT CO session modification without implicit Floor Control

St	Procedure		Message Sequence		Verdict
		U-S	Message		
1	Check: Does the UE (MCPTT Client) send a SIP INVITE requesting the establishment/modification of an MCPTT call?	>	SIP re-INVITE	-	Р
2	The SS sends 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 establishment/modification?	>	SIP ACK	-	Р
5	The SS (MCPTT Server) sends a Floor Idle message with no acknowledgement required.	<	Floor Idle	-	-

### 5.3.15.4 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 5.3.15.4-1: SIP 200 (OK) (step 2, Table 5.3.15.3-1)

Derivation Path: Table 5.5.2.17.1.2-1 with condition INVITE-RSP							
Information Element	Value/remark	Comment	Reference	Condition			
Message-body							
MIME body part		SDP message	RFC 4566				
MIME-part-headers							
Content-Type	"application/sdp"						
MIME-part-body	SDP message as described in Table 5.3.15.4-2						

Table 5.3.15.4-2: SDP in SIP 200 (OK) (Table 5.3.15.4-1)

Derivation Path: Table 5.5.3.1.2-1 SDP Message from the SS for MCPTT							
Information Element	Value/remark	Comment	Reference	Condition			
Session description:							
media attribute		a= line					
		attribute = fmtp					
mc_implicit_request Not present		Parameter has no	TS 24.380 [10]				
·		value	cl. 12.1.2.3				

### 5.3.16 Generic Test Procedure for MCPTT Floor Request – Floor Granted

5.3.16.1 Initial conditions

As specified in the test case which calls the procedure in its entirety or refers to parts of it.

5.3.16.2 Definition of system information messages

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

5.3.16.3 Procedure

Table 5.3.16.3-1: 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 an acknowledgement required.	<	Floor Granted	-	-
3	Check: Does the UE (MCPTT Client) send a Floor Ack message in response to the Floor Granted message?	>	Floor Ack	-	Р
4	Check: Does the UE (MCPTT Client) provide floor granted notification to the MCPTT User? (NOTE 1)	-	-	-	Р

### 5.3.16.4 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:

none

## 5.3.17 Generic Test Procedure for MCPTT Floor Request – Floor Queue Position Info

5.3.17.1 Initial conditions

As specified in the test case which calls the procedure.

5.3.17.2 Definition of system information messages

### 5.3.17.3 Procedure

Table 5.3.17.3-1: 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 was queued message with no acknowledgement required.	<	Floor Queue Position Info	-	-

### 5.3.17.4 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.

### 5.3.18 Generic Test Procedure for MCPTT Queuing Position Request

#### 5.3.18.1 Initial conditions

As specified in the test case which calls the procedure.

### 5.3.18.2 Definition of system information messages

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

### 5.3.18.3 Procedure

**Table 5.3.18.3-1: MCPTT Queuing Position Request** 

St	Procedure		Message Sequence		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 with no acknowledgement required.	<	Floor Queue Position Info	-	-

### 5.3.18.4 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

### 5.3.19 Generic Test Procedure for MCPTT Floor Request – Floor Deny

### 5.3.19.1 Initial conditions

As specified in the test case which calls the procedure.

### 5.3.19.2 Definition of system information messages

### 5.3.19.3 Procedure

Table 5.3.19.3-1: 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	-	Р
	Floor Request message?				
2	The SS (MCPTT Server) sends a Floor Deny	<	Floor Deny	-	-
	message with no acknowledgement required				
3	Check: Does the UE (MCPTT Client) provide	-	-	-	Р
	floor deny notification to the MCPTT User?				
	(NOTE 1)				
NOTE	1: This expected to be done via a suitable implei	mentatior	dependent MMI.		

### 5.3.19.4 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

### 5.3.20 Generic Test Procedure for MCPTT Floor Release - Floor Idle

### 5.3.20.1 Initial conditions

As specified in the test case which calls the procedure in its entirety or refers to parts of it.

### 5.3.20.2 Definition of system information messages

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

### 5.3.20.3 Procedure

Table 5.3.20.3-1: 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	-	Р
	Floor Release message?				
-	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	<	Floor Ack	-	-
	message in response to the Floor Release				
	message				
3	The SS (MCPTT Server) sends a Floor Idle	<	Floor Idle	-	-
	message with no acknowledgement required.				

### 5.3.20.4 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

### 5.3.21 Generic Test Procedure for MCPTT Floor Release - Floor Taken

### 5.3.21.1 Initial conditions

As specified in the test case which calls the procedure in its entirety or refers to parts of it.

### 5.3.21.2 Definition of system information messages

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

### 5.3.21.3 Procedure

Table 5.3.21.3-1: 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 in response to the Floor Release message	<	Floor Ack	-	-
3	The SS (MCPTT Server) sends a Floor Taken message with no acknowledgement required.	<	Floor Taken	-	-

### 5.3.21.4 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

### 5.3.22 Generic Test Procedure for NW initiated temporary group creation

### 5.3.22.1 Initial conditions

As specified in the test case which calls the procedure in its entirety or refers to parts of it.

5.3.22.2 Definition of system information messages

\_

### 5.3.22.3 Procedure

Table 5.3.22.3-1: NW initiated temporary group creation

St	Procedure Message Sequence		TP	Verdict	
		U-S	Message		
1	The SS (MCPTT server) sends a SIP NOTIFY	<	SIP NOTIFY	-	-
	to the UE informing that the user profile has				
	changed, containing the XCAP-URI of the				
	MCPTT User Profile Configuration Document.				
2	The UE sends a SIP 200 (OK) message to the	>	SIP 200 (OK)	-	-
	SS.				
2A	The UE (MCPTT client) sends an HTTP GET	>	HTTP GET	-	-
	Request message to the SS t that contains the				
	access token and the XCAP-URI of the				
	MCPTT User Profile Configuration Document				
2B	The SS sends the HTTP 200 (OK) message	<	HTTP 200 (OK)	-	-
	including the MCPTT User Profile				
	Configuration Document.				
2C	The UE (MCPTT client) sends a SIP	>	SIP SUBSCRIBE	-	Р
	SUBSCRIBE to the SS, containing the access				
	token and a resource list mime body with the				
	new Group to be obtained.		OID 000 (OI()		
2D	The SS sends a SIP 200 (OK) message.	<	SIP 200 (OK)	-	-
-	EXCEPTION: In parallel to procedure of all	-	-	-	-
	steps below the behaviour of Table 5.3.2.3-2C				
	Group communication key retrieval procedure				
25	takes place The SS sends a SIP NOTIFY message to the		CID NOTICY		
2E		<	SIP NOTIFY	-	-
	UE that contains the XCAP-URI of the Group				
_	documents.  EXCEPTION: The order of steps 4 and 5	_	-		
-	depends on UE and SS implementation and is	-	-	_	-
	not checked by the implementation				
2F	The UE (MCPTT client) sends a SIP 200 (OK)	>	SIP 200 (OK)	_	Р
	message.		Gii 200 (Git)		
3	The UE (MCPTT client) sends an HTTP GET	>	HTTP GET	<del> </del> -	_
	Request message to the SS that contains the		11111 021		
	access token and the XCAP-URI of the Group				
	Configuration document.				
4	The SS (MCPTT server) sends the HTTP 200	<	HTTP 200 (OK)	_	-
	(OK) message including the updated Group		,		
	Document				
-	EXCEPTION: Steps 5a1-5a2 describe	-	-	-	-
	behaviour that depends on UE implementation;				
	the "lower case letter" identifies a step				
	sequence that takes place when one or the				
	other is the case.				
5 a1	IF the Resource-Lists received from the UE at	<-	SIP NOTIFY	-	-
	step 2C contains an entry referring to an				
	MCPTT-GKTP document THEN the SS				
	(MCPTT server) sends a SIP NOTIFY				
	message to the UE containing the group key				
	transport payloads (GKTP) document including				
L	the temporary group keys.		015 000 (010)		
5a2	The UE (MCPTT client) sends a SIP 200 (OK)	>	SIP 200 (OK)	-	-
	message.				
6	Void	-	-	-	-

### 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 CONFIG					
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: RFC 5874 [107]				
Information Element	Value/remark	Comment	Reference	Condition
xcap-diff				
document				
sel	org.3gpp.mcptt.user-profile & "/users/" & "sip:" & px_MCPTT_ID_User_A & "/mcptt-user-profile-" & 0 & ".xml"	Editor's note: to be clarified whether only the path to the additional attribute shall be sent		
new-etag	same value as used in notification procedure for user profile change before - appendage increased by 1			
previous-etag	same as used in notification procedure for user profile change before			

### 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: HTTP GET (Step 2, Table 5.3.22.3-1)

Derivation Path: Table 5.5.4.2-1, condition UEUSERPROF.

### Table 5.3.22.4-2C: HTTP 200 (OK) (Step 6, Table 5.3.22.3-1)

Derivation Path: Table 5.5.4.6-1, condition UEUSERPROF					
Information Element	Value/remark	Comment	Reference	Condition	
Message-body					
mcptt-user-profile	User Profile Document described in Table 5.3.22.4-2D	User Profile Document returned			

### Table 5.3.22.4-2D: User Profile Document in HTTP 200 (OK) (Table 5.3.22.4-2C)

Derivation Path: Table 5.5.8.3-1				
Information Element	Value/remark	Comment	Reference	Condition
mcptt-user-profile				
OnNetwork				
MCPTTGroupInfo				
entry[2]		Group 2 the MCPTT user is allowed to affiliate to		
index attribute	"1"			
uri-entry	px_MCPTT_Group_T_I D	The MCPTT group ID for the on-network MCPTT group that the MCPTT user is allowed to affiliate to.		
display-name	px_MCPTT_Group_T_ Name	The display name for the group		

### Table 5.3.22.4-2E: SIP SUBSCRIBE (Step 1, Table 5.3.22.3-1)

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 5.5.3.3.1-1 with condition GROUPCONFIG_T				

### Table 5.3.22.4-2F: SIP NOTIFY (Step 3, Table 5.3.22.3-1)

Derivation Path: Table 5.5.2.8-1, condition GROUPCONFIG					
Information Element	Value/remark	Comment	Reference	Condition	
Message-body					
MIME body part					
MIME part body	xcap-diff document as described in Table 5.3.22.4-2G				

### Table 5.3.22.4-2G: Xcap-diff document in SIP NOTIFY (Table 5.3.22.4-2F)

Derivation Path: Table 5.5.3.12-2, condition GROUPCONFIG				
Information Element	Value/remark	Comment	Reference	Condition
xcap-diff				
document[1]				
sel	"org.openmobilealliance.gr oups/global/byGroupID/" & px_MCPTT_Group_T_ID			

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

Derivation Path: Table 5.5.4.2-1, condition GROUPCONFIG					
Request-Line					
Request-URI					
uri	"/" & tsc_MCX_GMSXCAPRootURI & "/" &	points to group			
	"org.openmobilealliance.groups/global/byGroupID/	configuration			
	" & px_MCPTT_Group_T_ID	document			

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

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

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

Derivation Path: Table 5.5.7.1-3				
Information Element	Value/remark	Comment	Reference	Condition
list-service[1]				
mcpttgi:on-network-			TS 24.481 [31]	
temporary			clause 7.2.4.2	
temporary-MCPTT-group-	px_MCPTT_ID_User_B	Identity of the	TS 24.481 [31]	
requestor attribute		responsible for	clause 7.2.4.2	
		formatting the MCS		
		temporary group.		

### Table 5.3.22.4-5A: SIP SUBSCRIBE (Step 2a1, Table 5.3.2.3-2C)

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 5.5.3.3.1-1 with condition GROUPKEY_T				

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

Derivation Path: Table 5.5.2.14-1, condition GROUPCONFIG				
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 (Table5.3.22.4-6)

Derivation Path: Table 5.5.3.12-2,	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]	group key transport payloads (GKTP) document as described in Table 5.3.22.4-8					
sel	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				

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

Derivation Path: TS 24.481 [11] c	lause 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				
temporary-MCPTT-group-ID attribute	px_MCPTT_Group_T_I D			
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		

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

Value/remark	Comment	Condition
	See TS 33.180 [94] clause E.6	
'1'		
px_MCPTT_Group_T_ID	The ID for the group associated with the key.	
	I .	TS 33.180 [94] clause E.6  '1'  px_MCPTT_Group_T_ID The ID for the group associated

# 5.3.23 Generic Test Procedure for MCPTT CT Call establishment automatic commencement using a pre-established session

5.3.23.1 Initial conditions

As specified in the test case which calls the procedure in its entirety or refers to parts of it.

5.3.23.2 Definition of system information messages

### 5.3.23.3 Procedure

Table 5.3.23.3-1: MCPTT CT Call establishment automatic commencement using a pre-established session

St	Procedure	Procedure Message Sequen		TP	Verdict
		U-S	Message		
1	E-UTRA/EPC signalling according to clause 5.4.13 'Generic Test Procedure for MCPTT radio bearer establishment for use of preestablished session' takes place	-	-	-	-
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 Acknowledgement to accept the incoming prearranged group call using a pre-established session?	>	Acknowledge	-	Р

### 5.3.23.4 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

# 5.3.24 Generic Test Procedure for UE intitated MCPTT functional alias status determination and subscription

### 5.3.24.1 Initial conditions

As specified in the test case which calls the procedure in its entirety or refers to parts of it.

### 5.3.24.2 Definition of system information messages

#### 5.3.24.3 Procedure

Table 5.3.24.3-1: MCPTT functional alias status determination and subscription

St	Procedure		Message Sequence TP \		Verdict
		U-S	Message		
1	Make the MCPTT User request to determine the current status of a functional alias and later notification of status changes of a functional alias.  (NOTE 1)	-	-	-	-
-	EXCEPTION: Step 2a1 describes behaviour that depends on the E-UTRA RRC state at the time the present procedure is called.	-	-	-	-
2a1	IF in RRC_IDLE state, the E-UTRA/EPC actions which are related to the MCPTT call establishment described in clause 5.4.3 'Generic Test Procedure for MCPTT CO communication in E-UTRA' take place.	-	-	-	-
3	Check: Does the UE (MCPTT Client) send a SIP SUBSCRIBE requesting the status of any existing functional aliases?	>	SIP SUBSCRIBE	-	Р
4	The SS (MCPTT server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
5	The SS (MCPTT server) sends a SIP NOTIFY with functional alias information	<	SIP NOTIFY	-	-
6	Check: Does the UE (MCPTT Client) send a SIP 200 (OK)?	>	SIP 200 (OK)	-	Р
- NOTE	EXCEPTION: The SS waits 2 seconds before the SS deactivates the dedicated EPS bearer and releases the RRC connection. (NOTE 2)  1: This is expected to be done via a suitable imple	-	-	-	-

NOTE 2: The specified wait period of 2s shall ensure that lower layer signalling (TCP) is finished.

#### 5.3.24.4 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 5.3.24.4-1: SIP SUBSCRIBE (step 3, Table 5.3.24.3-1)

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	
Message-body			TS 24.379 [9] clause 9A.2.1.3	
MIME body part		MCPTT Info		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-info+xml"			
Content-ID	any value	Unique URL identifying the MCPTT 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 5.3.24.4-2			

### Table 5.3.24.4-2: MCPTT-Info in SIP SUBSCRIBE (Table 5.3.24.4-1)

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.2.1.3		

### Table 5.3.24.4-3: SIP 200 (OK) (step 4, Table 5.3.24.3-1)

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

### Table 5.3.24.4-4: SIP NOTIFY (step 5, Table 5.3.24.3-1)

Derivation Path: Table 5.5.2.8-1 with condition PRESENCE-EVENT					
Information Element	Value/remark	Comment	Reference	Condition	
Message-body					
MIME body part		PIDF	TS 24.379 [9] clause 9A.2.2. 2.5		
MIME-part-headers					
Content-Type	"application/pidf+xml"				
MIME-part-body	PIDF as described in Table 5.3.24.4-5				

### Table 5.3.24.4-5: PIDF in SIP NOTIFY (Table 5.3.24.4-4)

Information Element	Value/remark	Comment	Reference	Condition
presence			TS 24.379 [9]	
			clause 9A.3.1v	
entity attribute	Encrypted URI (NOTE		TS 24.379 [9]	
	1) with value set to		clause 9A.3.1	
	px_MCPTT_ID_User_A			
tuple			TS 24.379 [9]	
			clause 9A.3.1	
id attribute	Encrypted URI (NOTE			
	1) with value set to the			
	mcptt-client-id as			
	provided by the UE at			
	registration			
status				
functionalAlias		Having no		
		functionalAliasID and		
		status parameters		
		under functionalAlias		
		equates to no activated		
		functional alias		
functionalAliasID	not present	Functional Alias ID		
user	Encrypted URI (NOTE			
	1) with value set to the			
	mcptt-client-id as			
	provided by the UE at			
	registration			
status	not present			
affiliation	not present			
group	not present			
status  NOTE 1: Encrypted attribute a	not present			

# 5.3.25 Generic Test Procedure for UE inititated MCPTT functional alias status change

### 5.3.25.1 Initial conditions

As specified in the test case which calls the procedure in its entirety or refers to parts of it.

### 5.3.25.2 Definition of system information messages

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

### 5.3.25.3 Procedure

Table 5.3.25.3-1: MCPTT functional alias status change

St	Procedure		Message Sequence		Verdict
		U-S	Message		
1	Make the MCPTT User request to change the status of a functional alias to "not activated".  (NOTE 1)	-	-	-	-
1	EXCEPTION: Step 2a1 describes behaviour that depends on the E-UTRA RRC state at the time the present procedure is called.	-	-	-	-
2a1	IF in RRC_IDLE state, the E-UTRA/EPC actions which are related to the MCPTT call establishment described in clause 5.4.3 'Generic Test Procedure for MCPTT CO communication in E-UTRA' take place.	-	-	-	-
3	Check: Does the UE (MCPTT Client) send a SIP PUBLISH requesting the status change of a functional alias?	>	SIP PUBLISH	-	Р
4	The SS (MCPTT server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
5	The SS (MCPTT server) sends a SIP NOTIFY with functional alias information	<	SIP NOTIFY	-	-
6	Check: Does the UE (MCPTT Client) send a SIP 200 (OK)?	>	SIP 200 (OK)	-	Р
-	EXCEPTION: The SS waits 2 seconds before the SS deactivates the dedicated EPS bearer and releases the RRC connection.  (NOTE 2)  1: This is expected to be done via a suitable imple:	-	-	-	-

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

NOTE 2: The specified wait period of 2s shall ensure that lower layer signalling (TCP) is finished.

### 5.3.25.4 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 5.3.25.4-1: SIP PUBLISH (step 3, Table 5.3.25.3-1)

Derivation Path: Table 5.5.2.11	-1 with condition PRESENCI	E-EVENT		
Information Element	Value/remark	Comment	Reference	Condition
Message-body				
MIME body part		MCPTT Info	TS 24.379 [9] clause 9A.2.1.2	
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-info+xml"			
Content-ID	any value			
MIME-part-body	MCPTT-Info as described in Table 5.3.25.4-2			
MIME body part		PIDF	TS 24.379 [9] clause 9A.2.1.2	
MIME-part-headers				
Content-Type	"application/pidf+xml"			
MIME-part-body	PIDF as described in Table 5.3.25.4-3			
MIME body part		MIKEY		
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		

### Table 5.3.25.4-2: MCPTT-Info in SIP PUBLISH (Table 5.3.25.4-1)

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 5.3.25.4-3: PIDF in SIP PUBLISH (Table 5.3.25.4-1)

Information Element	Value/remark	Comment	Reference	Condition
presence			TS 24.379 [9]	
			clause 9A.3.1	
entity attribute	Encrypted URI (NOTE		TS 24.379 [9]	
·	1) with value set to		clause 9A.3.1	
	px_MCPTT_ID_User_A			
tuple			TS 24.379 [9]	
•			clause 9A.3.1	
id attribute	Encrypted URI (NOTE			
	1) with value set to the			
	mcptt-client-id as			
	provided by the UE at			
	registration			
status				
functionalAlias				
functionalAliasID	px_MCPTT_ID_FA_A	Functional Alias ID		
user	Encrypted URI (NOTE			
	1) with value set to the			
	mcptt-client-id as			
	provided by the UE at			
	registration			
affiliation	not present			
group	not present			
status	not present			
p-id-fa	Any allowed value	a globally unique value	TS 24.379 [9]	
		set to an identifier of a	clause	
		SIP PUBLISH request	9A.2.1.2	

Table 5.3.25.4-4: SIP 200 (OK) (step 4, Table 5.3.25.3-1)

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

Table 5.3.25.4-5: SIP NOTIFY (step 5, Table 5.3.25.3-1)

Derivation Path: Table 5.5.2.8-1 with condition PRESENCE-EVENT						
Information Element	Value/remark	Comment	Reference	Condition		
Message-body			]			
MIME body part		PIDF	TS 24.379 [9] clause 9A.2.2. 2.5			
MIME-part-headers						
Content-Type	"application/pidf+xml"					
MIME-part-body	PIDF as described in Table 5.3.25.4-6					

Table 5.3.25.4-6: PIDF in SIP NOTIFY (Table 5.3.25.4-5)

Derivation Path: Table 5.5.3.5.2-	1			
Information Element	Value/remark	Comment	Reference	Condition
presence				
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				
functionalAlias				
functionalAliasID	px_MCPTT_ID_FA_A	Functional Alias ID		
status	"activated"			
affiliation	not present			
group	not present			
status	not present			
p-id-fa	same value as received in the SIP PUBLISH message		TS 24.379 [9] clause 9A.2.2.5	

### 5.3.26 Generic Test Procedure for MCPTT CO Group Creation

### 5.3.26.1 Initial conditions

As specified in the test case which calls the procedure.

### 5.3.26.2 Definition of system information messages

### 5.3.26.3 Procedure

Table 5.3.26.3-1: MCPTT CO Group Creation procedure

St	Procedure		Message Sequence	TP	Verdict
		U-S	Message		
	EXCEPTION: Steps 1a1-1b2 describe behaviour that depends on Group Creation procedure started; the "lower case letter" identifies a step sequence that takes place when one or the other is the case.	-	-	-	-
1a1	IF a new temporary group shall be created THEN Check: Does the UE (MCPTT Client) send a HTTP POST to the SS to request for creation of a new temporary group?	>	HTTP POST	-	Р
1a2	The SS (MCPTT Server) sends a HTTP 200 (OK) containing the new group identifier.	<	HTTP 200 (OK)	-	-
1b1	IF a new group shall be created THEN Check: Does the UE (MCPTT Client) send a HTTP PUT to the SS to request for creation of the new group?	>	HTTP PUT	1	Р
1b2	The SS (MCPTT Server) sends a HTTP 201 (Created) containing the new group identifier.	<	HTTP 201 (Created)	-	-
-	EXCEPTION: In parallel to procedure of all steps below the behaviour of table 5.3.2.3-2B: Group document subscription and notification procedure and the behaviour of Table 5.3.2.3-2C: Group communication key retrieval procedure takes place	-	-	-	-
2	The SS sends a SIP NOTIFY to the UE informing that the user profile has changed, containing the XCAP-URI of the MCPTT User Profile Configuration Document.	<	SIP NOTIFY	-	-
3	The UE sends a SIP 200 (OK) message to the SS.	>	SIP 200 (OK)	-	-
4	The UE (MCPTT client) sends an HTTP GET Request message to the SS t that contains the access token and the XCAP-URI of the MCPTT User Profile Configuration Document	>	HTTP GET	-	-
5	The SS sends the HTTP 200 (OK) message including the MCPTT User Profile Configuration Document.	<	HTTP 200 (OK)	-	-

### 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:

### Table 5.3.26.4-1: HTTP POST (Step 1a1, Table 5.3.26.3-1)

Derivation Path: Table 5.5.4.3-1, condition TEMPGROUP

### Table 5.3.26.4-2: HTTP 200 (OK) (Step 1a2, Table 5.3.26.3-1)

Derivation Path: Table 5.5.4.6-1, condition GROUPCONFIG						
Information Element	Value/remark	Comment	Reference	Condition		
Message-body						
ue-group-configuration	As described in Table 5.5.7.1-3					

### Table 5.3.26.4-3: HTTP PUT (Step 1b1, Table 5.3.26.3-1)

Derivation Path: Table 5.5.4.4-1,	Derivation Path: Table 5.5.4.4-1, condition GROUPCREATE						
Information Element	Value/remark	Comment	Reference	Condition			
Request-Line							
Request-URI							
uri	"/" & tsc_MCX_GMSXCAPR ootURI & "/" & "org.openmobileallianc e.groups/global/byGrou pID/" & px_MCPTT_Group_C_I D			GROUP_C			
Message-body							
group	Group Creation Document as described in Table 5.3.26.4-4			GROUP_C			

### Table 5.3.26.4-4: Group Creation Document in HTTP PUT (Table 5.3.26.4-3)

Information Element	Value/remark	Comment	Reference	Condition
group				
list-service				
uri-attribute	px_MCPTT_Grou	uri of the MCPTT group		
	p_C_ID			
display-name	px_MCPTT_Grou	group display name	•	
	p_C_name			

Table 5.3.26.4-5: HTTP 201 (Created) Step 1b2 (Table 5.3.26.3-1)

Derivation Path: Table 5.5.4.7-1, condit	ion GROUPCONFIG			
Information Element	Value/remark	Comment	Reference	Condition
Location			RFC 7231 [118] clauses 4.3.3, 6.3.2, 7.1.2	
Location-URI	" " 0			
uri	"/" & tsc_MCX_GMSX CAPRootURI & "/" & "org.openmobileall iance.groups/glob al/byGroupID/" & px_MCPTT_Grou p_B_ID	URI referring to the created MCPTT GROUP B document		GROUP_B
	"/" & tsc_MCX_GMSX CAPRootURI & "/" & "org.openmobileall iance.groups/glob al/byGroupID/" & px_MCPTT_Grou p_C_ID	URI referring to the created MCPTT GROUP C document		GROUP_C
Message-body				
ue-group-configuration	As described in Table5.3.26.4-6 with condition GROUP_B			GROUP_B
ue-group-configuration	As described in Table5.3.26.4-6 with condition GROUP_C			GROUP_C

# Table 5.3.26.4-6: UE group configuration in HTTP 201 (created) (Table 5.3.26.4-5)

Derivation Path: Table 5.5.7.1-1				
Information Element	Value/remark	Comment	Reference	Condition
list-service[1]				GROUP_B
uri attribute	px_MCPTT_Group_B_I D			
display-name	px_MCPTT_Group_B_ Name			
list-service[1]				GROUP_C
uri attribute	px_MCPTT_Group_C_I D			
display-name	px_MCPTT_Group_C_ Name			

### Table 5.3.26.4-7: SIP NOTIFY (Step 2, Table 5.3.26.3-1)

Derivation Path: Table 5.5.2.8-1 condition CONFIG				
Information Element	Value/remark	Comment	Reference	Condition
Message-body				
MIME body part		xcap-diff		
MIME-part-body	Xcap-diff as described			
	in Table 5.3.26.4-8			

Table 5.3.26.4-8: Xcap-diff document in SIP NOTIFY (Table 5.3.26.4-7)

Derivation Path: RFC 5874 [107	7]			
Information Element	Value/remark	Comment	Reference	Condition
xcap-diff				
document				
sel	org.3gpp.mcptt.user-profile & "/users/" & "sip:" & px_MCPTT_ID_User_A & "/mcptt-user-profile-" & 0 & ".xml"	Editor's note: to be clarified whether only the path to the additional attribute shall be sent		
new-etag	same value as used in notification procedure for user profile change before - appendage increased by 1			
previous-etag	same as used in notification procedure for user profile change before			

Table 5.3.26.4-9: HTTP GET (Step 4, Table 5.3.26.3-1)

Derivation Path: Table 5.5.4.2-1, condition UEUSERPROF.

Table 5.3.26.4-10: HTTP 200 (OK) (Step 5, Table 5.3.26.3-1)

Derivation Path: Table 5.5.4.6-1,	condition UEUSERPROF			
Information Element	Value/remark	Comment	Reference	Condition
Message-body				
mcptt-user-profile	User Profile Document described in Table 5.3.26.4-11	User Profile Document returned		
mcptt-user-profile	User Profile Document described in Table 5.3.26.4-12	User Profile Document returned		GROUP_T

Table 5.3.26.4-11: User Profile Document in HTTP 200 (OK) (Table 5.3.26.4-10)

Derivation Path: Table 5.5.8.3-	1			
Information Element	Value/remark	Comment	Reference	Condition
mcptt-user-profile				
OnNetwork				
index attribute	"0"			
MCPTTGroupInfo				
entry[2]		Group 2 the MCPTT user is allowed to affiliate to		
index attribute	"1"			
uri-entry	px_MCPTT_Group_B_I D	The MCPTT group ID for the on-network MCPTT group that the MCPTT user is allowed to affiliate to.		GROUP_B
display-name	px_MCPTT_Group_B_ Name	The display name for the group		
entry[3]		Group 3 the MCPTT user is allowed to affiliate to		GROUP_C
index attribute	"2"			
uri-entry	px_MCPTT_Group_C_I D	The MCPTT group ID for the on-network MCPTT group that the MCPTT user is allowed to affiliate to.		
display-name	px_MCPTT_Group_C_ Name	The display name for the group		

Table 5.3.26.4-12: User Profile Document in HTTP 200 (OK) (Table 5.3.26.4-10)

Information Element	Value/remark	Comment	Reference	Condition
mcptt-user-profile				
OnNetwork				
index attribute	"0"			
MCPTTGroupInfo				
entry[2]		Group 2 the MCPTT user is allowed to affiliate to		
index attribute	"1"			
uri-entry	px_MCPTT_Group_T_I D	The MCPTT group ID for the on-network MCPTT group that the MCPTT user is allowed to affiliate to.		
display-name	px_MCPTT_Group_T_ Name	The display name for the group		

Table 5.3.26.4-13: SIP SUBSCRIBE (Step 1, Table 5.3.2.3-2B)

Derivation Path: Table 5.5.2.14-	1, condition GROUPCONF	G		
Information Element	Value/remark	Comment	Reference	Condition
Message-body				
MIME body part		Resource-lists		
MIME-part-body	Resource-lists as described in Table 5.5.3.3.1-1 with condition GROUPCONFIG_B			GROUP_B
MIME-part-body	Resource-lists as described in Table 5.5.3.3.1-1 with condition GROUPCONFIG_C			GROUP_C
MIME-part-body	Resource-lists as described in Table 5.5.3.3.1-1 with condition GROUPCONFIG_T			GROUP_T

# Table 5.3.26.4-14: SIP NOTIFY (Step 3, Table 5.3.2.3-2B)

Derivation Path: Table 5.5.2.8-1, condition GROUPCONFIG				
Information Element	Value/remark	Comment	Reference	Condition
Message-body				
MIME body part				
MIME part body	xcap-diff document as described in Table 5.3.26.4-15 with condition GROUP_B			GROUP_B
MIME part body	xcap-diff document as described in Table 5.3.26.4-15 with condition GROUP_C			GROUP_C
MIME part body	xcap-diff document as described in Table 5.3.26.4-15 with condition GROUP_T			GROUP_T

# Table 5.3.26.4-15: Xcap-diff document in SIP NOTIFY (Table 5.3.26.4-14)

Derivation Path: Table 5.5.3.12-2	2, condition GROUPCONFIG			
Information Element	Value/remark	Comment	Reference	Condition
xcap-diff				
document[1]				
sel	"org.openmobilealliance.gr oups/global/byGroupID/" & px_MCPTT_Group_B_ID			GROUP_B
sel	"org.openmobilealliance.gr oups/global/byGroupID/" & px_MCPTT_Group_C_ID			GROUP_C
sel	"org.openmobilealliance.gr oups/global/byGroupID/" & px_MCPTT_Group_T_ID			GROUP_T

Table 5.3.26.4-16: HTTP GET (Step 5, Table 5.3.2.3-2B)

Derivation Path: Table 5.5.4.2-1	Derivation Path: Table 5.5.4.2-1, condition GROUPCONFIG			
Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
Request-URI				
uri	"/" & tsc_MCX_GMSXCAPRoot URI & "/" & "org.openmobilealliance.gr oups/global/byGroupID/" & px_MCPTT_Group_B_ID	points to group configuration document		GROUP_B
uri	"/" & tsc_MCX_GMSXCAPRoot URI & "/" & "org.openmobilealliance.gr oups/global/byGroupID/" & px_MCPTT_Group_C_ID	points to group configuration document		GROUP_C
uri	"/" & tsc_MCX_GMSXCAPRoot URI & "/" & "org.openmobilealliance.gr oups/global/byGroupID/" & px_MCPTT_Group_T_ID	points to group configuration document		GROUP_T

# Table 5.3.26.4-17: HTTP 200 (OK) (Step 6, Table 5.3.2.3-2B)

Derivation Path: Table 5.5.4.	6-1, condition GROUPCONFIG.	
Message-body		
ue-group-configuration	As described in Table5.3.26.4-18 with condition GROUP_B	GROUP_B
ue-group-configuration	As described in Table5.3.26.4-18 with condition GROUP_C	GROUP_C
ue-group-configuration	As described in Table5.3.26.4-18 with condition GROUP_T	GROUP_T

# Table 5.3.26.4-18: UE group configuration in HTTP 200 (OK) (Table 5.3.26.4-17)

Derivation Path: Table 5.5.7.1-1	Derivation Path: Table 5.5.7.1-1				
Information Element	Value/remark	Comment	Reference	Condition	
list-service[1]				GROUP_B	
uri attribute	px_MCPTT_Group_B_I D				
display-name	px_MCPTT_Group_B_ Name				
list-service[1]				GROUP_C	
uri attribute	px_MCPTT_Group_C_I D				
display-name	px_MCPTT_Group_C_ Name				
list-service[1]				GROUP_T	
uri attribute	px_MCPTT_Group_T_I D				
display-name	px_MCPTT_Group_T_ Name				

Table 5.3.26.4-19: SIP SUBSCRIBE (Step 1, Table 5.3.2.3-2C)

Derivation Path: Table 5.5.2.14-1	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 5.5.3.3.1-1 with condition GROUPKEY_B			GROUP_B		
MIME-part-body	Resource-lists as described in Table 5.5.3.3.1-1 with condition GROUPKEY_C			GROUP_C		
MIME-part-body	Resource-lists as described in Table 5.5.3.3.1-1 with condition GROUPKEY_T			GROUP_T		

# Table 5.3.26.4-20: SIP NOTIFY (Step 7a1, Table 5.3.2.3-2B and Step 2a3, Table 5.3.2.3-2C)

Derivation Path: Table 5.5.2.14-	Derivation Path: Table 5.5.2.14-1, condition GROUPCONFIG					
Information Element	Value/remark	Comment	Reference	Condition		
Message-body						
xcap-diff document	xcap-diff document as described in Table 5.3.26.4-21 with condition GROUP_B			GROUP_B		
xcap-diff document	xcap-diff document as described in Table 5.3.26.4-21 with condition GROUP_C			GROUP_C		
xcap-diff document	xcap-diff document as described in Table 5.3.26.4-21 with condition GROUP_T			GROUP_T		

# Table 5.3.26.4-21: Xcap-Diff Document in SIP NOTIFY (Table 5.3.26.4-20)

Derivation Path: Table 5.5.3.12-2	Derivation Path: Table 5.5.3.12-2, condition GROUPKEY				
Information Element	Value/remark	Comment	Reference	Condition	
xcap-diff					
element[1]	group key transport payloads (GKTP) document as described in Table 5.3.26.4-22 with condition GROUP_B			GROUP_B	
element[1]	group key transport payloads (GKTP) document as described in Table 5.3.26.4-22 with condition GROUP_C			GROUP_C	
element[1]	group key transport payloads (GKTP) document as described in Table 5.3.26.4-22 with condition GROUP_T			GROUP_T	

Table 5.3.26.4-22: group key transport payloads (GKTP) document in xcap-diff document (Table 5.3.26.4-21)

Derivation Path: Table 5.5.3.14-1					
Information Element	Value/remark	Comment	Reference	Condition	
<b>GKTP</b> s					
GMK-GKTPs					
GKTP[1]	MIKEY message as described in Table 5.3.26.4-23 with condition GROUP_B	MIKEY message, containing the GMK		GROUP_B	
GKTP[1]	MIKEY message as described in Table 5.3.26.4-23 with condition GROUP_C	MIKEY message, containing the GMK		GROUP_C	
GKTP[1]	MIKEY message as described in Table 5.3.26.4-24	MIKEY message, containing the GMK		GROUP_T	

Table 5.3.26.4-23: MIKEY-SAKKE I\_MESSAGE in group key transport payloads (Table 5.3.26.4-22)

Information Element	Value/remark	Comment	Reference	Condition
General Extension Payload {				
Data {				
Group IDs {				
Number of Group IDs	'1'			
Group ID	px_MCPTT_Group_B_I D	The ID for the group associated with the key.		GROUP_B
Group ID	px_MCPTT_Group_C_I D	The ID for the group associated with the key.		GROUP_C
}				
}				
}				

Table 5.3.26.4-24: group key transport payloads (GKTP) document (Table 5.3.26.4-22)

Derivation Path: TS 24.481 [11] clause 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			
id attribute	Same value as used in group communication key retrieval procedure				
on-network-regrouped-GKTPs					
temporary-MCPTT-group-ID attribute	px_MCPTT_Group_T_I D				
GKTP[1]	MIKEY message as described in Table 5.3.26.4-25	MIKEY message containing the GMK for Group T			
id attribute	arbitrary value	unique charstring assigned by the SS			

Table 5.3.26.4-25: MIKEY-SAKKE I\_MESSAGE (GMK distribution by the SS) (Table 5.3.26.4-24)

Derivation Path: Table 5.5.9.1-3  Field	Value/remark	Comment	Condition
General Extension Payload {			
Data {			
Group IDs {			
Number of Group IDs	'1'		
Group ID	px_MCPTT_Group_T_ID	The ID for the group associated with the key.	
}			
}			
}			

Condition	Explanation
GROUP_B	Message content for creation of GROUP_B
GROUP_C	Message content for creation of GROUP_C
GROUP_C	Message content for creation of temporary GROUP_T
NOTE: For further conditions see table 5.5.1-	1

# 5.4 Generic test procedures for UE operation over EUTRA/EPS

### 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 TCs specified e.g. in 3GPP TS 36.579-2 [2], 3GPP TS 36.579-3 [3], 3GPP TS 36.579-6 [84], 3GPP TS 36.579-7 [85].

The intention is, wherever possible, that E-UTRA/EPS 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 tests description itself.

Throughout the generic test procedures E-UTRA/EPC 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 an UE device is denoted e.g. as "SS-UE1".

# 5.4.1A UE APN/PDN support assumptions

A MCPTT (or in general Mission Critical Services) capable UE, depending on implementation/deployment, may be provided with up to 3 MCPTT related APN: An APN utilised by the MCPTT service including the MCPTT service APN for the SIP-1 reference point, an MC common core services APN for the HTTP-1 reference point and a MC identity management service APN for the CSC-1 reference point (see TS 23.179 [8], clause 5.2.9).

To limit the test specification complexity utilisation of single APN/PDN to be used for all 3 MCPTT services is assumed and only 2 QCIs are used for the bearers established in regard to the PDN:

1. MCPTT (QCI=69 for signalling bearer, QCI=65 for voice)

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.

In addition to the MCPTT relevant APN, a MCPTT (or in general Mission Critical Services) capable UE may support 2 additional different APNs for which different PDNs each with its specific QCI:

- 2. Internet (QCI=9)
- 3. IMS (VOLTE QCI=5 for signalling bearer, QCI=1 for voice call)

This will result in the need the MCPTT tests to be able to handle a 3 APNs and different PDNs.

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

Consequently, for the IMS and MCPTT 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 MCPTT. 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 36.579-5 [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).

In regard to the MCPTT the following shall be also taken into account

- If the PDN connection established during the initial attach by the UE is to an APN other than the MCPTT service APN, then prior to user authentication, the UE shall establish another PDN connection to the MCPTT service APN. PDN connection establishment can also be caused by a SIP registration request for MCPTT. The QCI value of 69 shall be used for the EPS bearer that transports SIP-1 reference point messaging. It is used for SIP signalling.
- For the MCPTT service APN, the MCPTT UE does not activate EPS bearers for media streams.
- The network initiates the creation of a dedicated bearer to transport the voice media. The dedicated bearer for Conversational Voice utilises the standardised QCI value of 65. The network, utilising dynamic PCC, creates no more than one dedicated bearer for voice media (the UE is required to support at minimum one UM bearer which is used for MCPTT voice).

Editor's Note: The requirements in regard to MCVideo and MCData are FFS.

# 5.4.2 Generic Test Procedure for MCPTT UE registration

#### 5.4.2.1 Initial conditions

System Simulator:

- SS (MCPTT server)
- E-UTRA related parameters are set to the default parameters for the basic single cell environment, as defined in TS 36.508 [6] clause 4.4, unless otherwise specified in the test case. Requirements in regard to the PLMN which the simulated Cell(s) belongs to are specified in the test case using the present procedure.

#### IUT:

- UE (MCPTT client)
  - The UE is MCPTT capable. The MCPTT preconditions required for initiation of MCPTT service authorization for the MCPTT client and the MCPTT service are specified in the test cases.
  - The test USIM set as defined in clause 5.5.10 is inserted.
  - The UE shall be switched off.

#### 5.4.2.2 Definition of system information messages

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

5.4.2.3 Procedure

Table 5.4.2.3-1: EUTRA/EPS signalling for UE registration

St	Procedure	Message Sequence		
		U-S	Message	
0	Switch the UE on.	-	-	
1	Void	-	-	
2	UE transmits an RRCConnectionRequest message.	>	RRC: RRCConnectionRequest	
3	SS transmits an <i>RRCConnectionSetup</i> message.	<	RRC: RRCConnectionSetup	
4	The UE transmits an RRCConnectionSetupComplete	>	RRC: RRCConnectionSetupComplete	
_	message to confirm the successful completion of the		NAS: ATTACH REQUEST	
	connection establishment and to initiate the Attach		NAS: PDN CONNECTIVITY REQUEST	
	procedure by including the ATTACH REQUEST		IVAC. I DIN COMMECTIVITI NEGGEOT	
	message. The PDN CONNECTIVITY REQUEST			
	message is piggybacked in ATTACH REQUEST.			
	(NOTE 1)			
5	The SS transmits an AUTHENTICATION REQUEST	<	RRC: DLInformationTransfer	
	message to initiate the EPS authentication and AKA	,	NAS: AUTHENTICATION REQUEST	
	procedure.		TWO. NOT TEXT TO A TICK TO	
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	>	RRC: ULInformationTransfer	
	COMPLETE message and establishes the initial		NAS: SECURITY MODE COMPLETE	
	security configuration.		TWO. GEOGRATT MODE COMITEETE	
_	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	
Jai	last PDN CONNECTIVITY REQUEST message THEN		NAS: ESM INFORMATION REQUEST	
	the SS transmits an ESM INFORMATION REQUEST		TWO. LOW HAT CHANK THOM REQUEST	
	message to initiate exchange of protocol configuration			
	options and/or APN.			
9a2	The UE transmits an ESM INFORMATION RESPONSE	>	RRC: ULInformationTransfer	
Ouz	message to transfer protocol configuration options		NAS: ESM INFORMATION RESPONSE	
	and/or APN.		TWIGHT COMMITTEE CONTROL	
10	The SS transmits a SecurityModeCommand message	<	RRC: SecurityModeCommand	
	to activate AS security.			
11	The UE transmits a SecurityModeComplete message	>	RRC: SecurityModeComplete	
	and establishes the initial security configuration.			
12	The SS transmits a UECapabilityEnquiry message to	<	RRC: UECapabilityEnquiry	
	initiate the UE radio access capability transfer		, , , , , , , , , , , , , , , , , , , ,	
	procedure.			
13	The UE transmits a UECapabilityInformation message	>	RRC: UECapabilityInformation	
	to transfer UE radio access capability.		, , ,	
14	The SS transmits an RRCConnectionReconfiguration	<	RRC: RRCConnectionReconfiguration	
	message to establish the default bearer with condition		NAS: ATTACH ACCEPT	
	SRB2-DRB(1, 0) according to TS 36.508 [6]		NAS: ACTIVATE DEFAULT EPS	
	clause 4.8.2.2.1.1.		BEARER CONTEXT REQUEST	
	This message includes the ATTACH ACCEPT			
	message. The ACTIVATE DEFAULT EPS BEARER			
	CONTEXT REQUEST message is piggybacked in			
	ATTACH ACCEPT. (NOTE 1)	<u></u>		
15	The UE transmits an	>	RRC:	
	RRCConnectionReconfigurationComplete message to		RRCConnectionReconfigurationComplet	
	confirm the establishment of default bearer.		е	
-	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			
	16Abelow the events described in table 5.4.2.3-2 take			
<u></u>	place.	<u> </u>		

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	-	-	
400	may be performed 0, 1 or 2 times. (NOTE 1)			
16A	The EUTRA/EPS signalling for establishment of an	-	-	
	additional PDN connectivity according to table 5.4.2.3-			
17	1A takes place The SS transmits an RRCConnectionRelease		RRC: RRCConnectionRelease	
''	message.	<	INO. ANGOUNTECHUITREIEASE	
	EXCEPTION: IF the UE is not configured to register for	-	-	
	MCX during initial registration, THEN steps 18 to 27	_		
	take place.			
18	Make the UE user request MCPTT service	-	-	
	authorisation/configuration.			
	NOTE 2			
19	The UE transmits an RRCConnectionRequest	>	RRCConnectionRequest	
	message.			
20	SS transmit an RRCConnectionSetup message.	<b></b>	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	
00	to activate AS security.		DDO: 0	
23	The UE transmits a SecurityModeComplete message	>	RRC: SecurityModeComplete	
24	and establishes the initial security configuration.	-	PDC: PDCConnectionPopenfiguration	
24	The SS configures a new data radio bearer, associated with the default EPS bearer context.	<	RRC: RRCConnectionReconfiguration	
	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		RRCConnectionReconfigurationComplet	
	confirm the establishment of the new radio bearer,		е	
	associated with the default EPS bearer context.			
26	The EUTRA/EPS signalling for establishment of an	-	-	
	additional PDN connectivity according to table 5.4.2.3-			
	1A takes place			
27	The SS transmits an RRCConnectionRelease	<	RRC: RRCConnectionRelease	
	message.			

NOTE 2: This will start a 5 stage process. The first stage involves MCPTT User Authentication and includes Steps 3a1 through 10 of Table 5.3.2.3-1. The end result of the first stage is the MCPTT Client receives 3 tokens: access token, ID token, and refresh token.

Table 5.4.2.3-1A: EUTRA/EPS signalling for establishment of an additional PDN connectivity

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 SIP registration for		
	MCPTT as specified in table 5.4.2.3-2 takes place		
4	The UE transmits an ACTIVATE DEFAULT EPS	>	RRC: ULInformationTransfer
	BEARER CONTEXT ACCEPT message.		NAS: ACTIVATE DEFAULT EPS
			BEARER CONTEXT ACCEPT

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

Table 5.4.2.3-2: SIP registration for MCPTT

St	Procedure	Message Sequence		
		U - S	Message	
-	EXCEPTION: In parallel to the event described			
	in steps 1 to 4 below the MCPTT user			
	authentication as according to table 5.3.2.3-1			
	take place.			
1	The UE sends initial registration for IMS	>	SIP REGISTER	
	services.			
2	The SS responds with a valid AKAv1-MD5	<	SIP 401 Unauthorized	
	authentication challenge and security			
	mechanisms supported by the network.			
3	The UE completes the security negotiation	>	SIP REGISTER	
	procedures, sets up a temporary set of SAs			
	and uses those for sending another			
	REGISTER with AKAv1-MD5 credentials.			
4	The SS responds with 200 OK.	<	SIP 200 OK	
5-6	Void			
6A	The generic procedure for MCPTT Service			
	Authorization as specified in table 5.3.2.3-2			
	takes place			
7	The SS (MCPTT server) sends SIP MESSAGE	<	SIP MESSAGE	
	for configuring Location Info reporting.			
8	The UE (MCPTT client) responds with SIP 200	>	SIP 200 (OK)	
	(OK)			

#### 5.4.2.4 Specific message contents

All specific EUTRA/EPS signalling message contents shall be referred to TS 36.508 [6] clause 4.6 and 4.7.

The MCPTT relevant SIP message contents, Table 5.4.2.3-2, are specified in the present document clause 5.5.2, except for the following messages.

#### Table 5.4.2.4-1: SIP MESSAGE (step 7)

Derivation Path: Table 5.5.2.7.2-1 SIP MESSAGE from the SS, condition LOCATION-INFO					
Information Element Value/remark Comment Reference Condition					
Message-body					
MIME body part		MCPTT Info			
MIME-part-body	As described in Table				
	5.4.2.4-1A				

#### Table 5.4.2.4-1A: MCPTT Info in SIP MESSAGE (Table 5.4.2.4-1)

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 5.4.2.4-2: SIP 200 (OK) (Step 8, Table 5.4.2.3-2)

Derivation Path: Table 5.5.2.17.1.1-1

#### Table 5.4.2.4-3: REGISTER (Step 1, Table 5.4.2.3-2)

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

#### Table 5.4.2.4-4: SIP 401 (Unauthorized) (Step 2, Table 5.4.2.3-2)

Derivation Path: Table 5.5.2.19.7-1

#### Table 5.4.2.4-5: REGISTER (Step 3, Table 5.4.2.3-2)

Derivation Path: Table 5.5.2.13-1

#### Table 5.4.2.4-6: SIP 200 (OK) (Step 4, Table 5.4.2.3-2)

Derivation Path: Table 5.5.2.17.1.2-1

# 5.4.2A Generic Test Procedure for MCVideo UE registration

The same as the procedure described in 5.4.2 with the following exception(s):

- The term "MCPTT" is replaced with "MCVideo".

# 5.4.2B Generic Test Procedure for MCData UE registration

The same as the procedure described in 5.4.2 with the following exception(s):

- The term "MCPTT" is replaced with "MCData", and the term "call" with "communication".

### 5.4.3 Generic Test Procedure for MCPTT CO communication in E-UTRA

#### 5.4.3.1 Initial conditions

System Simulator:

- SS (MCPTT server)
- SS E-UTRA related parameters are set to the default parameters for the basic single cell environment, as defined in TS 36.508 [6] clause 4.4, unless otherwise specified in the test case. Requirements in regard to the PLMN which the simulated Cell(s) belongs to are specified in the test case using the present procedure.

#### IUT:

- UE (MCPTT client)
  - The test USIM set as defined in clause 5.5.10 is inserted.
  - The UE has performed the Generic Test Procedure for MCPTT UE registration as specified in clause 5.4.2 and is in E-UTRA Registered, Idle Mode state with the MCPTT Client being active. 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 MCPTT and SIP signalling.
  - NOTE 1: The assumptions for the PDN support of a MCPTT capable UE, including the default EPS bearer context QCI requirements in regard to the different PDN are described in 5.4.1A.
  - Detailed initial conditions for the UE (MCPTT client) shall be specified in the TC referring to the present procedure.

#### 5.4.3.2 Definition of system information messages

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

#### 5.4.3.3 Procedure

Table 5.4.3.3-1: EUTRA/EPS signalling for MCPTT CO communication

St	Procedure	Message Sequence	
		U - S	Message
1	Make the UE attempt an MCPTT call	-	-
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 new data radio bearer, associated	<	RRC: RRCConnectionReconfiguration
	with the default EPS bearer context.		
	The RRCConnectionReconfiguration message is using		
	condition SRB2-DRB(1, 0) as specified in TS 36.508 [6]		
	clause 4.8.2.2.1. The DRB associated with default EPS		
	bearer context obtained during the attach procedure is		
	established (see Preamble).		
-	EXCEPTION: In parallel to the events described below,	-	-
	depending on the test case, one of the generic procedures in clause 5.3 for MCPTT CO call		
	<u> </u>		
	establishment, starting with step 2, takes place		

St	Procedure		Message Sequence
		U - S	Message
8	The UE transmits an RRCConnectionReconfigurationComplete message to confirm the establishment of the new data radio bearer, associated with the default EPS bearer context.	>	RRC: RRCConnectionReconfigurationComplet e
9-12	Void.	-	-
13	The SS configures a new RLC-UM data radio bearer, associated with the dedicated EPS bearer context. RRCConnectionReconfiguration message contains the ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST message. EPS bearer context #5 (QCI 65) according to table 6.6.2-1: Reference dedicated EPS bearer contexts is used. NOTE 1: The same MCPTT PDN address is applicable because the linked EPS bearer ID refers to the default EBC. NOTE 2: The network initiates the creation of a dedicated bearer to transport the voice media see 5.4.1A.	<	RRC: RRCConnectionReconfiguration NAS: ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST
14	The UE transmits an RRCConnectionReconfigurationComplete message to confirm the establishment of the new data radio bearer, associated with the default EPS bearer for emergency IMS signalling.	>	RRC: RRCConnectionReconfigurationComplet e
15	The UE transmits an ACTIVATE DEDICATED EPS BEARER CONTEXT ACCEPT message.	>	RRC: ULInformationTransfer NAS:ACTIVATE DEDICATED EPS BEARER CONTEXT ACCEPT

Table 5.4.3.3-2: Void

#### 5.4.3.4 Specific message contents

All specific EUTRA/EPS signalling message contents shall be referred to TS 36.508 [6] clauses 4.6 and 4.7.

#### 5.4.3A Generic Test Procedure for MCVideo CO communication in E-UTRA

The same as the procedure described in 5.4.3 with the following exception(s):

- The term "MCPTT" is replaced with "MCVideo".
- EPS bearer context #3 (QCI 2) according to TS 36.508 [6], table 6.6.2-1: Reference dedicated EPS bearer contexts is used.

## 5.4.3B Generic Test Procedure for MCData CO communication in E-UTRA

The same as the procedure described in 5.4.3 with the following exception(s):

- The term "MCPTT" is replaced with "MCData", and the term "call" with "communication".
- EPS bearer context #[9] (QCI 70) according to TS 36.508 [6], table 6.6.2-1: Reference dedicated EPS bearer contexts is used.

# 5.4.4 Generic Test Procedure for MCPTT CT communication in E-UTRA

#### 5.4.4.1 Initial conditions

System Simulator:

- SS (MCPTT server)

- E-UTRA related parameters are set to the default parameters for the basic single cell environment, as defined in TS 36.508 [6] clause 4.4, unless otherwise specified in the test case. Requirements in regard to the PLMN which the simulated Cell(s) belongs to are specified in the test case using the present procedure.

#### IUT:

- UE (MCPTT client):
  - The test USIM set as defined in clause 5.5.10 is inserted.
  - The UE has performed the Generic Test Procedure for MCPTT UE registration as specified in clause 5.4.2 and is in E-UTRA Registered, Idle Mode state with the MCPTT Client being active. 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 MCPTT and SIP signalling.
- NOTE 1: The assumptions for the PDN support of a MCPTT capable UE, including the default EPS bearer context QCI requirements in regard to the different PDN are described in 5.4.1A.
  - Detailed initial conditions for the UE (MCPTT client) shall be specified in the TC referring to the present procedure.

#### 5.4.4.2 Definition of system information messages

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

#### 5.4.4.3 Procedure

Table 5.4.4.3-1: EUTRA/EPS signalling for MCPTT CT communication

St	Procedure	Message Sequence	
		U-S	Message
1	SS sends a <i>Paging</i> message to the UE on the	<	RRC: Paging (PCCH)
	appropriate paging block, and including the UE identity		
	in one entry of the IE pagingRecordLists.		
2	The UE transmits an RRCConnectionRequest 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.		BB0 0 ". M 1 0
5	The SS transmits a SecurityModeCommand message	<	RRC: SecurityModeCommand
	to activate AS security.		DDC: Consult Manda Committee
6	The UE transmits a SecurityModeComplete message	>	RRC: SecurityModeComplete
7	and establishes the initial security configuration.	_	DDC: DDCCompostionDeconfiguration
_ ′	The SS configures a new data radio bearer, associated with the default EPS bearer context.	<	RRC: RRCConnectionReconfiguration
	The RRCConnectionReconfiguration message is using		
	condition SRB2-DRB(1, 0) as specified in TS 36.508 [6]		
	clause 4.8.2.2.1. The DRB associated with default EPS		
	bearer context obtained during the attach procedure is		
	established (see Preamble).		
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.		
-	EXCEPTION: In parallel to the events described below,	-	-
	depending on the test case, one of the generic		
	procedures in clause 5.3 for MCPTT CT call		
	establishment, starting with step 2, takes place		
9-12	Void.	-	-

St	Procedure	Message Sequence		
		U - S	Message	
13	The SS configures a new RLC-UM data radio bearer, associated with the dedicated EPS bearer context. RRCConnectionReconfiguration message contains the ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST message. EPS bearer context #5 (QCI 65/69) according to table 6.6.2-1: Reference dedicated EPS bearer contexts is used.  NOTE 1: The same MCPTT PDN address is applicable because the linked EPS bearer ID refers to the default EBC.  NOTE 2: The network initiates the creation of a dedicated bearer to transport the voice media see 5.4.1A.	<	RRC: RRCConnectionReconfiguration NAS: ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST	
14	The UE transmits an RRCConnectionReconfigurationComplete message to confirm the establishment of the new data radio bearer, associated with the default EPS bearer for emergency IMS signalling.	^	RRC: RRCConnectionReconfigurationComplet e	
15	The UE transmits an ACTIVATE DEDICATED EPS BEARER CONTEXT ACCEPT message.	>	RRC: ULInformationTransfer NAS:ACTIVATE DEDICATED EPS BEARER CONTEXT ACCEPT	
16	Void	-	-	

Table 5.4.4.3-2: Void

#### 5.4.4.4 Specific message contents

All specific EUTRA/EPS signalling message contents shall be referred to TS 36.508 [6] clause 4.6 and 4.7.

# 5.4.4A Generic Test Procedure for MCVideo CT communication in E-UTRA

The same as the procedure described in 5.4.4 with the following exception(s):

- The term "MCPTT" is replaced with "MCVideo".
- EPS bearer context #3 (QCI 2) according to TS 36.508 [6], table 6.6.2-1: Reference dedicated EPS bearer contexts is used.

# 5.4.4B Generic Test Procedure for MCData CT communication in E-UTRA

The same as the procedure described in 5.4.4 with the following exception(s):

- The term "MCPTT" is replaced with "MCData", and the term "call" with "communication".
- EPS bearer context #[9] (QCI 70) according to TS 36.508 [6], table 6.6.2-1: Reference dedicated EPS bearer contexts is used.

# 5.4.5 Generic Test Procedure for MCPTT CO communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment

#### 5.4.5.1 Initial conditions

System Simulator:

- SS-UE1 (MCPTT 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 (MCPTT client):
  - The test USIM set as defined in clause 5.5.10 is inserted.
  - Detailed initial conditions for the UE (MCPTT 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 MCPTT CO communication-establishment

St	Procedure	Message Sequence		
		U - S	Message	
1	Power up the UE.	1	-	
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 allocation not supported".	>	DIRECT_COMMUNICATION_REQUES T	
5	SS-UE1 sends a DIRECT_SECURITY_MODE_COMMAND message.	<b>&lt;</b>	DIRECT_SECURITY_MODE_COMMAND	
6	UE sends a DIRECT_SECURITY_MODE_COMPLETE message ciphered and integrity protected with the new security context.	->	DIRECT_SECURITY_MODE_COMPLET E	
7	SS-UE1 sends a DIRECT_COMMUNICATION_ACCEPT message.	<	DIRECT_COMMUNICATION_ACCEPT	
-	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.  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 message.	>	DIRECT_COMMUNICATION_KEEPALI VE	
9a2	SS-UE1 sends a DIRECT_COMMUNICATION_KEEPALIVE_ACK message.	<	DIRECT_COMMUNICATION_KEEPALI VE_ACK	

# 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	128-bit IPv6	
	'address allocation not	address	
	supported' in the IP		
	Address Config IE in the		
	DIRECT_COMMUNICAT		
	ION_REQUEST		
	message then a link-local		
	IPv6 address formed		
	locally		

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

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 $K_D$ $ID$	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 5.4.5.4-3: 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 Generic Test Procedure for MCPTT CT communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment

#### 5.4.6.1 Initial conditions

System Simulator:

- SS-UE1 (MCPTT 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 (MCPTT client)
  - The test USIM set as defined in clause 5.5.10 is inserted.
  - Detailed initial conditions for the UE (MCPTT 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 MCPTT 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.	<	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		

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

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			

# 5.4.7 Generic Test Procedure for MCPTT communication over ProSe direct one-to-one communication out of E-UTRA coverage - release by the SS

#### 5.4.7.1 Initial conditions

System Simulator:

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

#### IUT:

- UE (MCPTT client)

ProSe related configuration

- Same as those defined in the 'Generic Test Procedure for MCPTT CO communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment', as described in clause 5.4.5, or, the 'Generic Test Procedure for MCPTT 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 'Generic Test Procedure for MCPTT CO communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment', as described in clause 5.4.5, or, the 'Generic Test Procedure for MCPTT 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 MCPTT communication - release by the SS

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

#### 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 Generic Test Procedure for MCPTT communication over ProSe direct one-to-one communication out of E-UTRA coverage - release by the UE

#### 5.4.8.1 Initial conditions

System Simulator:

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

#### IUT:

- UE (MCPTT client)

ProSe related configuration

Same as those defined in the 'Generic Test Procedure for MCPTT CO communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment', as described in clause 5.4.5, or, the 'Generic Test Procedure for MCPTT 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 'Generic Test Procedure for MCPTT CO communication over ProSe direct one-to-one communication out of E-UTRA coverage-establishment', as described in clause 5.4.5, or, the 'Generic Test Procedure for MCPTT 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 MCPTT 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 Generic Test Procedure for MCPTT communication in E-UTRA / Change of cells

#### 5.4.9.1 Initial conditions

System Simulator:

- SS (MCPTT server)
- SS E-UTRA
  - Parameters are set to the default parameters for the basic E-UTRA single mode multi cell network scenarios, as defined in TS 36.508 [6] clause 4.4, unless otherwise specified in the test case.
  - 3 cells (Cell 1, Cell 2 and Cell 4, all operating on the same frequency). Cells 1 and 2 are on the same PLMN1, whereas Cell 4 is on a different PLMN2.

NOTE: The procedure only requires at maximum 2 cells to be active at any one instance.

#### IUT:

- UE (MCPTT client)
  - The UE has performed the Generic Test Procedure for MCPTT UE registration as specified in clause 5.4.2 and is in E-UTRA Registered, Idle Mode state on Cell 1 with the MCPTT Client being active. 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 MCPTT and SIP signalling. The UE is allowed to operate on both PLMN1 and PLMN2.
  - NOTE 1: The assumptions for the PDN support of a MCPTT capable UE, including the default EPS bearer context QCI requirements in regard to the different PDN are described in 5.4.1A.

- The UE has performed the Generic Test Procedure for MCPTT Authorization/Configuration and Key Generation as specified in clause 5.3.2 and thereby the MCPTT client is authorised for and able to use the MCPTT service including making group and private calls on- and off-network, and, the MCPTT user is registered for receiving MCPTT service through the MCPTT Client. The PLMN1 is set as HPLMN and PLMN2 is set as VPLMN in Table 5.5.8.1-1: MCPTT Initial UE Configuration Defaults.
- Detailed initial conditions for the UE (MCPTT client) shall be specified in the TC referring to the present procedure.

#### 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.

Table 5.4.9.3-1: Time instances of cell power level and parameter changes

	Parameter	Unit	Cell 1	Cell 2	Cell 4
T0	Cell-specific RS	dBm/15k	-79	"Off"	"Off"
	EPRE	Hz			
T1	Cell-specific RS	dBm/15k	"Off"	-79	"Off"
	EPRE	Hz			
T2	Cell-specific RS	dBm/15k	"Off"	"Off"	-79
	ÉPRE	Hz			

Table 5.4.9.3-2: EUTRA/EPS 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 take place.  NOTE 2.	-	-

NOTE 1: Depending on implementation the UE may start transmitting MCPTT protocol relevant data earlier. What may be transmitted is specified in the TCs.

NOTE 2: The UE may start transmitting MCPTT protocol relevant data as soon as it receives TRACKING AREA UPDATE ACCEPT message. If this happens the SS shall not execute step 7 of the Generic test procedure for 'Tracking area updating procedure' and shall continue with the rest of the messages exchange defined in the test case.

#### 5.4.9.4 Specific message contents

None.

# 5.4.10 Generic Test Procedure for MCPTT 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

System Simulator:

- SS-UE1 (MCPTT 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 (MCPTT client)
  - The test USIM set as defined in clause 5.5.10 is inserted.
  - Detailed initial conditions for the UE (MCPTT 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 MCPTT off-network CT group calls

St	Procedure	Message Sequence	
	110004410	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]) 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 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 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 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	<	PC5_DISCOVERY
-	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 transmission period a PC5_DISCOVERY message.	-	-
3b3a1	The UE transmits in the next transmission period 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 3b2.	>	PC5_DISCOVERY
3b3b1	The WaitForMessageCounter=11.	-	-
-	EXCEPTION: Steps 4 and 5 may be repeated multiple times depending on the MCPTT procedure taking place.	-	-
-	EXCEPTION: Step 4 is repeated until the MCPTT 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 by the GNSS simulator (same to be used by the UE).  NOTE 3.	<	STCH PDCP SDU packet
-	EXCEPTION: Step 5 is repeated until the MCPTT protocol data unit provided by the higher layers is transmitted in full. NOTE 4.	1	-
5	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
NOTE 1	1: UEs which are capable of Announcing for group member discovery may start announcement automatically.		

NOTE 1: UEs which are capable of Announcing for group member discovery may start announcement automatically. NOTE 2: The SS-UE1 may need to send more than one MCPTT protocol data unit in sequence with no response expected between them from the UE.

NOTE 3: What MCPTT protocol data units are included in the sidelink communication is defined in the test case using the present generic procedure.

NOTE 4: The UE may need to send more than one MCPTT protocol data unit in sequence with no response expected between them from the SS-UE1.

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 Generic Test Procedure for MCPTT 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

System Simulator:

- SS-UE1 (MCPTT 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 (MCPTT client)
  - The test USIM set as defined in clause 5.5.10 is inserted.
  - Detailed initial conditions for the UE (MCPTT 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 MCPTT 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_ProSeMonForGtoupMemberDiscovery (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 MCPTT procedure taking place.	-	-	
-	EXCEPTION: Step 4 is repeated until the MCPTT 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 MCPTT 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 member discovery may start Discoverer procedure automatically.		
NOTE	2: The UE may need to send more than one MCPTT protocol data unit in sequence with no response expected between them from the SS-UE1.		
NOTE	<ol><li>Which MCPTT protocol data units are included in the sidelink communication is defined in the test case using the present generic procedure.</li></ol>		
NOTE	4: The SS-UE1 may need to send more than one MCPTT protocol data unit in sequence with no response expected between them from the UE.		

#### 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 Generic Test Procedure for MCPTT communication over MBMS

#### 5.4.12.1 Initial conditions

System Simulator:

- SS (MCPTT server)
- SS E-UTRA
  - E-UTRA related parameters are set to the default parameters for the basic single cell environment, as defined in TS 36.508 [6] clause 4.4, unless otherwise specified in the test case.
  - MBSFNAreaConfiguration as defined in TS 36.508[6] table 4.6.1-4A is transmitted on MCCH

#### IUT:

- UE (MCPTT client):
  - E-UTRAN UE supporting MBMS services. The UE has performed the Generic Test Procedure for MCPTT
    UE registration as specified in clause 5.4.2 and is in E-UTRA Registered, Idle Mode state. The UE is made
    interested in receiving MBMS service in the PLMN of Cell 1 with MBMS Service ID 0.
  - Detailed initial conditions for the UE (MCPTT client) shall be specified in the TC referring to the present procedure.

#### 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: MCPTT communication over MBMS

St	Procedure	Message Sequence		
		U-S	Message	
1	SS transmits MBSFNAreaConfiguration message	<b></b>	MBSFNAreaConfiguration	
2	Wait for a period equal to the MCCH modification period for the UE to receive MBSFNAreaConfiguration message.	-	-	
-	EXCEPTION: Step 3 is repeated continuously to carry the relevant MCPTT 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 MCPTT protocol data units are sent and at which time is defined in the test case using the present generic procedure.			

#### 5.4.12.4 Specific message contents

None.

# 5.4.13 Generic Test Procedure for MCPTT radio bearer establishment for use of pre-established session

#### 5.4.13.1 Initial conditions

System Simulator:

- SS (MCPTT server)
- SS E-UTRA related parameters are set to the default parameters for the basic single cell environment, as defined in TS 36.508 [6] clause 4.4, unless otherwise specified in the test case. Requirements in regard to the PLMN which the simulated Cell(s) belongs to are specified in the test case using the present procedure.

#### IUT:

- UE (MCPTT client)
  - The test USIM set as defined in clause 5.5.10 is inserted.
  - The UE has performed the Generic Test Procedure for MCPTT UE registration as specified in clause 5.4.2 and is in E-UTRA Registered, Idle Mode state with the MCPTT Client being active. 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 MCPTT and SIP signalling.

NOTE 1: The assumptions for the PDN support of a MCPTT capable UE, including the default EPS bearer context QCI requirements in regard to the different PDN are described in 5.4.1A.

- The UE has performed the Generic Test Procedure for MCPTT pre-established session establishment CO as specified in clause 5.3.3.
- Detailed initial conditions for the UE (MCPTT client) shall be specified in the TC referring to the present procedure.

#### 5.4.13.2 Definition of system information messages

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

#### 5.4.13.3 Procedure

Table 5.4.13.3-1: MCPTT radio bearer establishment for use of pre-established session

St	Procedure	Message Sequence		
		U - S	Message	
1	SS sends a Paging message to the UE	<	RRC: Paging (PCCH)	
2	The UE transmits an RRCConnectionRequest message	>	RRC: RRCConnectionRequest	
3	The 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.		DD0 0 "144 1 0 1 1	
6	The UE transmits a SecurityModeComplete message	>	RRC: SecurityModeComplete	
	and establishes the initial security configuration.		DDO: DDOO:tiDtiti	
7	The SS configures all DRBs, associated with the default	<	RRC: RRCConnectionReconfiguration	
	EPS bearers established during the attach procedure and another DRB, associated with the dedicated EPS			
	bearer established during pre-established session			
	establishment.			
	The RRCConnectionReconfiguration message is using			
	condition SRB2-DRB(n, 1) 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).			
	=> The DRB associated with MCPTT default EPS			
	bearer obtained during the attach procedure and the			
	DRB associated with dedicated EPS bearer obtained			
	during the establishment of the pre-established session			
	get established			
-	EXCEPTION: In parallel to step 8, depending on the	-	-	
	test case, the UE may start signalling on the DRBs			
8	The UE transmits an	>	RRC:	
	RRCConnectionReconfigurationComplete message to		RRCConnectionReconfigurationComplet	
	confirm the establishment of radio bearers.		е	

## 5.4.13.4 Specific message contents

All specific EUTRA/EPS signalling message contents shall be referred to TS 36.508 [6] clauses 4.6 and 4.7.

# 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

	Message/IE sent only in on-network scenario.
OFF-NETWORK	Message/IE sent only in off-network scenario.
PRIVATE-CALL I	Message/IE sent only as part of a Private call handling.
GROUP-CALL I	Message/IE sent only as part of a Group call handling.
EMERGENCY-CALL I	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 I	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
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.
PRESENCE-EVENT	Message/IE for presence even package
POC-SETTINGS-EVENT	Message/IE for poc-settings even package
AFFILIATION	Message/IE for affiliation
	Message containing location info
UDP I	UE uses UDP for sending a request (this implies UDP to be used for a
	corresponding response)
	UE uses TCP for sending a request (this implies TCP to be used for a
	corresponding response)
	Call (dialog) has been initiated by the UE (mobile originated call)
	Call (dialog) has been initiated by the SS (mobile terminated call)
	MCPTT specific message content
	MCVideo specific message content
MCDATA II	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	J, clause A.2.1.4.2, A.2.2.4.2  Value/remark	Comment	Reference	Condition
	value/remark	Comment		Condition
Request-Line	"ACK"		RFC 3261 [22]	
Method Request-URI	same URI as the SS			
Request-URI	has sent earlier in the			
	Contact header of a			
	response within the same dialog			
SIP-Version	"SIP/2.0"			
Via	SIF/2.0		RFC 3261 [22]	
	"SIP/2.0/UDP"		KFC 3201 [22]	UDP
sent-protocol	"SIP/2.0/TCP"			TCP
a a mat have				TCP
sent-by	Same value as in			
via hvanah	INVITE message			
via-branch	Value starting with			
Route	'z9hG4bK'		DEC 2004 [20]	
	LIDIa of the Decemb		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	order		RFC 3261 [22]	
	same value as in the	Local URI of the dialog	KFC 3201 [22]	
addr-spec	INVITE message	(from the UE's point of		
	INVITE message	view)		
tag	same value as in the	Local tag of the dialog		
tag	INVITE	ID (from the UE's point		
	INVIIL	of view)		
То		OI VIEW)	RFC 3261 [22]	
addr-spec	same value as in the	Remote URI of the	1(1 0 3201 [22]	
addi Spec	INVITE	dialog (from the UE's		
	IIIVII E	point of view)		
tag	same tag as in the To-	Remote tag of the		
ag	header of the response	dialog ID (from the UE's		
	which has established	point of view)		
	the dialog	point or thou,		
Call-ID	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		RFC 3261 [22]	
callid	same value as in		[ <u></u> ]	
<del></del>	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		
<del></del>		included		

### 5.5.2.1.2 SIP ACK from the SS

Table 5.5.2.1.2-1: SIP ACK from the SS

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 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 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]	
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		

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

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22]	
Method	"BYE"		0 0=01 [=2]	
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		
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			MO_CALI
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 the UE	as assigned during registration		
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			MO_CALI
	URIs of the Record- Route header sent to the UE in the INVITE			MT_CALL
From			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 ID (from the UE's point of view)		
То		·	RFC 3261 [22]	
addr-spec	Same URI of the SS as used earlier in the dialogURI	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 ID (from the UE's point of view)		
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	"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			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-Length	if present		RFC 3261 [22]
value	"0"	No message body included	

### 5.5.2.2.2 SIP BYE from the SS

Table 5.5.2.2.2-1: SIP BYE from the SS

Derivation Path: TS 24.229 [16 Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22]	
Method	"BYE"			
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-		RFC 3261 [22]	MO_CALL
Via	same as in INVITE but with updated via- branches		RFC 3261 [22]	MT_CALL
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	9	,	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		
P-Asserted-Identity			RFC 3325 [32]	
addr-spec				
user-info and host	tsc_MCPTT_PublicServ iceId_A	The URI of the SS		
port	not present		<b>DEC</b> 05	
Content-Length			RFC 3261 [22]	
value	"0"	No message body included		

## 5.5.2.3 SIP CANCEL

This message is sent by the SS.

Table 5.5.2.3-1: SIP CANCEL

Information Element	Value/remark	Comment	Reference	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** 

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
Method	"INFO"			
Request-URI	px_MCPTT_Client_A_I			
·	D			
	px_MCVideo_Client_A			MCVIDEO
	_ID			
	px_MCData_Client_A_I			MCDATA
	D			
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			MCVIDEO
	_ID			
	px_MCData_Client_A_I			MCDATA
	D			
tag	"1"			
То			RFC 3261 [22]	
			RFC 5031 [54]	
addr-spec	tsc_MCPTT_PublicSer viceId_A			
	px_MCVideo_PublicSer			MCVIDEO
	viceId_A			
	px_MCData_PublicSer			MCDATA
	viceId_A			
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"			
Max-Forwards			RFC 3261 [22]	
value	"70"	The recommended		
		initial value is 70 in		
		RFC 3261.		
		Editor's Note: to be		
		changed to realistic		
		value taking into		
		account number of		
		hops		
Content-Length			RFC 3261 [22]	
value	length of message			
	body			
Message Body	any allowed value	1		

Editor's note: Table 5.5.2.4-1 needs to be reviewed

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

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Request-Line	Value/Terriark	Comment	RFC 3261 [22] RFC 5031 [54]	Condition
Method	"INVITE"		141 0 0001 [01]	
Request-URI	tsc_MCPTT_PublicServ iceId_A	The public service identity identifying the participating MCPTT function serving the MCPTT user		
	px_MCVideo_PublicSer viceId_A	The public service identity identifying the participating MCVideo function serving the MCVideo user		MCVIDEO
	px_MCData_PublicServ iceId_A	The public service identity identifying the participating MCData function serving the MCData user		MCDATA
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"		DEC 0004 [00]	
Via	#OID/O 0/FIDD#		RFC 3261 [22] RFC 3581 [55]	LIDD
sent-protocol	"SIP/2.0/UDP"	UE accesses the server via UDP		UDP
	"SIP/2.0/TCP"	UE accesses the server via 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'			
Route			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] user-info and host	SIP URI "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-param list	URIs of the Record- Route header sent to the UE in the response which has established the dialog, in reverse order URIs of the Record-		RFC 3261 [22]	re_INVITE MO_CALL  MT_CALL
	Route header sent to the UE in the INVITE			0/\LL

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
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_INVITE
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 ID (from the UE's point of view)		
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec				
user-info and host	Same URI as Request- URI			
port	not present			
tag	not present			
То			RFC 3261 [22]	re_INVITE
addr-spec	Same URI of the SS as used earlier in the dialogURI	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 ID (from the UE's point of view)		
Call-ID			RFC 3261 [22]	
callid	any allowed value			
callid	same value as in INVITE creating the dialog			re_INVITE
CSeq			RFC 3261 [22]	
value	any allowed value			
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			RFC 3261 [22]	
option-tag	"timer"		( <b></b> )	
Session-Expires			RFC 4028 [30]	
delta-seconds	any allowed value		. 2 .320 [00]	
Require	any america rando		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	3		RFC 3329 [53]	
sec-mechanism	same value as Security -Server header sent by SS during registration			
Contact			RFC 3261 [22 RFC 3840 [33]	

Derivation Path: TS 24.229 [16], Information Element	Value/remark	Comment	Reference	Condition
addr-spec	SIP URI	Comment	Veterence	Condition
user-info and host	IP address or FQDN			
port	protected server port of	as assigned during		
port	UE	registration		
feature-param	"+g.3gpp.mcptt"	This media feature tag		
reatare param	г д.одрр.торш	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
	9.0917	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
	3 - 3/1	when used in a SIP		
		request or a SIP		
		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		
•	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.		
	"+g.3gpp.icsi-	This URN indicates that		MCVIDEO
	ref=urn:urn-7:3gpp-	the device has the		
	service.ims.icsi.mcvide	capabilities to support		
	О"	the Mission Critical		
		Video (MCVideo)		
		communication.		
	"+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		
	<u> </u>	(MCData) service.		
feature-param	"audio"	This feature tag		MCPTT
		indicates that the		OR
		device supports audio		MCVIDEO
	ĺ	as a streaming media		
To at the same of		type.		MOV (10.50
feature-param	"video"	This feature tag		MCVIDEO
feature-param	"video"	This feature tag indicates that the		MCVIDEO
feature-param	"video"	This feature tag indicates that the device supports video		MCVIDEO
feature-param	"video"	This feature tag indicates that the device supports video as a streaming media		MCVIDEO
		This feature tag indicates that the device supports video as a streaming media type.		
feature-param feature-param	"video"  "text"	This feature tag indicates that the device supports video as a streaming media type.  This feature tag		MCVIDEO MCDATA
		This feature tag indicates that the device supports video as a streaming media type.  This feature tag indicates that the		
		This feature tag indicates that the device supports video as a streaming media type.  This feature tag indicates that the device supports text as		
		This feature tag indicates that the device supports video as a streaming media type.  This feature tag indicates that the device supports text as a streaming media		
		This feature tag indicates that the device supports video as a streaming media type.  This feature tag indicates that the device supports text as	RFC 3261 [22]	

Information Element	Value/remark	Comment	Reference	Condition
value	any allowed value	Non-zero value		
P-Access-Network-Info	-		RFC 7315 [52]	
access-net-specs	Access network technology and, if	AUTO		
	applicable, the cell ID		550 222/ 522	
Accept			RFC 3261 [22]	
media-range[1]	"application/sdp"			
media-range[2]	"application/vnd.3gpp. mcptt-info+xml"			
	application/vnd.3gpp.m cvideo-info+xml			MCVIDEO
	"application/vnd.3gpp. mcdata-info+xml"			MCDATA
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"			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		141 0 0020 [02]	
Accept-Contact	ricadei		RFC 3841 [29]	
ac-value[1]			1(1 0 3041 [23]	
feature-param	"+g.3gpp.icsi- 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. sds"			MCDATA
req-param	"require"			
explicit-param	"explicit"			
ac-value[2]				
feature-param	"+g.3gpp.mcptt" "+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA
req-param	"require"			
explicit-param	"explicit"			
Priv-Answer-Mode	not present			
Answer-Mode	not present		RFC 5373 [34]	re_INVITE
Answer-Mode			RFC 5373 [34]	
answer-mode-value	"Auto"			
answer-mode-value	"Manual"			MANUAL
Resource-Priority			RFC 4412 [40] RFC 7134 [57] RFC 8101 [45]	EMERGEN CY-CALL or
				IMMPERIL -CALL
r-value				EMERGEN CY-CALL

Derivation Path: TS 24.229 [16], o	lause A.2.1.4.7, A.2.2.4.7			
Information Element	Value/remark	Comment	Reference	Condition
namespace	value of the <resource- priority-namespace&gt; element contained in the <emergency- resource-priority&gt;</emergency- </resource- 	As configured in Table 5.5.8.4-1		
	element contained in the <onnetwork> element of the MCX service configuration documents</onnetwork>			
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		
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</onnetwork></imminent-peril- </resource- 	As configured in Table 5.5.8.4-1		-OALL
r-priority	documents  value of the <resource- priority-priority=""> element contained in the <imminent-peril- resource-priority=""> element contained in the <onnetwork> element of the MCX service configuration</onnetwork></imminent-peril-></resource->	As configured in Table 5.5.8.4-1		
Content-Type	document		RFC 5621 [58]	
media-type	"multipart/mixed"		141 0 0021 [00]	
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]	
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			1401/15=0
	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
MIME body part		MCPTT Info/MCVideo/MCData		
MIME-part-headers				

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Content-Type	"application/vnd.3gpp.		110.0.0.0.0	
	mcptt-info+xml"			
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml" "application/vnd.3gpp.			MCDATA
	mcdata-info+xml"			MCDATA
Content-ID	any value	Unique URL identifying	TS 24.379 [9]	
		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]	
	described in Table		clause F.1	
	5.5.3.2.1-1 MCVideo-Info as		TS 24.281 [86]	MCVIDEO
	described in Table		clause F.1	INICVIDEO
	5.5.3.2.1-2		3.3330 1 11	
	MCData-Info as		TS 24.282 [87]	MCDATA
	described in Table		clause D.1	
MIME body part	5.5.3.2.1-3	Resource list	RFC 5366 [35]	PRIVATE-
MINIC BODY PART		ivesource list	[NI C 3300 [33]	CALL OR
				MCD_1to1
MIME-part-headers				
Content-Type	"application/resource- lists+xml"			
Content-ID	any value	Unique URL identifying	TS 24.379 [9]	
Content-1D	arry value	the Resource-lists XML	clause 6.6.3.1	
		MIME body; used as		
		reference in the		
MIME-part-body	As described in Table	signature MIME body		
WilWic-part-body	5.5.3.3.1-1			
	As described in Table			MCVIDEO
	5.5.3.3.1-2			
	As described in Table			MCDATA
MIME body part	5.5.3.3.1-3	Location info		/EMEDCE
MIME body part		Location into		(EMERGE NCY-CALL
				AND
				ALERT_IN
				D) OR
				LOCATIO N-INFO
				IN-IINFO
MIME-part-headers				
Content-Type	"application/vnd.3gpp.	This MIME part shall be		
	mcptt-location- info+xml"	included if the MCPTT- Info 'alert-ind' element		
	IIIIO+XIIII	sent in the MCPTT-Info		
		is set to true.		
	"application/vnd.3gpp.	This MIME part shall be		MCVIDEO
	mcvideo-location-	included if the		
	info+xml"	MCVideo-Info 'alert-ind'		
		element sent in the MCVideo-Info is set to		
		true.		
Content-ID	any value	Unique URL identifying	TS 24.379 [9]	
		the Location-info XML	clause 6.6.3.1	
		MIME body; used as reference in the		

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	Location-info as described in Table 5.5.3.4.1-1		TS 24.379 [9] clause F.3	
	Location-info as described in Table 5.5.3.4.1-2		TS 24.281 [86] clause F.3	MCVIDEO
MIME body part		MIKEY message		MCD_1to1
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		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
MANUAL	Call establishment with manual commencement mode
MCD_1to1	A one-to-one MCData call
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 ta	

5.5.2.5.2 SIP INVITE from the SS

Table 5.5.2.5.2-1: SIP INVITE from the SS

Derivation Path: TS 24.229 [16]. Information Element	Value/remark	Comment	Reference	Condition
Request-Line	Value/Telliai K	Comment	RFC 3261 [22]	Condition
Request Ellie			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	("callee")		
	Contact header of a			
	response within the same dialog			
SIP-Version	"SIP/2.0"			
Via	GII 72.0		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	P-CSCF address as		
	SS	assigned to the UE via		
		NAS signalling or P-		
		CSCF discovery		
port	protected server port of the SS	as assigned during		
via-branch[1]	Value assigned by the	registration		
via-branch[1]	SS starting with			
	'z9hG4bK'			
sent-protocol[2]	"SIP/2.0/UDP"			
sent-by[2]	G.1. 7 2.10, G 2 1	Address of the other		
		endpoint (the caller)		
host	Host name of the SIP			
	URI being used in the			
	From header			
port	Same port number as	Caller's port number		
	in Contact-header			
via-branch[2]	Value assigned by the			
	SS starting with 'z9hG4bK'			
Record-Route	291IG4bK	Record-Route	RFC 3261 [22]	
Record-Route		corresponding to the	KFC 3201 [22]	
		Via header		
addr-spec[1]	SIP URI	SIP URI corresponding		
and special		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		
		NAS signalling or P-		
		CSCF discovery		
port	protected server port of	as assigned during		
uri paramatara	the SS	registration		
uri-parameters	SIP URI			
addr-spec[2] user-info and host	"term@scscf1.3gpp.org			
user-inio and nost	"			
port	not present			
uri-parameters	"Ir"			
addr-spec[3]	SIP URI			
user-info and host	"orig@scscf2.3gpp.org"			
port	not present			
uri-parameters	"Ir"			
addr-spec[4]	SIP URI			
user-info and host	"pcscf2.3gpp.org"			
port	not present			

Derivation Path: TS 24.229 [16], c	lause A.2.1.4.7, A.2.2.4.7			
Information Element	Value/remark	Comment	Reference	Condition
uri-parameters	"Ir"			
Record-Route	same as in the 180,		RFC 3261 [22]	re_INVITE
1100014110410	183 or 200 response		1 0 0201 [22]	AND
	sent to the UE during			MO_CALL
	MO call establishment			0_0/ 122
	in reverse order			
From	mileveres erasi		RFC 3261 [22]	
addr-spec			10 0201 [22]	
user-info and host	tsc_MCPTT_PublicServ	SIP URI of the calling		
user-inio and nost	iceld_A	UE		
	iceid_A	l oc		
	The MCV/idea DublicCon	CID LIDL of the colling		MOVIDEO
	px_MCVideo_PublicSer	SIP URI of the calling		MCVIDEO
	viceId_A	UE UE		MODATA
	px_MCData_PublicServ	SIP URI of the calling		MCDATA
	iceld_A	UE		
port	not present			
tag	Value assigned by the			
	SS			
From			RFC 3261 [22]	re_INVITE
addr-spec	Same URI of the SS as	Remote URI of the		
	used earlier in the	dialog (from the UE's		
	dialog	point of view)		
tag	Same tag of the SS as	Remote tag of the		
_	used earlier in the	dialog (from the UE's		
	dialog	point of view)		
То		,	RFC 3261 [22]	
			RFC 5031 [54]	
addr-spec			5551 [51]	
user-info and host	px_MCX_SIP_PublicUs	Default public user ID		
user-inio and nost	erld_A_1	(IMPU) as stored in the		
	ena_A_1	UICC		
port	not present	0000		
	not present			
tag	not present		DEC 2004 [20]	** INI\/ITE
To	On the LID of the LID on	Land IIDI at the distant	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	(from the UE's point of		
0.11.15	dialog	view)	DE0	
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			
Replaces			RFC	PRE-
-			3891 [117] TS	ESTABLIS
			24.379 [9]	HED
			clause 6.3.2.2	
callid	callid of the targeted			
	pre-established session			
replaces-params				
from-tag	to-tag of the targeted			
3	pre-established session			
to-tag	from-tag of the targeted			
io tag	pre-established session			
CSeq	pro cotabiloried session		RFC 3261 [22]	
value	Value assigned by the		111 0 0201 [22]	
value	SS value assigned by the			
	1 00	<u> </u>	1	l

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
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			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	"tdialog"			
option-tag	"norefersub"			
P-Called-Party-ID			RFC 7315 [52]	
called-pty-id-spec	Same public user ID as used in the To-header			
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]	
addr-spec				
user-info and host	same URI as in From- header			
port	not present		DE0 0004 (00)	
Contact			RFC 3261 [22] RFC 3840 [33]	
addr-spec	SIP URI			1
user-info and host	tsc_MCPTT_PublicServ iceId_A			140) ((550
	px_MCVideo_PublicSer viceId_A			MCVIDEO
	px_MCData_PublicServ iceId_A			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	

Derivation Path: TS 24.229 [16]				
Information Element	Value/remark	Comment	Reference	Condition
	"+g.3gpp.mcvideo"	This media feature tag when used in a SIP request or a SIP	RFC 3840 [33] clause 9	MCVIDEO
		response indicates that the function sending the SIP message supports Mission		
		Critical Video (MCVideo) communication.		
	"+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
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	
	"+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) service.	RFC 3840 [33] clause 9	MCDATA
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
feature-param	"isfocus"			
Max-Forwards	"00"	The reserver ! !	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		
Accept			RFC 3261 [22]	
media-range[1]	"application/sdp "			
media-range[2]	"application/vnd.3gpp. mcptt-info+xml"			

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
iniormation Element	"application/vnd.3gpp.	Comment	Reference	MCVIDEO
	mcvideo-info+xml"			IVICVIDEO
	"application/vnd.3gpp.			MCDATA
	mcdata-info+xml"			
Accept-Contact			RFC 3841 [29]	
ac-value[1]			•	
feature-param	"+g.3gpp.icsi-			
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcvide			
	"+g.3gpp.icsi-			MCDATA
	ref=urn:urn-7:3gpp-			WICDATA
	service.ims.icsi.mcdata.			
	sds"			
req-param	"require"			
explicit-param	"explicit"			
ac-value[2]				
feature-param	"+g.3gpp.mcptt"			
•	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA
req-param	"require"			
explicit-param	"explicit"			
Answer-Mode	not present		RFC 5373 [34]	re-INVITE
			TS 24.379 [9]	
			clause	
			6.3.2.2.6.3	
Answer-Mode			RFC 5373 [34]	
answer-mode-value	"Auto"			
answer-mode-value	"Manual"		DEC 4440 [40]	MANUAL
Resource-Priority			RFC 4412 [40] RFC 7134 [57]	EMERGEN CY-CALL
			RFC 7134 [57]	or
			KFC 0101 [45]	IMMPERIL
				-CALL
r-value				EMERGEN
. value				CY-CALL
namespace	value of the <resource-< td=""><td>As configured in Table</td><td></td><td></td></resource-<>	As configured in Table		
	priority-namespace>	5.5.8.4-1		
	element contained in			
	the <emergency-< td=""><td></td><td></td><td></td></emergency-<>			
	resource-priority>			
	element contained in			
	the <onnetwork></onnetwork>			
	element of the MCX			
	service configuration			
	documents			
r-priority	value of the <resource-< td=""><td>As configured in Table</td><td></td><td></td></resource-<>	As configured in Table		
	priority-priority>	5.5.8.4-1		
	element contained in			
	the <emergency-< td=""><td></td><td></td><td></td></emergency-<>			
	resource-priority>			
	element contained in the <onnetwork></onnetwork>			
	element of the MCX			
	service configuration			
	document			
r-value	accamon.			IMMPERIL
- <del></del>				-CALL

Indows - Class Electric	clause A.2.1.4.7, A.2.2.4.7	0	D-f	0
Information Element	Value/remark	Comment	Reference	Condition
Namespace	value of the <resource-< td=""><td>As configured in Table</td><td></td><td></td></resource-<>	As configured in Table		
	priority-namespace>	5.5.8.4-1		
	element contained in			
	the <imminent-peril-< td=""><td></td><td></td><td></td></imminent-peril-<>			
	resource-priority>			
	element contained in			
	the <onnetwork></onnetwork>			
	element of the MCX			
	service configuration documents			
r priority	value of the <resource-< td=""><td>As configured in Table</td><td></td><td></td></resource-<>	As configured in Table		
r-priority		5.5.8.4-1		
	priority-priority> element contained in	5.5.6.4-1		
	the <imminent-peril-< td=""><td></td><td></td><td></td></imminent-peril-<>			
	resource-priority>			
	element contained in			
	the <onnetwork></onnetwork>			
	element of the MCX			
	service configuration			
	document			
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"			
Content-Length			RFC 3261 [22]	
Value	length of message-			
	body		550	
Message-body		000	RFC 3261 [22]	
MIME body part		SDP message		
MIME-part-headers				
MIME-Content-Type	"application/sdp"		DEO 4500 1071	
MIME-part-body	SDP Message as		RFC 4566 [27]	
	described in Table			
	5.5.3.1.2-1		DEC 4560 1071	MOVIDEO
	SDP Message as described in Table		RFC 4566 [27]	MCVIDEO
	5.5.3.1.2-2			
	SDP Message as		RFC 4566 [27]	MCDATA
	described in Table		111 0 4300 [27]	WODATA
	5.5.3.1.2-3			
MIME body part	3.0.020	MCPTT/MCVideo/MCD		
		ata Info		
		ata Info		
MIME-part-headers	"application/ynd 3gpp	ata Info		
	"application/vnd.3gpp.	ata Info		
MIME-part-headers	mcptt-info+xml"	ata Info		MCVIDEO
MIME-part-headers	mcptt-info+xml" "application/vnd.3gpp.	ata Info		MCVIDEO
MIME-part-headers	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"	ata Info		
MIME-part-headers	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp.	ata Info		MCVIDEO MCDATA
MIME-part-headers MIME-Content-Type	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp. mcdata-info+xml"		TS 24.379 [9]	
MIME-part-headers	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp. mcdata-info+xml"  Unique id in format of a	Unique URL identifying the	TS 24.379 [9] clause 6.6.3.1	
MIME-part-headers MIME-Content-Type	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp. mcdata-info+xml"  Unique id in format of a Message-ID assigned	Unique URL identifying	TS 24.379 [9] clause 6.6.3.1	
MIME-part-headers MIME-Content-Type	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp. mcdata-info+xml"  Unique id in format of a	Unique URL identifying the		
MIME-part-headers MIME-Content-Type	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp. mcdata-info+xml"  Unique id in format of a Message-ID assigned	Unique URL identifying the MCPTT/MCVideo/MCD		
MIME-part-headers MIME-Content-Type	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp. mcdata-info+xml"  Unique id in format of a Message-ID assigned	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME		
MIME-part-headers MIME-Content-Type	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp. mcdata-info+xml"  Unique id in format of a Message-ID assigned	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as		
MIME-part-headers MIME-Content-Type	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp. mcdata-info+xml"  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		
MIME-part-headers MIME-Content-Type  Content-ID	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp. mcdata-info+xml"  Unique id in format of a Message-ID assigned by the SS  MCPTT-Info as described in Table	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the		
MIME-part-headers MIME-Content-Type  Content-ID	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp. mcdata-info+xml"  Unique id in format of a Message-ID assigned by the SS  MCPTT-Info as described in Table 5.5.3.2.2-1	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the		MCDATA
MIME-part-headers MIME-Content-Type  Content-ID	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp. mcdata-info+xml"  Unique id in format of a Message-ID assigned by the SS  MCPTT-Info as described in Table 5.5.3.2.2-1  MCVideo-Info as	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the		
MIME-part-headers MIME-Content-Type  Content-ID	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp. mcdata-info+xml"  Unique id in format of a Message-ID assigned by the SS  MCPTT-Info as described in Table 5.5.3.2.2-1  MCVideo-Info as described in Table	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the		MCDATA
MIME-part-headers MIME-Content-Type  Content-ID	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp. mcdata-info+xml"  Unique id in format of a Message-ID assigned by the SS  MCPTT-Info as described in Table 5.5.3.2.2-1  MCVideo-Info as described in Table 5.5.3.2.2-2	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the		MCDATA
MIME-part-headers MIME-Content-Type  Content-ID	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp. mcdata-info+xml"  Unique id in format of a Message-ID assigned by the SS  MCPTT-Info as described in Table 5.5.3.2.2-1  MCVideo-Info as described in Table 5.5.3.2.2-2  As described in Table	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the		MCDATA
MIME-part-headers MIME-Content-Type  Content-ID  MIME-part-body	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp. mcdata-info+xml"  Unique id in format of a Message-ID assigned by the SS  MCPTT-Info as described in Table 5.5.3.2.2-1  MCVideo-Info as described in Table 5.5.3.2.2-2	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the signature MIME body		MCVIDEO  MCDATA
MIME-part-headers MIME-Content-Type  Content-ID	mcptt-info+xml"  "application/vnd.3gpp. mcvideo-info+xml"  "application/vnd.3gpp. mcdata-info+xml"  Unique id in format of a Message-ID assigned by the SS  MCPTT-Info as described in Table 5.5.3.2.2-1  MCVideo-Info as described in Table 5.5.3.2.2-2  As described in Table	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the		MCVIDEO

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-Content-Type	"application/vnd.3gpp. mcptt-location- info+xml"			
	"application/vnd.3gpp. mcvideo-location- info+xml"			MCVIDEO
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	
	Location-info as described in Table 5.5.3.4.2-2		TS 24.281 [86] clause F.3	MCVIDEO
MIME body part		MIKEY message		MCD_1to1
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		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
MANUAL	Call establishment with manual commencement mode
re_INVITE	INVITE within a dialog
MCD_1to1	A one-to-one MCData call
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] Information Element	Value/remark	Comment	Reference	Condition
Request-Line	value/remark	Comment	RFC 3261 [22]	Condition
Request Ellie			RFC 5031 [54]	
Method	"MESSAGE"			
Request-URI	tsc_MCPTT_PublicSer	The public service		
	viceId_A	identity identifying the		
		originating participating		
		MCPTT function		
		serving the MCPTT		
	MOVEL BUILD	user		MOV//DEO
	px_MCVideo_PublicSer	The public service		MCVIDEO
	viceId_A	identity identifying the		
		originating participating MCVideo function		
		serving the MCVideo		
		user		
	px_MCData_PublicSer	The public service		MCDATA
	viceld_A	identity identifying the		
	_	originating participating		
		MCData function		
		serving the MCData		
	11017 (0.01)	user		
SIP-Version Via	"SIP/2.0"		DEC 2264 [22]	
via			RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"		Ki C 3301 [33]	UDP
Soft protocol	"SIP/2.0/TCP"			TCP
sent-by	311 /2:0/131			
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			
En a un	'z9hG4bK'		DE0 0004 [00]	
From			RFC 3261 [22]	
addr-spec user-info and host	Default public user id	The URI of the UE		
user-inio and nost	(px_MCX_SIP_PublicU	The ORI of the OE		
	serId_A_1)			
port	not present			
tag	any allowed value			
То			RFC 3261 [22]	
			RFC 5031 [54]	
addr-spec				
user-info and host		The URI of the SS		
	px_MCVideo_PublicSer	The URI of the SS		MCVIDEO
	viceld_A	TI LIDY (1) CO	ļ	
	px_MCData_PublicSer	The URI of the SS		MCDATA
nort	viceId_A		1	
port	not present			
tag Call-ID	not present		RFC 3261 [22]	
callid	any allowed value		111 0 0201 [22]	
Cseq	any anomou value		RFC 3261 [22]	
value	any allowed value		5 5251 [22]	
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]	
	INVITE sent by the UE			
	in Table 5.5.2.5.1-1			

Accept-Contact			RFC 3841 [29]	
ac-value[1]				
feature-param	"+g.3gpp.icsi- 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. sds"			MCDATA
req-param	"require"			
explicit-param	"explicit"			
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"			MCVIDEO
	"urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			MCDATA
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]	
MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-headers				
MIME-Content-Type	"application/vnd.3gpp. mcptt-info+xml"			
	"application/vnd.3gpp. mcvideo-info+xml"			MCVIDEO
	"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		TS 24.379 [9] clause F.1	
	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"			
	"application/vnd.3gpp. mcvideo-affiliation- command+xml"			

the			
	Inique URL identifying	TS 24.379 [9]	
	ne affiliation-command	clause 6.6.3.1	
	ML MIME body; used		
	s reference in the		
MIME-part-body MCPTT-Affiliation-	ignature MIME body	TS 24.379 [9]	
Command as described		clause F.4	
in Table 5.5.3.7-1		clause F.4	
MCVideo-Affiliation-		TS 24.281 [86]	MCVIDEO
Command as described		clause F.4	WOVIDEO
in Table 5.5.3.7-2		014400111	
MIME body part Re	esource lists	RFC 5366 [35]	RESOURC
			E_LISTS
			OR
			MCD_1to1
MIME-part-headers			
MIME-Content-Type "application/resource-			
lists+xml"		=======================================	
	Inique URL identifying	TS 24.379 [9]	
1	ne Resource-lists XML	clause 6.6.3.1	
	IIME body; used as eference in the		
	ignature MIME body		
MIME-part-body Resource-lists as	ignature willvil body		
described in Table			
5.5.3.3.1-1			
Resource-lists as			MCVIDEO
described in Table			
5.5.3.3.1-2			
Resource-lists as			MCDATA
described in Table			
5.5.3.3.1-3			
MIME body part Loc	ocation info	TS 24.379 [9]	LOCATIO
		clause F.3	N-INFO
NINATE ALL I			
MIME-part-headers	hio NAINAE work about ha		
Content-Type "application/vnd.3gpp. Thi	his MIME part shall be		-
Content-Type "application/vnd.3gpp. Thi mcptt-location- inc	cluded if the MCPTT-		_
Content-Type "application/vnd.3gpp. Thi mcptt-location- inc info+xml" Info	ncluded if the MCPTT- nfo 'alert-ind' element		
Content-Type "application/vnd.3gpp. Thi mcptt-location- inc info+xml" Info ser	ncluded if the MCPTT- nfo 'alert-ind' element ent in the MCPTT-Info		
Content-Type "application/vnd.3gpp. Thi mcptt-location- incomplete info+xml" Info ser is series.	ncluded if the MCPTT- nfo 'alert-ind' element ent in the MCPTT-Info s set to true.	TS 24.379 [9]	
Content-Type "application/vnd.3gpp. Thi mcptt-location- inc info+xml" Info ser is s  Content-ID any value Uni	ncluded if the MCPTT- info 'alert-ind' element ent in the MCPTT-Info is set to true. Inique URL identifying	TS 24.379 [9] clause 6.6.3.1	
Content-Type "application/vnd.3gpp. Inimodule incomplete incomplet	ncluded if the MCPTT- nfo 'alert-ind' element ent in the MCPTT-Info s set to true.		
Content-Type "application/vnd.3gpp. Thi mcptt-location- inc info+xml" Info ser is s  Content-ID any value Unithe MII reference	ncluded if the MCPTT- info 'alert-ind' element ent in the MCPTT-Info is set to true. Inique URL identifying the Location-info XML IIME body; used as eference in the		
Content-Type "application/vnd.3gpp. Thi mcptt-location-info+xml" Info ser is s  Content-ID any value Unithe MII refersing	ncluded if the MCPTT- info 'alert-ind' element ent in the MCPTT-Info is set to true. Inique URL identifying the Location-info XML IIME body; used as		
Content-Type "application/vnd.3gpp. Thi mcptt-location-info+xml" Info ser is s  Content-ID any value Unithe MII refe sig	ncluded if the MCPTT- info 'alert-ind' element ent in the MCPTT-Info is set to true. Inique URL identifying the Location-info XML IIME body; used as eference in the		
Content-Type "application/vnd.3gpp. Thi mcptt-location-info+xml" Info ser is s  Content-ID any value Unithe MII refe sig	ncluded if the MCPTT- info 'alert-ind' element ent in the MCPTT-Info is set to true. Inique URL identifying the Location-info XML IIME body; used as eference in the		
Content-Type "application/vnd.3gpp. mcptt-location-info+xml" Info ser is s  Content-ID any value Unithe MII refe sig  MIME-part-body Location-info as described in Table 5.5.3.4.1-1	included if the MCPTT- info 'alert-ind' element ent in the MCPTT-Info is set to true. Inique URL identifying the Location-info XML IIME body; used as eference in the ignature MIME body		
Content-Type "application/vnd.3gpp. mcptt-location-info+xml" Info ser is s  Content-ID any value Unithe MII refe sig  MIME-part-body Location-info as described in Table 5.5.3.4.1-1 MIIME body part	ncluded if the MCPTT- info 'alert-ind' element ent in the MCPTT-Info is set to true. Inique URL identifying the Location-info XML IIME body; used as eference in the		MCD_1to1
Content-Type "application/vnd.3gpp. Thi mcptt-location-info+xml" Info ser is s  Content-ID any value Unithe MIM  MIME-part-body Location-info as described in Table 5.5.3.4.1-1  MIME body part MIME-part-headers	included if the MCPTT- info 'alert-ind' element ent in the MCPTT-Info is set to true. Inique URL identifying the Location-info XML IIME body; used as eference in the ignature MIME body		
Content-Type "application/vnd.3gpp. mcptt-location-info+xml" Info ser is s  Content-ID any value Unithe MIM  MIME-part-body Location-info as described in Table 5.5.3.4.1-1  MIME body part MIME-part-headers  Content-Type "application/mikey"	included if the MCPTT- info 'alert-ind' element ent in the MCPTT-Info is set to true. Inique URL identifying the Location-info XML IIME body; used as eference in the tignature MIME body	clause 6.6.3.1	
Content-Type "application/vnd.3gpp. mcptt-location-info+xml" Info ser is s  Content-ID any value Unithe MII refe sign MIME-part-body Location-info as described in Table 5.5.3.4.1-1  MIME body part MIME-part-headers Content-Type "application/mikey" MIME-part-body As described in Table MIME-part-body	Included if the MCPTT- Info 'alert-ind' element Intent in the MCPTT-Info Is set to true. Inique URL identifying Ine Location-info XML IIIME body; used as Inference in the Ingrature MIME body  IIKEY message	TS 33.180 [30]	
Content-Type "application/vnd.3gpp. mcptt-location-info+xml" Info ser is	Included if the MCPTT- Info 'alert-ind' element Intent in the MCPTT-Info Is set to true. Inique URL identifying Ine Location-info XML IIME body; used as Inference in the Ingrature MIME body  IIKEY message  IIKEY message, IIKEY message	clause 6.6.3.1	MCD_1to1
Content-Type "application/vnd.3gpp. mcptt-location-info+xml" Info ser is s  Content-ID any value United Sign MIME-part-body Location-info as described in Table 5.5.3.4.1-1  MIME body part MIME-part-headers  Content-Type "application/mikey" MIME-part-body As described in Table 5.5.9.1-2A  MIME body part Sp. MIME-part-body Sp. MIME-part-body As described in Table 5.5.9.1-2A  MIME body part Sp. MIME-part-body Sp.	Included if the MCPTT- Info 'alert-ind' element Intent in the MCPTT-Info Is set to true. Inique URL identifying Ine Location-info XML IIIME body; used as Inference in the Ingrature MIME body  IIKEY message	TS 33.180 [30]	
Content-Type "application/vnd.3gpp. mcptt-location-info+xml" Info ser is s  Content-ID any value Unit the MIR refe sig MIME-part-body Location-info as described in Table 5.5.3.4.1-1 MIME body part MIME-part-headers  Content-Type "application/mikey" MIME-part-body As described in Table 5.5.9.1-2A SD PA	Included if the MCPTT- Info 'alert-ind' element Intent in the MCPTT-Info Is set to true. Inique URL identifying Ine Location-info XML IIME body; used as Inference in the Ingrature MIME body  IIKEY message  IIKEY message,	TS 33.180 [30]	MCD_1to1
Content-Type "application/vnd.3gpp. mcptt-location-info+xml" Info ser is	Included if the MCPTT- Info 'alert-ind' element Intent in the MCPTT-Info Is set to true. Inique URL identifying Ine Location-info XML IIME body; used as Inference in the Ingrature MIME body  IIKEY message  IIKEY message,	TS 33.180 [30]	MCD_1to1
Content-Type "application/vnd.3gpp. mcptt-location-info+xml" include ser is ser	Included if the MCPTT- Info 'alert-ind' element Intent in the MCPTT-Info Is set to true. Inique URL identifying Ine Location-info XML IIME body; used as Inference in the Ingrature MIME body  IIKEY message  IIKEY message,	TS 33.180 [30]	MCD_1to1
Content-Type "application/vnd.3gpp. mcptt-location-info+xml" Info ser is s  Content-ID any value Uni the MIME-part-body Location-info as described in Table 5.5.3.4.1-1  MIME body part MIME-part-headers  Content-Type "application/mikey"  MIME-part-body As described in Table 5.5.9.1-2A  MIME body part SD MIME-part-headers  Content-Type "application/vnd.3gpp. mcdata-signalling"  MIME-part-body As described in Table  SD PA  MIME-part-headers  Content-Type "application/vnd.3gpp. mcdata-signalling"  MIME-part-body As described in Table  As described in Table	Included if the MCPTT- Info 'alert-ind' element Intent in the MCPTT-Info Is set to true. Inique URL identifying Ine Location-info XML IIME body; used as Inference in the Ingrature MIME body  IIKEY message  IIKEY message,	TS 33.180 [30]	MCD_1to1
Content-Type "application/vnd.3gpp. mcptt-location-info+xml" Info ser is	Included if the MCPTT- Info 'alert-ind' element Intent in the MCPTT-Info Is set to true. Inique URL identifying Ine Location-info XML IIME body; used as Inference in the Ignature MIME body  IIKEY message  IIKEY message, INTENT MESSAGE INTENT MESS	TS 33.180 [30] TS 24.282 [87]	MCD_1to1
Content-Type "application/vnd.3gpp. mcptt-location-info+xml" Info ser is	Included if the MCPTT- Info 'alert-ind' element Intent in the MCPTT-Info Is set to true. Inique URL identifying Ine Location-info XML IIME body; used as Inference in the Injanature MIME body  IIKEY message  IIKEY message,	TS 33.180 [30] TS 24.282 [87]	MCD_1to1
Content-Type "application/vnd.3gpp. mcptt-location-info+xml" Info ser is	Included if the MCPTT- Info 'alert-ind' element Intent in the MCPTT-Info Is set to true. Inique URL identifying Ine Location-info XML IIME body; used as Inference in the Ignature MIME body  IIKEY message  IIKEY message, INTENT MESSAGE INTENT MESS	TS 33.180 [30] TS 24.282 [87]	MCD_1to1
Content-Type "application/vnd.3gpp. Thi mcptt-location-info+xml" Info ser is se	Included if the MCPTT- Info 'alert-ind' element Intent in the MCPTT-Info Is set to true. Inique URL identifying Ine Location-info XML IIME body; used as Inference in the Ignature MIME body  IIKEY message  IIKEY message, INTENT MESSAGE INTENT MESS	TS 33.180 [30] TS 24.282 [87]	MCD_1to1
Content-Type "application/vnd.3gpp. minch mcptt-location-info+xml" Info ser is	Included if the MCPTT- Info 'alert-ind' element Intent in the MCPTT-Info Is set to true. Inique URL identifying Ine Location-info XML IIME body; used as Inference in the Ignature MIME body  IIKEY message  IIKEY message, INTENT MESSAGE INTENT MESS	TS 33.180 [30] TS 24.282 [87]	MCD_1to1
Content-Type "application/vnd.3gpp. Thi mcptt-location-info+xml" Info ser is s  Content-ID any value Unithe MIM refersing  MIME-part-body Location-info as described in Table 5.5.3.4.1-1  MIME body part MIME-part-headers  Content-Type "application/mikey"  MIME body part S.5.9.1-2A cor MIME body part S.9.1-2A cor MIME-part-headers  Content-Type "application/vnd.3gpp. mcdata-signalling"  MIME-part-body As described in Table 5.5.3.8.1-1  MIME body part DA MIME-part-headers  Content-Type application/vnd.3gpp. mcdata-signalling"  MIME-part-body As described in Table 5.5.3.8.1-1  MIME body part DA MIME-part-headers  Content-Type application/vnd.3gpp.m cdata-payload  MIME-part-body As described in Table	Included if the MCPTT- Info 'alert-ind' element Intent in the MCPTT-Info Is set to true. Inique URL identifying Ine Location-info XML IIME body; used as Inference in the Ignature MIME body  IIKEY message  IIKEY message, INTENT MESSAGE INTENT MESS	TS 33.180 [30] TS 24.282 [87]	MCD_1to1
Content-Type "application/vnd.3gpp. Thi incher info+xml" Info ser is ser	Included if the MCPTT- Info 'alert-ind' element Intent in the MCPTT-Info Is set to true. Inique URL identifying Ine Location-info XML IIME body; used as Inference in the Ignature MIME body  IIKEY message  IIKEY message, INTENT MESSAGE INTENT MESS	TS 33.180 [30] TS 24.282 [87]	MCD_1to1

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
MCD_1to1	A one-to-one MCData call
RESOURCE_LISTS	Resource lists is to be sent from the UE (MCPTT client)
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

Derivation Path: TS 24.229 [16 Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22]	
•			RFC 5031 [54]	
Method	"MESSAGE"		-	
Request-URI	Public user id	px_MCX_SIP_PublicUs		
·	associated to the MC	erld_A_1 (in general)		
	service id			
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
			RFC 3581 [55]	
sent-protocol[1]	"SIP/2.0/TCP"			
sent-by[1]	G.: / =:0/ : G:	Address of the P-CSCF		
55 2)[.]		that communicates with		
		the called party		
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	as assigned during		
port	the SS	registration		
via-branch[1]	Value assigned by the	registration		
via-branch[1]	SS starting with			
	'z9hG4bK'			
sent-protocol[2]	"SIP/2.0/UDP"			
sent-by[2]	311 /2.0/001			
host	"scscf.3gpp.org"			
	Value assigned by the	Caller's port number		
port	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_PublicSer			
	viceld_A			
	px_MCVideo_PublicSer			MCVIDEO
	viceld_A			

Information Element	Value/remark	Comment	Reference	Condition
	px_MCData_PublicSer viceId_A			MCDATA
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			RFC 3261 [22]	
callid	Value assigned by the SS			
Cseq			RFC 3261 [22]	
value	Value assigned by the SS			
method	"MESSAGE"			
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		

Information Element	, clause A.2.1.4.7a, A.2.2.4.7 Value/remark	Comment	Reference	Condition
P-Asserted-Service	value/reffiai k	Comment	RFC 6050 [31]	MCDATA
Service-ID	"urn:urn-7:3gpp-		10 0000 [51]	WODATA
COLVICE ID	service.ims.icsi.mcdata.			
	sds"			
Accept-Contact			RFC 3841 [29]	
ac-value[1]				
feature-param	"+g.3gpp.icsi-			
•	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcvide			
	О"			
	"+g.3gpp.icsi-			MCDATA
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcdata.			
	sds"			
req-param	"require"  "explicit"			
explicit-param ac-value[2]	explicit			
ac-value[2] feature-param	"+g.3gpp.mcptt"			
reature-param				MCVIDEO
	"+g.3gpp.mcvideo" "+g.3gpp.mcdata.sds"			MCDATA
reg-naram	require"			IVICUATA
req-param explicit-param	"explicit"			
P-Asserted-Identity	σλριιοιτ		RFC 3325 [32]	MCDATA
name-addr	px_MCData_ID_User_	The public user identity	Ki C 3323 [32]	WICDATA
name-audi	B	of the originating		
		MCData User		
Content-Type		obala oooi	RFC 5621 [58]	
media-type	"multipart/mixed"		141 0 0021 [00]	
Content-Length	типриготписа		RFC 3261 [22]	
value	length of message-		0 020 . [22]	
13.33	body			
Message-body	,		RFC 3261 [22]	
MIME body part		MCPTT/MCVideo/MCD		
		ata Info		
MIME-part-headers				
MIME-Content-Type	"application/vnd.3gpp.			
	mcptt-info+xml"			
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml"			
	"application/vnd.3gpp.			MCDATA
-	mcdata-info+xml"			
Content-ID	Unique id in format of a	Unique URL identifying	TS 24.379 [9]	
	Message-ID assigned	the	clause 6.6.3.1	
	by the SS	MCPTT/MCVideo/MCD		
		ata Info XML MIME		
		body; used as reference in the		
		signature MIME body		
MIME-part-body	MCPTT-Info as	Signature Willvic Ducy	TS 24.379 [9]	
winvie part-body	described in Table		clause F.1	
	5.5.3.2.2-1		3144001.1	
	MCVideo-Info as		TS 24.281 [86]	MCVIDEO
	described in Table		clause F.1	
	5.5.3.2.2-2			
	MCData-Info as		TS 24.282 [87]	MCDATA
	described in Table		clause D.1.2	
	5.5.3.2.2-3			
MIME body part		Affiliation-Command		AFFILIATI
				ON

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
MIME-Content-Type	"application/vnd.3gpp.	Comment	Reference	Condition
William Type	mcptt-affiliation-			
	command+xml"			
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-affiliation-			
O-mt-mt ID	command+xml"	Union UDI identifica	TO 04 070 [0]	
Content-ID	Unique id in format of a Message-ID assigned	Unique URL identifying the affiliation-command	TS 24.379 [9] clause 6.6.3.1	
	by the SS	XML MIME body; used	clause 0.0.3.1	
	by the cc	as reference in the		
		signature MIME body		
MIME-part-body	MCPTT-Affiliation-		TS 24.379 [9]	
	Command as described		clause F.4	
	in Table 5.5.3.7-1		TO 04 004 (00)	140) ((550
	MCVideo-Affiliation-		TS 24.281 [86]	MCVIDEO
	Command as described in Table 5.5.3.7-2		clause F.4	
MIME body part	111 Table 3.3.3.7-2	Resource lists	RFC 5366 [35]	RESOURC
William Body Part		Noodui de iidie	141 6 6666 [66]	E_LISTS
MIME-part-headers				
MIME-Content-Type	"application/resource-			
Contant ID	lists+xml"	Uniona UDI SI 27 1	TO 04 070 [0]	
Content-ID	Unique id in format of a Message-ID assigned	Unique URL identifying the Resource-lists XML	TS 24.379 [9] clause 6.6.3.1	
	by the SS	MIME body; used as	clause 6.6.5.1	
	by the GG	reference in the		
		signature MIME body		
MIME-part-body	Resource-lists as			
	described in Table			
	5.5.3.3.2-1			
	Resource-lists as			MCVIDEO
	described in Table 5.5.3.3.2-2			
	Resource-lists as			MCDATA
	described in Table			
	5.5.3.3.2-3			
MIME body part		Location info		LOCATIO
NAINAE ( )				N-INFO
MIME-part-headers MIME-Content-Type	"application/vnd.3gpp.			
MilME-Content-Type	mcptt-location-			
	info+xml"			
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-location-			
	info+xml"			
Content-ID	Unique id in format of a	Unique URL identifying	TS 24.379 [9]	
	Message-ID assigned	the Location-info XML	clause 6.6.3.1	
	by the SS	MIME body; used as reference in the		
		signature MIME body		
MIME-part-body	Location-info as	Signature Willvin Dody	TS 24.379 [9]	
	described in Table		clause F.3	
	5.5.3.4.2-1			
	Location-info as		TS 24.281 [86]	MCVIDEO
	described in Table		clause F.3	
MIME body part	5.5.3.4.2-2	SDS SIGNALLING		MCDATA
wiiwie body pait		PAYLOAD		INIODATA
MIME-part-headers		_ · · · -		
Content-Type	"application/vnd.3gpp.			
·	mcdata-signalling"			
MIME-part-body	As described in Table		TS 24.282 [87]	
	5.5.3.8.2-1	DATA PAYLOAD	1	MCDATA
MIME body part				

Derivation Path: TS 24.229 [16], of	Derivation Path: TS 24.229 [16], clause A.2.1.4.7a, A.2.2.4.7a						
Information Element	Value/remark	Comment	Reference	Condition			
Content-Type	application/vnd.3gpp.m cdata-payload						
MIME-part-body	As described in Table 5.5.3.9-2		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	Resource lists is to be sent to the UE (MCPTT client)
For further conditions see table 5.5.1-1	

## 5.5.2.8 SIP NOTIFY

This message is sent by the SS.

**Table 5.5.2.8-1: SIP NOTIFY** 

Derivation Path: TS 24.229 [16]		_		
Information Element	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			RFC 3261 [22]	
sent-protocol[1]	"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]	0,2.0,001			
host	"scscf.3gpp.org"			
port	not present			
via-branch[2]	Value assigned by the			
via-brancii[2]	SS starting with			
sent-protocol[3]	"SIP/2.0/UDP"			
sent-by[3]				
host	host name of the MC			
11031	server			
	tsc_MCX_CMS_Hostna			CONFIG
	me			CONTIG
	tsc_MCX_GMS_Hostn			GROUPC
	ame			ONFIG
nort				UNFIG
port	not present			
via-branch[3]	Value assigned by the SS starting with 'z9hG4bK'			
From	20110 1511		RFC 3261 [22]	
addr-spec	same URI as received	Remote URI of the	111 0 0201 [22]	
addi-spec	in the To header of the	dialog (from the UE's		
	SUBSCRIBE message	point of view)		
tag	same tag as in the To-	Remote tag of the		
way	header of the response	dialog (from the UE's		
	which has established	point of view)		
	the dialog	point or viour)		
То	the dialog		RFC 3261 [22]	
addr-spec	same URI as received	Local URI of the dialog	111 0 0201 [22]	
auur-spec	in the From header of the SUBSCRIBE	(from the UE's point of view)		
	message			
tag	same value as received in From tag of the	Local tag of the dialog (from the UE's point of		
	SUBSCRIBE message	view)		
Call-ID			RFC 3261 [22]	
callid	same as value received in SUBSCRIBE			
0	message		DE0 000 : ****	
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	"NOTIFY"			

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Contact	v alue/l ellial K	Comment	RFC 3261 [22]	Condition
addr-spec			KFC 3201 [22]	
user-info and host	tsc_MCPTT_PublicSer			
	viceId_A			
	px_MCVideo_PublicSer			MCVIDEO
	viceId_A			
	px_MCData_PublicSer			MCData
	viceId_A			CONTIC
	"sip:" & tsc_MCX_CMS_Hostna			CONFIG
	me			
	"sip:" &			GROUPC
	tsc_MCX_GMS_Hostn			ONFIG
	ame			
port	not present			
Event			RFC 6665 [39]	
			RFC 3842 [61]	
event-type	"presence"			PRESENC
	"xcap-diff"			E-EVENT CONFIG.
	xcap-uiii			GROUPC
				ONFIG
Max-Forwards			RFC 3261 [22]	0.11.10
value	"67"	The recommended	<u> ]</u>	
		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		OL .	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-			
Magaza hadu	body		DEC 2064 [22]	
Message-body MIME body part		PIDF	RFC 3261 [22]	PRESENC
MINIE BODY PAIT		FIDI		E-EVENT
MIME-part-headers				L-L V LIVI
Content-Type	"application/pidf+xml"			
MIME-part-body	PIDF as described in		TS 24.379 [9]	
	Table 5.5.3.5-1		clause 9.3.1	
	PIDF as described in		TS 24.281 [86]	MCVIDEO
	Table 5.5.3.5-2		clause 8.3.1	
	PIDF as described in		TS 24.282 [87]	MCDATA
MINE	Table 5.5.3.5-3	1166	clause 8.4.1	001:5:0
MIME body part		xcap-diff		CONFIG,
				GROUPC ONFIG
MIME-part-headers				OINI IG
Content-Type	"application/xcap-			
.,,,,,,,	diff+xml"			
MIME-part-body	xcap-diff document as			CONFIG
, ,	described in Table			
	5.5.3.12-1			
	xcap-diff document as			GROUPC
	described in Table			ONFIG
	5.5.3.12-2			
MIME body part		Signature		

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-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			
request Disposition	D D			
	px_MCVideo_Client_A			MCVIDEO
	_ID			
	px_MCData_Client_A_I			MCDATA
SIP-Version	D "SIP/2.0"			
Via	011 72.0		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			
	px_MCVideo_PublicSer viceId_A			MCVIDEO
	px_MCData_PublicSer viceId_A			MCDATA
Call-ID			RFC 3261 [22]	
Callid	same value as in the INVITE			
CSeq	INVITE		RFC 3261 [22]	
value	value of CSeq sent by		10 0201 [22]	
	the SS within its previous request in the same dialog but			
NA - Ale I	increased by one			
Method Contact	INFO		RFC 3261 [22 RFC 3840 [33]	
addr-spec	SIP URI		KFC 3640 [33]	
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.		

when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Video (MCVideo) (MCVide					
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 when used in a SIP response indicates that the function sending the SIP message supports Mission Critical Data (MCData) communication.  This media feature tag when used in a SIP response indicates that the function sending the SIP message supports Mission Critical Data (MCData) communication.  This URN indicates that the device has the capabilities to support the mission critical push to talk (MCPTT) service.  "*g.3gpp.icsi-ref-um:um-7:3gpp-service.ims.icsi.mcvide of the mission critical video (MCVideo) service.  "*g.3gpp.icsi-ref-um:um-7:3gpp-service.ims.icsi.mcvide of the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This lumin dicates that the device has the capabilities to support the mission critical data (MCData) service.  This feature tag indicates that the device supports audio as a streaming media type.  feature-param  "video"  This feature tag indicates that the device supports video as a streaming media type.  feature-param  "text"  This feature tag indicates that the device supports video as a streaming media type.		"+g.3gpp.mcvideo"	This media feature tag		MCVIDEO
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 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-refl-um:um-7:3gpp-service.ims.icsi.mcptt*  *+g.3gpp.icsi-refl-um:um-7:3gpp-service.ims.icsi.mcvide or "+g.3gpp.icsi-refl-um:um-7:3gpp-service.ims.icsi.mcvide or "+g.3gpp.icsi-refl-um:um-7:3gpp-service.ims.icsi.mcvide or "his URN indicates that the device has the capabilities to support the mission critical push to talk (MCPTT) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical data (MCData) service.  This feature tag indicates that the device bas the capabilities to support the mission critical data (MCData) service.  This feature tag indicates that the device supports audio as a streaming media type.  feature-param  *video*  This feature tag indicates that the device supports video as a streaming media type.  feature-param  *text*  This feature tag indicates that the device supports video as a streaming media type.  feature-param  *text*  This feature tag indicates that the device supports video as a streaming media type.					
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video (MCVideo)   service.					
service.  "+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"  "audio"  This URN indicates that the device has the capabilities to support the mission critical data (MCData) service.  This feature tag indicates that the device supports audio as a streaming media type.  feature-param  "video"  This feature tag indicates that the device supports video as a streaming media type.  feature-param  "video"  This feature tag indicates that the device supports video as a streaming media type.  feature-param  "text"  This feature tag indicates that the device supports video as a streaming media type.  This feature tag indicates that the device supports video as a streaming media type.		o"	the mission critical		
service.  "+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"  "audio"  This URN indicates that the device has the capabilities to support the mission critical data (MCData) service.  This feature tag indicates that the device supports audio as a streaming media type.  feature-param  "video"  This feature tag indicates that the device supports video as a streaming media type.  feature-param  "video"  This feature tag indicates that the device supports video as a streaming media type.  feature-param  "text"  This feature tag indicates that the device supports video as a streaming media type.  This feature tag indicates that the device supports video as a streaming media type.			video (MCVideo)		
"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"  "audio"  This URN indicates that the device has the capabilities to support the mission critical data (MCData) service.  This feature tag indicates that the device supports audio as a streaming media type.  feature-param  "video"  This feature tag indicates that the device supports video as a streaming media type.  feature-param  "text"  This feature tag indicates that the device supports video as a streaming media type.  feature-param  "text"  This feature tag indicates that the device supports video as a streaming media type.					
ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"  the device has the capabilities to support the mission critical data (MCData) service.  feature-param  "audio"  This feature tag indicates that the device supports audio as a streaming media type.  feature-param  "video"  This feature tag indicates that the device supports video as a streaming media type.  feature-param  "text"  This feature tag indicates that the device supports video as a streaming media type.  feature-param  "text"  This feature tag indicates that the device supports video as a streaming media type.		"+q.3qpp.icsi-			MCDATA
service.ims.icsi.mcdata. sds"  capabilities to support the mission critical data (MCData) service.  feature-param  "audio"  This feature tag indicates that the device supports audio as a streaming media type.  feature-param  "video"  This feature tag indicates that the device supports video as a streaming media type.  feature-param  "text"  This feature tag indicates that the device supports video as a streaming media type.  feature-param  "text"  This feature tag indicates that the device supports tideo as a streaming media type.					
sds" the mission critical data (MCData) service.  feature-param "audio" This feature tag indicates that the device supports audio as a streaming media type.  feature-param "video" This feature tag indicates that the device supports video as a streaming media type.  feature-param "text" This feature tag indicates that the device supports video as a streaming media type.  feature-param "text" This feature tag indicates that the device supports text as					
This feature tag indicates that the device supports audio as a streaming media type.   This feature tag indicates that the device supports video as a streaming media type.   MCVI					
feature-param "audio" This feature tag indicates that the device supports audio as a streaming media type.  feature-param "video" This feature tag indicates that the device supports video as a streaming media type.  feature-param "text" This feature tag indicates that the device supports video as a streaming media type.  feature-param "text" This feature tag indicates that the device supports text as					
indicates that the device supports audio as a streaming media type.  feature-param  "video"  This feature tag indicates that the device supports video as a streaming media type.  feature-param  "text"  This feature tag indicates that the device supports video as a streaming media type.  feature-param  "text"  This feature tag indicates that the device supports text as	feature-param	"audio"			MCDTT
device supports audio as a streaming media type.  feature-param  "video"  This feature tag indicates that the device supports video as a streaming media type.  feature-param  "text"  This feature tag indicates that the device supports video as a streaming media type.  This feature tag indicates that the device supports text as	ieature-param	audio			
feature-param "video" This feature tag indicates that the device supports video as a streaming media type.  feature-param "text" This feature tag indicates that the device supports video as a streaming media type.  This feature tag indicates that the device supports text as					
type.  feature-param  "video"  This feature tag indicates that the device supports video as a streaming media type.  feature-param  "text"  This feature tag indicates that the device supports text as					MCVIDEO
feature-param "video" This feature tag indicates that the device supports video as a streaming media type.  feature-param "text" This feature tag indicates that the device supports text as					
indicates that the device supports video as a streaming media type.  feature-param  "text"  This feature tag indicates that the device supports text as					
device supports video as a streaming media type.  feature-param  "text"  This feature tag indicates that the device supports text as	feature-param	"vídeo"			MCVIDEO
feature-param "text" This feature tag indicates that the device supports text as					
feature-param "text" This feature tag indicates that the device supports text as					
feature-param "text" This feature tag indicates that the device supports text as			as a streaming media		
feature-param "text" This feature tag indicates that the device supports text as			_		
indicates that the device supports text as	feature-param	"text"			MCDATA
device supports text as					
type.			_		
Accept type.	Accent		type.		
media-range "application/sdp"		"application/cdp"			
		application/sup		DEC 2064 [00]	
		l annuallar de la	Nian and	KFU 3201 [22]	
value any allowed value Non-zero value		any allowed value	Non-zero value	5-0	
Content-Length RFC 3261 [22]				RFC 3261 [22]	
value "0" No message body	value	"0"			
included - end of SIP			included - end of SIP		
message			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]			Doforonce	Candition
Information Element	Value/remark	Comment	Reference	Condition
Status-Line	"DD A OLC"		RFC 3261 [22]	
Method Request-URI	"PRACK" same URI as the SS			
Request-ORI	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 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			
From	order		DEC 2064 [00]	
From addr spec	same value as in the	Local URI of the dialog	RFC 3261 [22]	
addr-spec	INVITE message	(from the UE's point of		
	INVITE Illessage	view)		
tag	same value as in the	Local tag of the dialog		
tag	INVITE	ID (from the UE's point		
		of view)		
То		,	RFC 3261 [22]	
addr-spec	same value as in the	Remote URI of the	• 1	
•	INVITE	dialog (from the UE's point of view)		
tag	same tag as in the To-	Remote tag of the		
	header of the response	dialog ID (from the UE's		
	which has established	point of view)		
0.11.15	the dialog		550 000/ 500	
Call-ID	<del></del>		RFC 3261 [22]	
callid	same value as in			
CSeq	INVITE message		DEC 2264 [22]	
value	value of CSeq sent by		RFC 3261 [22]	
valu <del>c</del>	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			
m ath a d	of reliable response			
method	same value as in CSeq of reliable response			
P-Access-Network-Info	or reliable response		RFC 7315 [52]	
access-net-spec	Access network		NEC (313 [32]	
access-liet-spec	technology and, if			
	applicable, the cell ID			
Content-Length	if present		RFC 3261 [22]	
value	"0"	No message body		
	1	included	•	

## 5.5.2.10.2 SIP PRACK from the SS

Table 5.5.2.10.2-1: SIP PRACK from the SS

	6] clause A.2.1.4.10, A2.2.4.10			0
Information Element	Value/remark	Comment	Reference	Condition
Status-Line	, , , , , , , , , , , , , , , , , , ,		RFC 3261 [22]	
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	"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]	
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	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	"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		
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			
Content-Length			RFC 3261 [22]	
value	"0"	No message body included		

# 5.5.2.11 SIP PUBLISH

This message is sent by the UE.

Table 5.5.2.11-1: SIP PUBLISH

Information Element	value/remark	Comment	Reference	Condition
Request-Line	Valadironian	Commone	RFC 3261 [22]	Condition
•			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		
	px_MCVideo_PublicSer viceId_A	The public service identity identifying the originating participating MCVideo function serving the MCVideo user		MCVIDEO
	px_MCData_PublicSer viceId_A	The public service identity identifying the originating participating MCData function serving the MCData user		MCDATA
SIP-Version	"SIP/2.0"			
Route	OID LIE!		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	"Ir"			
addr-spec[2]	SIP URI			
user-info and host	"scscf.3gpp.org"			
port	not present "Ir"			
uri-parameters Via	"If"		RFC 3261 [22]	
sent-protocol	"SIP/2.0/UDP"  "SIP/2.0/TCP"		RFC 3581 [55]	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			1	
user-info and host	same URI as used as Request URI			
port	not present			
tag	not present			
Expires	i	1	RFC 3261 [22]	

Require	Derivation Path: TS 24.229 [16]				
Proxy-Require   Sec-agree"   RFG 3329 [53]		Value/remark	Comment		Condition
Security-Verify   Security-Verify   Security-Verify   Security-Verify   Security-Verify   Security-Verify   Security-Verify   Security   Secu	Require				
Proxy-Require   Sec.agree   Sec.arrity   S				RFC 3329 [53]	
Security-Verify   Sec-agree"   RFC 3329 [53]		"sec-agree"		DEC 0004 [00]	
Security-Verify   Sec-mechanism   Sec-agree"   Security-Verify   Sec-mechanism   Same value as Security   Security   Sever headers ent by SS during registration   Security   SS during registration   SS during registration   Security   SS during registration	Proxy-Require			RFC 3261 [22]	
Security-Verify   Service-Institute   Security   Secu	antion to a	"aga agrae"		RFC 3329 [53]	
Sec-mechanism   Same value as Security   Service header sent by   SS during registration   RFC 3261 [22]		sec-agree		DEC 2220 [52]	
Service header sent by SS during registration   RFC 3261 [22]		sama valua as Sacurity		KFC 3329 [33]	
SS during registration	Sec-mechanism				
RFC 3261 [22]   Value					
Value	Csea	CC daming regionation		RFC 3261 [22]	
Max-Forwards		any allowed value		• •=• [==]	
Callid		"PUBLISH"			
Max-Forwards	Call-ID			RFC 3261 [22]	
Max-Forwards	callid	any allowed value			
Value	Max-Forwards			RFC 3261 [22]	
Access network technology and, if applicable, the cell ID	value	any allowed value			
Access network technology and, if applicable, the cell ID	P-Access-Network-Info	•		RFC 7315 [52]	
technology and, if applicable, the cell ID					
Event   PRESEN   PRESEN   PRESEN   PRESEN   E-EVENT   CONFIG   OR POC   SETTING   EVENT   PRESEN   E-EVENT   CONFIG   OR POC   SETTING   EVENT   EVE	access-net-spec				
Event-type					
PRESEN   Presence   PRESEN   E-EVENT		applicable, the cell ID			
P-Preferred-Service				RFC 3903 [43]	
"poc-settings"   CONFIG OR POC SETTING	event-type	"presence"			PRESENC
P-Preferred-Service					
SETTING		"poc-settings"			
P-Preferred-Service   RFC 6050 [31]					
P-Preferred-Service					
"urn:urn-7:3gpp-service.ims.icsi.mcptt"   "urn:urn-7:3gpp-service.ims.icsi.mcptt"   "urn:urn-7:3gpp-service.ims.icsi.mcvide o"   "urn:urn-7:3gpp-service.ims.icsi.mcvide o"   "urn:urn-7:3gpp-service.ims.icsi.mcdata "   TS 24.281 [86] clause 7.2.1A   MCVIDEC (aluse 7.2.1A   Clause 7.2.1A   MCDATA (aluse 7.2.1A   TS 24.282 [87] clause 7.2.1A   TS 24.28	D Dreferred Comice			DEC 6050 [24]	-EVEINI
Service.ims.icsi.mcptt"   Clause 7.2.1Å     "urn:urn-7:3gpp-service.ims.icsi.mcvide o"   TS 24.281 [86] clause 7.2.1A     "urn:urn-7:3gpp-service.ims.icsi.mcdata   TS 24.282 [87] clause 7.2.1A     "urn:urn-7:3gpp-service.ims.icsi.mcvide   TS 24		"urn:urn 7:2ann			
"urn:urn-7:3gpp-service.ims.icsi.mcvide o"	Service-ID				
service.ims.icsi.mcvide o" "urn:urn-7:3gpp- service.ims.icsi.mcdata "application/pidf+xml" port Content-Type media-type "multipart/mixed" Content-Length present in case of TCP and when there is a message body (otherwise optional)length of message-body MIME body part  MIME-part-headers Content-Type  Is exervice.ims.icsi.mcvide o" "urn:urn-7:3gpp- service.ims.icsi.mcvide clause 7.2.1A  MCDATA  MCDATA  MCDATA  MCDATA  Clause 7.2.1A  MCDATA  MCPSEN E-EVENT  PRESEN E-EVENT  RFC 3261 [22]  PRESEN E-EVENT  RFC 3261 [58]  RFC 3261 [58]  MCPTT/MCVideo/MCD ata Info					MCVIDEO
o" "urn:urn-7:3gpp- service.ims.icsi.mcdata "  Accept  RFC 3261 [22] PRESEN E-EVENT  media-range port not present  Content-Type media-type  Content-Length  Present in case of TCP and when there is a message body (otherwise optional)length of message-body  MIME body part  MIME-part-headers  Content-Type  "application/pidf+xml" RFC 3261 [22]  MCDATA  MCDATA  MCDATA  RFC 3261 [22] PRESEN E-EVENT  RFC 3261 [22]  RFC 3261 [22]  MCPTT/MCVideo/MCD ata Info					WOVIDEO
"urn:urn-7:3gpp- service.ims.icsi.mcdata clause 7.2.1A clause 7.2.1A  **To 24.282 [87] clause				oladoo 7.2.17t	
Service.ims.icsi.mcdata   Clause 7.2.1A				TS 24.282 [87]	MCDATA
media-range "application/pidf+xml" port not present RFC 5621 [58]  media-type "multipart/mixed" RFC 3261 [22] and when there is a message body (otherwise optional)length of message-body  value message-body milder body part MCPTT/MCVideo/MCD ata Info  MIME-part-headers Content-Type "application/vnd.3gpp. mcptt-info+xml"					
media-range "application/pidf+xml" port not present RFC 5621 [58]  media-type "multipart/mixed" RFC 3261 [22] and when there is a message body (otherwise optional)length of message-body  value message-body milder body part MCPTT/MCVideo/MCD ata Info  MIME-part-headers Content-Type "application/vnd.3gpp. mcptt-info+xml"		"			
media-range "application/pidf+xml" not present	Accept			RFC 3261 [22]	PRESENC
port					E-EVENT
Content-Type     "multipart/mixed"       Content-Length     present in case of TCP 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     "application/vnd.3gpp. mcptt-info+xml"	media-range	"application/pidf+xml"			
media-type       "multipart/mixed"       RFC 3261 [22]         Content-Length       present in case of TCP and when there is a message body (otherwise optional)length of message-body       RFC 3261 [22]         value       any value       RFC 3261 [22]         Message-body       RFC 3261 [22]         MIME body part       MCPTT/MCVideo/MCD ata Info         MIME-part-headers       "application/vnd.3gpp. mcptt-info+xml"		not present			
Content-Length present in case of TCP 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-info+xml"				RFC 5621 [58]	
and when there is a message body (otherwise optional)length of message-body  value  Message-body  MIME body part  MIME-part-headers  Content-Type  "application/vnd.3gpp. mcptt-info+xml"					
message body (otherwise optional)length of message-body  value  Message-body  MIME body part  MIME-part-headers  Content-Type  message body  ARFC 3261 [22]  MCPTT/MCVideo/MCD ata Info  message-body  RFC 3261 [22]  MCPTT/MCVideo/MCD ata Info	Content-Length			RFC 3261 [22]	
(otherwise optional)length of message-body  value  Message-body  MIME body part  MIME-part-headers  Content-Type  "application/vnd.3gpp. mcptt-info+xml"  (otherwise optional)length of message-body  RFC 3261 [22]  MCPTT/MCVideo/MCD ata Info					
optional)length of message-body  value  Message-body  MIME body part  MIME-part-headers  Content-Type  "application/vnd.3gpp. mcptt-info+xml"  Optional)length of message-body  RFC 3261 [22]  MCPTT/MCVideo/MCD ata Info					
value     any value       Message-body     RFC 3261 [22]       MIME body part     MCPTT/MCVideo/MCD ata Info       MIME-part-headers     "application/vnd.3gpp. mcptt-info+xml"					
value     any value       Message-body     RFC 3261 [22]       MIME body part     MCPTT/MCVideo/MCD ata Info       MIME-part-headers     "application/vnd.3gpp. mcptt-info+xml"					
Message-body     RFC 3261 [22]       MIME body part     MCPTT/MCVideo/MCD ata Info       MIME-part-headers     "application/vnd.3gpp. mcptt-info+xml"	value				
MIME body part  MIME-part-headers  Content-Type  "application/vnd.3gpp. mcptt-info+xml"  MCPTT/MCVideo/MCD ata Info  "ata Info  "application/vnd.3gpp. mcptt-info+xml"		arry value		REC 3261 [22]	
Ata Info  MIME-part-headers  Content-Type "application/vnd.3gpp. mcptt-info+xml"			MCPTT/MCVideo/MCD	111 0 3201 [22]	
MIME-part-headers  Content-Type "application/vnd.3gpp. mcptt-info+xml"	Minvic body part				
Content-Type "application/vnd.3gpp. mcptt-info+xml"	MIME-part-headers				
mcptt-info+xml"		"application/ynd 3gpp			
	Johnson Typo				
		"application/vnd.3gpp.			MCVIDEO
mcvideo-info+xml"					
					MCDATA
mcdata-info+xml"					

Information Element	6] clause A.2.1.4.10A, A.2.2.4. 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	
	MCVideo-Info as described in Table 5.5.3.2.1-2		TS 24.281 [86] clause F.1	MCVIDEC
	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		TS 24.379 [9] clause 9.3.1	
	PIDF as described in Table 5.5.3.5-2		TS 24.281 [86] clause 8.3.1	MCVIDEO
	PIDF as described in Table 5.5.3.5-3		TS 24.282 [87] clause 8.3.1	MCDATA
MIME body part		MIKEY		CONFIG
MIME-part-headers			550 0000 10 11	
Content-Type MIME-part-body	"application/mikey" MIKEY message as	MIKEY message,	RFC 3830 [24] TS 33.180 [94]	
2 pain 200,	described in Table 5.5.9.1-1	containing the CSK		
MIME body part		PoC-Settings		CONFIG OR POC- SETTING -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		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	Condition
Request-Line	valuo/i oinai k	-	RFC 3261 [22]	- Containion
Troquest Emis			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"			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			
via-branch	Value starting with 'z9hG4bK'			
Route	20110-7011		RFC 3261 [22]	
addr-spec[1]	SIP URI		0 0201 [22]	
user-info and host	P-CSCF address of the	P-CSCF address as		
doct into and nost	SS	assigned to the UE via NAS signalling or P- CSCF discovery		
port	protected server port of the SS	as assigned during registration		
uri-parameters	"Ir"	· ·		
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			
tag	not present			
Call-ID			RFC 3261 [22]	
callid	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]				0- 20
Information Element	Value/remark	Comment	Reference	Condition
Require			RFC 3261 [22] RFC 3312 [56] RFC 3329 [53]	
option-tag	"sec-agree"		•	
option-tag	"multiple-refer"			
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 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 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
	"+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.		MCDATA
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.		
	"+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. sds"	This URN indicates that the device has the capabilities to support the mission critical data (MCData) service.		MCDATA

Derivation Path: TS 24.229 [16			Doforance	Condition
Information Element	Value/remark "audio"	Comment	Reference	Condition MCPTT
feature-param	"audio"	This feature tag indicates that the		OR
		device supports audio		MCVIDEO
		as a streaming media		MICVIDEO
		type.		
feature-param	"video"	This feature tag		MCVIDEO
leature-param	video	indicates that the		WOVIDEO
		device supports video		
		as a streaming media		
		type.		
feature-param	"text"	This feature tag		MCDATA
roataro param	toxt	indicates that the		
		device supports text as		
		a streaming media		
		type.		
Refer-To			RFC 3515 [38]	
addr-spec	a Content-ID ("cid")			
- r	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			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			
P-Preferred-Service			RFC 6050 [31]	
Service-ID	"urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"urn:urn-7:3gpp-			MCVIDEO
	service.ims.icsi.mcvide			
	о"			
	"urn:urn-7:3gpp-			MCDATA
	service.ims.icsi.mcdata			
	"			
P-Preferred-Identity	If present		RFC 3325 [32]	
PPreferredID-value	same URI as in From-			
	header			
Resource-Priority			RFC 4412 [40]	EMERGEN
			RFC 7134 [57]	CY-CALL
			RFC 8101 [45]	AND
			TS 24.379 [9]	(GROUP-
			clause	CALL OR
			6.2.8.1.15	PRIVATE-
				CALL)
r-value				

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
namespace	value of the <resource-< td=""><td>As configured in Table</td><td>TS 24.484 [14]</td><td>Condition</td></resource-<>	As configured in Table	TS 24.484 [14]	Condition
	priority-namespace>	5.5.8.4-1		
	element contained in			
	the <emergency-< td=""><td></td><td></td><td></td></emergency-<>			
	resource-priority>			
	element contained in			
	the <onnetwork></onnetwork>			
	element of the MCX			
	service configuration			
	documents value of the <resource-< td=""><td>As soutieums die Toble</td><td>TC 04 404 [44]</td><td></td></resource-<>	As soutieums die Toble	TC 04 404 [44]	
r-priority	priority-priority>	As configured in Table 5.5.8.4-1	TS 24.484 [14]	
	element contained in	5.5.6.4-1		
	the <emergency-< td=""><td></td><td></td><td></td></emergency-<>			
	resource-priority>			
	element contained in			
	the <onnetwork></onnetwork>			
	element of the MCX			
	service configuration			
	document			
Resource-Priority			RFC 4412 [40]	IMMPERIL
-			RFC 7134 [57]	-CALL
			RFC 8101 [45]	AND
			TS 24.379 [9]	(GROUP-
			clause	CALL OR
			6.2.8.1.15	PRIVATE-
				CALL)
r-value	1 70	A (:	TO 04 40 17 17	
namespace	value of the <resource-< td=""><td>As configured in Table</td><td>TS 24.484 [14]</td><td></td></resource-<>	As configured in Table	TS 24.484 [14]	
	priority-namespace>	5.5.8.4-1		
	element contained in			
	the <imminent-peril-< td=""><td></td><td></td><td></td></imminent-peril-<>			
	resource-priority> element contained in			
	the <onnetwork></onnetwork>			
	element of the MCX			
	service configuration			
	documents			
r-priority	value of the <resource-< td=""><td>As configured in Table</td><td>TS 24.484 [14]</td><td></td></resource-<>	As configured in Table	TS 24.484 [14]	
	priority-priority>	5.5.8.4-1		
	element contained in			
	the <imminent-peril-< td=""><td></td><td></td><td></td></imminent-peril-<>			
	resource-priority>			1
	element contained in			1
	the <onnetwork></onnetwork>			1
	element of the MCX			1
	service configuration			1
LO. M. T.	document	1	1	1.4
Content-Type	not present			METHOD-
Contont-Type		1	DEC EGO4 (EQ)	BYE
Content-Type	"multipart/miyad"		RFC 5621 [58]	
media-type Content-Length	"multipart/mixed" present in case of TCP		DEC 2264 [22]	-
Content-Length	and when there is a		RFC 3261 [22]	1
	message body			1
	(otherwise optional)			
Value	any value	length of message-		1
value	arry value	body		1
	not present	, Journal of the second of the		METHOD-
Message-body	not prodont			BYE
Message-body		1	RFC 3261 [22]	- · <del>-</del>
MIME body part	<del>-  </del>	Resource list	RFC 5366 [35]	
MIME-part-headers	<del>-  </del>		111 0 0000 [00]	
Content-Type	"application/resource-			
Jointoint Typo	lists+xml"		I	1

Information Element	Value/remark	Comment	Reference	Conditio
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>			
	Resource-lists as described in Table 5.5.3.3.1-2			MCVIDE
	Resource-lists as described in Table 5.5.3.3.1-3			MCDATA
MIME body part		Location info		LOCATION N-INFO
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-location- info+xml"			
	"application/vnd.3gpp. mcvideo-location- info+xml"			MCVIDE
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	
	Location-info as described in Table 5.5.3.4.1-2		TS 24.281 [86] clause F.3	MCVIDE
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

info+xml"

Derivation Path: TS 24.379 [9] clause 10.1.1.2.2.1, 10.1.2.2.2.1, 11.1.1.2.2.1, 11.1.6.2.2.1 Editor's note: references for MCVIDEO and MCDATA to be added Information Comment Condition Value/remark Reference **Element** GROUP-CALL **Accept-Contact** RFC 3841 [29] OR CHAT-**GROUP-CALL** ac-value[1] feature-param "+g.3gpp.icsi-ref=urn:urn-7:3gpp-service.ims.icsi.mcptt" MCVIDEO "+g.3gpp.icsi-ref=urn:urn-7:3gppservice.ims.icsi.mcvideo" MCDATA "+g.3gpp.icsi-ref=urn:urn-7:3gppservice.ims.icsi.mcdata.sds" "require" req-param explicit-param "explicit" ac-value[2] feature-param "+g.3gpp.mcptt" "+g.3gpp.mcvideo" MCVIDEO "+g.3gpp.mcdata.sds" MCDATA req-param "require' "explicit" explicit-param **Answer-Mode** not present Answer-Mode RFC 5373 [34] PRIVATE-CALL AND (NOT TS 24.379 [9] FORCE) 11.1.1.2.2.1, 8) answer-mode-"Auto" value answer-mode-"Manual MANUAL value Priv-Answernot present Mode Priv-Answer-RFC 5373 [34] PRIVATE-CALL Mode TS 24.379 [9] AND FORCE clause 11.1.1.2.2.1, 8) and clause 11.1.6.2.2.1, 8) "Auto" answer-modeif force of automatic commencement mode at value the invited MCPTT client is requested by the MCPTT user, Content-Type RFC 5621 [58] "multipart/mixed" media-type NOTE: Characters that are RFC 3261 [22] body not formatted as ASCII characters are escaped in the following parameters in the headers portion of the SIP URI. MIME body MCPTT/MCVideo/MCData Info part MIME-partheaders "application/vnd.3gpp.mcptt-Content-Type info+xml" **MCPTT** "application/vnd.3gpp.mcvideo **MCVIDEO** -info+xml" "application/vnd.3gpp.mcdata-**MCDATA** 

Derivation Path: TS 24.379 [9] clause 10.1.1.2.2.1, 10.1.2.2.2.1, 11.1.1.2.2.1, 11.1.6.2.2.1 Editor's note: references for MCVIDEO and MCDATA to be added Information Value/remark Comment Reference Condition **Element** Unique URL identifying the Content-ID any value TS 24.379 [9] MCPTT/MCVideo/MCData clause 6.6.3.1 Info XML MIME body; used as reference in the signature MIME body MCPTT-Info as described in MIME-part-TS 24.379 [9] 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 MIME body Location info (MCPTT OR MCVIDEO) AND part ALLOW-LOCATION-INFO MIME-partheaders Content-"application/vnd.3gpp.mcpttlocation-info+xml" Type "application/vnd.3gpp.mcvideo-MCVIDEO location-info+xml" 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 TS 24.379 [9] MIME-part-Location-info as described in body Table 5.5.3.4.1-1 clause F.3 TS 24.281 [86] Location-info as described in **MCVIDEO** Table 5.5.3.4.1-2 clause F.3 MIME body Signature part MIME-partheaders Content-"application/vnd.3gpp.mcptt-TS 24.379 [9] Type signed+xml" Signatures for XML MIME MIME-part-TS 24.379 [9] bodies as described in Table body 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> element of the <ruleset> element of the MCPTT user profile document set to "true" in TS 36.579-1 [2] Table 5.5.8.3-1</ruleset></allow-location-info-when-talking>
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] of Information Element	Value/remark		Doforonce	Condition
	value/remark	Comment	Reference	Condition
Request-Line	"DECICTED"		RFC 3261 [22]	
Method	"REGISTER"	5 " " 115		
Request-URI	SIP URI of the home	Depending on the UE		
	domain name	configuration the UE		
	(px_MCX_SIP_HomeD	may know the home		
	omain_A) if available at	domain name of the		
	the UE or derived from	SIP core (e.g. when		
	the IMSI otherwise	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 2224 (222)	
Route	Not present		RFC 3261 [22]	
Via			RFC 3261 [22]	
			RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"	UE uses UDP for		UDP
	#01D/0.6/7707	registration		T05
	"SIP/2.0/TCP	UE uses TCP for		TCP
		registration		
sent-by	ID - dda 500M			
host	IP address or FQDN			OID DES
port	any value if present			SIP_REGI
				STER_INI
				TIAL
	any value if present			TCP
	protected server port of			UDP
	the UE when using			
	UDP			
via-branch	Value starting with			
From	'z9hG4bK'		DEC 2264 [22]	
From			RFC 3261 [22]	
addr-spec	a a mana a valua a a in the a			
user-info and host	same value as in the initial REGISTER			
	Default public user id	Depending on the UE		SIP_REGI
	(px_MCX_SIP_PublicU	configuration the UE		STER_INI
	serId_A_1) if available	may know the default		TIAL
	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 13.4B (e.g.		
		when there is a USIM		
	1	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	IP address or FQDN			
port	any value if present			SIP_REGI
Port	any value ii present			STER_INI
				TIAL
	protected server port of			
	the UE			

	Г	T =	T	
	"+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
	+g.sgpp.mcdata.sus			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-			
•	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"+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		
	O O			
		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		
		(MCData) service.		
feature-param	"audio"			MCPTT
·				OR
				MCVIDEO
feature-param	"video"	This feature tag		MCVIDEO
,		indicates that the		
		device supports video		
		as a streaming media		
		type.		
footure param	"text"	This feature tag		MCDATA
feature-param	text	indicates that the		WICDATA
		device supports text as		
		a streaming media		
	"	type.		
feature-param	"expires=600000" if			
	present			
Expires	Present if no expires		RFC 3261 [22]	
	parameter in Contact		RFC 3903 [43]	
	header	<u> </u>		
	"			
value	"600000"			
	"600000"		RFC 3261 [22]	
value Require	"600000"			
Require			RFC 3261 [22] RFC 3329 [53]	
Require option-tag	"600000" "sec-agree"		RFC 3329 [53]	
Require			RFC 3329 [53] RFC 3261 [22]	
option-tag Proxy-Require	"sec-agree"		RFC 3329 [53]	
option-tag Proxy-Require option-tag			RFC 3329 [53] RFC 3261 [22] RFC 3329 [53]	
option-tag Proxy-Require	"sec-agree"		RFC 3329 [53]  RFC 3261 [22]  RFC 3329 [53]  RFC 3261 [22]	
option-tag Proxy-Require option-tag	"sec-agree"		RFC 3329 [53]  RFC 3261 [22] RFC 3329 [53]  RFC 3261 [22] RFC 6442 [62]	
option-tag Proxy-Require  option-tag Supported	"sec-agree"  "sec-agree"		RFC 3329 [53]  RFC 3261 [22]  RFC 3329 [53]  RFC 3261 [22]	
option-tag Proxy-Require  option-tag Supported  option-tag	"sec-agree"  "sec-agree"  "path"		RFC 3329 [53]  RFC 3261 [22] RFC 3329 [53]  RFC 3261 [22] RFC 6442 [62]	
option-tag Proxy-Require  option-tag Supported  option-tag option-tag option-tag	"sec-agree"  "sec-agree"		RFC 3329 [53]  RFC 3261 [22] RFC 3329 [53]  RFC 3261 [22] RFC 6442 [62] RFC 4488 [36]	
option-tag Proxy-Require  option-tag Supported  option-tag option-tag option-tag Cseq	"sec-agree"  "sec-agree"  "path"  "timer"		RFC 3329 [53]  RFC 3261 [22] RFC 3329 [53]  RFC 3261 [22] RFC 6442 [62]	
option-tag Proxy-Require  option-tag Supported  option-tag option-tag option-tag	"sec-agree"  "sec-agree"  "path"		RFC 3329 [53]  RFC 3261 [22] RFC 3329 [53]  RFC 3261 [22] RFC 6442 [62] RFC 4488 [36]	SIP_REGI
option-tag Proxy-Require  option-tag Supported  option-tag option-tag option-tag Cseq	"sec-agree"  "sec-agree"  "path"  "timer"		RFC 3329 [53]  RFC 3261 [22] RFC 3329 [53]  RFC 3261 [22] RFC 6442 [62] RFC 4488 [36]	SIP_REGI STER_INI TIAL

	value sent by the UE in			
	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	"hmac-sha-1-96"			
protocol	"esp" (if present)			
mode	"trans" (if present)			
encrypt-algorithm	"des-ede3-cbc" or "aes- cbc"			
spi-c	SPI number of the			
opi o	inbound SA at the protected client port			
spi-s	SPI number of the			
3pi-3				
	inbound SA at the			
	protected server port			
port-c	protected client port			
port-s	protected server port			
Security-Verify	Not present		RFC 3329 [53]	SIP_REGI
			5 5525 [50]	STER_INI
				TIAL
Consults Venter			DEC 2000 (50)	IIAL
Security-Verify			RFC 3329 [53]	
sec-mechanism	same value as Security			
	Server header sent by SS			
Authorization			RFC	SIP_REGI
			2617 [72],	STER_INI
			RFC 3310 [96]	TIAL
	Deliverte verenist	Denoughan on the UE	KFC 3310 [90]	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			
	Request-URI			
nonce	III	Empty string		
	same SIP-URI as used	Empty stillig		
digest-uri				
	as Request-URI			
opaque	any value if present			
qop	any value if present			
cnonce	any value if present			
nc	any value if present			
	any value if present			
algorithm	any value ii present	County of the e		
response		Empty string	5-0	
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			
	noddor done by do	I	1	I

			T	T
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		
CHOICE	arry value	affecting the response		
		calculation		
nc	nonce-count value	counter to indicate how		
TIC	Horice-count value	many times the UE has		
		sent the same value of		
		nonce within		
		successive		
		REGISTERs, initial		
	"AIZA: 4 BADE"	value shall be 1		
algorithm	"AKAv1-MD5"			
response	Digest response	calculated by the client		
		according to RFC 2617	DEC 0001 1000	
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]	CONFIG
media-type	"multipart/mixed"			
Content-Length	present in case of TCP		RFC 3261 [22]	
3	and when there is a			
	message body			
	(otherwise optional)			
value	any value	length of the message		
valdo	any value	body		
Message-body		Body	RFC 3261 [22]	CONFIG
MIME body part		MCPTT/MCVideo/MCD	1(1 0 0201 [22]	0014110
MINIC Dody part		ata Info		
MIME part bandara	+	ata iiiio		
MIME-part-headers	llandiantian / mad 2 mm			
Content-Type	"application/vnd.3gpp.			
	mcptt-info+xml"			140) ((0.50
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml"			
	"application/vnd.3gpp.			MCDATA
_	mcdata-info+xml"			
Content-ID	any value	Unique URL identifying	TS 24.379 [9]	
		the	clause 6.6.3.1	
		MCPTT/MCVideo/MCD		
		ata Info XML MIME		
		body; used as		
		reference in the		
		signature MIME body		
MIME port body		T -	TO 04 070 [0]	
MIME-part-body	MCPTT-Info as		18 24.379 191	
MIME-part-body	MCPTT-Info as described in Table		TS 24.379 [9] clause F.1	
MIME-part-body				
мім <b>:</b> -рап-роду	described in Table 5.5.3.2.1-1		clause F.1	MCVIDEO
мим <b>е</b> -рап-воду	described in Table 5.5.3.2.1-1 MCVideo-Info as		clause F.1 TS 24.281 [86]	MCVIDEO
мим <b>е</b> -рап-воду	described in Table 5.5.3.2.1-1 MCVideo-Info as described in Table		clause F.1	MCVIDEO
MIME-part-body	described in Table 5.5.3.2.1-1 MCVideo-Info as described in Table 5.5.3.2.1-2		Clause F.1  TS 24.281 [86] clause F.1	
мим <b>с</b> -рап-роду	described in Table 5.5.3.2.1-1  MCVideo-Info as described in Table 5.5.3.2.1-2  MCData-Info as		Clause F.1  TS 24.281 [86] clause F.1  TS 24.282 [87]	MCVIDEO MCDATA
MIME-part-body	described in Table 5.5.3.2.1-1  MCVideo-Info as described in Table 5.5.3.2.1-2  MCData-Info as described in Table		Clause F.1  TS 24.281 [86] clause F.1	
	described in Table 5.5.3.2.1-1  MCVideo-Info as described in Table 5.5.3.2.1-2  MCData-Info as	MIKEY	Clause F.1  TS 24.281 [86] clause F.1  TS 24.282 [87]	
MIME body part	described in Table 5.5.3.2.1-1  MCVideo-Info as described in Table 5.5.3.2.1-2  MCData-Info as described in Table	MIKEY	Clause F.1  TS 24.281 [86] clause F.1  TS 24.282 [87]	
	described in Table 5.5.3.2.1-1  MCVideo-Info as described in Table 5.5.3.2.1-2  MCData-Info as described in Table	MIKEY	Clause F.1  TS 24.281 [86] clause F.1  TS 24.282 [87]	

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

Information Element	clause A.2.1.4.13, A.2.2.4.13 Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22] RFC 5031 [54]	
Method	"SUBSCRIBE"		141 0 0001 [01]	
Request-URI	tsc_MCPTT_PublicSer viceId_A	The public service identity identifying the originating participating MCPTT function serving the MCPTT user		
	px_MCVideo_PublicSer viceId_A	The public service identity identifying the originating participating MCVideo function serving the MCVideo user		MCVIDEC
	px_MCData_PublicSer viceId_A	The public service identity identifying the originating participating MCData function serving the MCData user		MCDATA
	"sip:" & tsc_MCX_CMS_Hostna me	SIP URI of the CMS's domain name: public service identity (PSI) for performing subscription proxy function of the CMS	TS 24.484 [14] clause 6.3.13. 2.2	CONFIG
	tsc_MCX_GMSURI	public service identity (PSI) for performing subscription proxy function of the GMS as configured in the <gms-uri> element of the initial UE configuration</gms-uri>	TS 24.481 [11] clause 6.3.13. 2.1	GROUPC ONFIG
	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 previous 200 OK		re_SUBS0 RIBE
SIP-Version	"SIP/2.0"			
Route			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	"Ir"			
addr-spec[2] user-info and host	SIP URI			
port and nost	"scscf.3gpp.org" not present			
uri-parameters	"Ir"			
Route			RFC 3261 [22]	re_SUBS(
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	0.00.		RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"	1	5 5551 [50]	UDP

Information Element	value/remark	Comment	Reference	Condition
information Element	"SIP/2.0/TCP"	Comment	Reference	TCP
sent-by	JII /2.0/101			101
host	IP address or FQDN	Either the UE's IP		
11031	ii address of 1 QDIV	address or its home		
		domain name		
port	protected server port of	as assigned during		
port	the UE	registration		
via-branch	value starting with	- og.ou.duo		
	'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_SUBSC
				RIBE
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 used as			
	Request URI			
port	not present			
tag	not present		DEC 0004 [00]	OLIDOO
То			RFC 3261 [22]	re_SUBSC
	Same URI of the SS as	Domesta LIDI of the		RIBE
addr-spec	used earlier in the	Remote URI of the		
	dialogURI	dialog (from the UE's point of view)		
tog	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)		
Contact	dialog	point or view)	RFC 3261 [22]	
addr-spec	SIP URI		141 0 0201 [22]	
user-info and host	IP address or FQDN			
port	protected server port of	as assigned during		
F 2	UE	registration		
feature-param	"+g.3gpp.mcptt"			
F	"+g.3gpp.mcvideo"	This media feature tag		MCVIDEO
	3 - 37 - 11.000	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)		
	i			Ì
		communication.		

Information Element	clause A.2.1.4.13, A.2.2.4.13  Value/remark	Comment	Reference	Condition
		Comment	Reference	Condition
feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-	This URN indicates that		MCVIDEO
	ref=urn:urn-7:3gpp-	the device has the		INICAIDEO
	service.ims.icsi.mcvide	capabilities to support		
	0"	the mission critical		
	0	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		
	303	(MCData) service.		
feature-param	"audio"	(Mediata) corvice.		MCPTT
roataro param	addio			OR
				MCVIDEO
feature-param	"video"	This feature tag		MCVIDEO
- 3   <del>-</del>		indicates that the		
		device supports video		
		as a streaming media		
		type.		
feature-param	"text"	This feature tag		MCDATA
ранения		indicates that the		
		device supports text as		
		a streaming media		
		type.		
Expires		31 -	RFC 3261 [22]	
•			RFC 3903 [43]	
value	any value		• 1	
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			
	value of CSeq sent by			re_SUBSC
	the endpoint within its			RIBE
	previous request in the			
	same dialog but			
	increased by one			
method	"SUBSCRIBE"			
Call-ID			RFC 3261 [22]	
callid	any allowed value			
	same value as in			re_SUBSC
	SUBSCRIBE creating			RIBE
	the dialog			
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	Access network		
	technology and, if	technology and, if		
	applicable, the cell ID	applicable, the cell ID		
Event			RFC 6665 [39]	
event-type	"presence"			00:
	"xcap-diff"			CONFIG
				GROUPC
	İ	i	l	ONFIG

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
	"poc-settings"			MCDATA
Accept	, pro comige		RFC 3261 [22]	
media-range	"application/pidf+xml"			
<b>3</b>	"application/xcap-			CONFIG,
	diff+xml"			GROUPC
				ONFIG
P-Preferred-Service			RFC 6050 [31]	
Service-ID	"urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"urn:urn-7:3gpp-			MCVIDEO
	service.ims.icsi.mcvide o"			
	"urn:urn-7:3gpp-			MCDATA
	service.ims.icsi.mcdata			WICDATA
	"			
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"		0 002 : [00]	
Content-Length	present in case of TCP		RFC 3261 [22]	
	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-info+xml"			140) ((0.50
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml"			MODATA
	"application/vnd.3gpp. mcdata-info+xml"			MCDATA
Content-ID	any value	Unique URL identifying	TS 24.379 [9]	
Content-1D	any value	the	clause 6.6.3.1	
		MCPTT/MCVideo/MCD	0.0.0.0.1	
		ata Info XML MIME		
		body; used as		
		reference in the		
		signature MIME body		
MIME-part-body	MCPTT-Info as		TS 24.379 [9]	
	described in Table		clause F.1	
	5.5.3.2.1-1			
	MCVideo-Info as		TS 24.281 [86]	MCVIDEO
	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	
NAINAE la automant	5.5.3.2.1-3	SIMPLE-FILTER		DDECENO
MIME body part		SIMPLE-FILTER		PRESENC
MIME-part-headers				E-EVENT
Content-Type	"application/simple-			
Content-Type	filter+xml"			
MIME-part-body	SIMPLE-FILTER as		TS 24.379 [9]	
	described in Table		clause 9.3.2	
	5.5.3.6-1		3.2.2.3.3.0.2.2	
	SIMPLE-FILTER as		TS 24.281 [86]	MCVIDEO
	described in Table		clause 8.3.2	
	5.5.3.6-2			
	SIMPLE-FILTER as		TS 24.282 [87]	MCDATA
	described in Table		clause 8.4.2	
	5.5.3.6-3			1

Information Element	Value/remark	Comment	Reference	Condition
MIME body part		Resource-lists		CONFIG, GROUPC ONFIG
MIME-part-headers				
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 5.5.3.3.1-1			
	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		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

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Request-Line	Turas, oman	Commone	RFC 3261 [22]	- Containen
1			RFC 5031 [54]	
Method	"UPDATE"		1	
Request-URI	The same URI value as			
	the recipient of			
	UPDATE has earlier			
	sent in its Contact			
	header within the same			
OID \	dialog			
SIP-Version	'SIP/2.0"		DE0 0004 [00]	
Via			RFC 3261 [22]	
cent protocol	"CID/2 O/LIDD"		RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"			TOD
a and but	"SIP/2.0/TCP"			TCP
sent-by	same value as in			MO_CALL
sent-hy	INVITE message			MT_CALL
sent-by host	IP address or FQDN	Either the UE's IP		WII_CALL
HUSL	IF AUDIESS OF FUDIN	address or its home		
		domain name		
port	protected server port of	as assigned during		
Port	the UE	registration		
via-branch	Value starting with	regionation		
via Branon	'z9hG4bK'			
Route			RFC 3261 [22]	
route-param list	URIs of the Record-			MO_CALL
rouse persons not	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)		
To	Same tag of the UE as	Local tag of the dialog		
	used earlier in the	ID (from the UE's point		
	dialog	of view)	DEC 0004 705	
			RFC 3261 [22]	
	Come UDL -f-th - CC	Demote LIDI -f #-	RFC 5031 [54]	
addr-spec	Same URI of the SS as	Remote URI of the		
	used earlier in the	dialog (from the UE's		
tog	dialog Same tag of the SS as	point of view)		
tag	used earlier in the	Remote tag of the dialog ID (from the UE's		
	dialog	point of view)		
Call-ID	dialog	point or view)	RFC 3261 [22]	
callid	Same value as used in		10 0 0201 [22]	
camu	the INVITE initiating the			
	dialog			
Contact	Contact header with the		RFC 3261 [22]	MO_CALL
	same Contact URI and		1.1 0 0201 [22]	
	the same mandatory			
	feature parameters as			
	in the INVITE creating			

	T -	1	1	T
	Contact header with the			MT_CALL
	same Contact URI and			
	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			
	increased by one			
method	"UPDATE"			
Require	OFDATE		DEC 2264 [22]	
Nequile			RFC 3261 [22]	
antian tag	"000 0 gro c"		RFC 3329 [53]	
option-tag	"sec-agree"		DEC 2004 [00]	1
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	3 3		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"		•	
Content-Length	present in case of TCP		RFC 3261 [22]	
	and when there is a		5 5-5 . []	
	message body			
	(otherwise optional)			
value	any value	length of message- body		
Message-body		Douy	RFC 3261 [22]	
	SDP Message as		111 0 0201 [22]	
SDP Message	described in Table			
	5.5.3.1.1-1			
	SDP Message as			MCVIDEO
	described in Table			INICAIDEO
	5.5.3.1.1-2			MCDATA
	SDP Message as			MCDATA
	described in Table			
	5.5.3.1.1-3			

5.5.2.15.2 SIP UPDATE from the SS

Table 5.5.2.15.2-1: SIP UPDATE from the SS

Derivation Path: TS 24.229 [16] Information Element	A.2.1.4.14, A.2.2.4.14 Value/remark	Comment	Reference	Condition
Request-Line	value/remark	Comment	RFC 3261 [22] RFC 5031 [54]	Condition
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		RFC 3261 [22] RFC 3581 [55]	MO_CALL
Via	same as in INVITE but with updated via- branches		RFC 3261 [22] RFC 3581 [55]	MT_CALL
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			
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"		<u> </u>	
Max-Forwards value	"68"	The recommended initial value is 70 in	RFC 3261 [22]	
		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		DE0 0001 700	
Message-body			RFC 3261 [22]	

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	Value/Terrial K	Comment	Reference	Condition
SIP-Version	"SIP/2.0"			
Status-Code	"100"			
Reason-Phrase	"Trying"			
Via	Trying			
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

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Status-Line			11010101100	
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	III II VIII E Medeage			
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	mais nvviiz message.			
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" "+g.3gpp.mcvideo" "+g.3gpp.mcdata.sds"			MCVIDEO MCDATA
feature-param	"+g.3gpp.icsi-ref= urn:urn-7:3gpp- service.ims.icsi.mcptt" "+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide			MCVIDEO
	o" "+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			MCDATA
feature-param	"audio"			MCPTT OR MCVideo
feature-param	"video"			MCVIDEO
feature-param	"text"			MCDATA
feature-param	"isfocus"			
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				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	Public user id of the callee (px_IMS_CalleeContact Uri)	Callee contact Uri		
port	not present			
feature-param	"+g.3gpp.mcptt"			
·	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA
feature-param	"+g.3gpp.icsi-ref= urn:urn-7:3gpp- service.ims.icsi.mcptt"			MCVIDEO
	"+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"			MCDATA
feature-param	"audio"			MCPTT OR MCVIDEO
feature-param	"video"	This feature tag indicates that the device supports video as a streaming media type.		MCVIDEO

Derivation Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
feature-param	"text"	This feature tag indicates that the device supports text as a streaming media type.		MCDATA
feature-param	"isfocus"			
Supported				
option-tag	"norefersub"			
Rseq			RFC 3262 [97]	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			
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

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Status-Line	value/lelliaik	Comment	Keieieiice	Condition
SIP-Version	"SIP/2.0"			
Status-Code	"183"			
Reason-Phrase	"Session progress"			
Record-Route	Gession progress		RFC 3261 [22]	
rec-route	same as received in		141 0 0201 [22]	
100 100.0	INVITE message			
Via	same as received in		RFC 3261 [22]	
	INVITE message		RFC 3581 [55]	
Require			<u> </u>	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			
011	in the INVITE message.			
Contact	OID LIE:			
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"			
	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA
feature-param	"+g.3gpp.icsi-ref= urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			140) ((550
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp- service.ims.icsi.mcvide			
	о"			
	"+g.3gpp.icsi-			MCDATA
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcdata.			
	sds"			
feature-param	"audio"			MCPTT
				OR MCV/idea
facture param	"video"			MCVIDEO
feature-param feature-param	"text"			MCDATA
feature-param feature-param	"isfocus"			IVICDATA
Supported	isiocus			
option-tag	"norefersub"			
Rseq	11010101000			100rel
response-num	previous RSeq number			100101
	sent in the same			
	direction incremented			
	by one			<u></u>
Call-ID				
callid	same value as received			
	in INVITE message			
CSeq				
value	same value as received			
	in INVITE message			
P-Answer-State	if present			
value	"unconfirmed"			
Content-Length	if present		RFC 3261 [22]	Ì

Derivation Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
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

Table 5.5.2.16.3.2-1: SIP 183 (Session Progress) from the SS

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Status-Line				33
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		RFC 3261 [22]	
Via	condition INVITE-RSP same as received in the		RFC 3261 [22]	
Doguino	INVITE message		RFC 3581 [55]	100rol
Require option-tag	"100rel"			100rel
From	Toolei			
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	Public user id of the callee (px_IMS_CalleeContact Uri)	Callee contact Uri		
port	not present			
feature-param	"+g.3gpp.mcptt"			
roata.o para	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA
feature-param	"+g.3gpp.icsi-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. sds"			MCDATA
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
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	3			
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_PublicSer			
	viceId_A			
	px_MCVideo_PublicSer			MCVIDEO
	viceld_A			
	px_MCData_PublicSer			MCDATA
	viceId_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 Status-Line SIP-Version Status-Code Reason-Phrase Via  Record-Route rec-route  From addr-spec tag  To addr-spec tag  Contact  user-info and host port feature-param	"SIP/2.0" "200" "OK" same as received in the request  same value as received in the request  same value as received in the request same value as received in the request same value as received in the request same value as received in the request same value as received in the request same value as received in the request or any value if missing in the request.	Comment	Reference  RFC 3261 [22]  RFC 3581 [55]  RFC 3261 [22]	INVITE- RSP
SIP-Version Status-Code Reason-Phrase Via  Record-Route rec-route  From addr-spec tag  To addr-spec tag  Contact user-info and host port	"200" "OK" same as received in the request  same as received in the request  Same value as received in the request same value as received in the request  same value as received in the request same value as received in the request or any value if missing in the		RFC 3581 [55]	
Status-Code Reason-Phrase Via  Record-Route rec-route  From addr-spec tag  To addr-spec tag  Contact user-info and host port	"200" "OK" same as received in the request  same as received in the request  Same value as received in the request same value as received in the request  same value as received in the request same value as received in the request or any value if missing in the		RFC 3581 [55]	
Reason-Phrase  Via  Record-Route  rec-route  From addr-spec tag  To addr-spec tag  Contact  user-info and host port	"OK" same as received in the request  same as received in the request  Same value as received in the request same value as received in the request same value as received in the request same value as received in the request same value as received in the request or any value if missing in the		RFC 3581 [55]	
Record-Route rec-route  From addr-spec tag  To addr-spec tag  Contact user-info and host port	same as received in the request  Same value as received in the request same value as received in the request same value as received in the request same value as received in the request same value as received in the request or any value if missing in the		RFC 3581 [55]	
rec-route  From addr-spec tag  To addr-spec tag  Contact  user-info and host port	same as received in the request  Same value as received in the request same value as received in the request same value as received in the request same value as received in the request or any value if missing in the		RFC 3261 [22]	
From addr-spec tag  To addr-spec tag  Contact  user-info and host port	request  Same value as received in the request same value as received in the request same value as received in the request same value as received in the request or any value if missing in the			101
addr-spec tag  To addr-spec tag  Contact  user-info and host port	Same value as received in the request or any value if missing in the			
tag  To addr-spec tag  Contact  user-info and host port	received in the request same value as received in the request same value as received in the request same value as received in the request or any value if missing in the			
To addr-spec tag  Contact  user-info and host port	same value as received in the request  same value as received in the request same value as received in the request or any value if missing in the			
addr-spec tag  Contact  user-info and host port	same value as received in the request same value as received in the request or any value if missing in the			
addr-spec tag  Contact  user-info and host port	in the request same value as received in the request or any value if missing in the			
Contact  user-info and host port	same value as received in the request or any value if missing in the			
user-info and host port	104000			
port	İ			INVITE- RSP
port	IP address or FQDN			
feature-param	protected server port of UE	as assigned during registration		
Tooliana panami	"+g.3gpp.mcptt"	- regionano.		
	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA
feature-param	"+g.3gpp.icsi-ref= urn:urn- 7:3gpp- service.ims.icsi.mcptt"			140) (1250
	"+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"			MCDATA
feature-param	"audio"			MCPTT OR MCVideo
feature-param	"video"			MCVIDEO
feature-param	"text"			MCDATA
feature-param	"isfocus"			
Call-ID				
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"		1	l
Content-Type			RFC 5621 [58]	INVITE-

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Content-Length	present in case of TCP and when there is a message body		RFC 3261 [22]	
value	(otherwise optional) 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				ļ
MIME-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 described in Table 5.5.3.1.1-2			MCVIDEO
	SDP message as described in Table 5.5.3.1.1-3	FFS		MCDATA
MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-header				
MIME-Content-Type	"application/vnd.3gpp. mcptt-info+xml"			
	"application/vnd.3gpp. mcvideo-info+xml"			MCVIDEO
-	"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		TS 24.379 [9] clause F.1	
	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

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

Information Element   Value/remark   Comment   Reference   Condition	Derivation Path: RFC 3261 [22]	1	_		I <u>a</u>
SIP-Version	Information Element	Value/remark	Comment	Reference	Condition
Status-Code   '200"					
Resord-Route					
Same as received in the request   RFC 3261 [22]   RRC 3261 [23]   RRC 3261 [23]   RRC 3261 [23]   RRC 3261 [23]   RRC 3261 [22]   RRC 3261 [					
Record-Route				DEC 0004 [00]	
Addr-spec(1)				RFC 3581 [55]	
user-info and host pessf.other.com port not present uir-parameters "ir" socious scatcher.com port not present uir-parameters "ir" socious scatcher.com port not present uir-parameters "ir" saddr-spec[3] SIP URI suser-info and host orig@scsct.3gpp.org port not present uir-parameters "ir" saddr-spec[4] SIP URI same address as sent by the UE in the first entry of the Route header of the INVITE not present uir-parameters "ir" saddr-spec[4] SIP URI same address as sent by the UE in the first entry of the Route header of the INVITE not present uir-parameters "ir" second-Route saddr-spec[1] SIP URI suser-info and host P-CSCF address of the SS Mark signed to the UE via NAS signaling or P-CSCF discovery (px_MCPTT_PCSCF_A_URI) port not present uir-parameters "ir" same value as in the request same value as in the request same value as in the request same value as in the request or To-tag assigned by the SS if missing in the request same value as in the request same value	Record-Route			RFC 3261 [22]	
port					
addr-spec 2    SIP URI					
user-info and host   scscf.other.com   port   not present					
Dort					
Unit   Unit					
addr-spec[3] SIP URI user-info and host orig@scscf.3gpp.org port not present uri-parameters "Ir" same address as sent by the UE in the first entry of the Route header of the INVITE port not present uri-parameters "Ir" port not present uri-parameters "Ir" secord-Route  addr-spec[1] SIP URI user-info and host P-CSCF address of the SS Signalling or P-CSCF discovery (px_MCPTT_PCSCF_A URI)  port not present uri-parameters "Ir"  port not present uri-parameters "Ir"  port not present uri-parameters "Ir"  from addr-spec same value as in the request tag same value as in the request request or To-tag assigned by the SS if missing in the request  tag same value as in the request  tag same value as in the request request or To-tag assigned by the SS if missing in the request  Expires  Expires  RFC 3261 [22] SUBSCRI BE-RSP  PUBLISH-RSP  Same value as in the request RFC 3903 [43] BE-RSP, PUBLISH-RSP  Value same value as in the request RFC 3903 [43] RFC 3903 [43] RFC 3903 [43] RFC 3903 [43] RFC 3903 [43] RFC 3909 [43] RFC 3					
user-info and host port not present profit port user-info and host profit p					
port includes a process of the service of the UE via NAS signalling or P-CSCF address as a sating and signature of the SS and signal signature of the UE via NAS signalling or P-CSCF address as signated to the UE via NAS signalling or P-CSCF address as a signature of the UE via NAS signalling or P-CSCF address as a signature of the UE via NAS signalling or P-CSCF address as a signed to the UE via NAS signalling or P-CSCF address as a signed to the UE via NAS signalling or P-CSCF discovery (px MCPTT_PCSCF_A_URI)  port		I .			
uir-parameters     "Ir"       addr-spec[4]     SIP URI       user-info and host     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     "Ir"       Record-Route     SIP URI       addr-spec[1]     SIP URI       user-info and host     P-CSCF address of the SS assigned to the UE via NAS signalling or P-CSCF discovery (px_MCPTT_PCSCF_AURI)       port     not present       uri-parameters     "Ir"       addr-spec     same value as in the request       tag     same value as in the request       tag     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       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] RF-RSP       Expires     RFC 3261 [22] RFC 3903 [43] RF-RSP       Contact     REGISTE R-RSP       feature-param     "+g.3gpp.modet"       "+g.3gpp.modet"     MCVIDEO       "+g.3gpp.modetes as "     MCVIDEO       "+g.3gpp.modetes as "     MCVIDEO       "House as "     MCVIDEO       "House as "     MCVIDEO       "House as "     MCVIDEO       Record Record Record Record R		not present			
addr-spec[4] SIP URI user-info and host same address as sent by the UE in the first entry of the Route header of the INVITE port not present uri-parameters "Ir"  Record-Route  addr-spec[1] SIP URI user-info and host P-CSCF address of the SS same value as in the request of the SS same value as in the request of the SS same value as in the request of the SS same value as in the request of the SS same value as in the request of the same value as in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned by the SS if missing in the request of To-tag assigned to the UE via NAS signalling as a suspensive to the UC via NAS signalling as a suspensive to the UC via NAS signalling as a suspensive to the UC via NAS signalling as a suspensive to the UC via NAS signalling as a suspensive to the UC via NAS signalling as a suspensive to the UC via NAS signalling as a suspensive to the Uc via NAS signalling as a suspensive to the Uc via NAS signalling as a suspensive to the Uc via NAS signalling as a suspensive to the Uc via NAS signalling as a suspensive to the Uc via NAS signall					
user-info and host by the UE in the first entry of the Route header of the INVITE  port		SIP URI			
Description	user-info and host	by the UE in the first entry of the Route	P-CSCF address		
Uri-parameters   "Ir"   Record-Route   RFC 3261 [22]   SUBSCRI   BE-RSP	port				
Record-Route     RFC 3261 [22]     SUBSCRI BE-RSP       addr-spec[1]     SIP URI     P-CSCF address of the SS     P-CSCF address as assigned to the Uvia NAS signalling or P-CSCF discovery (px_MCPTT_PCSCF_AURI)     P-CSCF discovery (px_MCPTT_PCSCF_AURI)     Image: Comparity of the CSCF discovery (px_MCPTT_PCSCF_AURI)     Image: CSCF disco					
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 (px_MCPTT_PCSCF_A_URI)  port  uri-parameters  "Ir"  From  addr-spec  same value as in the request  tag  same value as in the request  To  addr-spec  same value as in the request  RFC 3261 [22] RFC 3903 [43]  BE-RSP, PUBLISH-RSP  Value  same value as in the request  Contact  REGISTE  R-RSP  addr-spec  same value as received in the REGISTER  "+g.3gpp.mcytt"  "+g.3gpp.mcytdeo" "+g.3gp				RFC 3261 [22]	
user-info and host  P-CSCF address of the SS assignal to the UE via NAS signalling or P-CSCF discovery (px_MCPTT_PCSCF_A URI)  port not present uri-parameters "Ir" addr-spec same value as in the request same value as in the request same value as in the request same value as in the request same value as in the request same value as in the request same value as in the request same value as in the request same value as in the request same value as in the request or To-tag assigned by the SS if missing in the request PExpires  Expires  Expires  RFC 3261 [22] SUBSCRI RFC 3903 [43] BE-RSP, PUBLISH-RSP  Value same value as in the request request request request request request request request request respectively. The request reque	addr-spec[1]	SIP URI			BE IXO.
Uri-parameters	user-info and host		assigned to the UE via NAS signalling or P- CSCF discovery (px_MCPTT_PCSCF_A		
Uri-parameters   "Ir"	port	not present			
From addr-spec same value as in the request same value as in the request same value as in the request same value as in the request same value as in the request same value as in the request same value as in the request same value as in the request or To-tag assigned by the SS if missing in the request same value as in the request same value as in the request same value as in the request same value as in the request same value as in the request same value as received in the REGISTER same value as received in the REGISTER same value as received in the REGISTER same value as received in the REGISTER same value same value as received in the REGISTER same value same value as received in the REGISTER same value same value as received in the REGISTER same value same v	uri-parameters				
tag         request same value as in the request         Feature-param         Feature-param         Image: Feature param         Image: Feature param <td>From</td> <td></td> <td></td> <td></td> <td></td>	From				
request  To  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] SUBSCRI RFC 3903 [43] 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.mcvideo" "+g.3gpp.mcvideo" "+g.3gpp.mcvideo" "+g.3gpp.mcvideo" "+g.3gpp.mcvideo" "+g.3gpp.mcvideo" "+g.3gpp.mcvideo" "+g.3gpp.mcvideo" "+g.3gpp.mcvideo" "Hg.3gpp.mcvideo"	addr-spec				
To addr-spec same value as in the request same value as in the request or To-tag assigned by the SS if missing in the request RFC 3903 [43] BE-RSP, PUBLISH-RSP value same value as in the request REGISTE R-RSP addr-spec same value as received in the REGISTER feature-param "+g.3gpp.mcptt" "+g.3gpp.mcvideo" "+g.3gpp.mcvideo" MCVIDEO "+g.3gpp.mcdata.sds" MCDATA	tag				
tag same value as in the request same value as in the request or To-tag assigned by the SS if missing in the request RFC 3261 [22] RFC 3903 [43] BE-RSP, PUBLISH-RSP value same value as in the request REGISTE R-RSP addr-spec same value as received in the REGISTER feature-param "+g.3gpp.mcvideo" "+g.3gpp.mcvideo" MCVIDEO "+g.3gpp.mcdata.sds" MCVIDEO MCDATA	То				
same value as in the request or To-tag assigned by the SS if missing in the request  Expires  RFC 3261 [22] SUBSCRI RFC 3903 [43] BE-RSP, PUBLISH-RSP  Value  same value as in the request  Contact  same value as received in the REGISTER feature-param  "+g.3gpp.mcptt"  "+g.3gpp.mcvideo"  "+g.3gpp.mcdata.sds"  MCVIDEO  MCDATA	addr-spec				
Expires         RFC 3261 [22] RFC 3903 [43]         SUBSCRI BE-RSP, PUBLISH-RSP           value         same value as in the request         REGISTE R-RSP           addr-spec         same value as received in the REGISTER         REGISTE R-RSP           feature-param         "+g.3gpp.mcptt"         MCVIDEO           "+g.3gpp.mcdata.sds"         MCVIDEO	tag	same value as in the request or To-tag assigned by the SS if			
Value         same value as in the request         REGISTE R-RSP           addr-spec         same value as received in the REGISTER         in the REGISTER           feature-param         "+g.3gpp.mcptt"         MCVIDEO           "+g.3gpp.mcdata.sds"         MCDATA	Expires	missing in the request			BE-RSP, PUBLISH-
Contact         REGISTE R-RSP           addr-spec         same value as received in the REGISTER           feature-param         "+g.3gpp.mcptt"           "+g.3gpp.mcvideo"         MCVIDEO           "+g.3gpp.mcdata.sds"         MCDATA	value				
addr-spec         same value as received in the REGISTER           feature-param         "+g.3gpp.mcptt"           "+g.3gpp.mcvideo"         MCVIDEO           "+g.3gpp.mcdata.sds"         MCDATA	Contact				
feature-param         "+g.3gpp.mcptt"         MCVIDEO           "+g.3gpp.mcvideo"         MCDATA	addr-spec				
"+g.3gpp.mcvideo" MCVIDEO "+g.3gpp.mcdata.sds" MCDATA	feature-param				
	Touture param	"+g.3gpp.mcvideo"			
	ovniros				IVICDATA

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Contact	value/remark	Comment	Reference	SUBSCRI BE-RSP
addr-spec				
user-info and host	tsc_MCPTT_PublicSer			
	viceId_A			
	px_MCVideo_PublicSer			MCVIDEO
	viceId_A px_MCData_PublicSer			MCDATA
	viceld_A			WICDATA
	"sip:" &			CONFIG
	tsc_MCX_CMS_Hostna me			
	"sip:" &			GROUPC
	tsc_MCX_GMS_Hostn			ONFIG
port	ame not procept			
port Contact	not present			INVITE-
Contact				RSP
addr-spec				
user-info and host	tsc_MCPTT_PublicSer			
	viceId_A			140) ((2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2
	px_MCVideo_PublicSer viceId_A			MCVIDEO
	px_MCData_PublicSer			MCDATA
	viceId_A			WODATA
port	not present			
feature-param	"audio"			MCPTT
				OR
footing a second	# : -1 "			MCVIDEO
feature-param feature-param	"video" "text"			MCVIDEO MCDATA
Call-ID	lexi			WICDATA
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
generic-param	"3600"			
refresher Supported	"uac"			INVITE-
Cupported				RSP
option-tag	"tdialog"			
option-tag	"norefersub"			
option-tag	"explicitsub"			ļ
option-tag	"nosub"		DEO 4400 [00]	DEEEE
Refer-Sub			RFC 4488 [36]	REFER- RSP
refer-sub-value P-Associated-URI	"false"		RFC 3261 [22]	REGISTE
	CID LID		NFU 3201 [22]	REGISTE R-RSP
addr-spec[1] host	SIP URI px_MCX_SIP_PublicUs			1
11051	erld_A_1			
port	not present			
Service-Route	11, 132		RFC 3261 [22]	REGISTE R-RSP
addr-spec[1]	SIP URI			
host	scscf.3gpp.org			
port	not present			

Derivation Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
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			
	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	FFS		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

# 5.5.2.17.2 SIP 202 (Accepted)

Table 5.5.2.17.2-1: 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	, i		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"			

### 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)** 

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)

Delivery Path: RFC 3261 [22]					
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)

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]	"110"			
warn-agent[1]	any value			
warn-text[1]	"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)** 

Derivation Path: RFC 3261 [22]					
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	value/remark	Comment	RFC 3261 [22]	Condition
SIP-Version	"SIP/2.0"		RFC 3201 [22]	
Status-Code	"401"			
Reason-Phrase	"Unauthorized"			
Via	Same value as		RFC 3261 [22]	
1.0	received in the		111 0 0201 [22]	
	REGISTER message			
То	112010121111100000		RFC 3261 [22]	
addr-spec	Same value as		0 020 . [22]	
•	received in the			
	REGISTER message			
tag	To-tag assigned by the			
	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		DE0 225 : 225 :	
CSeq	Same value as		RFC 3261 [22]	
	received in the			
NADADAL A selle series sels	REGISTER message		DEO 0047 [70]	
WWW-Authenticate			RFC 2617 [72] RFC 3310 [96]	
Deales	ny MCV DamainNana		RFC 3310 [96]	
Realm	px_MCX_DomainName			
algorithm	_Organization_A "AKAv1-MD5"			
qop-value	"auth"			
nonce	Base 64 encoding of			
Honce	RAND and AUTN			
opaque	arbitrary value (to be			
opaque	returned by the UE in			
	subsequent			
	REGISTER)			
Security-Server	, , ,		RFC 3329 [50]	
mechanism-name	"ipsec-3gpp"			
algorithm[1]	px_lpSecAlgorithm			
0 17	(hmac-md5-96 or			
	hmac-sha-1-96)			
spi-c[1]	SPI number of the			
	inbound SA at the			
	protected client port			
spi-s[1]	SPI number of the			
	inbound SA at the			
. [4]	protected server port			
port-c[1]	protected client port of			
port o[1]	SS protected conver port of			
port-s[1]	protected server port of			
Encrypt-algorithm[1]	SS des-ede3-cbc or aes-			
Encrypt-aigontfiff[1]	cbc			
q[1]	"0.9"			
mechanism-name[2]	"Ipsec-3gpp"			
algorithm[2]	Algorithm not selected			
aigonaini <sub>[2]</sub>	by px_lpSecAlgorithm			
	(hmac-sha-1-96 or			
	hmac-md5-96)			
spi-c[2]	SPI number of the			
-1[-1	inbound SA at the			
	protected client port			
spi-s[2]	SPI number of the			
	inbound SA at the			
	protected server port			
port-c[2]	protected client port of	<del></del>		
	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)

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	"0"	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:

**Table 5.5.3.1.0-1: Conditions** 

Condition	Explanation
INITIAL_SDP_OFFER	SDP message is an initial offer
SDP_OFFER	SDP message is an offer
SDP_ANSWER	SDP message is an Answer
FIRST_SDP_FROM_UE	First SDP message sent by the UE within the session
FIRST_SDP_FROM_SS	First SDP message sent by the SS within the session
IMPLICIT_GRANT_REQUESTED	An implicit grant is requested by the user
IMPLICIT_FLOOR_GRANTED	An implicit grant shall be granted by the SS
ICE_SUPPORTED	The sender of the SDP messages is expected to support ICE (Interactive Connectivity Establishment; RFC 5245 [115])
WITHOUT_MEDIACONTROL	SDP message shall not contain a media description for media control (e.g. in case on-demand private call without floor control)
WITHOUT_SECURITY	In case of private call: SDP message shall not contain any "a=key-mgmt" attribute for end-to-end security

# 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:	- Graon oman	Johnnon	1.010101100	- Containion
Protocol Version	"0"	v= line		
Origin	Same o=line as in the	o= line		
J	previous SDP message			
	sent by the UE except			
	that sess-version is			
	incremented by one			FIDOT OD
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>, <nettype>, <addrtype>, and <unicast-address> forms a globally unique</unicast-address></addrtype></nettype></sess-id></username>		
		identifier for the session		
sess-version	any allowed value			
nettype	"IN" "IP4" or "IP6"			
Addrtype	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			
Bandwidth		b= line		
bwtype	"AS"	bwtype:bandwidth		
bandwidth	any allowed value		TS 26.114 [64] Table K.6	
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Media descriptions media description		m= line	RFC 4867 [59]	
media description		media = audio	111 0 4007 [38]	
media	"audio"	ouiu – uuuio		
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			

Derivation Path: RFC 4566 [27] Information Element	Valualramark	Comment	Deference	Canditia
Bandwidth	Value/remark	Comment b= line	Reference	Condition
bwtype	"AS"	b= line bwtype:bandwidth		
bandwidth	any allowed value	Dwtype.bandwidth	TS 26.114 [64]	
banawan	arry anowed value		Table K.6	
bwtype	"RS"		RFC 3556	
			[113]	
bandwidth	any value if present			
bwtype	"RR"		RFC 3556	
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			[113]	
bandwidth media attribute	any value if present	- Un-		
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"	attribute = rtprriap		
payload type	same value as format			
payload typo	parameter of the "fmtp" attribute			
encoding name	"AMR-WB"			
clock rate	16000		RFC 4867 [59]	
5,550, 14,5	.0000		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		
media attribute	optional	a= line attribute =sendrecv Indicates send and receive mode being activated		
sendrecv		Parameter 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]	ICE_SUPP ORTED
candidate	+	candidate for RTP	1	

Information Element	Value/remark	Comment	Reference	Conditio
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		
	speech media's c= line			
	or in the session's c=			
	line if the speech media			
	does not have a c= line			
port	same port number as in			
and type	the m= line for speech "host"			
cand-type nedia attribute	HUSL	a=line	RFC 5245	ICE_SUF
neula attribute		a=iine attribute="candidate"	[115]	ORTED
candidate		candidate for RTCP	LIIOJ	OILIED
foundation	any value	Sandidate for ICTO		
component-id	2	according to RFC 5245		
component id	_	[115] clause 4.1.1.1		
transport	"UDP"			
priority	any value			
connection-address	same IP address as in	default candidate		
	speech media's c= line			
	or in the session's c=			
	line if the speech media			
	does not have a c= line			
port	same port number as in			
	the m= line for speech			
cand-type	incremented by 1 "host"			
cand-type nedia attribute	11091	a= line		PRIVATE
		attribute = key-mgmt		CALL AN SDP_OF ER AND NOT WITHOU _SECUR Y
key-mgmt			TS 24.379 [9]	1
, ,			clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2A		RFC 4567 [44]	
nedia description		m= line		NOT
•		media = application		WITHOU _MEDIAG
		SDP media-level		ONTROL
		section for a media-		
		floor control entity		
media	"application"			
port	any allowed value	The port for the media- floor control entity		
proto	"udp"			
fmt	"MCPTT"			
Connection Data	present if session	c= line		
	description does not			
	contain a c=line;			
	optional otherwise			
nettype	"IN"			
Addrtype	"IP4" or "IP6"			
	depending on IP address"			
connection-address	IP address of the UE		I -	1

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
media attribute		a= line		
		attribute = fmtp		
fmtp				
format	"MCPTT"			
format specific parameters				SDP_OFF
				ER,
				INITIAL_S
				DP_OFF
	ti l	Danasa tan kasasa	TO 04 000 [40]	R
mc_queueing	optional	Parameter has no	TS 24.380 [10]	
mc_priority	any allowed value	Value Any integer value in the	cl. 12.1.2.3 TS 24.380 [10]	
mc_phonty	any allowed value	range of 1255	cl. 12.1.2.3	
mc_granted	not present	range or 1255	CI. 12.1.2.3	
mc_gramed	present	Parameter has no	TS 24.380 [10]	INITIAL_S
	present	value	cl. 12.1.2.3	DP_OFF
		Value	01. 12.1.2.0	R
mc_implicit_request	not present			
	present	Parameter has no	TS 24.380 [10]	IMPLICIT
	1.	value	cl. 12.1.2.3	GRANT_
				EQUEST
				D
format specific parameters				SDP_AN
				WER
mc_queueing	optional	Parameter has no	TS 24.380 [10]	
		value	cl. 12.1.2.3	
mc_priority	same value as in the		TS 24.380 [10]	
	offer		cl. 12.1.2.3 TS 24.380 [10]	
mc_granted	not present		cl. 12.1.2.3	
mc_implicit_request	not present		TS 24.380 [10]	
mc_implicit_request	not present		cl. 12.1.2.3	
mc_ssrc	not present		TS 24.380 [10]	
	not procent		cl. 12.1.2.3	
media attribute		a=line	RFC 5245	ICE_SUF
		attribute="candidate"	[115]	ORTED
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	defects against the		
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			
-	the m= line for			
	application			
cand-type	"host"			

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.

#### - 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:				

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
Protocol Version	"O"	v= line	1.CICICIO	Condition
Origin	Same o=line as in the	o= line		
Origin	previous SDP message sent by the UE except that sess-version is	o= line		
	incremented by one			FIDOT OD
Origin		o= line		FIRST_SD P_FROM_ UE
username	px_ MCVideo _User_A_ID	Username of client		
sess-id	any allowed value	A numeric string such that the tuple of <username>, <sess- id="">, <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			
Bandwidth		b= line		
bwtype	"AS"	bwtype:bandwidth		
bandwidth	any allowed value	zwypo.zanaman	TS 26.114 [64] Table K.6	
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Media descriptions				
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"			

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
connection-address	IP address of the UE			
Bandwidth		b= line		
bwtype	"AS"	bwtype:bandwidth		
bandwidth	any allowed value		TS 26.114 [64] Table K.6	
bwtype	"RS"		RFC 3556 [113]	
bandwidth	any value if present			
bwtype	"RR"		RFC 3556 [113]	
bandwidth	any value if present			
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		
media attribute	optional	a= line attribute =sendrecv Indicates send and receive mode being activated		
sendrecv		Parameter has no value		
media attribute		a= line attribute = key-mgmt		PRIVATE- CALL
key-mgmt			TS 24.281 [86] clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2A	Use condition MCVIDEO	RFC 4567 [44]	

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
media description	Varao/Tomark	m= line	11010101100	- Containen
a.u accop.iici.		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	present if session	c= line		
	description does not			
	contain a c=line;			
n atti in a	optional otherwise			
nettype Addrtype	"IP4" or "IP6"			
Additype	depending on IP			
	address"			
connection-address	IP address of the UE			
Bandwidth	add.000 01 1.10 02	b= line		
bwtype	"AS"	bwtype:bandwidth		
bandwidth	any allowed value		TS 26.114 [64]	
	,		Table K.6	
bwtype	"RS"		RFC 3556	
			[113]	
bandwidth	any value if present			
bwtype	"RR"		RFC 3556	
			[113]	
bandwidth	any value if present	<u> </u>		
media attribute		a= line		
		attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	""			
encoding name	"H.264"	1	DEC 4007 (50)	
clock rate			RFC 4867 [59]	
anading parameter	"" if present	Channel number	clause 8.3	
encoding parameter media attribute	"" if present	Channel number a= line		PRIVATE-
media attribute				CALL
		attribute = key-mgmt		OALL
key-mgmt			TS 24.281 [86]	
Koy mgmt			clause 6.2.1	
mikey	MIKEY-SAKKE	Use condition	RFC 4567 [44]	
···· <b>,</b>	I_MESSAGE as	MCVIDEO		
	specified in Table	MICVIDLO		
	1 -1	Ì	Ī	

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
media description	value/rellial K	m= line	iveletetice	Condition
modia document		media = application		
		SDP media-level		
		section for a media-		
		floor control entity		
media	"application"		3GPP TS 24.581 [88]	
			clause 12	
port	any allowed value	The port for the media-	oladoo 12	
Para		floor 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	present if session	c= line		
	description does not			
	contain a c=line;			
	optional otherwise			
nettype	"IN" "IP4" or "IP6"			
Addrtype	depending on IP			
	address"			
connection-address	IP address of the UE			
media attribute		a= line		
		attribute = fmtp		
fmtp			3GPP	
			TS 24.581 [88]	
			clause 12, clause 14	
format	"MCVideo"		5/4400 17	
format specific parameters				SDP_OFF
				ER,
				INITIAL_S
				DP_OFFE R
mc_queueing	optional	Parameter has no	3GPP	11
	\$   - 1 - 2 - 1 - 2   1   1   1   1   1   1   1   1   1	value.	TS 24.581 [88]	
			clause 12,	
		Shall include the	clause 14	
		"mc_queueing" fmtp		
		attribute in SDP offers		
		when queueing of Transmission request is		
		supported.		1

erivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
mc_priority		Any integer value in the	3GPP	Condition
тіс_рпопіту	not present or	range of 1255	TS 24.581 [88] clause 12,	
	any allowed value	Shall include the	clause 12,	
		"mc_priority" fmtp	Clause 14	
		attribute when a		
		transmission priority		
		different than the		
		default priority is		
		required.		
mc_reception_priority	not present	Any integer value in the	3GPP	
<u>-</u>	or any allowed value	range of 0255	TS 24.581 [88] clause 12,	
	any anowed value	Shall include the	clause 14	
		"mc_reception_priority"	Clause 14	
		fmtp attribute when a		
		reception priority		
		different than the		
		default reception		
		priority is required.		
mc_granted	not present	priority to required.		
mo_grantou	present	Parameter has no	3GPP	INITIAL_S
	present	value	TS 24.581 [88]	DP_OFFE
		value	clause 12,	R
			clause 14	10
mc_implicit_request	not present		Clause 14	
mo_mphon_request	present	Parameter has no	3GPP	IMPLICIT
	procent	value	TS 24.581 [88]	GRANT_F
		value	clause 12,	EQUESTE
			clause 14	D
format specific parameters			Jiaaco I I	SDP_ANS
				WER
mc_queueing	optional	Parameter has no	3GPP	
0		value	TS 24.581 [88]	
			clause 12,	
			clause 14	
mc_priority	same value as in the		3GPP	
	offer		TS 24.581 [88]	
			clause 12,	
			clause 14	
mc_reception_priority	not present	Any integer value in the	3GPP	
	or	range of 0255	TS 24.581 [88]	
	any allowed value		clause 12,	
		Shall include the	clause 14	
		"mc_reception_priority"		
		fmtp attribute when a		
		reception priority		
		different than the		
		default reception		
		priority is required.		
mc_granted	not present		3GPP	
-	•		TS 24.581 [88]	
			clause 12,	
			clause 14	
mc_implicit_request	not present		3GPP	
•	•		TS 24.581 [88]	
			clause 12,	
			clause 14	

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:	- Liver official			22114111011
Protocol Version	"0"	v= line		
Origin	"	o= line		
username	px_MCDATA_ID_User	Username of client		
acomanic	_A			
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		
	any allawad valva	session.		
sess-version	any allowed value			
nettype	"IP4" or "IP6"			
Addrtype				
	depending on IP address"			
unicast-address	IP address of the UE	IP address assigned at		
41110431-44411533	ii address of the or	initial registration		
Session Name	at least one UTF-8-	s= line		
	encoded character, or if			
	no name is given, a			
	single empty space			
Session Information	any allowed value	i= <session description=""></session>		
		The "i=" field is		
		intended to provide a		
		free-form human-		
		readable description of		
		the session or the		
		purpose of a media		
		stream. It is not suitable		
		for parsing by		
Connection Data	not required if included	automata. c= line		
Connection Data	in all media	C= III le		
nettype	"IN"			
Addrtype	"IP4" or "IP6"			
, taartype	depending on IP			
	address"			
connection-address	IP address of the UE			
Bandwidth		b= line		
bwtype	"AS:"	bwtype:bandwidth		
bandwidth	any allowed value		TS 26.114 [64]	
			Table K.6	
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Media descriptions				
media description		m= line	RFC 4867 [59]	
		media = message	TS 24.282 [31]	
media	"message"	The Angus to t t		
port	any allowed value	The transport port to which the media stream		
proto	"TCP/MSRP "	is sent		
proto fmt	1CP/MSRP			
media title	"message"	i= line		
Connection Data	present if session	c= line		
Connection Data	description does not	0- III IC		
	contain a c=line;			
		i		
	optional otherwise			

Information Element	Value/remark	Comment	Reference	Condition
Addrtype	"IP4" or "IP6"			
	depending on IP			
	address"			
connection-address	IP address of the UE			
media attribute		a= line		
		attribute = sendonly		
sendonly		No parameters		
		associated with this line		
media attribute		a= line		
		attribute = path		
path	px_MSRP_URI_A_ID	attribute containing its	TS 24.282 [31]	
	·	own MSRP URI.		
		An example:		
		msrp://mcdata.example		
		.com:7654/abcde1; tcp		
media attribute		a= line		
		attribute = accept-types		
accept-types	"application/vnd.3gpp.			
	mcdata-signalling			
	application/vnd.3gpp.m			
	cdata-payload"			
media attribute		a= line		
		attribute = setup		
role	"actpass"			
media attribute		a= line		MCD_1to1
		attribute = key-mgmt		
key-mgmt			TS 24.379 [9]	
			clause 6.2.1	
mikey	MIKEY-SAKKE	Use condition MCDATA	RFC 4567 [44]	
	I_MESSAGE as			
	specified in Table			
	5.5.9.1-2A			

# 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 [27]					
Information	Value/remar	Comment	Reference	Condition	
Element	k				
Session					
description:					
Protocol Version	"0"	v= line			
Origin	Same o=line	o= line			
	as in the				
	previous SDP				
	message sent				
	by the SS				
	except that sess-version				
	is				
	incremented				
	by one				
Origin		o= line		FIRST_SDP_FROM_SS	
username	"_"	"-" indicating the concept of			
		user IDs not being supported			
sess-id	"12345678"	A numeric string such that			
-	1	the tuple of <username>,</username>			
		<sess-id>, <nettype>,</nettype></sess-id>			
		<addrtype>, and <unicast-< td=""><td></td><td></td></unicast-<></addrtype>			
		address> forms a globally			
		unique identifier for the			
		session.			
sess-version	"12345678"				
nettype	"IN"				
Addrtype	"IP4" or "IP6"	This depends on the unicast			
	depending on	address of the UE			
	IP address"				
unicast-address	IP address of				
Cassian Nama	the SS	a line			
Session Name	" "	s= line			
		single empty space indicating no session name			
Bandwidth		b= line			
	"AS"	bwtype:bandwidth			
bwtype bandwidth	"38"	kilobits per second;	TS 26.114 [64		
Danuwium	30	Maximum AMR-WB at 23.85	] Table K.6		
		kbps but limit to 12.65 kbps	Table K.o		
		plus overhead			
Time description		pido everrioda			
Timing		t= line			
start-time	"0"	-			
stop-time	"0"				
Media					
descriptions					
media		m= line	RFC 4867 [59]		
description		media = audio			
media	"audio"				
port	port number	The transport port to which	RFC 6335 [63]		
	assigned by	the media stream is sent	clause 6		
	the SS (even				
	integer)				
proto	"RTP/SAVP"				
fmt	"99"	RTP/SAVP payload type for AMR-WB is dynamic		INITIAL_SDP_OFFER	
	value for				
	AMR-WB as				
	used in initial				
	offer				
media title	"speech"	i= line			
Connection Data		c= line			
nettype	"IN"				
	•		•		

Derivation Path: RFC			T -	
Information Element	Value/remar k	Comment	Reference	Condition
Addrtype	"IP4" or "IP6"	This depends on the		
	depending on IP address"	connection address		
connection- address	IP address of the SS			
Bandwidth	110 00	b= line		
bwtype	"AS"	bwtype:bandwidth		
bandwidth	38		TS 26.114	
la controlla de	"RS"		[64] Table K.6 RFC 3556	
bwtype	KS		[113]	
bandwidth	0			
bwtype	"RR"		RFC 3556 [113]	
bandwidth	2000		[]	
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"99"			INITIAL SDP OFFER
F 1.5/12 11 3/F 2	value for AMR-WB as used in initial offer			
encoding name	"AMR-WB"			
clock rate	16000		RFC 4867 [59]	
encoding parameter	"1"	Channel number	clause 8.3	
media attribute		a= line attribute = fmtp		
fmtp				
format	"99"			INITIAL_SDP_OFFER
	value for AMR-WB as used in initial offer			
format specific parameters	0.1.0.	Parameters of WB-AMR codec		
mode-change-	"2"	To be able to interoperate	RFC 4867 [59]	
capability		fully with gateways to circuit switched networks	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		PRIVATE-CALL AND SDP_OFFER AND NOT 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		RFC 4567 [44]	

Derivation Path: RFC 4566 [27]					
Information Element	Value/remar k	Comment	Reference	Condition	
media description		m= line media = application		NOT WITHOUT_MEDIACONTROL	
		SDP media-level section for a media-floor control entity			
media	"application"				
port	port number assigned by the SS being different than the port number of the audio channel (RTP) and its associated control channel (RTCP)"	The port for the media-floor control entity			
proto	"udp" "MCPTT"				
fmt Connection Data	NICPTI	c= line			
nettype	"IN"	C- IIIIC			
Addrtype	"IP4" or "IP6" depending on IP address	This depends on the connection address			
connection- address	IP address of the SS				
media attribute	110 00	a= line attribute = fmtp			
fmtp					
format	"MCPTT"				
format specific parameters				SDP_OFFER	
mc_queueing	Present	Parameter has no value	TS 24.380 [10 ] cl. 12.1.2.3		
mc_priority	"3"	"3" is the value of the <user- priority&gt; element for user A in the MCPTT Group Configuration (Table 5.5.7.1- 1)</user- 	TS 24.380 [10 ] cl. 12.1.2.3 and cl. 143.3		
mc_granted	not present		TS 24.380 [10 ] cl. 12.1.2.3		
mc_implicit_reques	not present		TS 24.380 [10 ] cl. 12.1.2.3		
format specific parameters			-	SDP_ANSWER	
mc_queueing	present if included in the offer	Parameter has no value	TS 24.380 [10 ] cl. 12.1.2.3		
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&gt; 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-priority- </user- 	TS 24.380 [10 ] cl. 12.1.2.3 and cl. 14.3.3		

Derivation Path: RFC	4566 [27]			
Information Element	Value/remar k	Comment	Reference	Condition
mc_granted	not present		TS 24.380 [10 ] cl. 12.1.2.3	
	present	Parameter has no value	TS 24.380 [10 ] cl. 12.1.2.3	IMPLICIT_FLOOR_GRANTED
mc_implicit_reques	not present		TS 24.380 [10 ] cl. 12.1.2.3	
	present	Parameter has no value	TS 24.380 [10 ] cl. 12.1.2.3	IMPLICIT_GRANT_REQUESTE D
mc_ssrc	not present		TS 24.380 [10 ] cl. 12.1.2.3	
	same value as in the offer if provided in the offer and there is no collision with the value used by the SS; otherwise value assigned by the SS		TS 24.380 [10 ] cl. 12.1.2.3	IMPLICIT_GRANT_REQUESTE D

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:				
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	px_MCVideo_ID_User_ B	Username of client sending message		
sess-id	"12345678"	A numeric string such that the tuple of <username>, <sess- id="">, <nettype>,  <addrtype>, and  <unicast-address>  forms a globally unique  identifier for the  session.</unicast-address></addrtype></nettype></sess-></username>		
sess-version	"12345678"			
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	"_"	s= line	<u> </u>	

Information Element	Value/remark	Comment	Reference	Condition
Bandwidth		b= line		
bwtype	"AS:"	bwtype:bandwidth		
bandwidth	"38"	kilobits per second; Maximum AMR-WB at 23.85 kbps but limit to 12.65 kbps plus overhead	TS 26.114 [64] Table K.6	
Time description				
Timing	<u> </u>	t= line		
start-time	"0"	t= iii ie		
	"0"			
stop-time	0	_		
Media descriptions		<del>                                     </del>	D=0 : ::	
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/AVP"			
fmt	"99"	RTP/AVP payload type for AMR-WB is dynamic		
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			
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"99"			
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				
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	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	<del>  -</del> -	a= line		
	"240"	attribute =maxptime		
maxptime	240	maximum packet time		
media attribute		a= line		PRIVATE
key-mgmt		attribute = key-mgmt	TS 24.281 [86]	CALL
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2	Use condition MCVIDEO	clause 6.2.1 RFC 4567 [44]	

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Conditio
media description		m= line		
		media = video		
		000 1: 1 1		
		SDP media-level section for a media-		
		transmission control		
		entity		
media	"video"	Criaty		
port	port number of the	The port for the media-		
•	audio stream	transmission control		
	incremented by 2	entity		
	(resulting in even			
	integer)	11. 5.		
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"	- cycloniii		
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"	021		
Addrtype	"IP4" or "IP6"			
71	depending on IP			
	address			
connection-address	IP address of the SS			
media attribute		a= line		
rtnman	"rtnman"	attribute = rtpmap		
rtpmap payload type	"rtpmap"			
encoding name	"H.264"			
clock rate			RFC 4867 [59]	
			clause 8.3	
encoding parameter	"" if present	Channel number		
media attribute		a= line		PRIVATE
		attribute = key-mgmt		CALL
key-mgmt			TS 24.281 [86]	
miltou	MIZEY CARRE	TT	clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as	Use condition	RFC 4567 [44]	
	specified in Table	MCVIDEO		
	5.5.9.1-2			
media description	0.0.0.1 2	m= line		
a.a.aconpuon		media = application		
		application		
		SDP media-level		
		section for a media-		
		floor control entity		
media	"application"	section for a media-		

Derivation Path: RFC 4566 [27]	\/a	Commerci	Deference	Condition
Information Element	Value/remark	Comment	Reference	Condition
port	port number assigned by the SS being different than the port number of the audio and video channels (RTP) and their associated control	The port for the media- floor control entity		
proto	channels (RTCP)"			
proto	"udp" "MCVideo"			
fmt Connection Data	MCVIdeo	o line		
	"IN"	c= line		
nettype 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	"MCVideo"			
format specific parameters				SDP_OFF ER
mc_queueing	Present	Parameter has no value	3GPP TS 24.581 [88] clause 12, clause 14	
mc_priority	"5"	Any integer value in the range of 1255	3GPP TS 24.581 [88] clause 12, clause 14	
mc_granted	not present	Parameter has no value	3GPP TS 24.581 [88] clause 12, clause 14	
mc_implicit_request	Present	Parameter has no value	3GPP TS 24.581 [88] clause 12, clause 14	
mc_reception_priority"	not present		3GPP TS 24.581 [88] clause 12, clause 14	
format specific parameters				SDP_ANS WER
mc_queueing	Present	Parameter has no value	3GPP TS 24.581 [88] clause 12, clause 14	
mc_priority	"5"	Any integer value in the range of 1255	3GPP TS 24.581 [88] clause 12, clause 14	
mc_granted	not present			
	present	Parameter has no value	3GPP TS 24.581 [88] clause 12, clause 14	IMPLICIT_ FLOOR_G RANTED
mc_implicit_request	Present	Parameter has no value		
			3GPP TS 24.581 [88] clause 12, clause 14	IMPLICIT_ GRANT_R EQUESTE D

Derivation Path: RFC 4566 [27]				
Information Element	Value/remark	Comment	Reference	Condition
mc_reception_priority"	not present or "10"	No present if not present in the SDP offer. If present in the SDP offer, then the arbitrarily chosen value of "10 should be used	3GPP TS 24.581 [88] clause 12, clause 14	

Table 5.5.3.1.2-3: SDP Message from the SS for MCData

Derivation Path: RFC 4566 [27]	Volume	0	Deference	0
Information Element	Value/remark	Comment	Reference	Condition
Session description:	HO!!			
Protocol Version	"0"	v= line		
Origin	ACDATA ID Haar	o= line		
username	px_MCDATA_ID_User _B	Username of client		
sess-id	"12345678"	A numeric string such that the tuple of <username>, <sess- id="">, <nettype>, <addrtype>, and <unicast-address> forms a globally unique identifier for the session.</unicast-address></addrtype></nettype></sess-></username>		
sess-version	"12345678"			
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address			
unicast-address	IP address of the SS			
Session Name	"_"	s= line		
Session Information	"message"	i= <session description=""> The "i=" field is intended to provide a free-form human- readable description of the session or the purpose of a media stream. It is not suitable for parsing by automata.</session>		
Connection Data	not required if included in all media	c= line Included if the media plane control channel uses a different IP address than other media described in the SDP		
nettype	"IN"	CDI		
Addrtype	"IP4" or "IP6" depending on IP address			
connection-address	IP address of the SS			
Bandwidth		b= line		
bwtype bandwidth	"AS:" "38"	bwtype:bandwidth kilobits per second; Maximum AMR-WB at 23.85 kbps but limit to 12.65 kbps plus overhead	TS 26.114 [64] Table K.6	
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Media descriptions				
media description		m= line media = message	RFC 4867 [59] TS 24.282 [31]	
media	"message"		[]	
port	"49152"	The transport port to which the media stream is sent		
proto	"TCP/MSRP "			
fmt	66 <del>***</del> ****			
media title	"message"	i= line		

Information Element	Value/remark	Comment	Reference	Condition
Connection Data		c= line		
		Included if the media		
		plane for audio uses a		
		different IP address		
		than other media		
		described in the SDP		
nettype	"IN"			
Addrtype	"IP4" or "IP6"			
	depending on IP			
	address			
connection-address	IP address of the SS			
media attribute		a= line		
		attribute = recvonly		
recvonly		No parameters		
•		associated with this line		
media attribute		a= line		
		attribute = path		
path	px_MSRP_URI_SS_ID	attribute containing its	TS 24.282 [31]	
		own MSRP URI.		
		An example:		
		msrp://mcdata.example		
		.com:7654/abcde1; tcp		
media attribute		a= line		
		attribute = accept-types		
accept-types	"application/vnd.3gpp.			
	mcdata-signalling			
	application/vnd.3gpp.m			
	cdata-payload"			
media attribute	•	a= line		
		attribute = setup		
role	"actpass"			
media attribute		a= line		MCD_1to1
		attribute = key-mgmt		
key-mgmt			TS 24.379 [9]	
			clause 6.2.1	
mikey	MIKEY-SAKKE	Use condition MCDATA	RFC 4567 [44]	
•	I_MESSAGE as		' '	
	specified in Table			
	5.5.9.1-2A			

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:	value/leillaik	Comment	iveteteting.	Condition
Protocol Version	"0"	v= line		
	0	o= line		+
Origin	II_II	o= line		1
username	_	A		1
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		
	any allawad valva	session.		1
sess-version	any allowed value			
nettype addrtype	"IP4"	"IP4" or "IP6"		
unicast-address	px_MCPTT_IP_Connec	IP4 01 IP6		
	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			1
Time description				1
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Media descriptions				
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	эрссоп	a= line		
dia atti isatt		attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"99"			
encoding name	"AMR-WB"			
clock rate	16000			
encoding parameter	"1" if present	Channel number		1
media attribute	p. 000111	a= line		
		attribute = fmtp		
fmtp	"fmtp"			
format	the value given in fmt in			
	the audio media description			
format specific parameters	Goodipaon	Parameters of WB- AMR codec		
mode-change-capability	"2"	To be able to		1
mode-change-capability		interoperate fully with		
		gateways to circuit		
		switched networks		
max-red	"0"	No redundancy will be		1
max rou	1	used		

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"	11		
port	any allowed value	Set to a port number for		
r	, , , , , , , , , , , , , , , , , , , ,	media-floor control		
		entity of the MCPTT		
		group		
proto	"udp"	9.5%		
fmt	"MCPTT"			
media attribute		a= line		
		attribute = fmtp		
fmtp				
format	"MCPTT"			
format specific parameters				
mc_queueing	optional	Parameter has no		
	op messen	value		
mc_priority	not present	Any integer value in the		
<u>-</u> py	or	range of 1255		
	any allowed value	1		
mc_granted	present	Parameter has no		
o_g.aoa	p. ccc	value		
mc_implicit_request	present	Parameter has no		
<u>-</u> po.ioquoot	p. ccc	value		
media attribute		a= line		
modia attributo		attribute = key-mgmt		
key-mgmt		l l l l l l l l l l l l l l l l l l l		
mikey	MIKEY-SAKKE			
	I_MESSAGE as			
	specified in Table			
	5.5.9.1-2			

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="">, <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"	"IP4" or "IP6"			
unicast-address	px_MCVideo_IP_Conn ectionAddressAll				
Session Name	"_"	s= line	•		
Connection Data		c= line	•		

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
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	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		
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		

Derivation Path: RFC 4566 [27]				
Information Element	Value/remark	Comment	Reference	Condition
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 SDP		
nettype	"IN"			
addrtype	"IP4"			
connection-address	px_MCVideo_IP_Conn ectionAddressApp			
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"H.264"			
encoding name clock rate	H.204		RFC 4867 [59] clause 8.3	
encoding parameter	"" if present	Channel number	ciause 6.5	
media attribute		a= line attribute = fmtp		
fmtp			3GPP TS 24.581 [88] clause 12, clause 14	
format	"MCVideo"			
format specific parameters				
mc_queueing	optional	Parameter has no value.  Shall include the "mc_queueing" fmtp attribute in SDP offers when queueing of Transmission request is supported.	3GPP TS 24.581 [88] clause 12, clause 14	

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
mc_priority	not present	Any integer value in the	3GPP	Condition
mo_priority	or	range of 1255	TS 24.581 [88]	
	any allowed value		clause 12,	
		Shall include the	clause 14	
		"mc_priority" fmtp attribute when a		
		transmission priority		
		different than the		
		default priority is		
		required.		
mc_reception_priority	not present	Any integer value in the	3GPP	
	or	range of 0255	TS 24.581 [88]	
	any allowed value		clause 12,	
		Shall include the	clause 14	
		"mc_reception_priority" fmtp attribute when a		
		reception priority		
		different than the		
		default reception		
		priority is required.		
mc_granted	present	Parameter has no	3GPP	
		value	TS 24.581 [88]	
		Shall include the	clause 12, clause 14	
		"mc_granted" fmtp	Clause 14	
		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		
		request.		
mc_implicit_request	present	Parameter has no	3GPP	
		value	TS 24.581 [88]	
		Shall include the	clause 12,	
		"mc_implicit_request"	clause 14	
		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		
		3GPP 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		PRIVATE-
·		attribute = key-mgmt		CALL
key-mgmt		Key Management	TS 24.281 [86]	
		attribute field in the	clause 6.2.1	
		media and session		
		level.		

Information Element	Value/remark	Comment	Reference	Condition
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		
		media = application		
media	"application"			
port	any allowed value	Set to a port number for		
		media-floor control		
		entity of the MCVideo		
		group		
proto	"udp"			
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		
	any allowed value			
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			
	5.5.9.1-2A			

Table 5.5.3.1.3-3: SDP Message from the UE - Off-network for MCData

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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:	Valuo/Tolliarik	Gommont	11010101100	Condition
Protocol Version	"0"	v= line		
Origin		o= line		
username	и_и			
sess-id	"12345678"	A numeric string such		
3633-Iu	12943070	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		1
nettype	"IN"			1
addrtype	"IP4"	"IP4" or "IP6"		1
connection-address	px_MCPTT_IP_Connec	Set to the multicast IP		†
connection address	tionAddressAll	address of the MCPTT		
	lion/ (ddi coo/ tii	group		
Bandwidth		b= line		
bwtype	"AS:"	bwtype:bandwidth		
bandwidth	any allowed value	Swtypo.banawiatii		
Time description	arry anowed value			
Timing		t= line		
start-time	"0"	t= iiiic		
stop-time	"0"			
Media descriptions				
media description		m= line		
media description		media = audio		
media	"audio"	Illedia – addio		
port	"49152"	Set to a port number for		
port	49132	MCPTT speech of the		
		MCPTT group		
proto	"RTP/AVP"	Wei i i giodp		
proto fmt	"99"	Indicating RTP payload		
IIII	99	type numbers		
media title	"speech"	i= line		
media attribute	эрссоп	a= line		+
media atti ibute		a= line attribute = rtpmap		
rtnman	"rtpmap"	αιτιραίο = πριπαρ		+
rtpmap	"99"			+
payload type	"AMR-WB"			+
encoding name				+
clock rate	16000	Channel		+
encoding parameter	"1" if present	Channel number		1
media attribute		a= line		
fina tin	Ilfore to II	attribute = fmtp		1
fmtp	"fmtp"			1
format	"99"			+
format specific parameters		Parameters of WB- AMR codec		
mode-change-capability	"2"	To be able to		+
тюче-спапуе-саравшу	4			
		interoperate fully with		
		gateways to circuit switched networks		
may rod	"0"			+
max-red	١٠	No redundancy will be		
				•
media attribute		used a= line		

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			1

Table 5.5.3.1.4-2: SDP Message from the SS - Off-network for MCVideo

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="">, <nettype>, <addrtype>, and <unicast-address> forms a globally unique identifier for the session.</unicast-address></addrtype></nettype></sess-></username>		
sess-version	"12345678"			
nettype	"IN"			
addrtype	"IP4"			
unicast-address	px_MCVideo_IP_Conn ectionAddressAll			
Session Name	"-"	s= line		
Connection Data		c= line		
nettype	"IN"			
addrtype	"IP4"	"IP4" or "IP6"		

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
connection-address	px_MCVideo_IP_Conn	Set to the multicast IP	I/EIEIEIICE	Condition
connection-address	ectionAddressAll	address of the		
	Collorn (darecon in	MCVideo group		
Bandwidth		b= line		
bwtype	"AS:"	bwtype:bandwidth		
bandwidth	any allowed value	5wtypo.banawiati1		
Time description	any anowed value			
Timing		t= line		
start-time	"0"	t- iiile		
stop-time	"0"			
Media descriptions	0			
media description		m= line		
media description		media = audio		
media	"audio"			
port	"49152"	Set to a port number for		
F	10.10=	MCVideo speech of the		
		MCVideo group		
proto	"RTP/AVP"			
fmt	"99"	Indicating RTP payload		
		type numbers		
media title	"speech"	i= line		
media attribute	56000.	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	i ii present	a= line		
media attribute		attribute = fmtp		
fmtp	"fmtp"	,		
format	"99"			
format specific parameters		Parameters of WB-		
		AMR codec		
mode-change-capability	"2"	To be able to		
gg.	-	interoperate fully with		
		gateways to circuit		
		switched networks		
max-red	"0"	No redundancy will be		
		used		
media attribute		a= line		
-		attribute =ptime		
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		
		entity		
media	"video"			
port	any allowed value	The port for the media-		
•		transmission control		
		entity		

Derivation Path: RFC 4566 [27]				
Information Element	Value/remark	Comment	Reference	Condition
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 SDP		
nettype	"IN"			
addrtype	"IP4"			
connection-address	px_MCVideo_IP_Conn ectionAddressApp			
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"H.264"			
encoding name clock rate	H.204		RFC 4867 [59] clause 8.3	
encoding parameter	"" if present	Channel number	ciause 6.5	
media attribute		a= line attribute = fmtp		
fmtp			3GPP TS 24.581 [88] clause 12, clause 14	
format	"MCVideo"			
format specific parameters				
mc_queueing	optional	Parameter has no value.  Shall include the "mc_queueing" fmtp attribute in SDP offers when queueing of Transmission request is supported.	3GPP TS 24.581 [88] clause 12, clause 14	

ivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Conditio
mc_priority	not present	Any integer value in the	3GPP	
_, ,	or	range of 1255	TS 24.581 [88]	
	any allowed value		clause 12,	
		Shall include the	clause 14	
		"mc_priority" fmtp		
		attribute when a		
		transmission priority		
		different than the		
		default priority is		
		required.		
mc_reception_priority	not present	Any integer value in the	3GPP	
_ ' _, ,	or	range of 0255	TS 24.581 [88]	
	any allowed value		clause 12,	
	, , , , , , , , , , , , , , , , , , , ,	Shall include the	clause 14	
		"mc_reception_priority"		
		fmtp attribute when a		
		reception priority		
		different than the		
		different than the default reception		
		•		
was avantad		priority is required.	2000	
mc_granted	present	Parameter has no	3GPP	
		value	TS 24.581 [88]	
		Shall include the	clause 12,	
			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		
		request.		
mc_implicit_request	present	Parameter has no	3GPP	
		value	TS 24.581 [88]	
			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		
		3GPP 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.		
edia attribute				PRIVATE
edia attribute		option. a= line		PRIVATE CALL
		option. a= line attribute = key-mgmt	TS 24.281 [86]	
edia attribute ey-mgmt		option.  a= line attribute = key-mgmt Key Management	TS 24.281 [86] clause 6.2.1	
		option. a= line attribute = key-mgmt	TS 24.281 [86] clause 6.2.1	

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
mikey	MIKEY-SAKKE	MIKEY carries the	RFC 4567 [44]	Condition
Tilkey	I_MESSAGE as	security parameters	1(1 0 4307 [44]	
	specified in Table	needed for		
	6.1.1.1.3.3-3	setting up the security		
	0.1.1.1.0.0	protocol. It is a protocol		
		designed for		
		government and		
		relevant enterprises to		
		enable secure, cross-		
		platform multimedia		
		communications.		
media description		m= line		
		media = application		
media	"application"			-
port	"49153"	Set to a port number for		
		media-floor control		
		entity of the MCVideo		
		group		
proto	"udp"			
fmt	"MCVideo"	1.		
media attribute		a= line attribute = fmtp		
fmtn		attribute = imtp		
fmtp format	"MCVideo"			
	MCVIdeo			
format specific parameters	Drocent	Parameter has no		
mc_queueing	Present	value		
mc_priority	"5"	Any integer value in the		
	<del>                                     </del>	range of 1255		
mc_granted	Present	Parameter has no		
	<del>-</del>	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			

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

Derivation Path: TS 24.379 [9] clause F.1.2					
Information Element	Value/remark	Comment	Reference	Condition	
mcpttinfo					
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 the Token Response</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	
session-type	not present				
	"prearranged"			GROUP- CALL AND INVITE_R EFER	
	"private"			PRIVATE- CALL AND INVITE_R EFER	
	"chat"			CHAT- GROUP- CALL 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_User_B_ID</mcptt-request-uri>	The URI of the invited MCPTT Client		PRIVATE- CALL AND 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>			CONFIG	
	not present			CONFIG, GROUPC ONFIG, POC- SETTINGS -EVENT	
mcptt-called-party-id	not present not present or encrypted (NOTE 2) <mcpt-called-party-id> with mcpttURI set to px_MCPTT_ID_User_A</mcpt-called-party-id>			INVITE- RSP	
mcptt-calling-group-id	not present				
required emergency-ind	not present not present or encrypted (NOTE 2) <emergency-ind> with mcpttBoolean set to "false"</emergency-ind>				

Derivation Path: TS 24.379 [9] cla	ause F.1.2			
Information Element	Value/remark	Comment	Reference	Condition
	Encrypted (NOTE 2)			EMERGEN
	<emergency-ind> with</emergency-ind>			CY-CALL
	mcpttBoolean set to			AND
	"true"			INVITE_R
				EFER
alert-ind	not present or			
	encrypted (NOTE 2) <alert-ind> with</alert-ind>			
	mcpttBoolean set to			
	"false"			
	Encrypted (NOTE 2)			EMERGEN
	<alert-ind> with</alert-ind>			CY-CALL
	mcpttBoolean set to			AND
	pc_MCX_EmergencyIn			INVITE_R
	dWithAlertInd			EFER
imminentperil-ind	not present or			
	encrypted (NOTE 2)			
	<imminentperil-ind></imminentperil-ind>			
	with mcpttBoolean set			
	to "false"			<u> </u>
	Encrypted (NOTE 2)			IMMPERIL
	<pre><emergency-ind> with</emergency-ind></pre>			-CALL
	mcpttBoolean set to "true"			AND INVITE_R
	true			EFER
broadcast-ind	not present or "false"			EFER
mc-org"	not present			
floor-state	not present			
associated-group-id	px_MCPTT_Group_A_I	if the <mcptt-request-< td=""><td>TS 24.379 [9]</td><td>GROUP-</td></mcptt-request-<>	TS 24.379 [9]	GROUP-
acconated group to	D if mcptt-request-uri	uri> element contains a	clause F.1.3	CALL
	contains a temporary	group identity then this		
	group identity;	element can include an		
	otherwise, not present	MCPTT group ID		
		associated with the		
		group identity in the		
		<mcptt-request-uri></mcptt-request-uri>		
		element. E.g. if the		
		<mcptt-request-uri></mcptt-request-uri>		
		element contains a		
		temporary group		
		identity (TGI), then the <associated-group-id></associated-group-id>		
		element can contain		
		the constituent MCPTT		
		group ID		
	not present			PRIVATE-
	<u> </u>			CALL
originated-by	not present			
MKFC-GKTPs	not present			
mcptt-client-id	not present			
	encrypted (NOTE 2)	The UUID URN of the	RFC	(
	<mcptt-client-id> with</mcptt-client-id>	MCPTT Client	4122 [106]	GROUP-
	mcpttString set to valid		TS 24.379 [9]	CALL OR
	UUID URN (NOTE 1)		clause 4.10	CHAT-
				GROUP-
				CALL OR
				EMERGEN CY-CALL
				OR
				IMMPERIL
				-CALL)
				AND
				INVITE_R
				EFER

Derivation Path: TS 24.379 [9] cla	Derivation Path: TS 24.379 [9] clause F.1.2				
Information Element	Value/remark	Comment	Reference	Condition	
	not present or encrypted (NOTE 2) <mcptt-client-id> with mcpttString set to valid UUID URN (NOTE 1)</mcptt-client-id>			PRIVATE- CALL AND INVITE_R EFER	
	encrypted (NOTE 2) <mcptt-client-id> with mcpttString set to valid UUID URN (NOTE 1) if present</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				
anyExt	not present or any allowed value		TS 24.379 [9], clause F.1.3		

NOTE 1: The SS shall check the mcptt-client-id

- at the first time being sent by the UE to be a valid UUID URN with a format like "urn:uuid:XXXXXXXXYYYY-ZZZZ-yyyy-zzzzzzzzzzz" according to RFC 4122 [106]

- to be all the same UUID URN in subsequent messages. NOTE 2: Encrypted element as described in Table 5.5.3.2.1-1A

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
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] clause F.1.2				
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			

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				
	not present  "eyJhbGciOiJSUzI1NiJ9 .eyJtY3B0dF9pZCI6ImF saWNIQG9yZy5jb20iLC JIeHAiOjE0NTM1MDYx MjEsInNjb3BIljpbIm9wZ W5pZCIsIjNncHA6bWN wdHQ6cHR0X3NIcnZIci JdLCJjbGIlbnRfaWQiOi JtY3B0dF9jbGIlbnQifQ. XYIqai4YKSZCKRNMLi pGC_5nV4BE79IJpvjex WjIqqcqiEx6AmHHIR00 mhcxeCESrXei9krom9e 8Goxr_hgF3szvgbwl8J RbFuv97XgepDLjEq4jL 3Cbu41Q9b0WdXAdFm eEbiB8wo_xggiGwv6ID R1b3TgAAsdjkRxSK4ct IKPaOJSRmM7MKMcK hlug3BEkSC9- aXBTSIv5fAGN- ShDbPvHycBpjzKWXBv MIR5PaCg- 9fwjELXZXdRwz8C6Jb RM8aqzhdt4CVhQ3- Arip-S9CKd0tu- qhHfF2rvJDRlg8ZBiihd PH8mJs-qpTFep_1- kON3ml 0_q54xVmIMw	The access token is opaque to the MCVideo client	TS 33.180 [94], clause B.4 RFC 6749 [77]	CONFIG
	kON3mL0_g54xVmlMw N0XQA"			
session-type	not present			
	"prearranged"  "private"			GROUP- CALL AND INVITE_RE FER PRIVATE- CALL AND INVITE_RE
	"chat"			FER CHAT- GROUP- CALL AND INVITE_RE FER
mcvideo-request-uri	px_MCVideo_Group_A _ID	The URI of the group		GROUP- CALL
	not present or px_MCVideo_User_B_I D	The URI of the invited MCVideo Client		PRIVATE- CALL
mcvideo-calling-user-id	not present or px_MCVideo_ID_User_ A			
mcvideo-called-party-id	not present			
mcvideo-calling-group-id	not present			
required emergency-ind	not present not present or if present then="false"  "true"			EMERGEN CY-CALL
alert-ind	not present or if present then="false" "false"			EMERGEN
				CY-CALL
imminentperil-ind	not present or if present then="false"			

	"true"			IMMPERIL- CALL
broadcast-ind	not present or "false"			ONLL
mc-org"	not present			
transmission-state	not present			
associated-group-id	px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity; otherwise, not present	if the <mcvideo- request-uri=""> 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
	not present			PRIVATE- 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- CALLOR 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
	encrypted (NOTE 2) < mcvideo-client-id> with mcvideoString set to valid UUID URN (NOTE 1) if present	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 24.379 [9] 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 MCPTT service settings only, according to TS 24.379 [9] clause 7.2.3	RFC 4122 [106] TS 24.281 [86 ] clause 4.9	POC- SETTINGS -EVENT
alert-ind-rcvd	not present			

anyExt	not present or any	TS 24.281 [86	
·	allowed value	] clause F.1.3	

### - MCData

Table 5.5.3.2.1-3: MCData-Info from the UE

Derivation Path: TS 24.282 [87]	, Clause D.1			
Information Element	Value/remark	Comment	Reference	Condition
mcdata-info				
mcdata-Params				
mcdata-access-token	not present			
request-type	"one-to-one-sds"			MCD_1to1
request-type	"group-sds"			MCD_grp
mcdata-request-uri	px_MCData_Group_A			MCD_grp
mcdata-calling-user-id	not present			
mcdata-called-party-id	not present			
mcdata-calling-group-id	not present			
alert-ind	not present			
originated-by	not present			
mcdata-client-id	px_MCData_Client_A_I D			MCD_grp
mcdata-controller-psi	not present			

Condition	Explanation
MCD_1to1	A one-to-one MCData call
MCD_grp	A goup MCData call
For further conditions see table 5.5.1-1	

#### 5.5.3.2.2 MCS Info Lists from the SS

- MCPTT

Table 5.5.3.2.2-1: MCPTT-Info from the SS

Information Element	clause F.1.2  Value/remark	Comment	Reference	Condition
mcpttinfo				
mcptt-Params				
mcptt-access-token	not present			
session-type	not present			
	"prearranged"			GROUP-
				CALL
	"private"			PRIVATE- CALL
	"chat"			CHAT- GROUP- CALL
mcptt-request-uri	Encrypted (NOTE 1) <mcptt-request-uri> with mcpttURI set to px_MCPTT_ID_User_A</mcptt-request-uri>	The URI of the called user		0.122
mcptt-calling-user-id	Encrypted (NOTE 1) <mcptt-calling-user-id> with mcpttURI set to px MCPTT ID User B</mcptt-calling-user-id>	The URI of the calling user		
mcptt-called-party-id	not present			
mcptt-calling-group-id	not present			
	Encrypted (NOTE 1) <mcptt-calling-group- id=""> with mcpttURI set to px_MCPTT_Group_A_I D</mcptt-calling-group->	The URI of the group		GROUP- CALLOR CHAT- GROUP- CALL
required	not present			
emergency-ind	not present			
	Encrypted (NOTE 1) <emergency-ind> with mcpttBoolean set to "true"</emergency-ind>			EMERGEI CY-CALL
alert-ind	not present			
	Encrypted (NOTE 1) <alert-ind> with mcpttBoolean set to "false"</alert-ind>			EMERGEI CY-CALL
imminentperil-ind	not present			
	Encrypted (NOTE 1) <imminentperil-ind> with mcpttBoolean set to "true"</imminentperil-ind>			IMMPERIL -CALL
broadcast-ind	not present			
mc-org"	not present			
floor-state	not present			
associated-group-id	not present			
originated-by	not present			
MKFC-GKTPs	not present			
mcptt-client-id	not present			
alert-ind-rcvd	not present			
anyExt	not present		TS 24.379 [9], clause F.1.3	

Table 5.5.3.2.2-1A: Encrypted MCPTT info parameter sent by the SS

Derivation Path: TS 24.379 [9] clause F.1.2

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
mcvideoinfo				
mcvideo-Params				
mcvideo-access-token	not present			
	"eyJhbGciOiJSUzI1NiJ	The access token is	TS 33.180 [94]	CONFIG
	9.eyJtY3B0dF9pZCl6l	opaque to the MCVideo	clause B.4	
	mFsaWNIQG9yZy5jb20	client	RFC 6749 [77]	
	iLCJIeHAiOjE0NTM1M	55.11	• •	
	DYxMjEsInNjb3Blljpbl			
	m9wZW5pZCIsIjNncHA			
	6bWNwdHQ6cHR0X3N			
	lcnZlciJdLCJjbGllbnRfa			
	WQiOiJtY3B0dF9jbGllb			
	nQifQ.XYIqai4YKSZCK			
	RNMLipGC_5nV4BE79			
	IJpvjexWjlqqcqiEx6Am			
	HHIRo0mhcxeCESrXei			
	9krom9e8Goxr_hgF3sz			
	vgbwl8JRbFuv97Xgep			
	DLjEq4jL3Cbu41Q9b0			
	WdXAdFmeEbiB8wo_x			
	ggiGwv6IDR1b3TgAAs			
	djkRxSK4ctIKPaOJSR			
	mM7MKMcKhlug3BEk			
	SC9-aXBTSIv5fAGN-			
	ShDbPvHycBpjzKWXB			
	vMIR5PaCg-			
	9fwjELXZXdRwz8C6Jb			
	RM8aqzhdt4CVhQ3-			
	Arip-S9CKd0tu-			
	qhHfF2rvJDRlg8ZBiihd			
	PH8mJs-qpTFep_1-			
	kON3mL0_g54xVmlMw			
	NOXQA"			
session-type	"prearranged"			GROUP-
3333.5.1.	prodrianged			CALL
	"private"			PRIVATE
	piivate			CALL
mcvideo-request-uri	px_MCVideo_Group_A	The URI of the group		GROUP-
	ID	I Start of the group		CALL
	px_MCVideo_Client_B	The URI of the invited		PRIVATE
	_ID	MCVideo Client		CALL
mcvideo-calling-user-id	not present or	INIO VIGEO OIIEIT		UALL
movideo-caiii ig-usei-iu	px_MCVideo_ID_User_			
	A			
mcvideo-called-party-id	not present or			
тсуюео-сапео-рапу-ю	px_MCVideo_ID_User_			
	B			
movidoo calling group id				
mcvideo-calling-group-id	not present			
required	not present			
emergency-ind	not present or if present			
	then="false"	1	1	l

Comment	Reference	Condition
Comment	Reference	EMERGEN
		CY-CALL
		OT OALL
		EMERGEN
		CY-CALL
		IMMPERIL
		-CALL
if the <mcvideo- request-uri=""> 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></associated-group-id></mcvideo-request-uri></mcvideo-request-uri></mcvideo->	TS 24.281 [86] clause F.1.3	GROUP- CALL
element can contain the constituent MCVideo group ID		PRIVATE-
		CALL
The URI of the MCVideo Client		PRIVATE- CALL GROUP- CALL EMERGEN CY-CALL IMMPERIL -CALL
The MCVideo client may validate the user with the ID token and configure itself for the user	TS 33.180 [94] clause B.4 RFC 6749 [77]	CONFIG

Derivation Path: TS 24.281 [86] Clause F.1.2					
Information Element	Value/remark	Comment	Reference	Condition	
anyExt	not present or any		TS 24.281 [86]		
	allowed value		clause F.1.3		

### - MCData

Table 5.5.3.2.2-3: MCData-Info from the SS

Derivation Path: TS 24.282 [87], Clause D.1					
Information Element	Value/remark	Comment	Reference	Condition	
mcdata-info					
mcdata-Params					
mcdata-access-token	not present				
request-type	"one-to-one-sds"			MCD_1to1	
request-type	"group-sds"			MCD_grp	
mcdata-request-uri	px_MCData_Group_A			MCD_grp	
mcdata-calling-user-id	px_MCData_ID_User_				
	В				
mcdata-called-party-id	px_MCData_ID_User_				
	A				
mcdata-calling-group-id	not present				
alert-ind	not present				
originated-by	not present				
mcdata-client-id	px_MCData_Client_B_I				
	D				
mcdata-controller-psi	not present	·			

Condition	Explanation
MCD_1to1	A one-to-one MCData call
MCD_grp	A goup MCData call
For further conditions see table 5.5.1-1	

### 5.5.3.3 Resource-lists

### 5.5.3.3.1 Resource-lists from the UE

Table 5.5.3.3.1-1: Resource-lists from the UE for MCPTT

Derivation Path: RFC 5366 [35] Information Element	Value/remark	Comment	Reference	Condition
resource-lists	encrypted (NOTE 4)		11010101100	Containen
list[1]	encrypted (NOTE 4)			
name attribute	Not present			
display-name	Not present			
entry[1]	NOTE 4,5			
uri attribute	px_MCPTT_ID_User_B	The MCPTT ID of the		
	•	invited user		
	px_MCPTT_ID_User_B	the MCPTT ID		MSG_RSP
		contained in the		
		<mcptt-calling-user-id></mcptt-calling-user-id>		
		element in the		
		application/ vnd.3gpp.mcptt-		
		info+xml MIME body of		
		the received SIP		
		MESSAGE request		
	SIP-URI with	SIP-URI:		PRE-
	px_MCPTT_Group_A_I	prearranged MCPTT		ESTABLIS
	D (NOTE 8) extended	group identit 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			GROUP-
	CID LIDI:	CID LIDI:		CALL)
	SIP-URI with px_MCPTT_ID_User_B	SIP-URI: MCPTT ID of the called		PRE- ESTABLIS
	(NOTE 8) extended	user extended with		H AND
	with SIP URI header	header fields		PRIVATE-
	fields as specified for	Treader fields		CALL
	the SIP REFER			07.22
	message			
display-name	not present			
resource-lists	encrypted (NOTE 4)		TS 24.481 [11]	CONFIG
			TS 24.484 [14]	OR
				GROUPC
				ONFIG
list[1]	encrypted (NOTE 4)			
name attribute	not present			
display-name	Not present		TO 04 404 F4 41	0011510
entry[1]	NOTE 4, 5	115.0 6 6	TS 24.484 [14]	CONFIG
uri attribute	AUID1 & "/users/" &	UE Configuration		
	XUID & "/" & MCSUEID & "/"	document		
	"AUID1 & "/users/" &	(NOTE 1a, 2, 3) Editor's note: It is not		
	XUID & "/"	clear in the core specs		
	AOID & /	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 4, 5		TS 24.484 [14]	CONFIG
uri attribute	AUID2 & "/users/" &	UE User Profile		
	XUID & "/"	document		
diaplay sama	Not proceed	(NOTE 1b, 2)		
display-name	Not present		TS 24.484 [14]	CONFIG
entry[3] uri attribute	NOTE 4, 5 AUID3 &	UE Service	13 24.484 [14]	CONFIG
un atmoute	"/global/service-	Configuration		
	config.xml"	document		
	Comig.Am	(NOTE 1c)		
	•	\	1	1

entry[1]	NOTE 4, 5		TS 24.484 [14]	GROUPC ONFIG
uri attribute	"org.openmobileallianc e.groups/global/byGrou pID/" & px_MCPTT_Group_A_I D	UE Group Configuration document		
display-name	Not present			
entry[1]	NOTE 4, 5		TS 24.484 [14]	GROUPC ONFIG_B
uri attribute	"org.openmobileallianc e.groups/global/byGrou pID/" & px_MCPTT_Group_B_I D	UE Group Configuration document		
display-name	Not present			
entry[1]	NOTE 4, 5		TS 24.484 [14]	GROUPC ONFIG_C
uri attribute	"org.openmobileallianc e.groups/global/byGrou pID/" & px_MCPTT_Group_C_I D	UE Group Configuration document		
display-name	Not present			
entry[1]	NOTE 4, 5		TS 24.484 [14]	GROUPC ONFIG_T
uri attribute	"org.openmobileallianc e.groups/global/byGrou pID/" & px_MCPTT_Group_T_I D	UE Group Configuration document		_
display-name	Not present			
entry[2]	optional, NOTE 4, 5		TS 24.481 [11]	GROUPC ONFIG
uri attribute	Doc-Sel & "~~" & Node- Sel	MCPTT-GKTP document (NOTE 6, 7)		
display-name	Not present			
entry[2]	optional, NOTE 4, 5		TS 24.481 [11]	GROUPC ONFIG_B
uri attribute	Doc-Sel_B & "~~" & Node-Sel	MCPTT-GKTP document (NOTE 6, 7)		
display-name	Not present			
entry[2]	optional, NOTE 4, 5		TS 24.481 [11]	GROUPC ONFIG_C
uri attribute	Doc-Sel_C & "~~" & Node-Sel	MCPTT-GKTP document (NOTE 6, 7)		
display-name	Not present			
entry[2]	optional, NOTE 4, 5		TS 24.481 [11]	GROUPC ONFIG_T
uri attribute	Doc-Sel_T & "~~" & Node-Sel	MCPTT-GKTP document (NOTE 6, 7)		
display-name	Not present	<u> </u>		
entry[1]	NOTE 4, 5		TS 24.481 [11]	GROUPKE Y
uri attribute	Doc-Sel & "~~" & Node- Sel	MCPTT-GKTP document (NOTE 6, 7)		
display-name	Not present			
entry[1]	NOTE 4, 5		TS 24.481 [11]	GROUPKE Y_B
uri attribute	Doc-Sel_B & "~~" & Node-Sel	MCPTT-GKTP document (NOTE 6, 7)		
display-name	Not present			
entry[1]	NOTE 4, 5		TS 24.481 [11]	GROUPKE Y_C
uri attribute	Doc-Sel_C & "~~" & Node-Sel	MCPTT-GKTP document (NOTE 6, 7)		
display-name	Not present			

entry[2]	optional, NOTE 4, 5		TS 24.481 [11]	GROUPC ONFIG_T
uri attribute	Doc-Sel_T & "~~" &	MCPTT-GKTP		
	Node-Sel	document (NOTE 6, 7)		
display-name	Not present			

NOTE 1a: AUID1 = "org.3gpp.mcptt.ue-config"

NOTE 1b: AUID2 = "org.3gpp.mcptt.user-profile"

NOTE 1c: AUID3 = "org.3gpp.mcptt.service-config"

NOTE 2: XUID = "sip:" & px\_MCPTT\_ID\_User\_A

NOTE 3: MCSUEID = Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8)

NOTE 4: XML encryption may be done by

- element content encryption of the root element <resource-lists> as described in Table 5.5.13.2-1

- element content encryption of (each) < list> element as described in Table 5.5.13.2-1

- attribute URI encryption of the entry's uri attribute as described in Table 5.5.13.3-1

NOTE 5: When a resource-lists document contains more than one entry, the entries may be in any order NOTE 6: Doc-Sel = "org.3gpp.MCPTT-GKTP/global/byGroupID/" & px\_MCPTT\_Group\_A\_ID & "/" Doc-Sel\_B="org.3gpp.MCPTT-GKTP/global/byGroupID/" & px\_MCPTT\_Group\_B\_ID & "/" Doc-Sel\_C="org.3gpp.MCPTT-GKTP/global/byGroupID/" & px\_MCPTT\_Group\_C\_ID & "/" Doc-Sel\_T="org.3gpp.MCPTT-GKTP/global/byGroupID/" & px\_MCPTT\_Group\_T\_ID & "/" NOTE 7: Node-Sel = "/group/list-service/mgktp:GKTPs?xmlns(mgktp=urn:3gpp:ns:mcpttGKTP:1.0)"

NOTE 8: TS 23.179 [8] specifies MCPTT ID and MCPTT group ID (clause 8.1.3.1) to be a URIs but does not mandate them to be a SIP URIs; nevertheless according to TS 24.379 [9] (clauses 10.1.1.2.2.1, 10.1.2.2.2.1) the URI in the uri attribute of the resource-lists' <entry> element needs to be a SIP URI.

Condition	Explanation
PRE-ESTABLISH	Call using a pre-established session
MSG_RSP	resource lists IE in SIP MESSAGE in response to a received SIP MESSAGE message
GROUPCONFIG_B	Message content within subscription to GROUP_B documents
GROUPCONFIG_C	Message content within subscription to GROUP_C documents
GROUPCONFIG_T	Message content within subscription to temporary GROUP_T documents
GROUPKEY_B	Message content within subscription to GROUP_B key material retrieval
GROUPKEY_C	Message content within subscription to GROUP_C key material retrieval
GROUPKEY_T	Message content within subscription to temporary GROUP_T key material retrieval
For further conditions see table 5.5.1-1	

### MCVideo

Table 5.5.3.3.1-2: Resource-lists from the UE for MCVideo

Derivation Path: RFC 5366 [35]	/ RFC 4826 [83]			
Information Element	Value/remark	Comment	Reference	Condition
resource-lists				PRIVATE- CALL GROUP- CALL EMERGEN CY-CALL IMMPERIL -CALL
list[1]				
name attribute	Not present			
display-name	Not present			
entry[1]	NOTE 5			
uri attribute	px_MCVideo_ID_User_ B	The MCVideo ID of the invited user		
display-name	Not present			
resource-lists	encrypted (NOTE 4)		TS 24.481 [11] TS 24.484 [14]	CONFIG OR GROUPC ONFIG
list[1]	encrypted (NOTE 4)			
name attribute	"uri: mcvideo- op.gov:resource-lists"	Editor's note: to be removed		CONFIG
display-name	Not present			
entry[1]	NOTE 5		TS 24.484 [14]	CONFIG
uri attribute	AUID1 & "/users/" & XUID & "/" & MCSUEID & "/"	UE Configuration document (NOTE 1a, 2, 3)		
	"AUID1 & "/users/" & XUID & "/"	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		TO 04 404 54 41	0011510
entry[2] uri attribute	NOTE 5 AUID2 & "/users/" & XUID & "/"	UE User Profile document (NOTE 1b, 2)	TS 24.484 [14]	CONFIG
display-name	Not present	, ,		
entry[3]	NOTE 5		TS 24.484 [14]	CONFIG
uri attribute	AUID3 & "/global/service- config.xml"	UE Service Configuration document (NOTE 1c)		_
display-name	Not present			
entry[1]	NOTE 5		TS 24.481 [11]	GROUPC ONFIG

uri attribute	"org.openmobileallianc e.groups/global/byGrou pID/" & px_MCVideo_Group_A _ID	UE Group Configuration document		
display-name	Not present			
entry[2]	optional NOTE 5		TS 24.481 [11]	GROUPC ONFIG
uri attribute	Doc-Sel & "~~" & Node- Sel	MCPTT-GKTP document (NOTE 6, 7)		
display-name	Not present			
entry[1]	NOTE 5		TS 24.481 [11]	GROUPKE Y
uri attribute	Doc-Sel & "~~" & Node- Sel	MCPTT-GKTP document (NOTE 6, 7)		
display-name	Not present	_		

NOTE 1a: AUID1 = "org.3gpp.mcvideo.ue-config" = "org.3gpp.mcvideo.user-profile" = "org.3gpp.mcvideo.user-profile" = "org.3gpp.mcvideo.service-config" = "org.3gpp.mcvideo.service-config" = "sip:" & px\_MCVideo\_ID\_User\_A

NOTE 3: MCSUEID = Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8)

NOTE 4: XML encryption may be done by

- element content encryption of the root element <resource-lists> as described in Table 5.5.13.2-1

element content encryption of (each) list> element as described in Table 5.5.13.2-1
 attribute URI encryption of the entry's uri attribute as described in Table 5.5.13.3-1

NOTE 5: When a resource-lists document contains more than one entry, the entries may be in any order NOTE 6: Doc-Sel = "org.3gpp.MCPTT-GKTP/global/byGroupID/" & px\_MCVideo\_Group\_A\_ID & "/"

NOTE 6: Doc-Sel = "org.3gpp.MCPTT-GKTP/global/byGroupID/" & px\_MCVideo\_Group\_A\_ID & "/" NOTE 7: Node-Sel = "/group/list-service/mgktp:GKTPs?xmlns(mgktp=urn:3gpp:ns:mcpttGKTP:1.0)"

#### MCData

Table 5.5.3.3.1-3: Resource-lists from the UE for MCData

Derivation Path: RFC 5366 [35]	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	px_MCData_ID_User_ B	The MCData ID of the target MCData user			

#### 5.5.3.3.2 Resource-lists from the SS

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

Information Element	Value/remark	Comment	Reference	Condition
resource-lists	Editor's note: XML element content encryption to be added			
list				
entry	px_MCVideo_ID_User_ A	The MCVideo ID of the invited user		

#### - MCData

Table 5.5.3.3.2-3: Resource-lists from the SS for MCData

Information Element	Value/remark	Comment	Reference	Condition
resource-lists	Editor's note: XML element content encryption to be added			
list				
entry	px_MCData_ID_User_ A	The MCData ID of the invited user		

5.5.3.4 Location-info

5.5.3.4.1 Location-info (Report from the UE)

Table 5.5.3.4.1-1: Location-info (Report from the UE) for MCPTT

Derivation Path: TS 24.379 [9] of Information Element	Value/remark	Comment	Reference	Condition
location-info				
Report				
ReportID attribute	not present	Attribute is used to return the value in the <requestld> attribute in the <request> element. Only present</request></requestld>		
		in response to a Location-Info Request.		
PapartType attribute	"Emorgonov"			+
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>		
CurrentLocation				+
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>			

Table 5.5.3.4.1-1A: Encrypted sub-element of <CurrentCoordinate> sent by the UE

NOTE 2: Encrypted sub-element of <CurrentLocation> element as described in Table 5.5.3.4.1-1B

Derivation Path: TS 24.379 [9] cla	use F.3.2 (tCoordinateType	e )		
Information Element	Value/remark	Comment	Reference	Condition

type attribute	"Encrypted"
EncryptedData	EncryptedData as described in Table 5.5.13.2-1 containing encrypted element content of the sub-
	element of <currentcoordinate></currentcoordinate>

Table 5.5.3.4.1-1B: Encrypted sub-element of <CurrentLocation> sent by the UE

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	Condition
location-info	value/remark	Comment	Reference	Condition
Report				
TriggerID	not present	An element which can occur multiple times. Contains the value of the <triggerid> attribute associated</triggerid>		
		with a trigger that has fired. Only present if a trigger is the cause of the Location-info Report.		
CurrentLocation		A mandatory element that contains the location information		
CurrentServingEcgi	optional	This is optional depending on the configuration sent by the SS		
NeighbouringEcgi	optional	This is optional depending on the configuration sent by the SS		
MbmsSald	optional	This is optional depending on the configuration sent by the SS		
MbsfnArea	optional	This is optional depending on the configuration sent by the SS		
CurrentCoordinate	optional	This is optional depending on the configuration sent by the SS		
ReportID	not present	Attribute is used to return the value in the <requestld> attribute in the <request> element. Only present in response to a Location-Info Request.</request></requestld>		
ReportType	"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>		
EmergencyEventType	"GroupCallEmergency"			GROUP- CALL and EMERGEN CY-CALL
	"GroupCallImminentPer il"			GROUP- CALL and IMMPERIL -CALL
	"PrivateCallEmergency"			PRIVATE- CALL and EMERGEN CY-CALL
	"InitiateEmergencyAlert			IMMPERIL -CALL

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				ļ
Configuration	"="	The MODIT Of the		
ConfigScope	"Full"	The MCPTT Client		
		shall replace any previous configuration.		
		previous coringulation.		
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		
rveighbouring Legi	present	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	present	reported; An optional element		
IVIDSITIATEA	present	specifying that the		
		MBSFN area Id needs		
		to be reported;		
GeographicalCoordinate	present	An optional element		
	i ·	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		
i i i i i i i i i i i i i i i i i i i		specifying the minimum		
		time the MCPTT client		
		needs to wait between		
		sending location		
		reports. The value is		
		given in seconds		
EmergencyLocationInformation"		An anti-		
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		
Mla ma o C = 1 -1	nnaant	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;		

Derivation Path: TS 24.379 [9] cla	use 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		
and the same of th	"5"	to be reported		
minimumIntervalLength	<sup>"</sup> 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		giveri ili secorius		
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			

- MCVideo

Table 5.5.3.4.2-2: Location-info (Configuration sent by the SS) for MCVideo

Derivation Path: TS 24.281 [86] o				T
Information Element	Value/remark	Comment	Reference	Condition
location-info				
Configuration	"Full"	The MOVides Office		
ConfigScope	"Full"	The MCVideo Client shall replace any		
		previous configuration.		
		previous configuration.		
NonEmergencyLocationInformat ion				
ServingEcgi	present	An optional element		
		specifying that the		
		serving E-UTRAN Cell		
		Global Identity (ECGI)		
NoighbouringEogi	procent	needs to be reported  An optional element		
NeighbouringEcgi	present	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	procent	reported;		
MidsinArea	present	An optional element specifying that the		
		MBSFN area Id needs		
		to be reported;		
GeographicalCoordinate	present	An optional element		
3 1		specifying that the		
		geographical		
		coordinate specified in		
		clause 6.1 in 3GPP		
		TS 23.032 [65] needs		
minimumIntervalLength	"10"	to be reported A mandatory element		
i i i i i i i i i i i i i i i i i i i	10	specifying the minimum		
		time the MCVIdeo		
		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		1
		that can occur multiple		
		times, specifying that		
		neighbouring ECGIs		
		need to be reported		1
MbmsSald	present	An optional element		
		specifying that the		
		serving MBMS Service Area Id needs to be		
		reported;		
MbsfnArea	present	An optional element		
Wibottii ti od	procent	specifying that the		
		MBSFN area Id needs		
		to be reported;		

Derivation Path: TS 24.281 [86] of	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		<u>-</u>	
MbsfnAreaChange	not present			
PeriodicReport	not present			
TravelledDistance	not present			
McvideoSignallingEvent	not present			
GeographicalAreaChange	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			

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			

### 5.5.3.4.4 Location-info (Report from the SS)

Table 5.5.3.4.4-1: Location-info (Report from the SS) for MCPTT

Information Element	Value/remark	Comment	Reference	Condition
location-info				
Report				
ReportID attribute	not present			
ReportType attribute	"Emergency"			
TriggerID [1]	"EMERGENCY ALERT"	A randomly chosen string to reflect the trigger of the message.		
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) <longitude> with content as specified by the test case</longitude>			

Table 5.5.3.4.4-1A: Encrypted sub-element of <CurrentCoordinate> sent by the SS

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

5.5.3.5.1 PIDF from the UE

Table 5.5.3.5.1-1: PIDF for MCPTT from the UE

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	
group	Encrypted URI (NOTE 1) with value set to px_MCPTT_Group_A_I D			
client	not present			
status	not present			
expires	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	

#### MCVideo

Table 5.5.3.5.1-2: PIDF for MCVideo from the UE

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	
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 present			

#### **MCData**

Table 5.5.3.5.1-3: PIDF for MCData from the UE

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	
group	Encrypted URI (NOTE 1) with value set to px_MCDATA_Group_A _ID			
client	not present			
status	not present			
expires	not present			
p-id	any allowed value or same value as sent in SIP PUBLISH	set to an identifier of a SIP PUBLISH request		

### 5.5.3.5.2 PIDF from the SS

Table 5.5.3.5.2-1: PIDF for MCPTT from the SS

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	
group	Encrypted URI (NOTE 1) with value set to px_MCPTT_Group_A_I D			
client	not present			
status	"affiliating"			
expires	not present			
contact	not present			
note	not present			
timestamp	not present			
note	not present			
p-id NOTE 1: Encrypted attribute a	not present			

### MCVideo

Table 5.5.3.5.2-2: PIDF for MCVideo from the SS

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	
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			

#### - MCData

Table 5.5.3.5.2-3: PIDF for MCData from the SS

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	
group	px_MCDATA_Group_A _ID			
client	not present			
status	"affiliating"			
expires	not present			
p-id	not present	·		

### 5.5.3.6 SIMPLE-FILTER

Table 5.5.3.6-1: SIMPLE-FILTER for MCPTT

Value/remark	Comment	Reference	Condition
		RFC 4661 [48]	
	TS 24.379 [9] clause 9.3.2.2 requires two separate ns- binding elements	RFC 4661 [48]	
		RFC 4661 [48]	
пн	Editor's note: according to RFC 4661 the prefix is required nevertheless TS 24.379 says 'does not contain a "prefix" attribute'		
"urn:ietf:params:xml:ns: pidf"	·		
		RFC 4661 [48]	
"mcpttPI10"			
"urn:3gpp:ns:mcpttPres Info:1.0"			
		RFC 4661 [48]	
Any value	The value of the 'id' attribute has to be unique within the <filter- set=""> element</filter->		
Not present	According to TS 24.379		
Not present	According to TS 24.379		
Not present	'false' per default		
Not present	'true' per default		
"//presence/tuple[@id=" & px_MCPTT_Client_A_I D & "]"	contains the value, according to IETF RFC 4661 [48], set to concatenation of the '//presence/tuple[@id="' string, the MCPTT client ID, and the '"]' string	RFC 4661 [48]	
	"urn:ietf:params:xml:ns: pidf"  "mcpttPI10"  "urn:3gpp:ns:mcpttPres Info:1.0"  Any value  Not present Not present Not present Not present Not present "//presence/tuple[@id=" & px_MCPTT_Client_A_I	TS 24.379 [9] clause 9.3.2.2 requires two separate ns- binding elements  Editor's note: according to RFC 4661 the prefix is required nevertheless TS 24.379 says 'does not contain a "prefix" attribute'  "urn:ietf:params:xml:ns: pidf"  "mcpttPl10"  "urn:3gpp:ns:mcpttPres Info:1.0"  Any value  The value of the 'id' attribute has to be unique within the <filter- set=""> element  Not present According to TS 24.379 Not present Not present Not present Not present Virue' per default  "//presence/tuple[@id=" &amp; px_MCPTT_Client_A_I D &amp; "]"  "resence/tuple[@id=" string, the MCPTT client ID, and the "]' string</filter->	TS 24.379 [9] clause 9.3.2.2 requires two separate ns- binding elements    ""   Editor's note: according to RFC 4661 [48]   "experiment   RFC 4661 [48]    "urn:ietf:params:xml:ns: pidf"   RFC 4661 [48]    "mcpttPl10"   RFC 4661 [48]    "mcpttPl10"   RFC 4661 [48]    "mcpttPl10"   RFC 4661 [48]    "mcpttPl10"   RFC 4661 [48]    Any value   The value of the 'id' attribute has to be unique within the <filter- set=""> element    Not present   According to TS 24.379     Not present   RFC 4661 [48]    "//presence/tuple[@id=" &amp; according to IETF RFC 4661 [48]    "//presence/tuple[@id=" string, the MCPTT client ID, and the "]'   string</filter->

### MCVideo

Table 5.5.3.6-2: SIMPLE-FILTER for MCVideo

Information Element	Value/remark	Comment	Reference	Condition
filter-set	px_MCVideo_Client_A _ID		RFC 4661 [48]	
nc-bindings	px_MCVideo_Client_A _ID		RFC 4661 [48]	
ns-binding urn	"urn:ietf:params:xml:ns: pidf"		RFC 4661 [48]	
ns-binding urn	"urn:3gpp:ns:mcvideoP resInfo:1.0"	TS 24.281 [86] clause 8.3.2.2 requires two separate nsbinding elements	RFC 4661 [48]	
filter id	"123"	The value of the 'id' attribute has to be unique within the <filter-set> element. Does not contain the 'uri' element. Does not contain the 'domain' element.</filter-set>	RFC 4661 [48]	
what			RFC 4661 [48]	
include	//presence/tuple[@id= px_MCVideo_Client_A _ID]	contains the value, according to IETF RFC 4661 [48], set to concatenation of the '//presence/tuple[@id="' string, the MCVideo client ID, and the '"]' string	RFC 4661 [48]	

#### MCData

Table 5.5.3.6-3: SIMPLE-FILTER for MCData

Information Element	Value/remark	Comment	Reference	Condition
filter-set	px_MCData_Client_A_I D		RFC 4661 [48]	
nc-bindings	px_MCData_Client_A_I D		RFC 4661 [48]	
ns-binding urn	"urn:ietf:params:xml:ns: pidf"		RFC 4661 [48]	
ns-binding urn	"urn:3gpp:ns:mcdataPr esInfo:1.0"	TS 24.282 [87] clause 8.4.2.2 requires two separate nsbinding elements	RFC 4661 [48]	
filter id	"123"	The value of the 'id' attribute has to be unique within the <filter-set> element. Does not contain the 'uri' element. Does not contain the 'domain' element.</filter-set>	RFC 4661 [48]	
what			RFC 4661 [48]	
include	//presence/tuple[@id= px_MCData_Client_A_I D]	contains the value, according to IETF RFC 4661 [48], set to concatenation of the '//presence/tuple[@id="' string, the MCData client ID, and the ""]' string	RFC 4661 [48]	

## 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 D	MCPTT group name		
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 SDS Signaling Payload

### 5.5.3.8.1 SDS Signaling Payload from the UE

Table 5.5.3.8.1-1: SDS Signaling Payload from the UE

Derivation Path: TS 24.282 [87]	clause 15.1.2			
Information Element	Value/remark	Comment	Reference	Condition
SDS signalling payload	"01000001"	SDS Signalling Payload	TS 24.282 [87]	
message identity			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	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		
	<b>+</b>	unique identifier.	TO 04 000 1071	
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		
In Donk (To recoon a ID	Not propert	identifier	TC 04 000 [07]	
InReplyTo message ID	Not present		TS 24.282 [87]	
Application ID	Not propert		clause 15.2.11	
Application ID	Not present		TS 24.282 [87]	
000 diamanitian manusat tuma	11000411	DELIVEDY	clause 15.2.7	
SDS disposition request type	"0001"	DELIVERY	TS 24.282 [87]	
			clause 15.2.3	

## 5.5.3.8.2 SDS Signaling Payload from the SS

Table 5.5.3.8.2-1: SDS Signaling Payload from the SS

Information Element	Value/remark	Comment	Reference	Condition
SDS signalling payload	"01000001"	SDS Signalling Payload	TS 24.282 [87]	
message identity			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	"0000001000000100	The Conversation ID	TS 24.282 [87]	
	0000010000000100000	contains a number	clause 15.2.9	
	0010000000100000001	uniquely identifying the		
	0000000100000001000	conversation. The		
	0000100000001000000	value is a universally		
	0100000001000000010	unique identifier.		
	000000100000001"			
Message ID	"00000010000000100	The Message ID	TS 24.282 [87]	
	0000010000000100000	contains a number	clause 15.2.10	
	001000000100000001	uniquely identifying a		
	00000010000001000	message. The value is		
	0000100000001000000	a universally unique		
	010000001000000010	identifier		
	000000100000001"			
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"	DELIVERY	TS 24.282 [87]	
			clause 15.2.3	

### 5.5.3.9 MCData Data Payload

Table 5.5.3.9-1: MCData Data Payload from the UE

Derivation Path: TS 24.282 [87] of	clause 15.1.4			
Information Element	Value/remark	Comment	Reference	Condition
Data payload message identity	"01000011"	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	As described in Table 5.5.3.10-1	MCData Protected Payload Message	TS 33.180 [94]	MCD_1to1
Payload			TS 24.282 [87] clause 15.2.13	MCD_grp
Payload content type	"0000001"	TEXT		
Payload data	any allowed value	The data payload Example: "abcdEFGH"		

Condition	Explanation	
MCD_1to1	A one-to-one MCData call	
MCD_grp	A goup MCData call	
For further conditions see table 5.5.1-1		

Table 5.5.3.9-2: MCData Data Payload from the SS

Derivation Path: TS 24.282 [87] clause 15.1.4					
Information Element	Value/remark	Comment	Reference	Condition	
Data payload message identity	"01000011"	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	As described in Table	MCData Protected	TS 33.180 [94]	MCD_1to1	
Payload	5.5.3.10-2	Payload Message			
Payload			TS 24.282 [87]	MCD_grp	
			clause 15.2.13		
Payload content type	"00000001"	TEXT			
Payload data	"Test"	The data payload			

Condition	Explanation	
MCD_1to1	A one-to-one MCData call	
MCD_grp	A goup MCData call	
For further conditions see table 5.5.1-1		

# 5.5.3.10 MCData Protected Payload Message

Table 5.5.3.10-1: MCData Protected Payload Message from the UE

Derivation Path: TS 33.180 [94] Information Element	Value/remark	Comment	Reference	Condition
			Reference	Condition
Message Type	"01000011"	Message type – Data		
Data and Time	The comment data and	Payload		
Date and Time	The current date and	Date and Time of		
	time	creation of protected		
		payload message		
Payload ID	"1"	The identifier for the		
	4.19	payload.		
Payload sequence number	"1"	The sequence number		
		of the protected		
		payload.		
Algorithm	"DP_AES_128_GCM"	Protection of payloads		
		shall support the		
		following algorithms		
		(cipher suites):		
		DP_AES_128_GCM		
		and		
		DP_AES_256_GCM		
IV	"11011100 10111001	Initialisation vector (or		
	00001000 01010001	nonce) for message.		
	01010000 10110011	Length depends on the		
	11001111 00100001	algorithm and key		
	11100010 11110111	used.		
	11011111 01011011	128 bits or 256 bits		
	01010100 00101100	depending on the		
	00100101 10100010"	algorithm.		
DPPK-ID	PCK-ID	Key identifier		
DFFR-ID	1 OK IB	128 bits or 256 bits		
		depending on the		
		algorithm		
		For one-to-one		
		communications,		
		DPPK-ID shall be the		
		PCK-ID. For group		
		communications, the DPPK ID shall be the		
Devide and		GMK-ID		+
Payload		Protected Payload		
		(Ciphertext)		
Payload content type	"0000001"	TEXT		
Payload contents	Any allowed value	Example: "abcdEFGH"		

Table 5.5.3.10-2: MCData Protected Payload Message from the SS

Derivation Path: TS 33.180 [94] clause 8.5.4				
Information Element	Value/remark	Comment	Reference	Condition
Message Type	"01000011"	Message type – Data Payload		
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.		
Algorithm	"DP_AES_128_GCM"	Protection of payloads shall support the following algorithms (cipher suites): DP_AES_128_GCM and DP_AES_256_GCM		
IV	"11011100 10111001 00001000 01010001 01010000 10110011 11001111 00100001 11100010 11110111 11011111 01011011 01010100 00101100 00100101 10100010"	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	Key identifier 128 bits or 256 bits depending on the algorithm For one-to-one communications, DPPK-ID shall be the PCK-ID. For group communications, the DPPK ID shall be the GMK-ID		
Payload		Protected Payload (Ciphertext)		
Payload content type	"0000001"	TEXT		
Payload contents	"abcdEFGH"			

# 5.5.3.11 PoC Settings

Table 5.5.3.11-1: PoC Settings

Derivation Path: TS 33.180 [94]	clause 8.5.4			
Information Element	Value/remark	Comment	Reference	Condition
poc-settings				
entity [1]				
id	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

# 5.5.3.12 Xcap-diff documents

Table 5.5.3.12-1: xcap-diff document for MCX configuration

Derivation Path: RFC 5854 [107] of Information Element	Value/remark	Comment	Reference	Condition
xcap-diff	encrypted (NOTE 5)	Comment	Reference	Condition
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	AUID1 & "/users/" & XUID & "/" & MCSUEID & "/mcptt-ue-configuration.xml"	NOTE 1a, 2, 3		
new-etag	arbitrary value			
previous-etag	same as new-etag			
document[2]				
sel	AUID2 & "/users/" & XUID & "/mcptt-user- profile-" & profile-index & ".xml"	NOTE 1b, 2, 4		
new-etag	arbitrary value (different than for document[1])			
previous-etag	same as new-etag			
document[3]				
sel	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. AUID1 = "org.3gpp. AUID2 = "org.3gpp. AUID2 = "org.3gpp. AUID2 = "org.3gpp. AUID2 = "org.3gpp. AUID3 = "org.3gpp. AUID3 = "org.3gpp. AUID3 = "org.3gpp. AUID3 = "org.3gpp. XUID = "sip:" & px. XUID = "sip:" & px.	e as in the user-profile-inde	dition MCVideo dition MCData dition MCPTT condition MCVideo ndition MCData condition MCPTT Condition MCPTT Condition MCVideo Condition MCData condition MCPTT Condition MCPTT Condition MCPTT Condition MCPTT Condition MCVideo condition MCVideo condition MCVideo condition MCVideo condition MCVideo condition MCData dee IMEI according to 23.003 dex attribute of the correspon	ding document	

Table 5.5.3.12-2: xcap-diff document for MCX group configuration

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	"org.openmobileallianc e.groups/global/byGrou pID/" & px_MCPTT_Group_A_I D			
new-etag	arbitrary value			
previous-etag	same as new-etag			
element[1]	group key transport payloads (GKTP) document as described in Table 5.5.3.14-1			GROUPKE Y
sel	Doc-Sel-PTT & "~~" & Node-Sel	NOTE 2a, 3		MCPTT
sel	Doc-Sel-Video & "~~" & Node-Sel	NOTE 2b, 3		MCVIDEO

NOTE 1: The content of the root element <xcap-diff> (not including the xcap-root attribute) is encrypted as described in Table 5.5.13.2-2

NOTE 2a: Doc-Sel-PTT = "org.3gpp.MCPTT-GKTP/global/byGroupID/" & px\_MCPTT\_Group\_A\_ID & "/" NOTE 2b: Doc-Sel-Video = "org.3gpp.MCPTT-GKTP/global/byGroupID/" & px\_MCVideo\_Group\_A\_ID & "/" NOTE 3: Node-Sel = "/group/list-service/mgktp:GKTPs?xmlns(mgktp=urn:3gpp:ns:mcpttGKTP:1.0)"

#### 5.5.3.13 MCDATA FD SIGNALLING PAYLOAD FROM THE UE

#### 5.5.3.13.1 FD SIGNALLING PAYLOAD FROM THE UE

Table 5.5.3.13.1-1: FD Signalling Payload from the UE

Derivation Path: TS 24.282 [87],				
Information Element	Value/remark	Comment	Reference	Condition
FD signalling payload message	"0000010"	FD SIGNALLING	TS 24.282 [87]	
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		
Conversation ID	A real all assessed a selection	seconds). The Conversation ID	TC 04 000 [07]	
Conversation ID	Any allowed value		TS 24.282 [87] clause 15.2.9	
		contains a number	clause 15.2.9	
		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		
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	TS 24.282 [87]	
		COMPLETED UPDATE	clause 15.2.4	
Mandatory download	Not present	Not present indicates a	TS 24.282 [87]	
		Non-Mandatory download	clause 15.2.16	
Payload			TS 24.282 [87]	
•			clause 15.2.13	
Length of Payload contents	Length of the payload			
-	contents			
Payload content type	"00000100"	FILEURL		
Payload contents	px_MCDATA_FD_FILE _LOC			
Metadata	Any allowed value	Metadata is optional	TS 24.282 [87] clause 15.2.17	
file-selector	Any allowed value			
file-date	Any allowed value			
file-availability	Any allowed value			

#### 5.5.3.13.2 FD SIGNALLING PAYLOAD FROM THE SS

Table 5.5.3.13.2-1: FD Signalling Payload from the SS

Derivation Path: TS 24.282 [87], Information Element	Value/remark	Comment	Reference	Condition
FD signalling payload message identity	"0000010"	FD SIGNALLING PAYLOAD	TS 24.282 [87] clause 15.2.2	
Date and time	The current date and time	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	"0000001000000100 000001000000100000 001000000	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	"0000001000000100 000001000000100000 001000000	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	
Payload			TS 24.282 [87] clause 15.2.13	
Length of Payload contents	Length of the payload contents			
Payload content type	"00000100"	FILEURL		
Payload contents	px_MCDATA_FD_FILE _LOC			
Metadata	Not present		TS 24.282 [87] clause 15.2.17	
file-selector	"file-selector:name:" <name file="" of="">":size:"<size file="" of="">":type:"<type file="" of="">":type:"<tspe file="" of="">":hash:sha-1:58:23:1F:E8:65:3B:BC:F3:71:36:2F:86:D4:71:91:3E:E4:B1:DF:2F"</tspe></type></size></name>	a concatenation of filename, filesize, filetype and hash. The filesize value is an integer as defined RFC 4566 [27]		
file-date	"file- date:creation:" <dquot E date-time the file was created DQUOTE&gt;</dquot 			
file-availability	"file-availability:" <date-time></date-time>	date-time is set to a date and time that the file is available until and is defined in RFC 5322 [109]		

#### 5.5.3.13.3 FD SIGNALLING PAYLOAD USING THE MEDIA PLANE FROM THE UE

Table 5.5.3.13.3-1: FD Signalling Payload Using the Media Plane from the UE

Derivation Path: TS 24.282 [87],	Derivation Path: TS 24.282 [87], Table 15.1.3.1-1			
Information Element	Value/remark	Comment	Reference	Condition
FD signalling payload message	"0000010"	FD SIGNALLING	TS 24.282 [87]	
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		
0	A	seconds). The Conversation ID	TO 04 000 [07]	
Conversation ID	Any allowed value	contains a number	TS 24.282 [87] clause 15.2.9	
		uniquely identifying the	clause 15.2.9	
		conversation. The		
		value is a universally		
		unique identifier.		
Message ID	Any allowed value	The Message ID	TS 24.282 [87]	
mocoago 12	7 my anomou varao	contains a number	clause 15.2.10	
		uniquely identifying a	0.0000 10.2.10	
		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	
FD disposition request type	"0001"	FILE DOWNLOAD	TS 24.282 [87]	
		COMPLETED UPDATE	clause 15.2.4	
Mandatory download	"0001"	MANDATORY	TS 24.282 [87]	
		DOWNLOAD	clause 15.2.16	
Payload	Not present		TS 24.282 [87]	
			clause 15.2.13	
Metadata	Not present		TS 24.282 [87]	
			clause 15.2.17	

#### 5.5.3.13.4 FD SIGNALLING PAYLOAD USING THE MEDIA PLANE FROM THE SS

Table 5.5.3.13.4-1: FD Signalling Payload Using the Media Plane from the SS

Derivation Path: TS 24.282 [87],	Table 15.1.3.1-1			
Information Element	Value/remark	Comment	Reference	Condition
FD signalling payload message	"0000010"	FD SIGNALLING	TS 24.282 [87]	
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	"0000001000000100	The Conversation ID	TS 24.282 [87]	
	0000010000000100000	contains a number	clause 15.2.9	
	0010000000100000001	uniquely identifying the		
	00000010000001000	conversation. The		
	0000100000001000000	value is a universally		
	0100000001000000010	unique identifier.		
	000000100000001"			
Message ID	"0000001000000100	The Message ID	TS 24.282 [87]	
	0000010000000100000	contains a number	clause 15.2.10	
	0010000000100000001	uniquely identifying a		
	00000010000001000	message. The value is		
	0000100000001000000	a universally unique		
	0100000001000000010	identifier		
	000000100000001"		=======================================	
InReplyTo message ID	Not present		TS 24.282 [87]	
	1		clause 15.2.11	
Application ID	Not present		TS 24.282 [87]	
			clause 15.2.7	
FD disposition request type	"0001"	FILE DOWNLOAD	TS 24.282 [87]	
	100041	COMPLETED UPDATE	clause 15.2.4	
Mandatory download	"0001"	MANDATORY	TS 24.282 [87]	
<u> </u>	l N	DOWNLOAD	clause 15.2.16	
Payload	Not present		TS 24.282 [87]	
			clause 15.2.13	
Metadata	Not present		TS 24.282 [87]	
			clause 15.2.17	

## 5.5.3.14 MCS group key transport payloads (GKTP) document

Table 5.5.3.14-1: group key transport payloads (GKTP) document

Information Element	Value/remark	Comment	Reference	Condition
<b>GKTP</b> s				
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		

# 5.5.4 Default HTTP message and other information elements

#### 5.5.4.1 General

The HTTP Messages are specified in RFC 2616 [26]. Wherever another reference apply to their content it is explicitly indicated.

The following conditions apply throughout clause 5.5:

Table 5.5.4-1: Conditions

Condition	Explanation
AUTH	Message/IE sent only as part of an MCPTT UE authentication
UEINITIALCONFIG	Message/IE sent only as part of an MCPTT UE initial configuration
USERAUTH	Message/IE sent only as part of an MCPTT UE user authentication
UECONFIG	Message/IE sent only as part of an MCPTT UE configuration
UEUSERPROF	Message/IE sent only as part of an MCPTT UE User profile configuration
UESERVCONFIG	Message/IE sent only as part of an MCPTT UE service configuration
GROUPCONFIG	Message/IE sent only as part of an MCPTT group configuration
TOKEN	Message/IE sent only as part of an MCPTT token exchange
KMSINIT	Message/IE sent only as part of an MCPTT KMS initialisation
KMSKEY	Message/IE sent only as part of an MCPTT KMS key exchange

5.5.4.2 GET

**Table 5.5.4.2-1: HTTP GET** 

Derivation Path: RFC 2616 [26]	Value/ramaris	Commont	Deference	Condition
Information Element Request-Line	Value/remark	Comment	Reference	Condition
Method	"GET"			
Request-URI	GEI			
uri	tsc_MCX_IdMS_auth_ UriPath	points to the Authorisation endpoint of the IdM Server	TS 33.180 [94]	AUTH
	px_MCX_InitialConfigS erver_UriPath	points to initial UE Configuration document	TS 24.484 [14]	UEINITIAL CONFIG
	"/" & tsc_MCX_CMSXCAPR ootURI & "/" & AUID1 & "/users/" & XUID & "/" & MCSUEID & "/mcptt- ue-configuration.xml"	points to UE Configuration document (NOTE 1a, 2, 3)	TS 24.484 [14]	UECONFI G
	"/" & tsc_MCX_CMSXCAPR ootURI & "/" & AUID2 & "/users/" & XUID & "/mcptt-user-profile-" & profile-index & ".xml"	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/" & px_MCPTT_Group_A_I D	points to group configuration document	TS 24.481 [11]	GROUPC ONFIG
query	As described in Table 5.5.4.10.1-1		TS 33.180 [94]	AUTH
HTTP-Version	"HTTP/1.1"			
Cache-Control			RFC 2616 [26]	
cache-directive	"no-cache"			
Authorization			RFC 2617 [72]	UECONFI G UEUSERP ROF UESERVC ONFIG GROUPC ONFIG
authentication-scheme	"Bearer"		RFC 6750 [104]	
b64token	Access token as assigned to the UE by Token Response		RFC 6750 [104]	
Authorization	not present			
Content-Type				AUTH
media-type	"application/x-www- form-urlencoded"			
Content-Type	Not present			
Message-body	Not present			

NOTE 1a: A	J IID1	= "org.3gpp.mcptt.ue-config" for Condition MCPTT
		0 011 1 0
A		= "org.3gpp.mcvideo.ue-config" for Condition MCVideo
A		= "org.3gpp.mcdata.ue-config" for Condition MCData
NOTE 1b: A	UID2	= "org.3gpp.mcptt.user-profile" for Condition MCPTT
A	UID2	= "org.3gpp.mcvideo.user-profile" for Condition MCVideo
A	UID2	= "org.3gpp.mcdata.user-profile" for Condition MCData
NOTE 1c: A	NUID3	= "org.3gpp.mcptt.service-config" for Condition MCPTT
A	AUID3	= "org.3gpp.mcvideo.service-config" for Condition MCVideo
A		= "org.3gpp.mcdata.service-config" for Condition MCData
NOTE 2: X	(UID	= "sip:" & px_MCPTT_ID_User_A for Condition MCPTT
X	(UID	= "sip:" & px_MCVideo_ID_User_A for Condition MCVideo
X	(UID	= "sip:" & px_MCData_ID_User_A for Condition MCData
NOTE 3: M	<b>ICSUEID</b>	= Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8)
NOTE 4: pi	rofile-inde	ex is the same as in the <user-profile-index> attribute of the corresponding document</user-profile-index>

5.5.4.3 POST

**Table 5.5.4.3-1: HTTP POST** 

Derivation Path: RFC 2616 [26]				T -
Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
Method	"POST"			
Request-URI				
uri	tsc_MCX_ldMS_auth_ UriPath	points to the Authorisation endpoint of the IdM Server	TS 33.180 [94]	AUTH, USERAUT H
	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
	tsc_MCX_KMS_init_Uri Path	"KMS Initialize" request according to TS 33.180 [94] D.2.3	TS 33.180 [94]	KMSINIT
	tsc_MCX_KMS_keypro v_UriPath	"KMS KeyProvision" request according to TS 33.180 [94] D.2.4	TS 33.180 [94]	KMSKEY
	"/" & tsc_MCX_GMSXCAPR ootURI & "/" & "org.openmobileallianc e.groups/global/byGrou pID/" & px_MCPTT_Group_T_I D	Points to the temporary group configuration document to be created	TS 24.481[11] clause 6.3.14.2	TEMPGRO UP
HTTP-Version	"HTTP/1.1"			
Cache-Control			RFC 2616 [26]	
cache-directive	"no-cache"		-	
Authorization			RFC 2617 [72]	KMSINIT, KMSKEY
authentication-scheme	"Bearer"		RFC 6750 [104]	
b64token	Access token as assigned to the UE by Token Response		RFC 6750 [104]	
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]	•
Content-Type				TEMPGRO UP
media-type	application/vnd.oma.po c.groups+xml			
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 px_MCX_User_A_pass word		
Message-body			TOKEN
Token request	As described in Table 5.5.4.10.3-1		
Message-body		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 5.5.7.1-3		

Condition	Explanation
TEMPGROUP	Message/IE sent only in temporary group creation scenario
NOTE: For further conditions see table 5.5.1-	1

## 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/global/byGrou pID/" & px_MCPTT_Group_B_I D	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	
Content-Type				GROUPC REATE	
media-type	application/vnd.3gpp.G MOP+xml				
Message-body				GROUPC REATE	
Group Creation Document	As described in Table 5.5.7.1-2				

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

Table 5.5.4.5-1: HTTP 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/global/byGrou pID/" & px_MCPTT_Group_T_I D	Points to the group configuration document	TS 24.481 [11]	

5.5.4.6 HTTP 200 (OK)

Table 5.5.4.6-1: HTTP 200 (OK)

Derivation Path: RFC 2616 [26] 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"			
Pragma			RFC 2616 [26]	
pragma-directive	"no-cache"			
Content-Length				
value	length of message- body			
Content-Type				
media-type	"application/json;charse t=UTF-8"		TS 33.180 [94]	TOKEN
media-type	"application/xml"	Editor's note: Message-Body contains an XML document but there is no media-type specific for "urn:3gpp:ns:mcsecKM SInterface:1.0"  > "application/xml" to be confirmed	TS 33.180 [94]	KMSINIT
media-type	"application/xml"	Editor's note:  Message-Body contains an XML document but there is no media-type specific for "urn:3gpp:ns:mcsecKM SInterface:1.0"  > "application/xml" to be confirmed	TS 33.180 [94]	KMSKEY
media-type	"application/vnd.3gpp. mcptt-ue-init- config+xml"	be committed	TS 24.484 [14]	UEINITIAL CONFIG
media-type	"application/vnd.3gpp. mcptt-ue-config+xml"		TS 24.484 [14]	UECONFI G
media-type	"application/vnd.3gpp. mcptt-user-profile+xml"		TS 24.484 [14]	UEUSERP ROF
media-type	"application/vnd.3gpp. mcptt-service- config+xml"		TS 24.484 [14]	UESERVC ONFIG
media-type	"application/vnd.oma.p oc.groups+xml"		TS 24.481 [11]	GROUPC ONFIG
Message-body	Ĭ ,			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				KMSKEY
KMS Key Set	As described in Table 5.5.4.10.8-1			
Message-body	0.0.1.10.01			UEINITIAL CONFIG
mcptt-initial-UE-configuration	As described in Table 5.5.8.1-1	Initial UE Configuration document returned		CONTIG
Message-body	J.J.O. 1-1	aocument returned		UECONFI
mcptt-UE-configuration	As described in Table 5.5.8.2-1	UE Configuration document returned		G
Message-body	J.J.U.Z-1	addument returned		UEUSERP ROF

mcptt-user-profile	As described in Table	UE User Profile	
	5.5.8.3-1	document returned	
Message-body			UESERVC ONFIG
service-configuration-info	As described in Table 5.5.8.4-1	UE Service Configuration document returned	
Message-body			GROUPC ONFIG
ue-group-configuration	As described in Table 5.5.7.1-1	Group Configuration document returned	

# 5.5.4.7 HTTP 201 (Created)

Table 5.5.4.7-1: HTTP 201 (Created)

Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
HTTP-Version	"HTTP/1.1"			
Status-Code	"20"			
Reason-Phrase	"Created"			
Cache-Control			RFC 2616 [26]	
cache-directive	"no-store"			
Pragma			RFC 2616 [26]	
pragma-directive	"no-cache"			
Content-Length				
value	length of message- body			
Content-Type				GROUPC ONFIG
media-type	application/resource- lists+xml		TS 24.483 [13]	
Message-body				GROUPC ONFIG
ue-group-configuration	As described in Table 5.5.7.1-1	Group Configuration document returned		

## 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
response-type	"code"	For native MCPTT	OpenID Connect	Condition
response type	Code	clients the value shall	1.0 [95]	
		be set to "code"		
client_id	px_MCX_OAuth_ClientId_	Identifier of the	OpenID Connect	
	A	MCPTT client making	1.0 [95]	
Scope	"openid"	the API request Scope values are	TS 33.180 [94]	
Scope	Орепіа	expressed as a list of	OpenID Connect	
		space-delimited,	1.0 [95]	
		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		
	"3gpp:mc:ptt_service"	Additional		MCPTT
	"3gpp:mc:ptt_key_manage ment_service"	authorization scopes when the UE		
	"3gpp:mc:ptt_config_mana	supports MCPTT		
	gement_service"	Supports MOLTI		
	"3gpp:mc:ptt_group_manag			
	ement_service"			
	NOTE: The list may contain			
	further scope values which			
	are not checked "3gpp:mc:video_service"	Additional		MCVIDEO
	"3gpp:mc.video_service" "3gpp:mc:video_key_mana	authorization scopes		IVICVIDEO
	gement_service"	when the UE		
	"3gpp:mc:video_config_ma	supports MCVideo		
	nagement_service"			
	"3gpp:mc:video_group_ma			
	nagement_service" NOTE: The list may contain			
	further scope values which			
	are not checked			
	"3gpp:mc:data_service"	Additional		MCDATA
	"3gpp:mc:data_key_manag	authorization scopes		
	ement_service"	when the UE		
	"3gpp:mc:data_config_man agement_service"	supports MCData		
	"3gpp:mc:data_group_man			
	agement_service"			
	NOTE: The list may contain			
	further scope values which			
rodiroct uri	are not checked px_MCX_OAuth_RedirectU	The URI of the	OpenID Connect	
redirect_uri	RI_A	MCPTT client to	1.0 [95]	
		which the IdM server	[00]	
		will redirect the		
		MCPTT client's user		
		agent in order to		
		return the authorization code		
state	any value as selected by	An opaque value	OpenID Connect	
0.0.0	the UE	used by the MCPTT	1.0 [95]	
		client to maintain	[]	
		state between the		
		authentication		
		request and authentication		

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]

## 5.5.4.10.2 Authentication Response

Table 5.5.4.10.2-1: Authentication Response

Information Element	Value/remark	Comment	Reference	Condition
code	"SpixIOBeZQQYbYS6 WxSbIA"	The authorization code generated by the authorization endpoint and returned to the MCPTT 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

Table 5.5.4.10.3-1: Token Request

Derivation Path: TS 33.180 [94]				
Information Element	Value/remark	Comment	Reference	Condition
grant-type	"authorization_code"		RFC 2616 [26]	
code	same value as assigned by the SS in the Authentication Response	The authorization code generated by the authorization endpoint and returned to the MCPTT client via the authentication	TS 33.180 [94]	
		response		
client_id	px_MCX_OAuth_Client Id_A	Identifier of the MCPTT client making the API request	TS 33.180 [94]	
redirect_uri	px_MCX_OAuth_Redir ectURI_A	The URI of the MCPTT client to which the IdM server will redirect the MCPTT client's user agent	TS 33.180 [94]	
code_verifier	Value selected by the UE: The SS shall check that the code-challenge in the Authentication Request is the base64url-encoded SHA-256 hash of the code-verifier	A cryptographically random string that is used to correlate the authorization request to the token request; the minimum length is 43 characters, the maximum length of 128 characters	TS 33.180 [94] RFC 7636 [100]	

5.5.4.10.4 Token Response

Table 5.5.4.10.4-1: Token Response

Derivation Path: TS 33.180 [9	94], clause B.4.2.5			
Information Element	Value/remark	Comment	Reference	Condition
access_token		The access token. The access token is opaque to the MCPTT client	RFC 6749 [77] TS 33.180 [94]	
{		I I d A I d I		
{     "kid"	"jws-rsa"	Header Algorithm hint indicating which key was used to secure the JWS: name of the RSA public key in case of RS256 Editor's note: value to be confirmed	RFC 7515 [102]	
"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]	
{		Payload Data	RFC 7519 [101]	
"mcptt_id"	px_MCPTT_ID_User_A	URI of the MCPTT client User this is a globally unique identifier within the MCPTT service that represents the MCPTT user	TS 24.380 TS 24.483	
"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]	
	"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" "3gpp:mc:video_config_ management_service" "3gpp:mc:video_group_m			MCPTT  MCVIDEO
	anagement_service"  "3gpp:mc:data_service"  "3gpp:mc:data_key_man agement_service"  "3gpp:mc:data_config_m anagement_service"  "3gpp:mc:data_group_m anagement_service"			MCDATA

			<u> </u>
"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 MCPTT client making the API request	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]
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 MCPTT client may validate the user with the ID token and configure itself for the user	RFC 6749 [77] TS 33.180 [94]
{			550 5515151
{		Header Algorithm	RFC 7515 [102]
"kid"	"jws-rsa"	hint indicating which key was used to secure the JWS Editor's note: value to be confirmed	
"alg"	"RS256"	identifies the cryptographic algorithm used to secure the JWS Editor's note: value to be confirmed	
}		D 1 1D 1	DE0 7540 (404)
"mcptt_id"	px_MCPTT_ID_User_A	Payload Data  URI of the MCPTT client User this is a globally unique identifier within the MCPTT service that represents the MCPTT user	RFC 7519 [101] TS 24.380 TS 24.483
"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"	px_MCPTT_IdM_Server_ URI	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]

Editor's note: It is to be clarified whether the identifiers for mcdata and mcvideo are to be added in the table above or whether explicit tables are to be defined.

5.5.4.10.5 Void

5.5.4.10.6 KMS Certificate

Table 5.5.4.10.6-1: KMS Certificate

Derivation Path: TS 33.180 [94], Information Element	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	tsc_MCX_MC_ID_User	The MC ID with which		
	_A	the user has used for		
	Editor's note: to be	authentication		
	clarified whether the			
	MC ID can be used in			
	this context or whether			
	there are restrictions			
	how to set the UserUri			
Time	Current system time of	Time stamp of KMS		
	the SS	message		
ClientReqUrl	tsc_MCX_KMS_Client	URL of the client		
Olichii (cqon	ReqUrl_init	making the key request		
KmsMessage	rtequi_mit	making the key request		
Kmslnit				
Version	"1.0.0"			
	1.0.0			
KmsCertificate	"4 4 0"			
Version	"1.1.0"	The version number of		
		the certificate type		
Role	"Root"	This shall indicate		
		whether the certificate		
		is a "Root" or "External"		
		certificate		
CertUri	tsc_MCX_KMS_CertUri	The URI of the		
		Certificate (this object)		
KmsUri	tsc_MCX_KMS_Hostna	The URI of the KMS		
	me	which issued the		
		Certificate		
Issuer	Not present	(Optional) String		
		describing the issuing		
		entity		
ValidFrom	Not present	(Optional) Date from		
		which the Certificate		
		may be used		
ValidTo	Not present	(Optional) Date at		
	· ·	which the Certificate		
		expires		
Revoked	false	(Optional) A Boolean		
	1.00	value defining whether		
		a Certificate has been		
		revoked		
UserIDFormat	"2"	Shall contain the value		
2002. 0		'2'		
UserKeyPeriod	"2592000"	The number of seconds		
200.11031 31100		that each user key		
		issued by this KMS		
		should be used		
		(2592000 seconds are		
		30 days)		
UserKeyOffset	CurrentTimostoma	UserKeyOffset so that		+
OserneyOnset	CurrentTimestamp MODULO			
		KeyPeriod starts at		
	UserKeyPeriod	current system time; CurrentTimestamp is		
		L COHEDITIMESTAMD IS		i
		the current system time in seconds since 0h on		

PubEncKey	SAKKE Public Key Z_T	The SAKKE Public	RFC 6508 [99]
Fublickey	derived from master	Key, "Z_T". This is an	KFC 0308 [99]
	secret z_T according to	OCTET STRING	
	RFC 6508	encoding of an elliptic	
	141 6 6566	curve point	
PubAuthKey	ECCSI Public Key	The ECCSI Public Key,	RFC 6507 [98]
1 db/(dill/(cy	KPAK derived from	"KPAK". This is an	141 0 0007 [50]
	private key KSAK	OCTET STRING	
	according to RFC 6507	encoding of an elliptic	
		curve point	
ParameterSet	Not present	(Optional) The choice	
T dramotor cot	The process	of parameter set used	
		for SAKKE and ECCSI	
KmsDomainList	Not present	(Optional) List of	
Tanobomaniziot	Trot procent	domains associated	
		with the certificate	
SignedInfo		With the continuate	
CanonicalizationAlgorithm	"xml-c14n"	XML Signature	
Gariornoanzation, agorianni	X 01	processing	
SignatureAlgorithm	"HMAC-SHA-256"	Hashing algorithm to be	
J.g. a. a. a. g. a. a. a.		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)	
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	- Sisson official	30		23.14.14.1
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	tsc_MCX_MC_ID_User	The MC ID with which		
	_A	the user has used for		
	Editor's note: to be	authentication		
	clarified whether the			
	MC ID can be used in			
	this context or whether			
	there are restrictions			
Time	how to set the UserUri Current system time of	Time stamp of KMS		
Tille	the SS	message		
ClientReqUrl	tsc_MCX_KMS_Client	URL of the client		
S.ISTILLOGOTI	RegUrl_keyprov	making the key request		
KmsMessage	i togon_noyprov	making the key request		
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	The URI of the KMS		
	me	which issued the key		
		set		
CertUri	Not present	(Optional) The URI of		
		the Certificate which		
		may be used to validate		
	N	the key set		
Issuer	Not present	(Optional) String		
		describing the issuing entity		
UserUri	px_MCPTT_ID_User_A	The user's MCPTT ID		
OseiOii	px_MCVideo_ID_User_	The user's MCVideo ID		MCVIDEO
	A	The user's MC video ID		IVICVIDEC
	px_MCData_ID_User_	The user's MCData ID		MCDATA
	A	The deer o Medata 15		WOD/(I/(
UserID	UID generated	UID corresponding to	TS 33.180 [94]	
	according to annex	the key set		
	F.2.1 of TS 33.180 [94]			
	with MCPTT-Id as			
	identifier			
	Editor's note: to be			
	clarified how to convert			
	the UID into charstring			
	(e.g. hexstring			
	representation or			
ValidFrom	base64 encoding)  Not present	(Optional) Date and		
v aliuFIUIII	Not present	time from which the key		
		set may be used		
ValidTo	Not present	(Optional) Date and		
valid i O	Not prosont	time at which the key		
		set expires		

Derivation Path: TS 33.180 [94],				
Information Element	Value/remark	Comment	Reference	Condition
Signed KmsResponse				
KeyPeriodNo	FLOOR((CurrentTimest amp - UserKeyOffset) / UserKeyPeriod)	Current Key Period: CurrentTimestamp is the current system time in seconds since 0h on 1st Jan 1900; UserKeyOffset and UserKeyPeriod are given in the KMS Certificate (Table 5.5.4.10.6-1) in seconds	TS 33.180 [94]	
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		The area of the transfer		
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)		

Information Element	, clause D.3.2.2 Value/remark	Comment	Reference	Condition
Signed KmsResponse	10.007.0.00			
UserPubTokenPVT		The ECCSI public	RFC 6507 [98]	
Oseir ub i okelir v i		validation token, "PVT".	KFC 0507 [90]	
		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		
EncryptionAlgorithm	"AES256"			
EncryptionAlgoritim	AE3230	Encryption algorithm to		
		use		
KeyInfo	1 04 1 1714			
KeyName	base64 encoded TrK-			
	ID (px_MCX_TrK_ID)			
CipherData				
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		
- · g. · · · · · · · · · g - · · · · · · ·		applied to sign the		
		SignedInfo with the key		
Deference		given in the KeyInfo		
Reference	641 cm = D = 0 m = 0 m = 0	notonning to the plate		
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		
Digoda agonami	01.11 200	applied to sign the data		
		object		
Digost\/alus	Hoch signing 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)		
KeyInfo				
KeyName	base64 encoded InK-ID			
	(px_MCX_InK_ID)		i	1

# 5.5.4.10.9 Signed KMS Request

Table 5.5.4.10.9-1: Signed KMS Request

Derivation Path: TS 33.180 [94] Information Element	Value/remark	Comment	Reference	Condition
SignedKmsRequest				
KmsRequest				
Id attribute	any value	value as used as reference in the signature		
Version attribute	"1.1.0"			
UserUri	px_MCPTT_ID_User_A	The user's MCPTT ID		
	px_MCVideo_ID_User_ A	The user's MCVideo ID		MCVIDEO
	px_MCData_ID_User_ A	The user's MCData ID		MCDATA
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		
Deviceld	any value if present	A string representing the device		
ClientReqUrl	URI with same path as in the request URI of the HTTP request	The resource URI to which the HTTP POST request is sent		
KrrList	not present			
ClientError	not present			
Signature				
SignedInfo				
CanonicalizationAlgorithm	"http://www.w3.org/TR/ 2001/REC-xml-c14n- 20010315"	XML Signature processing		
SignatureAlgorithm	"http://www.w3.org/200 1/04/xmldsig- more#hmac-sha256"	Hashing algorithm to be applied to sign the SignedInfo with the key given in the KeyInfo		
Reference				
URI	URI referring to the Id of the request	same value as the Id attribute of the request with leading "#"		
DigestAlgorithm	"http://www.w3.org/200 1/04/xmlenc#sha256"	Hashing algorithm applied to sign the data object		
DigestValue	Hash signing the data object (referred to by the URI)			
SignatureValue	Hash signing the SignedInfo; shall be validated by the SS	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)		
KeyInfo				
KeyName	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		

#### GROUP CALL ANNOUNCEMENT from the SS 5.5.5.2.2

Table 5.5.5.2.2-1: 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	"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 5.5.3.1.4-1		
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		

## 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	<u> </u>	
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	"00000010"	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	"00000010"	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

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	"00000000"	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	"00000000"	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

Derivation Path: 24.379 [9], Table 15.1.6.1-1.			
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		

## 5.5.5.10 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

#### Table 5.5.5.11.2-1: 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		

## 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	Commone	Condition
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

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

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_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].

Depending on the TC scenario, the same MCPTT media plane control message can be sent by the SS or by the UE. Throughout the default content specified in below a particular value has been chosen to satisfy one or the other scenario. It is expected that when a message is used in a TC in a particular context then the relevant for the usage in the TC values will be defined in the TC.

The following conditions apply throughout clause 5.5.6:

Table 5.5.6.1-1: Conditions

Condition	Explanation
ON-NETWORK	Message sent in on-network scenario.
OFF-NETWORK	Message sent in off-network scenario.
PRIVATE-CALL	Message sent as part of a Private call handling.
GROUP-CALL	Message sent as part of a Group call handling.
FA	IE for when an active Functional Alias is used
Multi-Talker	IE for when a Multi Talker call is active

Considerations in regard to describing specific values:

#### - SSRC

- Synchronization SouRCe (SSRC) values are used in most of the messages specified in clause 5.5.6. The SSRC value is randomly chosen by the participant in, and globally unique within, an RTP session as specified in IETF RFC 3550 [76]. Because the value chosen by the UE (MCPTT client) cannot be controlled, specifying a "hard coded" value to be used by the SS (MCPTT server) or the SS-UE (MCPTT Client) is prone to triggering a collision by choosing a value which may be the same as the one chosen by the UE. How to resolve SSRC collisions is described in IETF RFC 3550 [76] however, resolving them as part of the MCPTT test case definitions e.g. in TS 36.579-2 [2] is not foreseen and is left to the test implementation.
- For the purposes of default and specific messages definition throughout the present specification, as well as, throughout the rest of the MCPTT conformance test specifications e.g. the TS 36.579-2 [2] no explicit SSRC values are defined and instead the following notation is used to clarify the messages origin/destination:
- When there is no danger for misunderstanding the notation 'The SSRC of the message sender' and the 'The SSRC of the intended recipient of the message' are used whereas the "sender" and the "recipient" are to be understood in the context of the test i.e. the test entities being involved to exchange messages.
- When in doubt, the notations 'UE (MCPTT client) SSRC', SS (MCPTT server) SSRC', 'SS-UE1 (MCPTT Client) SSRC' or 'SS-UE2 (MCPTT Client) SSRC' are used.

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	value/remark	Comment	Condition
Subtype	00000	Floor Request	
SSRC	The SSRC of the message sender	The SSRC of the floor participant sending the message. Notation in accordance with	
		clause 5.5.6.1.	
name Floor priority	MCPT 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 call setup	
User ID User ID	Not present		ON- NETWORK OFF-
User ID	px_MCPTT_ID_User_A	The MCPTT User ID of the floor participant requesting the floor.	NETWORK
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	10000x0000000000	Normal call, any queueing	
Functional Alias	Not present px_MCPTT_ID_FA_A	Functional Alias = URI	FA
Location	optional		
Location Type	Any allowed value	See TS 24.380 [10] Table 8.2.3.21-3	

Derivation Path: 24.380 [10], Table 8.2.4-1.			
Information Element	Value/remark	Comment	Condition
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	Tuluo/Tolliulik	- Common	
Subtype	10001	Floor Granted with acknowledgment required	
SSRC	The SSRC of the message sender	The SSRC of the floor control server for onnetwork and floor arbitrator for offnetwork.  Notation in accordance with clause 5.5.6.1.  Coded as specified in IETF RFC 3550 [76].	
name	MCPT		
Duration			
Duration	"00000000 10000000"	128 sec (an arbitrary value)	
SSRC of granted floor participant	The SSRC of the intended recipient of the message	Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].	
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	

Derivation Path: 24.380 [10], Table 8.2.5-1.			
Information Element	Value/remark	Comment	Condition
User ID	Not present		ON- NETWORK
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		ON- NETWORK
Queue Size	"0"	the number of queued MCPTT clients in the MCPTT call	OFF- NETWORK
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			
Floor Indicator	100001000000000	Normal call, queueing 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.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00011	Floor Deny with acknowledgment not required	
SSRC	The SSRC of the message sender	The SSRC of the floor control server for onnetwork and floor arbitrator for offnetwork.  Notation in accordance with clause 5.5.6.1.  Coded as specified in IETF RFC 3550 [76].	
name	MCPT		
Reject Cause			
Reject Cause	"1"	Cause #1 - Another MCPTT client has permission	
Reject Phrase	"Another MCPTT client has permission"	An additional text string explaining the reason for rejecting the floor request.	
User ID	Not present		ON- NETWORK
User ID			OFF- NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT User 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	1000010000000000	Normal call, queueing 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	
SSRC	The SSRC of the	The SSRC of the	
	message sender	floor participant	
		sending the	
		message.	
		Notation in	
		accordance with	
		clause 5.5.6.1.	
		Coded as	
		specified in IETF	
	MODE	RFC 3550 [76]	
name	MCPT		ONI
User ID	Not present		ON-
Hearth			NETWORK
User ID			OFF- NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT User	NETWORK
Osel ID	px_ivici i i_ib_osei_A	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, any	
		queueing	

## 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	
SSRC	The SSRC of the message sender	The SSRC of the floor control server for onnetwork and floor arbitrator for offnetwork.  Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].	
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 number="" sequence=""> 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	1000010000000000	Normal call, queueing supported	

5.5.6.7 Floor Taken

Table 5.5.6.7-1: Floor Taken

Derivation Path: 24.380 [10], Table 8.2.9-1.			
Information Element	Value/remark	Comment	Condition
RTCP header Subtype	00010	Floor Taken with acknowledgment not required	
SSRC	The SSRC of the message sender	The SSRC of the floor control server for onnetwork and floor arbitrator for offnetwork.	
	Netroscot	Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].	NA III Tallan
nome	Not present MCPT		Multi-Talker
name User ID	Not present		ON- NETWORK
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 number="" sequence=""> 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	1000010000000000	Normal call, queueing supported	
SSRC of granted floor participant	SS-UE1 (MCPTT Client) SSRC	The SSRC of the granted floor participant.	
Functional Alias	Not present		
	px_MCPTT_ID_FA_B	Functional Alias = URI	FA AND NOT Multi- Talker
List of Granted Users	Not present		

Derivation Path: 24.380 [10], Table 8.2.9-1.			
Information Element	Value/remark	Comment	Condition
List of Granted Users	1401		Multi-Talker
No of users	'10'		
User ID User ID	px_MCPTT_ID_User_A px_MCPTT_ID_User_B		
List of SSRCs of granted floor participants	Not present		
List of SSRCs of granted floor participants	Not present		Multi-Talker
Number of SSRCs	'10'		Watti-Talket
SSRC	The SSRC of User A		
SSRC	The SSRC of User B		
List of Functional Aliases	Not present		
List of Functional Aliases			FA AND Multi-Talker
No of FAs	'10'		
Functional Alias	px_MCPTT_ID_FA_A		
Functional Alias	px_MCPTT_ID_FA_B		
Location			NOT Multi- Talker
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"	
Location	Not present	1	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'		
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"	
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"	

## 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	The SSRC of the message sender	The SSRC of the floor control server for onnetwork and floor arbitrator for offnetwork.  Notation in accordance with clause 5.5.6.1. Coded as specified in IETF	
nomo	MCPT	RFC 3550 [76].	
name Reject Cause	IVICE		
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	1000010000000000	Normal call, queueing supported	

## 5.5.6.9 Floor Queue Position Request

Table 5.5.6.9-1: 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	The SSRC of the message sender	The SSRC of the floor participant sending the message.	
		Notation in accordance with clause 5.5.6.1. Codedas specified in IETF RFC 3550 [76]	
name	MCPT		
User ID	Not present		ON- NETWORK
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	

## 5.5.6.10 Floor Queue Position Info

Table 5.5.6.10-1: 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	
SSRC	The SSRC of the message sender	The SSRC of the floor control server for onnetwork and floor arbitrator for offnetwork.	
		Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].	
name	MCPT		
User ID	Not present		ON- NETWORK
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		ON- NETWORK
	The SSRC of the message recepient	The SSRC field carries the SSRC of the queued floor participant	OFF- NETWORK
Queued User ID	Not present		ON- NETWORK
Queued User ID			OFF- NETWORK
Queued User ID	px_MCPTT_ID_User_A	the MCPTT ID of the queued floor participant	
Queue Info		<u> </u>	
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	

## 5.5.6.11 Floor Ack

**Table 5.5.6.11-1: Floor Ack** 

Derivation Path: 24.380 [10], Table 8.2.13-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype SSRC	01010 The SSRC of the SS	Floor Ack The SSRC of the floor control server for onnetwork and floor arbitrator for offnetwork.	DOWNLINK
		Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].	
	The SSRC of the UE	The SSRC of the floor participant sending the message	UPLINK
		Notation in accordance with subclause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].	
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	"0001xxxx"	Message Type of the Floormessage which requested the acknowledgment	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	

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

Table 5.5.6.11A-1: Floor Release Multi Talker

Derivation Path: 24.380 [10], Table 8.2.14-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	01111	Floor Release Multi Talker	
SSRC	The SSRC of the message sender	The SSRC of the floor participant sending the message. Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76]	
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	

5.5.6.12 Connect

**Table 5.5.6.12-1: Connect** 

Derivation Path: 24.380 [10], Table 8.3.4-1.		_	
Information Element RTCP header	Value/remark	Comment	Condition
Subtype	10000	Connect with acknowledgment required	
SSRC	The SSRC of the SS	The SSRC of the floor control server for onnetwork and floor arbitrator for offnetwork.	
		Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].	
name	MCPC		
MCPTT Session Identity field	"0000000"	NI ' (	
Session Type	"0000000" "0000001"	No session type private	PRIVATE- CALL
	"0000011"	prearranged	GROUP- CALL OR BROADCAS T- GROUPCAL L
	"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	INCT TT TURBUST	PRIVATE- CALL
MCPTT Group Identity field			GROUP- CALL
MCPTT Group Identity	px_MCPTT_Group_A_ID	a URI, which identifies the MCPTT group	
Media Streams		- 11:	
Media Stream field	"1"	8 bit parameter 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 "m=application" m-line negotiated in the pre- established session	
	"0"	no floor control	WITHOUT_ FLOORCON TROL
Warning Text field	Not Present		

Answer State field			
Answer State	"1"	confirmed	
Inviting MCPTT User Identity field			
Inviting MCPTT User Identity	px_MCPTT_ID_User_B	URI, which identifies the inviting MCPTT user	
PCK I_MESSAGE field	Not Present		

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	10001	Disconnect with acknowledgment required	
SSRC	The SSRC of the SS	The SSRC of the floor control server for onnetwork and floor arbitrator for offnetwork.  Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].	
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	

## 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	The SSRC of the UE	The SSRC of the floor participant sending the message	
		accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].	
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			
Subtype	00000	Map Group To Bearer	
SSRC	The SSRC of the	The SSRC of the	
	message sender	floor control	
		server for on-	
		network and floor	
		arbitrator for off- network.	
		Notation in	
		accordance with	
		clause 5.5.6.1.	
		Coded as	
		specified in IETF RFC 3550 [76].	
name	MCMC	141 0 0000 [70].	
MCPTT Group ID	px_MCPTT_Group_A_ID	The group ID of	
TMGI		the call	
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	
MOO	The serve welve set for	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	Mobile Network	
	PLMN1 specified in Table 5.5.8.1-x	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<="" td=""><td></td></floor>	
		Number> value is	
		set to "0" when	
		the same	
		subchannel is	
		used for media	
		and for floor	
		control.	

Derivation Path: 24.380 [10], Table 8.4.4-1.			
Information Element	Value/remark	Comment	Condition
IP version	"0"	'0' = IP version 4 '1' = IP version 6 All other values are reserved for future use	
Floor control Port Number	"9"	The port to be used if the <floor m-line="" number=""> value is greater than '0'. If the <floor m-line="" number=""> value is equal to '0', the <floor control="" number="" port=""> 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

Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00001	Unmap Group To Bearer	
SSRC	The SSRC of the message sender	The SSRC of the floor control server for onnetwork and floor arbitrator for offnetwork.  Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].	
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	The SSRC of the message sender	The SSRC of the participating MCPTT function.  Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].	
name	MCMC		
MCPTT Group ID	px_MCPTT_Group_A_ID	The group ID of the call	

#### 5.5.6.18 Bearer Announcement

Table 5.5.6.18-1: Bearer Announcement

Derivation Path: 24.380 [10], Table 8.4.7-1.  Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00011	Bearer	
•		Announcement	
name	MCMC		
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	
MCC	The same value as for PLMN1 specified in Table 5.5.8.1-x	administration  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	<del></del>	
Monitoring State	'1'	The <monitoring state=""> value is a binary value where the following values are defined: '0' Monitoring is inactive '1' Monitoring is active</monitoring>	

# 5.5.7 Default MCPTT 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	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 24.483 [13] clause 6.2.7	
display-name	px_MCPTT_Group_A_ Name	TS-XDM_Group-V1_1 Value is a <display- name=""> 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_MCPTT_User_A_P articipantType	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> element indicates that the MCPTT group member is authorized for multi-talker floor control in a 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> 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-talker-allowed></multi-talker-allowed>		
	ny MCDTT ID Hear B		TC 24 402 [42]	
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_MCPTT_User_B_P articipantType	Participant type of the MCPTT group	TS 24.483 [13] clause 6.2.13	

Derivation Path: TS 24.481 [11] cla				
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:multi-talker-allowed	Present	Presence of the <multi-< td=""><td></td><td></td></multi-<>		
		talker-allowed> element		
		indicates that the		
		MCPTT group member		
		is authorized for multi-		
		talker floor control in a		
		MCPTT group call of		
		the MCPTT group in		
		on-network MCPTT		
		procedures when the		
		MCPTT group supports multi-talker-control.		
		Absence of the <multi-< td=""><td></td><td></td></multi-<>		
		talker-allowed> element		
		indicates that the		
		MCPTT group member		
		identified by the		
		<entry> element is not</entry>		
		authorized for multi-		
		talker floor control		
entry[3]		group member 3		1
uri attribute	px_MCPTT_ID_User_C	Indicates an MCPTT	TS 24.483 [13]	
	,	user identity (MCPTT	clause 6.2.11	
		ID) which is a globally		
		unique identifier within		
		the MCPTT service that		
		represents the MCPTT		
		user		
display-name	Not present			
mcpttgi:user-priority	"1"	Indicates the user	TS 24.483 [13]	
		priority of the MCPTT	clause 6.2.12	
		group member		
mcpttgi:participant-type	px_MCPTT_User_C_P	Participant type of the	TS 24.483 [13]	
	articipantType	MCPTT group	clause 6.2.13	
mcpttgi:multi-talker-allowed	Present	Presence of the <multi-< td=""><td></td><td></td></multi-<>		
		talker-allowed> element		
		indicates that the		
		MCPTT group member		
		is authorized for multi-		
		talker floor control in a		
		MCPTT group call of		
		the MCPTT group in		
		on-network MCPTT		
		procedures when the		
		MCPTT group supports		
		multi-talker-control.		
		Absence of the <multi-< td=""><td></td><td></td></multi-<>		
		talker-allowed> element		
		indicates that the		
		MCPTT group member		
		identified by the		
		<entry> element is not authorized for multi-</entry>		
		talker floor control		
cp:ruleset	1		1	I
cp:rule				
cp:id attribute	"rule1"			
cp:actions	TUIOT			
cp:on-network-allow-	"true"	Indicates that the		
getting-member-list	แนษ	identity is allowed to		
gotting-member-list		get the MCS group		
		member list of the MCS		
		group in on-network		
		procedures		
cp:allow-initiate-conference	"true"	F. 000 a.a. 00		
cp:join-handling	"true"			
op.jo		<u> </u>		

Information Element	ause 7.2.2 Value/remark	Comment	Reference	Condition
cp:allow-MCPTT-	"true"	Indicates whether an	TS 24.483 [13]	
emergency-call		MCPTT emergency	clause 6.2.19	
		group call is permitted		
and the section of a set of all	H4 II	on the MCPTT group	TO 04 400 [40]	
cp:allow-imminent-peril-call	"true"	Indicates whether an	TS 24.483 [13]	
		MCPTT imminent peril	clause 6.2.20	
		group call is permitted		
cp:allow-MCPTT-	"true"	on the MCPTT group Indicates whether an	TC 24 402 [42]	
	true		TS 24.483 [13] clause 6.2.21	
emergency-alert		MCPTT emergency alert is possible on the	ciause 6.2.21	
		MCPTT group		
cp:on-network-allow-	"true"	Indicates that the		
getting-affiliation-list	liue	identity is allowed to		
getting-aniliation-list		get the list of MCPTT		
		users affiliated to the		
		MCPTT group in on-		
		network MCPTT		
		procedures		
cp:on-network-allow-	"true"	indicates that the		
conference-state	แน	identity is allowed to		
COMETERIOS-SIGIS		subscribe to the		
		conference event		
		package of an MCPTT		
		group session of the		
		MCPTT group in on-		
		network MCPTT		
monttalioumor	px_MCPTT_Group_A_	procedures Group's owner (Mission	TS 24.483 [13]	
mcpttgi:owner	Owner_Organization	Critical Organisation).	clause 6.2.15	
mcpttgi:preferred-voice-	Owner_Organization	Chilcal Organisation).	ciause 6.2.15	
encodings				
mcpttgi:encoding-				
mcpttgi:encoding- mcpttgi:name[1]	px_MCPTT_Group_A_	Preferred voice codec	RFC 4566 [27]	
moptigi.name[1]	preferred_VCodec	is a RTP payload.	TS 26.171 [66]	
	preferred_vCodec	MCPTT clients shall	TS 24.483 [13]	
			clause 6.2.16	
		support the AMR-WB codec.	ciause 6.2.16	
mcpttgi:level-within-group-	"0"	Indicates the level	TS 24.483 [13]	
hierarchy	· ·	within a group	clause 6.2.17	
inerarchy		hierarchy (only	ciause 0.2.17	
		applicable for group-		
		broadcast group).		
mcpttgi:level-within-user-	"0"	Indicates the level	TS 24.483 [13]	
hierarchy		within user hierarchy	clause 6.2.18	
ino. arony		(only applicable for	JIQU36 U.Z. 10	
		user-broadcast group).		
mcpttgi:protect-media	"true"	Indicates whether	TS 24.483 [13]	
moptigi.protect-media	uue	confidentiality and	clause 6.2.22	
		integrity of media is	0.2.22	
		required on the MCPTT		
mcpttgi:protect-floor-control-	"true"	group Indicates whether	TS 24.483 [13]	
signalling	uue	confidentiality and	clause 6.2.23	
aignainig			Clause 0.2.23	
		integrity of floor control		
		signalling is required on		
mcpttgi:off-network-ProSe-	tsc_MCPTT_Group_A_	the MCPTT group Indicates the Prose	TS 23.303 [68]	
layer-2-group-id	ProSeLayer2GroupID	layer-2 group ID	TS 24.483 [13]	
iayer-2-group-iu	F100eLaye(2010upiD	layer-z group ID		
mentalioff naturals ID	"0 0 0 0"	Indicates the ProSe	clause 6.2.27	
mcpttgi:off-network-IP-	"0.0.0.0"		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	l	
	i	L DOMINOD OF THE IP	ì	

Derivation Path: TS 24.481 [11] c Information Element	Value/remark	Comment	Reference	Condition
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		
		TS 24.483 [13]		
mcpttgi:off-network-in-	"PT18H12M15S"	Indicates the timeout	TS 24.483 [13]	
progress-imminent-peril-state-	1 1101112111100	value for the	clause 6.2.32	
cancellation-timeout		cancellation of an in	5,4400 0.2.02	
		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		
	UDT 4 8 4 H	seconds	TO 04 400 (40)	
mcpttgi:off-network-	"PT1M"	Indicates the max	TS 24.483 [13]	
maximum-duration		duration of group calls.	clause 6.2.34	
		"PT1M" corresponds to		
month with the materials are also	"true"	1 minute	TC 04 400 [40]	
mcpttgi:off-network-queue-	true	Indicates if queuing is enabled or not	TS 24.483 [13] clause 6.2.34A	
usage mcpttgi:off-network-ProSe-	"1"	Indicates the default		
signalling-PPPP	'	ProSe Per-Packet	TS 24.483 [13] clause 6.2.36	
Signaming-1 FFF		Priority (PPPP) value	JIQUSE 0.2.30	
mcpttgi:off-network-ProSe-	"1"	Indicates the default	TS 24.483 [13]	
media-PPPP	'	ProSe Per-Packet	clause 6.2.37	
		Priority (PPPP) value	5.4450 0.2.07	
mcpttgi:off-network-ProSe-	"8"	Indicates the default	TS 24.483 [13]	
emergency-call-signalling-	-	ProSe Per-Packet	clause 6.2.38	
PPPP		Priority (PPPP) value		
mcpttgi:off-network-ProSe-	"8"	Indicates the default	TS 24.483 [13]	
emergency-call-media-PPPP		ProSe Per-Packet	clause 6.2.39	
		Priority (PPPP) value		
mcpttgi:off-network-ProSe-	"7"	Indicates the default	TS 24.483 [13]	
imminent-peril-call-signalling-		ProSe Per-Packet	clause 6.2.40	
PPPP		Priority (PPPP) value		
mcpttgi:off-network-ProSe-	"7"	Indicates the default	TS 24.483 [13]	
imminent-peril-call-media-		ProSe Per-Packet	clause 6.2.41	
PPPP		Priority (PPPP) value		
mcpttgi:multi-talker-control	"false"	"true" indicates that		
		multi-talker control is		1
		enabled for the group		
		"false" indicates that		1
		multi-talker control is		1
1	1	disabled for the group	İ	ĺ

Derivation Path: TS 24.481 [11] cla	ause 7.2.2			
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:max-number- simultaneous-talkers	"1"	Indicates the maximum number of parallel talkers in a MCPTT group session in onnetwork MCPTT procedures		
mcpttgi:audio-mixing-entity	Not present	Absence of the <audio- mixing-entity&gt; element indicates that audio mixing is performed in the network</audio- 		

Table 5.5.7.1-2: Group Creation Document

Derivation Path: TS 24.481 [11] clause Information Element	Value/remark	Comment	Reference	Condition
group				
list-service				
uri-attribute	px_MCPTT_Grou p_B_ID	uri of the MCPTT group	TS 24.481 [11]	
display-name	px_MCPTT_Grou p B name	group display name	TS 24.481 [11]	
list	1 = =			
entry[1]		User-A		
uri-attribute	px_MCPTT_ID_U ser_A	User ID allowed to participate in this group	TS 24.481 [11]	
display-name	px_MCPTT_User _A_Profile_Name	User display name	TS 24.481 [11]	
mcpttgi:user-priority	1	User priority	TS 24.481 [11]	
entry[2]		User-B		
uri-attribute	px_MCPTT_ID_U ser B	User ID allowed to participate in this group	TS 24.481 [11]	
display-name	px_MCPTT_User _B_Profile_Name	User display name	TS 24.481 [11]	
mcpttgi:user-priority	2	User priority	TS 24.481 [11]	
entry[3]		User-C	. 1	
uri-attribute	px_MCPTT_ID_U ser_C	User ID allowed to participate in this group	TS 24.481 [11]	
display-name	px_MCPTT_User _C_Profile_Name	User display name	TS 24.481 [11]	
mcpttgi:user-priority	3	User priority	TS 24.481 [11]	
mcpttgi:on-network-invite-members	"true"	Allow users to invite members to this group	TS 24.481 [11]	
mcpttgi:on-network-max- participant-count	"3"	Maximum number of users in the group	TS 24.481 [11]	
cp:ruleset				
cp:rule				
cp:id attribute	"a7c"		TS 24.481 [11]	
cp:actions				
cp:allow-initiate-conference	"true"	All conference calls	TS 24.481 [11]	
cp:join-handling	"true"	Allow group join	TS 24.481 [11]	
cp:allow-MCPTT-emergency-call	"true"	Allow emergency call	TS 24.481 [11]	
cp:allow-imminent-peril-call	"true"	Allow imminent peril call	TS 24.481 [11]	
cp:allow-MCPTT-emergency- alert	"true"	All emergency alert	TS 24.481 [11]	
oxe:supported-services				
oxe:service			TS 24.481 [11]	
oxe:enabler	"urn:urn-7:3gpp- service.ims.icsi.m cptt"			
oxe:group-media				
mcpttgi:mcptt-speech				
mcpttgi:on-network-group-priority	"5"	New group priority	TS 24.481 [11]	

**Table 5.5.7.1-3: Temporary Group Creation Document** 

Derivation Path: TS 24.481 [11] cl Information Element	Value/remark	Comment	Reference	Condition
gmop:document				
gmop:request				
group				
list-service[1]				
mcpttgi: on-network-			TS 24.481 [11]	
temporary				
temporary-MCPTT-group-ID attribute	px_MCPTT_Group_T_I D	MCS temporary group identity		
temporary-MCPTT-group- requestor attribute	px_MCPTT_ID_User_A	Identity of the responsible for formatting the MCS temporary group.		
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		
constituent-MCPTT- group-ID[2]	px_MCPTT_Group_B_I D	MCS group ID of a constituent MCS group of the temporary MCS group		

## 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 5.5.7.1-1: MCVideo Group Configuration Defaults** 

Derivation Path: TS 24.481 [11] Information Element	Value/remark	Comment	Reference	Condition
list-service[1]		Group 1		
uri attribute	px_MCVideo_Group_A _ID	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_MCVideo_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_MCVideo_ID_User_ A	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 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"3"	Indicates the user priority of the MCVideo group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCVideo_User_A_ ParticipantType	Participant type of the MCVideo group	TS 24.483 [13] clause 6.2.13	
rl:mcvideo-mcvideo-id				
uri attribute	px_MCVideo_ID_User_ A			
entry[2]	px_MCVideo_ID_User_	Group member 2 Indicates an MCVideo	TS 24.483 [13]	
	В	user identity (MCVideo ID) which is a globally unique identifier within the MCVideo service that represents the MCVideo user	clause 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"2"	Indicates the user priority of the MCVideo group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCVideo_User_B_ ParticipantType	Participant type of the MCVideo group	TS 24.483 [13] clause 6.2.13	
rl:mcvideo-mcvideo-id				
uri attribute	px_MCVideo_ID_User_ B			
entry[3]		Group member 3		
uri attribute	px_MCVideo_ID_User_ C	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 6.2.11	
		1010 01000 0001		
display-name	Not present			
display-name mcpttgi:user-priority	Not present	Indicates the user priority of the MCVideo group member	TS 24.483 [13] clause 6.2.12	
		Indicates the user priority of the MCVideo		
mcpttgi:user-priority	px_MCVideo_User_C_ ParticipantType	Indicates the user priority of the MCVideo group member Participant type of the	clause 6.2.12 TS 24.483 [13]	
mcpttgi:user-priority mcpttgi:participant-type	"1" px_MCVideo_User_C_	Indicates the user priority of the MCVideo group member Participant type of the	clause 6.2.12 TS 24.483 [13]	
mcpttgi:user-priority mcpttgi:participant-type rl:mcvideo-mcvideo-id	px_MCVideo_User_C_ ParticipantType px_MCVideo_ID_User_	Indicates the user priority of the MCVideo group member Participant type of the	clause 6.2.12 TS 24.483 [13]	
mcpttgi:user-priority  mcpttgi:participant-type  rl:mcvideo-mcvideo-id  uri attribute	px_MCVideo_User_C_ ParticipantType px_MCVideo_ID_User_	Indicates the user priority of the MCVideo group member Participant type of the	clause 6.2.12 TS 24.483 [13]	

Derivation Path: TS 24.481 [11] c	ause 7.2.2			
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi: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.		
mcpttgi:mcvideo-allow- emergency-call	"true"	Indicates that the identity is allowed to request an MCVideo-emergency call on the MCVideo group.		
mcpttgi:mcvideo-allow- emergency-alert	"true"	Indicates that the identity is allowed to request an MCVideo-emergency alert on the MCVideo group.		
mcpttgi:mcvideo-allow- imminent-peril-call	"true"	Indicates that the identity is allowed to request an MCVideo imminent peril call on the MCVideo group.		
mcpttgi:mcvideo-on- network-allow-conference-state	"true"	Indicates that the 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- network-allow-getting-affiliation- list	"true"	Indicates that the identity is allowed to get the list of MCVideo users affiliated to the MCVideo group in onnetwork MCVideo procedures.		
oxe:supported-services				
oxe:service				
oxe:enabler	"urn:urn-7:3gpp- service.ims.icsi.mcvide o"	String defining an enabler		
oxe:group-media				
oxe:mcvideo-video-media			TO 05 225 222	
mcpttgi:off-network-ProSe- layer-2-group-id	tsc_MCPTT_Group_A_ ProSeLayer2GroupID	Indicates the Prose layer-2 group ID	TS 23.303 [68] TS 24.483 [13] clause 6.2.27	
mcpttgi:off-network-IP- multicast-address	"0.0.0.0"	Indicates the ProSe group IP multicast address;the IP version is implicitly given by the notation of the IP address	TS 23.303 [68] TS 24.483 [13] clause 6.2.28	
mcpttgi:off-network-ProSe- relay-service-code	"123456"	Indicates the connectivity service that the ProSe UE-to-network relay provides to public safety applications	TS 23.303 [68] TS 24.483 [13] clause 6.2.29	
mcpttgi:owner	px_MCVideo_Group_A _Owner_Organization	Group's owner (Mission Critical Organisation).	TS 24.483 [13] clause 6.2.15	
mcpttgi:level-within-group- hierarchy	"0"	Indicates the level within a group hierarchy (only applicable for group-broadcast group).	TS 24.483 [13] clause 6.2.17	

Derivation Path: TS 24.481 [11] c	Value/remark	Comment	Reference	Condition
mcpttgi:level-within-user-	"0"	Indicates the level	TS 24.483 [13]	
hierarchy		within user hierarchy	clause 6.2.18	
•		(only applicable for		
		user-broadcast group).		
mcpttgi:mcvideo-on-	"true"			
network-invite-members				
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		
monttel movides non unest	H4	MCVideo group.		
mcpttgi:mcvideo-non-urgent- real-time-video-mode	"true"	indicates that non		
real-time-video-mode		urgent real-time video mode is allowed for the		
mcpttgi:mcvideo-non-real-	"true"	MCVideo group. indicates that non real-		
time-video-mode	ii ue	time video mode is		
THIS TIMES HISUS		allowed for the		
		MCVideo group.		
mcpttgi:mcvideo-active-real-	"non-urgent-real-time"	Indicates the the active		
time-video-mode	Tion argoni roai timo	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		
		Group Members.		
mcpttgi:mcvideo-on-	"1"	Indicates the minimum		
network-minimum-number-to-		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-		
g. Jap priority		network MCVideo		
		procedures. Higher		
		value indicates higher		
		priority. Absence of the		
		<mcvideo-on-network-< td=""><td></td><td></td></mcvideo-on-network-<>		
		group-priority> element		
		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	clause 6.2.47	
		used for off-network		
		video tranmissions on		
mcpttgi:mcvideo-off-	"1"	the group. indicates maximum	TC 24 402 [42]	
network-maximum-	'	number of	TS 24.483 [13] clause 6.2.48	
simultaneous-transmissions		simultaneous	Ulause 0.2.40	
Simultaneous-transillissions		transmissions for off-		
		network MCVideo		
		procedures.		
mcpttgi:mcvideo-off-	"1"	Indicates the default	TS 24.483 [13]	
network-ProSe-signalling-		ProSe Per-Packet	clause 6.2.50	
	1	Priority (PPPP) value	1 3.5.5.5.5.	1

Derivation Path: TS 24.481 [11] o	lause 7.2.2 Value/remark	Comment	Reference	Condition
mcpttgi:mcvideo-off-	"8"	Indicates the default	TS 24.483 [13]	Condition
network-ProSe-emergency-		ProSe Per-Packet	clause 6.2.52	
call-signalling-PPPP		Priority (PPPP) value		
		(as specified in		
		3GPP TS 23.303 [6])		
		for the MCVideo		
		emerency group call		
manttali mavidas off	"7"	signalling. Indicates the default	TC 04 400 [40]	
mcpttgi:mcvideo-off- network-ProSe-imminent-	/	ProSe Per-Packet	TS 24.483 [13] clause 6.2.54	
peril-call-signalling-PPPP		Priority (PPPP) value	Clause 0.2.54	
pom oun orginaming i i i i		(as specified in		
		3GPP TS 23.303 [6])		
		for the MCVideo		
		imminent peril group		
		call signalling.		
mcpttgi:mcvideo-off-	"1"	Indicates the default	TS 24.483 [13]	
network-ProSe-media-PPPP		ProSe Per-Packet	clause 6.2.51	
mcpttgi:mcvideo-off-	"8"	Priority (PPPP) value	TS 24.483 [13]	
network-ProSe-emergency-	o o		clause 6.2.53	
call-media-PPPP			0.2.00	
mcpttgi:mcvideo-off-	"7"	Indicates the default	TS 24.483 [13]	
network-ProSe-imminent-		ProSe Per-Packet	clause 6.2.55	
peril-call-media-PPPP		Priority (PPPP) value		
		(as specified in		
		3GPP TS 23.303 [6])		
		for the MCVideo		
		imminent peril group call media.		
mcpttgi:mcvideo-off-	"60	Indicates the maximum		
network-maximum-duration	30	duration of group calls		
mcpttgi:mcvideo-off-	"65535"	Indicates the timeout		
network-in-progress-		value for the		
emergency-state-cancellation-		cancellation of an in		
timeout		progress emergency in		
		off-network MCVideo		
mcpttgi:mcvideo-off-	"65535"	procedures Indicates the timeout		
network-in-progress-	00000	value for the		
imminent-peril-state-		cancellation of an in		
cancellation-timeout		progress imminent-peril		
		group call in off-		
		network MCVideo		
		procedures		
list-service[2]		Group 2		
uri attribute	px_MCVideo_Group_D	Value is a "uri" attribute	TS 24.483 [13]	
	_ID	specified in OMA OMA-	clause 6.2.7	
display-name	px_MCVideo_Group_D	TS-XDM_Group-V1_1 Value is a <display-< td=""><td>TS 24.483 [13]</td><td></td></display-<>	TS 24.483 [13]	
alopidy Hullie	_Name	name> element	clause 6.2.8	
		specified in OMA OMA-	3.2200 0.2.0	
		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]	
	•			
mopagacor phoney		priority of the MCVideo group member	clause 6.2.12	

Derivation Path: TS 24.481 [11] cl		Camma:::	Deferen	Condition
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:participant-type	px_MCVideo_User_A_ ParticipantType	Participant type of the MCVideo group	TS 24.483 [13] clause 6.2.13	
rl:mcvideo-mcvideo-id				
uri attribute	px_MCVideo_ID_User_ A			
entry[2]		Group member 2		
uri attribute	px_MCVideo_ID_User_ B	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 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"2"	Indicates the user priority of the MCVideo group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCVideo_User_B_ ParticipantType	Participant type of the MCVideo group	TS 24.483 [13] clause 6.2.13	
rl:mcvideo-mcvideo-id				
uri attribute	px_MCVideo_ID_User_ B			
cp:ruleset				
cp:rule				
cp:id attribute	"rule2"			
cp:actions				
mcpttgi: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.		
mcpttgi:mcvideo-allow- emergency-call	"false"	Indicates that the identity is not allowed to request an MCVideo-emergency call on the MCVideo group.		
mcpttgi:mcvideo-allow- emergency-alert	"false"	Indicates that the identity is not allowed to request an MCVideo-emergency alert on the MCVideo group.		
mcpttgi:mcvideo-allow- imminent-peril-call	"false"	Indicates that the identity is not allowed to request an MCVideo imminent peril call on the MCVideo group.		
mcpttgi:mcvideo-on- network-allow-conference-state	"false"	Indicates that the identity is not 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- network-allow-getting-affiliation- list  oxe:supported-services	"false"	Indicates that the identity is not allowed to get the list of MCVideo users affiliated to the MCVideo group in onnetwork MCVideo procedures.		

Derivation Path: TS 24.481 [11] cl				
Information Element	Value/remark	Comment	Reference	Condition
oxe:service				
oxe:enabler	"urn:urn-7:3gpp- service.ims.icsi.mcvide o"	String defining an enabler		
oxe:group-media				
oxe:mcvideo-video-media				
mcpttgi:off-network-ProSe-	tsc_MCPTT_Group_D_	Indicates the Prose	TS 23.303 [68]	
layer-2-group-id	ProSeLayer2GroupID	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		
mcpttgi:off-network-ProSe-	"123456"	address Indicates the	TS 23.303 [68]	
relay-service-code	120400	connectivity service	TS 24.483 [13]	
iolay ool floe-oode		that the ProSe UE-to-	clause 6.2.29	
		network relay provides	0.4400 0.2.20	
		to public safety		
		applications		
mcpttgi:owner	px_MCVideo_Group_D	Group's owner (Mission	TS 24.483 [13]	
	_Owner_Organization	Critical Organisation).	clause 6.2.15	
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-		
menttai:lovol.within user	"0"	broadcast group).	TC 04 400 [40]	
mcpttgi:level-within-user- hierarchy	U	Indicates the level within user hierarchy	TS 24.483 [13] clause 6.2.18	
merarchy		(only applicable for	Glause 0.2.10	
		user-broadcast group).		
mcpttgi:mcvideo-on-	"true"	grap)		
network-invite-members				
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		
mcpttgi:mcvideo-non-urgent-	"true"	MCVideo group. indicates that non		
real-time-video-mode	แนษ	urgent real-time video		
Tour time there in ode		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		
		MCVideo group.		
mcpttgi:mcvideo-active-real-	"non-urgent-real-time"	Indicates the the active		
time-video-mode		real time video mode of		
		the current group		
monttairmovidos maximum	"1"	session Indicates the allowed		
mcpttgi:mcvideo-maximum- simultaneous-mcvideo-	'	maximum number of		
transmitting-group-members		simultaneous		
a anomitting-group-members		transmitting MCVideo		
		Group Members.		
		Group Members.		

Derivation Path: TS 24.481 [11] c		0	Deferre	0.000
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:mcvideo-on- network-minimum-number-to-	"1"	Indicates the minimum number of affiliated		
start				
Start		group members acknowledging before		
		start of video		
		transmission specified		
		in 3GPP TS 23.281 [24]		
		in on-network MCVideo		
		procedures.		
mcpttgi:mcpttgi: mcvideo-	"1"	Indicates the priority		
on-network-group-priority		level of the group in on-		
5		network MCVideo		
		procedures. Higher		
		value indicates higher		
		priority. Absence of the		
		<mcvideo-on-network-< td=""><td></td><td></td></mcvideo-on-network-<>		
		group-priority> element		
		of the <list-service></list-service>		
		element of the		
		MCVideo group		
		document indicates the		
		lowest possible priority.	TO 0 4 40 5 5 1 5 5	
mcpttgi:mcvideo-off-	"self"	This leaf node indicates	TS 24.483 [13]	
network-arbitration-approach		the arbitration approach	clause 6.2.47	
		used for off-network		
		video tranmissions on		
mcpttgi:mcvideo-off-	"1"	the group.	TS 24.483 [13]	
network-maximum-	1	indicates maximum number of	clause 6.2.48	
simultaneous-transmissions		simultaneous	clause 6.2.46	
Sillultarieous-transillissions		transmissions for off-		
		network MCVideo		
		procedures.		
mcpttgi:mcvideo-off-	"1"	Indicates the default	TS 24.483 [13]	
network-ProSe-signalling-	·	ProSe Per-Packet	clause 6.2.50	
PPPP		Priority (PPPP) value	0.0000 0.2.00	
mcpttgi:mcvideo-off-	"8"	Indicates the default	TS 24.483 [13]	
network-ProSe-emergency-		ProSe Per-Packet	clause 6.2.52	
call-signalling-PPPP		Priority (PPPP) value		
		(as specified in		
		3GPP TS 23.303 [6])		
		for the MCVideo		
		emerency group call		
		signalling.		
mcpttgi:mcvideo-off-	"7"	Indicates the default	TS 24.483 [13]	
network-ProSe-imminent-		ProSe Per-Packet	clause 6.2.54	
peril-call-signalling-PPPP		Priority (PPPP) value		
		(as specified in		
		3GPP TS 23.303 [6])		
		for the MCVideo		
		imminent peril group		
mcpttgi:mcvideo-off-	"1"	call signalling. Indicates the default	TS 24.483 [13]	
network-ProSe-media-PPPP	'	ProSe Per-Packet	clause 6.2.51	
network-rroge-media-FFFF		Priose Per-Packet Priority (PPPP) value	Ulause 0.2.31	
mcpttgi:mcvideo-off-	"8"		TS 24.483 [13]	
network-ProSe-emergency-	· ·		clause 6.2.53	
call-media-PPPP			514436 U.Z.33	
mcpttgi:mcvideo-off-	"7"	Indicates the default	TS 24.483 [13]	
network-ProSe-imminent-	'	ProSe Per-Packet	clause 6.2.55	
peril-call-media-PPPP		Priority (PPPP) value	3.4400 0.2.00	
point dan interior in in		(as specified in		
		3GPP TS 23.303 [6])		
		for the MCVideo		
	1		Ī	
		imminent peril group		

Derivation Path: TS 24.481 [11] clause 7.2.2					
Information Element	Value/remark	Comment	Reference	Condition	
mcpttgi:mcvideo-off-	"60	Indicates the maximum			
network-maximum-duration		duration of group calls			
mcpttgi:mcvideo-off-	"65535"	Indicates the timeout			
network-in-progress-		value for the			
emergency-state-cancellation-		cancellation of an in			
timeout		progress emergency in			
		off-network MCVideo			
		procedures			
mcpttgi:mcvideo-off-	"65535"	Indicates the timeout			
network-in-progress-		value for the			
imminent-peril-state-		cancellation of an in			
cancellation-timeout		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 _ID	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_MCData _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_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_MCData _User_A_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_ 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_MCData _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		<b>TO 0 / 10 = 1 : 1</b>	
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_MCData _User_C_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_ C		TS 24.483 [13] clause 6.2.11	
cp:ruleset				

Derivation Path: TS 24.481 [11] c Information Element	Value/remark	Comment	Reference	Condition
cp:id attribute	"rule1"	30111110111		23.12.11011
cp:actions	Tule1			
mcpttgi:on-network-allow-	"true"	Indicates that the		
getting-member-list	1146	identity is allowed to		
getting momber net		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-	1140	identity is allowed to		
list		get the list of MCData		
151		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		3		
oxe:service				
oxe:enabler	"urn:urn-7:3gpp-	String defining an		
	service.ims.icsi.mcdata.	enabler		1
	sds"			1
mcpttgi:off-network-ProSe-	tsc_MCPTT_Group_A	Indicates the Prose	TS 23.303 [68]	
layer-2-group-id	ProSeLayer2GroupID	layer-2 group ID	TS 24.483 [13]	
, , ,		3 - 1	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	TS 24.483 [13]	
		that the ProSe UE-to-	clause 6.2.29	
		network relay provides		
		to public safety		
		applications		
mcpttgi:owner	px_MCData_Group_A_	Group's owner (Mission	TS 24.483 [13]	
	Owner_Organization	Critical Organisation).	clause 6.2.15	
mcpttgi:level-within-group-	"0"	Indicates the level	TS 24.483 [13]	
hierarchy		within a group	clause 6.2.17	1
		hierarchy (only		
		applicable for group-		1
		broadcast group).		
mcpttgi:level-within-user-	"0"	Indicates the level	TS 24.483 [13]	1
hierarchy		within user hierarchy	clause 6.2.18	
		(only applicable for		1
		user-broadcast group).		
mcpttgi:mcpttgi:mcdata-on-	"1"	Indicates the priority		
network-group-priority		level of the group in on-		
		network MCData		
		procedures. Higher		
		value indicates higher		
	"40000"	priority		
mcpttgi:mcdata-on-network-	"10000"	Indicates the maximum		
max-data-size-for-SDS		size of data (in bytes)		
		that the originating		
		MCData client is		
		allowed to send to the		
		MCData server for on-		
		network SDS		
		communications		

Derivation Path: TS 24.481 [11] clause 7.2.2					
Information Element	Value/remark	Comment	Reference	Condition	
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			
monttairmodata an naturalis	"2000"	communications			
mcpttgi:mcdata-on-network- max-data-size-auto-recv	2000	Indicates the maximum			
Illax-data-Size-auto-recv		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-	"1"	Indicates the ProSe			
ProSe-signalling-PPPP		Per-Packet Priority			
		value to be used when			
		transmitting IP packets			
		carrying signalling for a			
		call on the MCData			
		group in off-network			
monttelimondate off naturals	"1"	MCData procedures			
mcpttgi:mcdata-off-network- ProSe-media-PPPP	"1"	Indicates the ProSe			
Prose-media-PPP		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			
list-service[2]		Group 2			
uri attribute	px_MCDATA_Group_D	Value is a "uri" attribute	TS 24.483 [13]		
	_ID	specified in OMA OMA-	clause 6.2.7		
		TS-XDM_Group-V1_1			
display-name	px_MCData	Value is a <display-< th=""><th>TS 24.483 [13]</th><th></th></display-<>	TS 24.483 [13]		
	_Group_D_Name	name> element	clause 6.2.8		
		specified in OMA OMA-			
line.		TS-XDM_Group-V1_1			
list		aroup march as 4			
entry[1]	ny MCData ID Has :	group member 1	TC 04 400 [40]		
uri attribute	px_MCData_ID_User_	Indicates an MCData user identity (MCData	TS 24.483 [13]		
	A	ID) which is a globally	clause 6.2.11		
		unique identifier within			
		the MCData service			
		that represents the			
		MCData user			
display-name	Not present				
mcpttgi:user-priority	"3"	Indicates the user	TS 24.483 [13]		
		priority of the MCData	clause 6.2.12		
		group member			
mcpttgi:participant-type	px_MCData	Participant type of the	TS 24.483 [13]		
	_User_A_ParticipantTy	MCData group	clause 6.2.13		
	pe	-			
rl:mcdata-mcdata-id					
uri attribute	px_MCData_ID_User_				
	Α				
entry[2]		Group member 2			

Derivation Path: TS 24.481 [11] c Information Element	Value/remark	Comment	Reference	Condition
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_MCData _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	
cp:ruleset				
cp:rule				
cp:id attribute	"rule2"			
cp:actions mcpttgi: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.		
mcpttgi:mcdata-on- network-allow-getting-affiliation- list	"false"	Indicates that the identity is allowed to get the list of MCData users affiliated to the MCData group in onnetwork MCData procedures		
mcpttgi:mcdata-allow- transmit-data-in-this-group	"true"	Indicates that the identity is allowed to transmit data in this group		
oxe:supported-services				
oxe:service				
oxe:enabler	"urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"	String defining an enabler		
mcpttgi:off-network-ProSe- layer-2-group-id	tsc_MCPTT_Group_D_ ProSeLayer2GroupID	Indicates the Prose layer-2 group ID	TS 23.303 [68] TS 24.483 [13] clause 6.2.27	
mcpttgi:off-network-IP- multicast-address	"0.0.0.0"	Indicates the ProSe group IP multicast address;the IP version is implicitly given by the notation of the IP address	TS 23.303 [68] TS 24.483 [13] clause 6.2.28	
mcpttgi:off-network-ProSe- relay-service-code	"123456"	Indicates the connectivity service that the ProSe UE-to-network relay provides to public safety applications	TS 23.303 [68] TS 24.483 [13] clause 6.2.29	
mcpttgi:owner	px_MCVideo_Group_D	Group's owner (Mission	TS 24.483 [13]	
monttailovol viitkin anav	_Owner_Organization	Critical Organisation).	clause 6.2.15	
mcpttgi:level-within-group- hierarchy	"O"	Indicates the level within a group hierarchy (only applicable for group-broadcast group).	TS 24.483 [13] clause 6.2.17	

Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:level-within-user-	"0"	Indicates the level	TS 24.483 [13]	
hierarchy		within user hierarchy	clause 6.2.18	
-		(only applicable for		
		user-broadcast group).		
mcpttgi:mcdata-on-network-	"1"	Indicates the priority		
group-priority		level of the group in on-		
,		network MCData		
		procedures. Higher		
		value indicates higher		
		priority		
mcpttgi:mcdata-on-network-	"10000"	Indicates the maximum		
max-data-size-for-SDS		size of data (in bytes)		
		that the originating		
		MCData client is		
		allowed to send to the		
		MCData server for on-		
		network SDS		
		communications		
monttairmodata an natwork	"10000"	Indicates the maximum		
mcpttgi:mcdata-on-network- max-data-size-for-FD	"10000"			
max-data-size-tor-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-	"2000"	Indicates the maximum		
max-data-size-auto-recv		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-	"1"	Indicates the ProSe		
ProSe-signalling-PPPP		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-	"1"	Indicates the ProSe		
ProSe-media-PPPP	•	Per-Packet Priority		
		value to be used when		
		transmitting IP packets		
		carrying media for a		
		call on the MCData		
		group in off-network	1	

# 5.5.8 Default MCS configuration management messages and other information elements

### 5.5.8.1 MCPTT Initial UE Configuration

The structure of a initial UE configuration document is specified in TS 24.484 [14] clause 7.2, single MCPTT group configuration parameters are defined in TS 24.483 [13] clause 8.2.

**Table 5.5.8.1-1: MCPTT Initial UE Configuration Defaults** 

Derivation Path: TS 24.484 [13], 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 24.380 [10] TS 24.483 [13] clause 8.2.11	
T101	"2"	Values 0-255 sec	TS 24.380 [10] TS 24.483 [13] clause 8.2.12	
T103	"5"	Values 0-255 sec	TS 24.380 [10] TS 24.483 [13] clause 8.2.13	
T104	"2"	Values 0-255 sec	TS 24.380 [10] TS 24.483 [13] clause 8.2.14	
T132	"3"	Values 0-255 sec	TS 24.380 [10] TS 24.483 [13] clause 8.2.15	
HPLMN				
PLMN attribute service	PLMN1	the PLMN on which the UE is allowed for MCPTT services.  Public Land Mobile Network is uniquely identified by its PLMN identifier; consists of Mobile Country Code (MCC) and Mobile Network Code (MNC) and are defined by the operator.  NOTE: PLMN1 shall be the PLMN of the Cell on which the UE is camped during testing.	TS 23.003 [69] TS 24.483 [13] clause 8.2.16	
		services on a per HPLMN basis		
MCPTT-to-con-ref	px_MCPTT_ALL_APN	configuration parameter for establishment of the PDN connection for the MCPTT service	TS 24.483 [13] clause 8.2.21	
MC-common-core-to-con- ref	px_MCPTT_ALL_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_MCPTT_ALL_APN	configuration parameter for establishment of the PDN connection for the MC identity management service	TS 24.483 [13] clause 8.2.27	

Derivation Path: TS 24.484 [13], of Information Element	Value/remark	Comment	Reference	Condition
PLMN attribute	PLMN2	VPLMN configuration for another PLMN which can be used by the UE to access	Reference	Condition
		MCPTT service  NOTE: PLMN2 shall be a different PLMN to PLMN1 of a Cell to which the UE will move during testing when specified in a test case.		
service MCPTT-to-con-ref	px_MCPTT_ALL_APN	configuration parameter for establishment of the PDN connection for the MCPTT service	TS 24.483 [13] clause 8.2.33	
MC-common-core-to-con- ref	px_MCPTT_ALL_APN	configuration parameter for establishment of the PDN connection for the MC common core service	TS 24.483 [13] clause 8.2.36	
MC-ID-to-con-ref	px_MCPTT_ALL_APN	configuration parameter for establishment of the PDN connection for the MC identity management service	TS 24.483 [13] clause 8.2.39	
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
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
http-proxy	"https://" & px_MCX_HTTP_Proxy _IPAddress & ":" & px_MCX_HTTP_Proxy _Port	IP address and port used by the UE for the HTTP TCP connection	TS 23.003 [69] TS 24.483 [13] clause 8.2.41B	IPv4
	"https://[" & px_MCX_HTTP_Proxy _IPAddress & "]:" & px_MCX_HTTP_Proxy Port	IP address and port used by the UE for the HTTP TCP connection	TS 23.003 [69] TS 24.483 [13] clause 8.2.41B	IPv6

Derivation Path: TS 24.484 [13], clause 7.2						
Information Element	Value/remark	Comment	Reference	Condition		
gms	tsc_MCX_GMS_Hostn	Indicates the group	TS 23.003 [69]			
	ame	management server	TS 24.483 [13]			
		identity information	clause 8.2.42			
cms	tsc_MCX_CMS_Hostna	Indicates the	TS 23.003 [69]			
	me	configuration	TS 24.483 [13]			
		management server	clause 8.2.43			
kms	tsc_MCX_KMS_Hostna	identity information Indicates the key	TS 23.003 [69]			
KITIS	me	management server	TS 24.483 [13]			
		identity information	clause 8.2.44			
tls-tunnel-auth-method		Identity information	ciause o.z.++			
mutual-authentication	"false"	Indicates whether	TS 24.483 [13]			
mataar admentidation	laise	mutual authentication is	clause 8.2.44B			
		used for the TLS tunnel				
		authentication				
		false=one-way				
		authentication based				
		on the server certificate				
		is used				
x509	Not present	the X.509 certificate for	TS 24.483 [13]			
		mutual authentication	clause 8.2.44C			
		for the TLS tunnel				
	N	authentication	TO 04 (00 (16)			
key	Not present	pre-shared key for	TS 24.483 [13]			
		mutual authentication	clause 8.2.44D			
		for the TLS tunnel				
GMS-URI	tsc_MCX_GMSURI	authentication The group	TS 23.003 [69]			
GIVIS-OKI	ISC_IVICX_GIVISORI	management service	TS 24.483 [13]			
		URI information which	clause 8.2.9			
		contains the public	014430 0.2.5			
		service identity for				
		performing subscription				
		proxy function of the				
		GMS				
group-creation-XUI	px_MCPTT_GroupCrea	Indicates the group	TS 23.003 [69]			
	tionXUI	creation XUI	TS 24.483 [13]			
		information for creation	clause 8.2.9A			
0110 1/012		of groups	TO 00 000 100			
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			
CMS-XCAP-root-URI	tsc_MCX_CMSXCAPR	information Indicates the	TS 23.003 [69]			
CIVIO-ACAP-1001-UKI	ootURI	configuration	TS 24.483 [13]			
	OOLOIN	management server	clause 8.2.9C			
		XCAP Root URI	314400 0.2.30			
		information				
integrity-protection-enabled	"true"	Indicates whether	TS 24.483 [13]			
J , , ,		integrity protection is	clause 8.2.44E			
		enabled				
confidentiality-protection-	"true"	Indicates whether	TS 24.483 [13]			
enabled		integrity protection is	clause 8.2.44F			
		enabled				
off-network						
Timers						
TFG1	"150"	Indicates the timer for	TS 24.379 [9]			
		wait for call	TS 24.483 [13]			
		announcement; Values:	clause 8.2.47			
TEOO	1100001	0-65535 ms	TO 04 070 101			
TFG2	"2000"	Indicates the timer for	TS 24.379 [9]			
		call announcement;	TS 24.483 [13]			
	l .	Values: 0-65535 ms	clause 8.2.48			

Derivation Path: TS 24.484 [13] Information Element	Value/remark	Comment	Reference	Condition
TFG3	"40"	Indicates the timer for	TS 24.379 [9]	Condition
11 65		call probe	TS 24.483 [13]	
		retransmission; Values:	clause 8.2.49	
		0-65535 ms		
TFG4	"20"	Indicates the timer for	TS 24.379 [9]	
		waiting for the MCPTT	TS 24.483 [13]	
		user; Values: 0-60 s	clause 8.2.50	
TFG5	"2"	Indicates the timer for	TS 24.379 [9]	
		not present incoming	TS 24.483 [13]	
		call announcements;	clause 8.2.51	
		Values: 0-255 s		
TFG11	"3000"	Indicates the timer for	TS 24.379 [9]	
		MCPTT emergency	TS 24.483 [13]	
		end retransmission;	clause 8.2.52	
		Values: 0-65535 ms		
TFG12	"3000"	Indicates the timer for	TS 24.379 [9]	
		MCPTT imminent peril	TS 24.483 [13]	
		end retransmission;	clause 8.2.53	
		Values: 0-65535 ms		
TFG13	"1"	Indicates the timer for	TS 24.379 [9]	
		implicit priority	TS 24.483 [13]	
		downgrade; Values: 0-	clause 8.2.54	
		255 s		
TFG14	"1"	Indicates the MCPTT	TS 24.379 [9]	
		timer for implicit priority	TS 24.483 [13]	
		downgrade (imminent	clause 8.2.54A	
		peril); Values: 0-255 s		
TFP1	"2000"	Indicates the timer for	TS 24.379 [9]	
		private call request	TS 24.483 [13]	
		retransmission; Values:	clause 8.2.55	
		0-65535 ms		
TFP2	"50"	Indicates the timer for	TS 24.379 [9]	
		waiting for call	TS 24.483 [13]	
		response message;	clause 8.2.56	
TEDO	"2000"	Values: 0-60 s	TC 04 070 [0]	
TFP3	"2000"	Indicates the timer for	TS 24.379 [9]	
		private call release	TS 24.483 [13]	
		retransmission; Values:	clause 8.2.57	
TFP4	"5000"	0-65535 ms Indicates the timer for	TS 24.379 [9]	
1774	5000	private call release	TS 24.379 [9]	
		retransmission; Values:	clause 8.2.58	
		0-65535 ms	clause 6.2.56	
TFP5	"30"	Indicates the timer for	TS 24.379 [9]	
IFFO	30	call release; Values: 0-	TS 24.379 [9]	
		600 s	clause 8.2.59	
TFP6	"3000"	Indicates the timer for	TS 24.379 [9]	
1110	0000	MCPTT emergency	TS 24.483 [13]	
		private call cancel	clause 8.2.60	
		retransmission; Values:	ciause 0.2.00	
		0-65535 ms		
TFP7	"6"	Indicates the timer for	TS 24.379 [9]	
		waiting for any	TS 24.483 [13]	
		message with same	clause 8.2.61	
		call identifier; Values:	0.0000 0.2.01	
		0-255 s		
TFB1	"300"	Indicates the timer for	TS 24.379 [9]	
		max duration; Values:	TS 24.483 [13]	
		0-600 s	clause 8.2.62	
TFB2	"10"	Indicates the timer for	TS 24.379 [9]	
		max duration; Values:	TS 24.483 [13]	
		0-10 s	clause 8.2.63	
TFB3	"20"	Indicates the timer for	TS 24.379 [9]	
		waiting for the MCPTT	TS 24.483 [13]	
		user; Values: 0-60 s	clause 8.2.64	

Information Element	, clause 7.2 Value/remark	Comment	Reference	Condition
T201	"1000"	Indicates the timer for	TS 24.380 [10]	
		floor request; Values:	TS 24.483 [13]	
		0-65535 ms	clause 8.2.65	
T203	"5"	Indicates the timer for	TS 24.380 [10]	
		end of RTP media;	TS 24.483 [13]	
		Values: 0-255 s	clause 8.2.66	
T204	"5"	Indicates the timer for	TS 24.380 [10]	
		floor queue position	TS 24.483 [13]	
		request; Values: 0-255	clause 8.2.67	
		S		
T205	"1"	Indicates the timer for	TS 24.380 [10]	
		floor granted request;	TS 24.483 [13]	
		Values: 0-255 s	clause 8.2.68	
T230	"10"	Indicates the timer for	TS 24.380 [10]	
		inactivity; Values: 0-255		
		S		
T233	"10"	Indicates the timer for	TS 24.380 [10]	
		pending user action;	TS 24.483 [13]	
		Values: 0-255 s	clause 8.2.70	
TFE1	"30"	Indicates the timer for	TS 24.379 [9]	
		MCPTT emergency	TS 24.483 [13]	
		alert; Values: 0-65535 s	clause 8.2.71	
TFE2	"10"	Indicates the timer for	TS 24.379 [9]	
		MCPTT emergency	TS 24.483 [13]	
		alert re-transmission;	clause 8.2.72	
		Values: 0-10 s		
Counters				
CFP1	"3"	Indicates the counter	TS 24.379 [9]	
		for private call request	TS 24.483 [13]	
		retransmission	clause 8.2.74	
CFP3	"5"	Indicates the counter	TS 24.379 [9]	
		for private call release	TS 24.483 [13]	
		retransmission	clause 8.2.75	
CFP4	"2"	Indicates the counter	TS 24.379 [9]	
		for private call accept	TS 24.483 [13]	
		retransmission	clause 8.2.76	
CFP6	"2"	Indicates the counter	TS 24.379 [9]	
		for private call accept	TS 24.483 [13]	
		retransmission	clause 8.2.77	
CFP11	"2"	Indicates the counter	TS 24.379 [9]	
		for MCPTT group call	TS 24.483 [13]	
		emergency end	clause 8.2.78	
		retransmission		
CFP12	"2"	Indicates the counter	TS 24.379 [9]	
		for MCPTT imminent	TS 24.483 [13]	
		peril call emergency	clause 8.2.79	
		end retransmission		
C201	"3"	Indicates the counter	TS 24.379 [9]	
		for floor request	TS 24.483 [13]	
		·	clause 8.2.80	
C204	"2"	Indicates the counter	TS 24.379 [9]	
		for floor queue position	TS 24.483 [13]	
		request	clause 8.2.81	
C205	"4"	Indicates the counter	TS 24.379 [9]	
		for floor granted	TS 24.483 [13]	
		request	clause 8.2.82	

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.

**Table 5.5.8.2-1: MCPTT UE Configuration Defaults** 

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 MCPTT 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	Value/remark	Comment	Reference	Condition
mcptt-user-profile				
XUI-URI attribute	px_MCPTT_User_XUI_ URI			
user-profile-index attribute	"49"	value arbitrarily selected		
Status	true	MCPTT user profile is enabled		
ProfileName	px_MCPTT_User_A_Pr ofile_Name	Profile name for the MCPTT user	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_Al			
ParticipantType	px_MCPTT_User_A_P articipantType	Participant type of the MCPTT user	TS 24.483 [13] clause 5.2.10	
MissionCriticalOrganization	px_MCX_DomainName _Organization_A	Indicates the organization an MCPTT user belongs to	TS 24.483 [13] clause 5.2.11	
PrivateCall		January State of the State of t		
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	"1234"	Discovery group ID in the ProSe discovery procedures	TS 23.303 [68] TS 24.483 [13] clause 5.2.19	
User-Info-ID	"5555"	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"			
DiscoveryGroupID	"1234"	Discovery group ID in the ProSe discovery procedures	TS 23.303 [68] TS 24.483 [13] clause 5.2.19	
User-Info-ID	"6666"	Prose user Info ID in the ProSe discovery procedures	TS 23.303 [68] TS 24.483 [13] clause 5.2.19A	
EmergencyCall				
MCPTTPrivateRecipient				
entry				

Information Element	clause 8.3 Value/remark	Comment	Reference	Condition
entry-info attribute	"UsePreConfigured"	Indicates the criteria to	TS 24.483 [13]	2223
,	3	determine when	clause 5.2.29F	
		initiation of an MCPTT		
		emergency private call		
		uses the MCPTT		
		private recipient ID.		<u> </u>
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	llo!!			
index attribute	"0"	Discovery reserved ID :	TO 04 400 [40]	
DiscoveryGroupID	"1234"	Discovery group ID in	TS 24.483 [13]	
		the ProSe discovery	clause 5.2.29C	
Harak ( 15	"5555"	procedures	TO 04 400 1401	
User-Info-ID	"5555"	ProSe user Info ID in	TS 24.483 [13]	
		the ProSe discovery	clause 5.2.29D	
MCDTT engine act		procedures		
MCPTT-group-call MaxSimultaneousCallsN6	"3"	Indicator the maniference	TC 24 402 [40]	
wax5imuitaneousCallsN6	٥	Indicates the maximum	TS 24.483 [13]	
		number of	clause 5.2.31	
		simultaneously received MCPTT group		
		calls		
EmergencyCall		callo		
MCPTTGroupInitiation				
entry				
entry-info attribute	"UseCurrentlySelected	Use currently selected	TS 24.483 [13]	
only into attribute	Group"	MCPTT group for an	clause 5.2.34D	
	Joup	on-network MCPTT	5/443C 5.2.57D	
		emergency group call		
index attribute	"0"	zo.go.io, group ouii		
uri-entry	px_MCPTT_Group_A_I	The group used upon	TS 24.483 [13]	
<b>,</b>	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]	
1 - 2	Name	group used for	clause 5.2.34C	
		emergency		
ImminentPerilCall		,		
MCPTTGroupInitiation				
entry				
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]	<u></u>
	D	initiation of an MCPTT	clause 5.2.39B	
		imminent peril group		
		call.		
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				
index attribute	"0"			
entry-info attribute	"UseCurrentlySelected	Use currently selected	TS 24.483 [13]	
	Group"	MCPTT group for	clause 5.2.43E	
	•	emergency alert	i e	

Derivation Path: TS 24.484 [14] cl Information Element	Value/remark	Comment	Reference	Condition
uri-entry	px_MCPTT_Group_A_I	Indicates the MCPTT	TS 24.483 [13]	
•	l b	group used upon	clause 5.2.43B	
		certain criteria on		
		initiation of an MCPTT		
dia a la company	THE MODEL COLUMN	emergency alert.	TO 04 400 [40]	
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]	
•		the MCPTT group calls,	clause 5.2.43F	
		0-255		
OffNetwork		0 200		
	11011			
index attribute	"0"			
MCPTTGroupInfo				
entry[1]				
index attribute	"0"			
uri-entry	px_MCPTT_Group_A_I	Indicates an off-	TS 24.483 [13]	
un-entry	_ ·			
	D	network MCPTT group	clause 5.2.53	
		for use by an MCPTT		
		user		<u></u> _
display-name	px_MCPTT_Group_A_	The display name	TS 24.483 [13]	
1 2	Name	corresponding to off-	clause 5.2.53A	
	1.301110	network group id	514400 0.2.00A	
Hear late ID	"5555"		TO 00 000 1001	
User-Info-ID	"5555"	ProSe user info ID	TS 23.303 [68]	
			TS 24.483 [13]	
			clause 5.2.58	
OnNetwork				
index attribute	"0"			
	0			
MCPTTGroupInfo				
entry[1]		Group 1 the MCPTT		
		user is allowed to		
		affiliate to		
index attribute	"0"	diffication to		
		The MODIT was used in	TO 04 400 [40]	
uri-entry	px_MCPTT_Group_A_I	The MCPTT group ID	TS 24.483 [13]	
	D	for the on-network	clause 5.2.48B	
		MCPTT group that the	4	
		MCPTT user is allowed		
		to affiliate to.		
display-name	px_MCPTT_Group_A_	The display name for	TS 24.483 [13]	
uispiay-name				
	Name	the group	clause 5.2.48B	
			5	
MaxAffiliationsN2	20			
	20			
MaxSimultaneousTransmissions				
N7				
ImplicitAffiliations		Group 1 the MCPTT		
		user is implicitly		
		affiliated to		
entry				
index attribute	"0"			
	_	in dia star MACRET	TO 04 400 1401	
uri-entry	px_MCPTT_Group_A_I	indicates a MCPTT	TS 24.483 [13]	
	D	group ID to which the	clause 5.2.48C	
		MCPTT user is	4	
		implicitly affiliated to		
display-name	px_MCPTT_Group_A_	display name for	TS 24.483 [13]	
uispiay-fiaffie				
	Name	implicitly affiliated	clause 5.2.48C	
		group	5	
PrivateEmergencyAlert				
entry				
	"LlcoProConfigured"	Indicator the aritaria ta	TC 24 402 [42]	
entry-info attribute	"UsePreConfigured"	Indicates the criteria to	TS 24.483 [13]	
		determine when	clause 5.2.48	
		initiation of an MCPTT	0	
	1	emergency private call		
		, corgono, privato dall	1	i
		uses the MCPTT private recipient ID.		

Derivation Path: TS 24.484 [14] ( Information Element	Value/remark	Comment	Reference	Condition
uri-entry	px_MCPTT_ID_User_B	Indicates the default	TS 24.483 [13]	Condition
un-entry	bx_ivice i i _ib_osei_b	MCPTT user ID to be	clause 5.2.48	
			M	
		used upon certain criteria on initiation of	IVI	
		an MCPTT private		
		emergency alert for on- network		
display-name	px_MCPTT_User_A_AI	The display name	TS 24.483 [13]	
	ias	corresponding to	clause 5.2.48N	
		private emergency call		
		id		
anyExt				
FunctionalAliasList			TS 24.483 [13]	
			clause 5.2.48	
			W6	
entry	px_MCPTT_ID_FA_A			
cp:ruleset				
cp:rule				
cp:id attribute	"rule1"			
cp:actions				
allow-create-delete-user-	"true"	Indicates authorisation	TS 24.483 [13]	
alias		to create and delete	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		
allow-manual-	"true"	Indicates the	TS 24.483 [13]	
commencement		authorisation to make a	clause 5.2.20	
		MCPTT private call with		
		manual		
- II - · · · · · · · · · · · · · · · · ·		commencement	TO 04 400 [40]	
allow-automatic-	"true"	Indicates the authorisation to make a	TS 24.483 [13] clause 5.2.21	
commencement			clause 5.2.21	
		MCPTT private call with		
		automatic		
allow-force-auto-answer	"true"	Indicates the	TS 24.483 [13]	
ลแบพ-เบเบ <del>เ-</del> ลนเบ-สเเรพยเ	lide	authorisation of MCPTT	clause 5.2.22	
		user to force automatic	Clause J.Z.ZZ	
		answer for a MCPTT		
		private call		
allow-failure-restriction	"false"	Indicates the	TS 24.483 [13]	
anow failure restriction	laise	authorisation to restrict	clause 5.2.23	
		the provision of a	014430 0.2.20	
		notification of call		
		failure reason for a		
		MCPTT private call		
allow-private-call-media-	"true"	Indicates authorisation	TS 24.483 [13]	
protection	1140	to protect confidentiality	clause 5.2.24	
protocion		and integrity of media	5,4400 0.2.27	
		for MCPTT private calls		
allow-private-call-floor-	"true"	Indicates authorisation	TS 24.483 [13]	
a piirato vali 11001		to protect confidentiality	clause 5.2.25	
control-protection	i .	and integrity of floor	3.2230 0.2.20	
control-protection				
control-protection				
control-protection		control signalling for		
·	"true"	control signalling for MCPTT private calls.	TS 24.483 [13]	
allow-emergency-private-	"true"	control signalling for MCPTT private calls. Indicates the	TS 24.483 [13] clause 5.2.27	
·	"true"	control signalling for MCPTT private calls.	TS 24.483 [13] clause 5.2.27	

Derivation Path: TS 24.484 [14] cla Information Element	Value/remark	Comment	Reference	Condition
allow-cancel-private- emergency-call	"true"	Indicates the authorisation to cancel emergency priority in an MCPTT emergency private call by an authorised MCPTT user	TS 24.483 [13] clause 5.2.28	
allow-emergency-group-call	"true"	Indicates the authorisation to make an MCPTT emergency group call functionality enabled for MCPTT user	TS 24.483 [13] clause 5.2.33	
allow-cancel-group- emergency	"true"	Indicates the authorisation to cancel an in progress MCPTT emergency call associated with a group.	TS 24.483 [13] clause 5.2.35	
allow-imminent-peril-call	"true"	Indicates the authorisation to make an Imminent Peril group call	TS 24.483 [13] clause 5.2.37	
allow-cancel-imminent-peril	"true"	Indicates the authorisation for in- progress MCPTT imminent peril cancelation	TS 24.483 [13] clause 5.2.38	
allow-activate-emergency- alert	"true"	Indicates the authorisation to activate an MCPTT emergency alert	TS 24.483 [13] clause 5.2.41	
allow-cancel-emergency- alert	"true"	Indicates the authorisation to cancel an MCPTT emergency alert	TS 24.483 [13] clause 5.2.42	
allow-create-group- broadcast-group	"true"	Indicates the authorisation to create a group-broadcast group.	TS 24.483 [13] clause 5.2.46	
allow-create-user- broadcast-group	"true"	Indicates the authorisation to create a user-broadcast group	TS 24.483 [13] clause 5.2.48	
allow-offnetwork	"true"	Indicates the authorisation for off-network services	TS 24.483 [13] clause 5.2.50	
allow-listen-both-overriding- and-overridden	"false"	Indicates whether the MCPTT user is allowed to listen both overriding and override	TS 24.483 [13] clause 5.2.54	
allow-transmit-during- override	"false"	Indicates whether the MCPTT user is allowed to transmit in case of override (overriding and/or overridden)	TS 24.483 [13] clause 5.2.55	
allow-off-network-group- call-change-to-emergency	"true"	Indicates the authorisation for a participant to change an off-network group call in-progress to an off-network MCPTT emergency group call	TS 24.483 [13] clause 5.2.56	

Derivation Path: TS 24.484 [14] cl	Value/remark	Comment	Reference	Condition
allow-imminent-peril- change	"true"	Indicates the authorisation for a participant to change an off-network group call in-progress to an off-network MCPTT imminent peril group call	TS 24.483 [13] clause 5.2.57	
allow-regroup	"true"	Indicates whether the MCPTT user is authorised to perform dynamic regrouping operations	TS 24.483 [13] clause 5.2.48D	
allow-presence-status	"true"	Indicates the presence status on the network of this MCPTT user is available	TS 24.483 [13] clause 5.2.48E	
allow-request-presence	"true"	Indicates whether the MCPTT user is authorised to obtain whether a particular MCPTT User is present on the network	TS 24.483 [13] clause 5.2.48F	
allow-private-call- participation	"true"	Indicates whether the MCPTT user is allowed to participate in MCPTT private calls that they are invited to	TS 24.483 [13] clause 5.2.48 G	
allow-override-of- transmission	"true"	Indicates whether the MCPTT user is authorised to override transmission in a MCPTT private call	TS 24.483 [13] clause 5.2.48H	
allow-manual-off-network- switch	"true"	Indicates whether the MCPTT user is authorised to manually switch to off-network operation while in onnetwork operation	TS 24.483 [13] clause 5.2.48l	
anyExt allow-request-first-to- answer-call	"true"	Indicates whether the MCPTT user is authorised to request a first to answer call	TS 24.483 [13] clause 5.2.48T	
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-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	

Derivation Path: TS 24.484 [14] cl	ause 8.3			
Information Element	Value/remark	Comment	Reference	Condition
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	TS 24.483 [13] clause 5.2.48 W10	Condition
		when it is requesting the floor.		

# 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], of Information Element	Value/remark	Comment	Reference	Condition
service configuration				
domain attribute	px_MCX_DomainName _Organization_A	Mandatory attribute: domain name of the mission critical organization		
common	II OII	1 12 6 2 2	TO 04 400 [40]	
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 private-call	"PT20M"	20 minutes		
hang-time	"PT30S"	30 seconds		
max-duration-with-floor-	"PT30S"	30 seconds		
control	F1303	30 seconds		
max-duration-without-floor-	"PT20M"	20 minutes		
num-levels-priority-hierarchy	10			
transmit-time	10			
time-limit	"PT30S"	30 seconds		
time-warning	"PT20M"	20 minutes		
hang-time-warning	"PT20M"	20 minutes		
floor-control-queue	1 120101	Zominates		
depth	5			
max-user-request-time	"PT20M"	20 minutes		
fc-timers-counters	1 120101	20 111110103		
T1-end-of-rtp-media	"PT4S"	Default value	TS 24.380 [10]	
The challenger the challenger	1140	Value in seconds	clause 11	
T3-stop-talking-grace	"PT3S"	Default value	TS 24.380 [10]	
. o ctop tammig grade		Value in seconds	clause 11	
T7-floor-idle	"PT2S"	Depends on the	TS 24.380 [10]	
		characteristic of the radio access network	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	

Information Element	Value/remark	Comment	Reference	Conditio
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]	
050 1		5 ( );	clause 11	
C56-disconnect	3	Default value	TS 24.380 [10] clause 11	
signalling-protection			clause 11	
confidentiality-protection	true			
integrity-protection	true			
protection-between-mcptt-	tide			
servers				
allow-signalling-protection	true			
allow-floor-control-protection	true			
emergency-resource-priority				
resource-priority-namespace	"mcpttp"		RFC 8101	
resource-priority-priority	"8"		RFC 8101	
imminent-peril-resource-				
priority				
resource-priority-namespace	"mcpttp"		RFC 8101	
resource-priority-priority	"5"		RFC 8101	
normal-resource-priority				
resource-priority-namespace	"mcpttp"		RFC 8101	
resource-priority-priority	"1"		RFC 8101	
anyExt				
functional-alias-list				
functional-alias	px_MCPTT_ID_FA_A			
max-simultaneous-	"1"			
activations				
allow-takeover	"true"			
mcptt-user-list				
entry	px_MCPTT_ID_User_A		1	1
off-network				
emergency-call	"DTCO"		TO 04 400 [40]	
private-cancel-timeout	"PT5S"	5 seconds;	TS 24.483 [13]	
		Indicates timeout value for the cancellation of	clause 7.2.14	
		an in progress		
		emergency for an		
		MCPTT private call.		
		Values: : 0-65535 s		
group-time-limit	"PT5S"	5 seconds:	TS 24.483 [13]	
group une min	1 100	Indicates time limit for	clause 7.2.16	
		an in progress MCPTT	oladoo riziro	
		emergency call related		
		to an MCPTT group.		
		Values: 0-65535 s		
private-call				
hang-time	"PT5S"	5 seconds;	TS 24.483 [13]	
-		Indicates hang timer for	clause 7.2.13	
		private calls (with floor		
		control). Values: 0-		
		65535 s		
max-duration-with-floor-	"PT60S"	60 seconds;	TS 24.483 [13]	
control		Indicates max private	clause 7.2.12	
		call (with floor control)		
		duration. Values: 0-		
		65535 s		
num-levels-priority-hierarchy	"4"	Indicates the number of	TS 24.483 [13]	
		levels of hierarchy for	clause 7.2.17	
		floor control override in		
		off-network. Values: 4-		
		256		
transmit-time				

Information Element	Value/remark	Comment	Reference	Condition
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	

# 5.5.8.5 MCVideo Initial UE Configuration

Table 5.5.8.5-1: MCVideo Initial UE Configuration Defaults

Derivation Path: TS 24.484 [14], o	Value/remark	Commont	Poforonoo	Condition
Information Element mcptt-UE-initial-configuration	value/reiflark	Comment	Reference	Condition
domain attribute	px_MCX_DomainName _Organization_A	Mandatory attribute: domain name of the mission critical organization		
Default-user-profile		o.ga <u>z</u> ao		
User-ID attribute	px_MCVideo_ID_User_ A	Default User Identity	TS 24.483 [13] clause 8.2.6	
user-profile-index attribute	"0"	Values 0-255. Indicates selected user profile	TS 24.483 [13] clause 8.2.7	
on-network				
Timers				
T100	"2"	Values 0-255 sec	TS 24.581 [88] TS 24.483 [13] clause 8.2.11	
T101	"2"	Values 0-255 sec	TS 24.581 [88] TS 24.483 [13] clause 8.2.12	
T103	"5"	Values 0-255 sec	TS 24.581 [88] TS 24.483 [13] clause 8.2.13	
T104	"2"	Values 0-255 sec	TS 24.581 [88] TS 24.483 [13] clause 8.2.14	
T132	"3"	Values 0-255 sec	TS 24.581 [88] TS 24.483 [13] clause 8.2.15	
HPLMN				
PLMN attribute	PLMN1	the PLMN on which the UE is allowed for MCVideo services.	TS 23.003 [69] TS 24.483 [13] clause 8.2.16	
		Public Land Mobile Network is uniquely identified by its PLMN identifier; consists of Mobile Country Code (MCC) and Mobile Network Code (MNC) and are defined by the operator.		
		NOTE: PLMN1 shall be the PLMN of the Cell on which the UE is camped during testing.		
service		MCVideo related services on a per HPLMN basis		
MCPTT-to-con-ref	px_MCVideo_ALL_AP N	configuration parameter for establishment of the PDN connection for the MCVideo service	TS 24.483 [13] clause 8.2.21	
MC-common-core-to-con- ref	px_MCVideo_ALL_AP N	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_MCVideo_ALL_AP N	configuration parameter for establishment of the PDN connection for the MC identity management service	TS 24.483 [13] clause 8.2.27	

Derivation Path: TS 24.484 [14], o	lause 7.2			
Information Element	Value/remark	Comment	Reference	Condition
VPLM[1]				
PLMN attribute	PLMN2	VPLMN configuration		
		for another PLMN		
		which can be used by		
		the UE to access		
		MCVideo service		
		NOTE: PLMN2 shall be		
		a different PLMN to		
		PLMN1 of a Cell to		
		which the UE will move		
		during testing when		
		specified in a test case.		
service				
MCPTT-to-con-ref	px_MCVideo_ALL_AP	configuration	TS 24.483 [13]	
	N	parameter for	clause 8.2.33	
		establishment of the		
		PDN connection for the		
		MCVideo service		
MC-common-core-to-con-	px_MCVideo_ALL_AP	configuration	TS 24.483 [13]	
ref	N	parameter for	clause 8.2.36	
		establishment of the		
		PDN connection for the		
		MC common core		
		service		
MC-ID-to-con-ref	px_MCVideo_ALL_AP	configuration	TS 24.483 [13]	
	N	parameter for	clause 8.2.39	
		establishment of the		
		PDN connection for the		
		MC identity		
		management service		
App-Server-Info		<u> </u>		
idms-auth-endpoint	"https://" &	Identity management	TS 23.003 [69]	IPv4
	px_MCX_IdMS_auth_I	server authorisation	TS 24.483 [13]	
	PAddress & ":" &	endpoint identity	clause 8.2.41	
	px_MCX_IdMS_auth_P	information		
	ort &			
	tsc_MCX_IdMS_auth_			
	UriPath			
	"https://[" &	Identity management	TS 23.003 [69]	IPv6
	px_MCX_IdMS_auth_I	server authorisation	TS 24.483 [13]	
	PAddress & "]:" &	endpoint identity	clause 8.2.41	
	px_MCX_IdMS_auth_P	information		
	ort &			
	tsc_MCX_IdMS_auth_			
	UriPath			
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_ldMS_token_	-	3.2	
	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]	
	PAddress & "]:" &	identity information	clause 8.2.41A	
	px_MCX_IdMS_token_	·		
		I		
	Port &			
	Port &			
http-proxy	Port & tsc_MCX_ldMS_token_ UriPath	IP address and port	TS 23.003 [69]	IPv4
http-proxy	Port & tsc_MCX_IdMS_token_ UriPath   "https://" &	IP address and port used by the UE for the	TS 23.003 [69] TS 24.483 [13]	IPv4
http-proxy	Port & tsc_MCX_IdMS_token_ UriPath "https://" & px_MCX_HTTP_Proxy	IP address and port used by the UE for the HTTP TCP connection	TS 24.483 [13]	IPv4
http-proxy	Port & tsc_MCX_IdMS_token_ UriPath "https://" & px_MCX_HTTP_Proxy _IPAddress & ":" &	used by the UE for the		IPv4
http-proxy	Port & tsc_MCX_IdMS_token_ UriPath "https://" & px_MCX_HTTP_Proxy	used by the UE for the	TS 24.483 [13]	IPv4

Derivation Path: TS 24.484 [14], of Information Element	Value/remark	Comment	Reference	Condition
	"https://[" & px_MCX_HTTP_Proxy _IPAddress & "]:" & px_MCX_HTTP_Proxy _Port	IP address and port used by the UE for the HTTP TCP connection	TS 23.003 [69] TS 24.483 [13] clause 8.2.41B	IPv6
gms	tsc_MCX_GMS_Hostn ame	Indicates the group management server identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.42	
cms	tsc_MCX_CMS_Hostna me	Indicates the configuration management server identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.43	
kms	tsc_MCX_KMS_Hostna me	Indicates the key management server identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.44	
tls-tunnel-auth-method				
mutual-authentication	"false"	Indicates whether mutual authentication is used for the TLS tunnel authentication false=one-way authentication based on the server certificate is used	TS 24.483 [13] clause 8.2.44B	
x509	Not present	the X.509 certificate for mutual authentication for the TLS tunnel authentication	TS 24.483 [13] clause 8.2.44C	
key	Not present	pre-shared key for mutual authentication for the TLS tunnel authentication	TS 24.483 [13] clause 8.2.44D	
GMS-URI	tsc_MCX_GMSURI	The group management service URI information which contains the public service identity for performing subscription proxy function of the GMS	TS 23.003 [69] TS 24.483 [13] clause 8.2.9	
group-creation-XUI	px_MCVideo_GroupCr eationXUI	Indicates the group creation XUI information for creation of groups	TS 23.003 [69] TS 24.483 [13] clause 8.2.9A	
GMS-XCAP-root-URI	tsc_MCX_GMSXCAPR ootURI	Indicates the group management server XCAP Root URI information	TS 23.003 [69] TS 24.483 [13] clause 8.2.9B	
CMS-XCAP-root-URI	tsc_MCX_CMSXCAPR ootURI	Indicates the configuration management server XCAP Root URI information	TS 23.003 [69] TS 24.483 [13] clause 8.2.9C	
integrity-protection-enabled	"true"	Indicates whether integrity protection is enabled	TS 24.483 [13] clause 8.2.44E	
confidentiality-protection- enabled	"true"	Indicates whether integrity protection is enabled	TS 24.483 [13] clause 8.2.44F	
off-network				
Timers	"450"	Indicate 0 C C	TO 04 004 700	
TFG1	"150"	Indicates the timer for wait for call announcement; Values: 0-65535 ms	TS 24.281 [86] TS 24.483 [13] clause 8.2.47	

Information Element	, clause 7.2 Value/remark	Comment	Reference	Condition
TFG2	"2000"	Indicates the timer for	TS 24.281 [86]	
		call announcement;	TS 24.483 [13]	
		Values: 0-65535 ms	clause 8.2.48	
TFG3	"40"	Indicates the timer for	TS 24.281 [86]	
		call probe	TS 24.483 [13]	
		retransmission; Values:	clause 8.2.49	
		0-65535 ms		
TFG4	"20"	Indicates the timer for	TS 24.281 [86]	
		waiting for the	TS 24.483 [13]	
		MCVideo user; Values:	clause 8.2.50	
		0-60 s		
TFG5	"2"	Indicates the timer for	TS 24.281 [86]	
		not present incoming	TS 24.483 [13]	
		call announcements;	clause 8.2.51	
		Values: 0-255 s		
TFG11	"3000"	Indicates the timer for	TS 24.281 [86]	
		MCVideo emergency	TS 24.483 [13]	
		end retransmission;	clause 8.2.52	
		Values: 0-65535 ms		
TFG12	"3000"	Indicates the timer for	TS 24.281 [86]	
		MCVideo imminent	TS 24.483 [13]	
		peril end	clause 8.2.53	
		retransmission; Values:		
TEO40	11411	0-65535 ms	TO 04 004 500	
TFG13	"1"	Indicates the timer for	TS 24.281 [86]	
		implicit priority	TS 24.483 [13]	
		downgrade; Values: 0-	clause 8.2.54	
TEOAA	"1"	255 s	TO 04 004 [00]	
TFG14	"1"	Indicates the MCVideo	TS 24.281 [86]	
		timer for implicit priority	TS 24.483 [13]	
		downgrade (imminent	clause 8.2.54A	
TFP1	"2000"	peril); Values: 0-255 s Indicates the timer for	TC 24 204 [06]	
IFFI	2000	private call request	TS 24.281 [86] TS 24.483 [13]	
		retransmission; Values:	clause 8.2.55	
		0-65535 ms	Clause 6.2.55	
TFP2	"50"	Indicates the timer for	TS 24.281 [86]	
1112	30	waiting for call	TS 24.483 [13]	
		response message;	clause 8.2.56	
		Values: 0-60 s	0.0000 0.2.00	
TFP3	"2000"	Indicates the timer for	TS 24.281 [86]	
		private call release	TS 24.483 [13]	
		retransmission; Values:	clause 8.2.57	
		0-65535 ms		
TFP4	"5000"	Indicates the timer for	TS 24.281 [86]	
		private call release	TS 24.483 [13]	
		retransmission; Values:	clause 8.2.58	
		0-65535 ms		
TFP5	"30"	Indicates the timer for	TS 24.281 [86]	
		call release; Values: 0-	TS 24.483 [13]	
		600 s	clause 8.2.59	
TFP6	"3000"	Indicates the timer for	TS 24.281 [86]	
		MCVideo emergency	TS 24.483 [13]	
		private call cancel	clause 8.2.60	
		retransmission; Values:		
		0-65535 ms		
TFP7	"6"	Indicates the timer for	TS 24.281 [86]	
		waiting for any	TS 24.483 [13]	
		message with same	clause 8.2.61	
		call identifier; Values:		
		0-255 s		
TFB1	"300"	Indicates the timer for	TS 24.281 [86]	
		max duration; Values:	TS 24.483 [13]	
		0-600 s	clause 8.2.62	1

Derivation Path: TS 24.484 [14]. Information Element	Value/remark	Comment	Reference	Condition
TFB2	"10"	Indicates the timer for	TS 24.281 [86]	
		max duration; Values:	TS 24.483 [13]	
		0-10 s	clause 8.2.63	
TFB3	"20"	Indicates the timer for	TS 24.281 [86]	
		waiting for the	TS 24.483 [13]	
		MCVideo user; Values:	clause 8.2.64	
		0-60 s	0.0000 0.2.0	
T201	"1000"	Indicates the timer for	TS 24.581 [88]	
. = 0 :	1000	floor request; Values:	TS 24.483 [13]	
		0-65535 ms	clause 8.2.65	
T203	"5"	Indicates the timer for	TS 24.581 [88]	
.200		end of RTP media;	TS 24.483 [13]	
		Values: 0-255 s	clause 8.2.66	
T204	"5"	Indicates the timer for	TS 24.581 [88]	
. = 0 :		floor queue position	TS 24.483 [13]	
		request; Values: 0-255	clause 8.2.67	
		s	0.00000.2.0.	
T205	"1"	Indicates the timer for	TS 24.581 [88]	
. 200		floor granted request;	TS 24.483 [13]	
		Values: 0-255 s	clause 8.2.68	
T230	"10"	Indicates the timer for	TS 24.581 [88]	
1200	10	inactivity; Values: 0-	10 24.001 [00]	
		255 s		
T233	"10"	Indicates the timer for	TS 24.581 [88]	
1233	10	pending user action;	TS 24.483 [13]	
		Values: 0-255 s	clause 8.2.70	
TFE1	"30"	Indicates the timer for	TS 24.281 [86]	
11 🗀 1	30	MCVideo emergency	TS 24.483 [13]	
		alert; Values: 0-65535	clause 8.2.71	
		s	Clause 6.2.7 I	
TFE2	"10"	Indicates the timer for	TS 24.281 [86]	
IFEZ	10	MCVideo emergency	TS 24.483 [13]	
		alert re-transmission;	clause 8.2.72	
		Values: 0-10 s	Clause 6.2.72	
Counters		Values. 0-10 s		
CFP1	"3"	Indicates the counter	TS 24.281 [86]	
CFFI	3	for private call request	TS 24.483 [13]	
		retransmission	clause 8.2.74	
CFP3	"5"	Indicates the counter	TS 24.281 [86]	
CFP3	5		TS 24.483 [13]	
		for private call release		
CEB4	"2"	retransmission	clause 8.2.75	
CFP4	4	Indicates the counter	TS 24.281 [86]	
		for private call accept	TS 24.483 [13]	
CED6	"2"	retransmission	clause 8.2.76	
CFP6	4	Indicates the counter	TS 24.281 [86]	
		for private call accept	TS 24.483 [13]	
OFD44	lou.	retransmission	clause 8.2.77	
CFP11	"2"	Indicates the counter	TS 24.281 [86]	
		for MCVideo group call	TS 24.483 [13]	
		emergency end	clause 8.2.78	
OFD40	llo!!	retransmission	TO 0 4 00 : 12 2	
CFP12	"2"	Indicates the counter	TS 24.281 [86]	
		for MCVideo imminent	TS 24.483 [13]	
		peril call emergency	clause 8.2.79	
222	100	end retransmission		
C201	"3"	Indicates the counter	TS 24.281 [86]	
		for floor request	TS 24.483 [13]	
			clause 8.2.80	
C204	"2"	Indicates the counter	TS 24.281 [86]	
		for floor queue position	TS 24.483 [13]	
		request	clause 8.2.81	
C205	"4"	Indicates the counter	TS 24.281 [86]	
		for floor granted	TS 24.483 [13]	
		request	clause 8.2.82	1

Condition	Explanation	
IPv4	IP address is IPv4 address	
IPv6	IP address is IPv6 address	

## 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.

Table 5.5.8.6-1: MCVideo UE Configuration Defaults

Derivation Path: TS 24.484 [14] of Information Element	Value/remark	Comment	Reference	Condition
mcvideo-UE-configuration	Value/Terrial K	Comment	Kelelelice	Condition
domain attribute	px_MCX_DomainName _Organization_A	Mandatory attribute: 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		aorig groupe		
IPv6Preferred	"false"	Indicates whether IPv6 is preferred over IPv4 for on-network operation when the MCPTT 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 MCPTT 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]	

#### 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 24.24.484, cl				
Information Element	Value/remark	Comment	Reference	Condition
mcptt-user-profile	140) " 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2			
XUI-URI attribute	px_MCVideo_User_XU I_URI			
user-profile-index attribute	"0"			
Status	"true"	MCVideo user profile is enabled		
ProfileName	px_MCVideo_User_A_ Profile_Name	Profile name for the MCVideo user	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	px_MCVideo_User_A_	Alphanumeric aliases	TS 24.483 [13]	
	Alias	of MCVideo user	clause 13.2.11	
ParticipantType	px_MCVideo_User_A_ ParticipantType	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_MCVideo_User_A_ Organization	Indicates the organization an MCVideo user belongs to	TS 24.483 [13] clause 13.2.16	
NotifyList				
index attribute	"0"			
uri-entry	px_MCVideo_ID_User_ B			
CatList				
catentry	"1"		TS 24.483 [13] clause 13.2.38	
ReceptionPriority	"1"			
OnNetwork				
index	"1"			
MCVideoGroupInfo MCVideo-Group-ID	px_MCVideo_Group_A			
GMS-App-Serv-Id	tsc_MCX_GMS_Hostn ame			
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

Derivation Path: TS 24.24.484, cla				
Information Element	Value/remark	Comment	Reference	Condition
	"https://[" & px_MCX_IdMS_token_I PAddress & "]:" & px_MCX_IdMS_token_ Port &	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv6
	tsc_MCX_IdMS_token_ UriPath			
RelativePresentationPriority	"7"		TS 24.483 [13] clause 13.2.51	
MaxAffiliationsNc2	"10"		TS 24.483 [13] clause 13.2.67	
MaxTimeSingleTransmit	"600"	Value in seconds	TS 24.483 [13] clause 13.2.87	
OffNetwork				
index	"1"			
MCVideoGroupInfo	The Mac Control of the Control of th			
MCVideo-Group-ID	px_MCVideo_Group_A _ID			
GMS-App-Serv-Id	tsc_MCX_GMS_Hostn ame			
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	px_MCVideo_ID_User_ A		TS 24.483 [13] clause 13.2.10 2	
cp:ruleset				
cp:rule				
cp:id attribute	"rule1"			
cp:actions				
allow-create-delete-user- alias	"true"			
allow-create-group- broadcast- group	"true"			
allow-create-user- broadcast-group	"true"			
allow-modify-video	"true"			
allow-renegotiate-codec	"true"			
allow-camera-control	"true"			
allow-remote-control allow-display-remote-ue	"true" "true"			
allow-remote-camera	"true"			
allow-remote-camera allow-push-video	"true"			
allow-auto-send-notify	"true"			
allow-request-affiliated-	"true"			
groups	"4" "			
allow-request-to-affiliate- other-users	"true"			
allow-recommend-to- affiliate-other-users	"true"			
allow-regroup	"true"			
allow-presence-status	"true"			

Derivation Path: TS 24.24.484, cla	Value/remark	Comment	Reference	Condition
		Comment	Reference	Condition
allow-request-presence	"true"			
allow-activate-emergency-	"true"			
alert	114			
allow-cancel-emergency-	"true"			
alert				
allow-cancel-emergency-	"true"			
alert-any-user allow-enable-disable-user	"true"			
allow-enable-disable-UE	"true"			
allow-off-network-manual-	"true"			
switch				
allow-unlimited-video-	"true"			
streams	H. II			
allow-auto-recv	"true"			
allow-auto-recv-emergency	"true"			
allow-auto-recv-imminent-	"true"			
peril				
allow-request-override	"true"			
allow-select-override	"true"			
allow-override-group-call	"true"			
allow-off-network	"true"			
allow-private-call	"true"			
allow-manual-	"true"			
commencement				
allow-automatic-	"true"			
commencement				
allow-failure-restriction	"true"			
allow-emergency-group-call	"true"			
allow-emergency-private-	"true"			
call				
allow-cancel-group-	"true"			
emergency				
allow-imminent-peril-call	"true"			
allow-cancel-imminent-peril	"true"			
allow-off-network-group-	"true"			
call-change-to-emergency				
allow-create-delete-user-	"true"			
alias				

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 8.4. 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], of Information Element	Value/remark	Comment	Reference	Condition
service configuration				
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)		
broadcast-group				
num-levels-group-hierarchy	"1"	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 groups		
on-network				
signalling-protection				
confidentiality-protection	"true"			
integrity-protection	"true"			
protection-between-mcvideo- servers				
allow-signalling-protection	"true"			
allow-transmission-control- protection	"true"			
off-network				
private-call				
mcvideo-max-duration	"600"	Value in seconds	TS 24.483 [13] clause 14.2.17	
default-prose-per-packet- priority	"1"	Indicates the default ProSe Per-Packet Priority (PPPP) value		
mcvideo-private-call- signalling	"1"	Indicates the default ProSe Per-Packet Priority (PPPP) value		
mcvideo-private-call-media	"1"	Indicates the default ProSe Per-Packet Priority (PPPP) value		
mcvideo-emergency-private- call-signalling	"8"	Indicates the default ProSe Per-Packet Priority (PPPP) value		
mcvideo-emergency-private- call-media	"8"	Indicates the default ProSe Per-Packet Priority (PPPP) value		
num-levels-priority-hierarchy	"4"		TS 24.483 [13] clause 14.2.18	

#### 5.5.8.9 MCDATA Initial UE Configuration

The structure of an initial UE configuration document is specified in TS 24.484 [14] clause 7.2. Single MCPTT group configuration parameters are defined in TS 24.483 [13] clause 8.2.

Table 5.5.8.9-1: MCDATA Initial UE Configuration Defaults

Derivation Path: TS 24.484 [14], o	lause 7.2 Value/remark	Comment	Reference	Condition
mcptt-UE-initial-configuration	value/i eiildi k	Comment	I/elelelice	Condition
domain attribute	px_MCX_DomainName _Organization_A	Mandatory attribute: domain name of the mission critical organization		
Default-user-profile				
User-ID attribute	px_MCData_ID_User_ A	Default User Identity	TS 24.483 [13] clause 8.2.6	
user-profile-index attribute	"0"	Values 0-255. Indicates selected user profile	TS 24.483 [13] clause 8.2.7	
on-network				
Timers			=	
T100	"2"	Values 0-255 sec	TS 24.380 [10] TS 24.483 [13] clause 8.2.11	
T101	"2"	Values 0-255 sec	TS 24.380 [10] TS 24.483 [13] clause 8.2.12	
T103	"5"	Values 0-255 sec	TS 24.380 [10] TS 24.483 [13] clause 8.2.13	
T104	"2"	Values 0-255 sec	TS 24.380 [10] TS 24.483 [13]	
T132	"3"	Values 0-255 sec	clause 8.2.14 TS 24.380 [10] TS 24.483 [13] clause 8.2.15	
TDU1	"120"	Value in ms	TS 24.282 [91] clause F.2.3	
TDU2	"60"	Value in seconds	TS 24.282 [91] clause F.2.3	
HPLMN				
PLMN attribute	PLMN1	the PLMN on which the UE is allowed for MCData services.	TS 23.003 [69] TS 24.483 [13] clause 8.2.16	
		Public Land Mobile Network is uniquely identified by its PLMN identifier; consists of Mobile Country Code (MCC) and Mobile Network Code (MNC) and are defined by the operator.		
		NOTE: PLMN1 shall be the PLMN of the Cell on which the UE is camped during testing.		
service		MCData related services on a per HPLMN basis		
MCPTT-to-con-ref	px_MCData_ALL_APN	configuration parameter for establishment of the PDN connection for the MCData service	TS 24.483 [13] clause 8.2.21	
MC-common-core-to-con- ref	px_MCData_ALL_APN	configuration parameter for establishment of the PDN connection for the MC common core service	TS 24.483 [13] clause 8.2.24	

Derivation Path: TS 24.484 [14],		Cammant	Doforon	Condition
Information Element	Value/remark	Comment	Reference	Condition
MC-ID-to-con-ref	px_MCData_ALL_APN	configuration parameter for	TS 24.483 [13] clause 8.2.27	
		establishment of the		
		PDN connection for the		
		MC identity		
		management service		
VPLM[1]	DLMNO	VDI MNI configuration		
PLMN attribute	PLMN2	VPLMN configuration		
		for another PLMN		
		which can be used by		
		the UE to access MCData service		
		MCData Service		
		NOTE: PLMN2 shall be		
		a different PLMN to		
		PLMN1 of a Cell to		
		which the UE will move		
		during testing when		
		specified in a test case.		
service	my MCData ALL ADAL	a and incompation	TC 04 400 [40]	
MCPTT-to-con-ref	px_MCData_ALL_APN	configuration parameter for	TS 24.483 [13] clause 8.2.33	
			clause 8.2.33	
		establishment of the PDN connection for the		
		MCData service		
MC-common-core-to-con-	px_MCData_ALL_APN	configuration	TS 24.483 [13]	
ref		parameter for	clause 8.2.36	
		establishment of the		
		PDN connection for the		
		MC common core		
		service		
MC-ID-to-con-ref	px_MCData_ALL_APN	configuration	TS 24.483 [13]	
		parameter for	clause 8.2.39	
		establishment of the		
		PDN connection for the		
		MC identity		
App-Server-Info		management service		
idms-auth-endpoint	"https://" &	Identity management	TS 23.003 [69]	IPv4
·	px_MCX_IdMS_auth_I	server authorisation	TS 24.483 [13]	
	PAddress & ":" &	endpoint identity	clause 8.2.41	
	px_MCX_IdMS_auth_P	information		
	ort &			
	tsc_MCX_ldMS_auth_			
	UriPath			
	"https://[" &	Identity management	TS 23.003 [69]	IPv6
	px_MCX_IdMS_auth_I	server authorisation	TS 24.483 [13]	
	PAddress & "]:" &	endpoint identity	clause 8.2.41	
	px_MCX_IdMS_auth_P	information		
	ort &			
	tsc_MCX_IdMS_auth_			
idms-token-endpoint	UriPath "https://" &	Identity management	TS 23.003 [69]	IPv4
idins-token-endpoint	px_MCX_IdMS_token_I	server token endpoint	TS 24.483 [13]	'' V <del>'</del>
	PAddress & ":" &	identity information	clause 8.2.41A	
	px_MCX_IdMS_token_	active information	514436 U.Z.41A	
	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]	
	PAddress & "]:" &	identity information	clause 8.2.41A	
	px_MCX_IdMS_token_			
	Port &			
	tsc_MCX_ldMS_token_			
	UriPath			

Information Element	Derivation Path: TS 24.484 [14],				
px.MCX_HTTP_Proxy	Information Element	Value/remark	Comment	Reference	Condition
DX_MCX_HTTP_Proxy   For   Fo	http-proxy	px_MCX_HTTP_Proxy _IPAddress & ":" & px_MCX_HTTP_Proxy _Port	used by the UE for the HTTP TCP connection	TS 24.483 [13] clause 8.2.41B	
management server cleasuse 8.2.42 clause 8.2.42 clause 8.2.42 clause 8.2.42 clause 8.2.42 clause 8.2.42 clause 8.2.43 clause 8.2.43 clause 8.2.43 clause 8.2.43 clause 8.2.43 clause 8.2.43 clause 8.2.43 clause 8.2.43 clause 8.2.43 clause 8.2.43 clause 8.2.43 clause 8.2.43 clause 8.2.43 clause 8.2.43 clause 8.2.43 clause 8.2.44 clause 8.2		px_MCX_HTTP_Proxy _IPAddress & "]:" & px_MCX_HTTP_Proxy _Port	used by the UE for the HTTP TCP connection	TS 24.483 [13] clause 8.2.41B	IPv6
kms tsc_MCX_KMS_Hostna me clantity information in daugement server identity information in terms of the terms	gms		management server	TS 24.483 [13]	
tls-tunnel-auth-method mutual-authentication "false" Indicates whether mutual authentication is used for the TLS tunnel authentication false-one-way authentication is used for the TLS tunnel authentication false-one-way authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication The group management service URI information which contains the public service identity for performing subscription proxy function of the GMS  GMS-VCAP-root-URI tsc_MCX_GMSXCAPR of GMS-XCAP-root-URI tsc_MCX_GMSXCAPR of URI information for creation of groups  GMS-XCAP-root-URI tsc_MCX_CMSXCAPR of URI information for creation of groups  CMS-XCAP-root-URI tsc_MCX_CMSXCAPR of URI information for creation of groups  CMS-XCAP-root-URI tsc_MCX_CMSXCAPR of URI information for creation of groups  CMS-XCAP-root-URI tsc_MCX_CMSXCAPR of URI information for creation of groups  CMS-XCAP-root-URI tsc_MCX_CMSXCAPR of URI information for creation of groups  CMS-XCAP-root-URI tsc_MCX_CMSXCAPR of URI information for creation of groups  CMS-XCAP-root-URI tsc_MCX_CMSXCAPR of URI information for creation of groups  CMS-XCAP-root-URI tsc_MCX_CMSXCAPR of URI information for creation of groups  CMS-XCAP-root-URI tsc_MCX_CMSXCAPR of URI information for creation of groups  CMS-XCAP-root-URI tsc_MCX_CMSXCAPR of URI information for creation of groups  CMS-XCAP-root-URI tsc_MCX_CMSXCAPR of URI information for creation of groups  CMS-XCAP-root-URI tsc_MCX_CMSXCAPR of URI information for creation of groups  CMS-XCAP-root-URI tsc_MCX_CMSXCAPR of URI information for creation of groups  CMS-XCAP-root-URI tsc_MCX_CMSXCAPR of URI information for creation of groups  CMS-XCAP-root-URI tsc_MCX_CMSXCAPR of URI information for creation of groups  CMS-XCAP-root-URI tsc_MCX_CMSXCAPR of URI	cms		configuration management server	TS 24.483 [13]	
mutual-authentication "false" Indicates whether mutual authentication is used for the TLS tunnel authentication false—one-way authentication based on the server certificate is used  x509 Not present the X.509 certificate for mutual authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the GMS authentication for the GMS authentication for the GMS authentication for the GMS are also and authentication for the GMS are also and also are also and also also also also also also also also			management server	TS 24.483 [13]	
mutual authentication is used for the TLS tunnel authentication false=one-way authentication based on the server certificate is used  x509  Not present the X.509 certificate for mutual authentication for the TLS tunnel authentication for the TL				TO 04 400 [40]	
Mutual authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication TS 24.483 [13] clause 8.2.44D      GMS-URI	mutual-authentication	"false"	mutual authentication is used for the TLS tunnel authentication false=one-way authentication based on the server certificate		
Mutual authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication	x509		mutual authentication for the TLS tunnel	clause 8.2.44C	
management service URI information which contains the public service identity for performing subscription proxy function of the GMS  group-creation-XUI  px_MCData_GroupCre ationXUI  px_S 23.003 [69]  px_S 24.483 [13]  clause 8.2.9B  px_S 23.003 [69]  px_S 24.483 [13]  px_S 23.003 [69]  px_S 24.483 [13]  px_S 23.003 [69]  px_S 24.483 [13]  px_S 23.003 [69]  px_S 24.483 [13]  px_S 23.003 [69]  px_S 24.483 [13]  px_S 23.003 [69]  px_S 24.483 [13]  px_S 23.003 [69]  px_S 24.483 [13]  px_S 23.003 [69]  px_S 24.483 [13]  px_S 23.003 [69]  px_S 24.483 [13]  px_S 23.003 [69]  px_S 24.483 [13]  px_S 23.003 [69]  px_S 24.483 [13]  px_S	key	Not present	mutual authentication for the TLS tunnel		
group-creation-XUI	GMS-URI	tsc_MCX_GMSURI	management service URI information which contains the public service identity for performing subscription proxy function of the	TS 24.483 [13]	
GMS-XCAP-root-URItsc_MCX_GMSXCAPR ootURIIndicates the group management server XCAP Root URI informationTS 23.003 [69] TS 24.483 [13] clause 8.2.9BCMS-XCAP-root-URItsc_MCX_CMSXCAPR ootURIIndicates the configuration management server XCAP Root URI informationintegrity-protection-enabled"true"Indicates whether integrity protection is enabledTS 24.483 [13] clause 8.2.44Econfidentiality-protection-enabled"true"Indicates whether integrity protection is enabledTS 24.483 [13] clause 8.2.44Eoff-network	group-creation-XUI		Indicates the group creation XUI information for creation	TS 24.483 [13]	
ootURI  configuration management server XCAP Root URI information  integrity-protection-enabled  "true"  Indicates whether integrity protection is enabled  confidentiality-protection-enabled  integrity protection is enabled  off-network  TS 24.483 [13] clause 8.2.44E  Indicates whether integrity protection is enabled  clause 8.2.44F	GMS-XCAP-root-URI		Indicates the group management server XCAP Root URI	TS 24.483 [13]	
integrity protection is enabled  confidentiality-protection- enabled  "true"  Indicates whether integrity protection is enabled  off-network  integrity protection is enabled  clause 8.2.44E  clause 8.2.44F  enabled			configuration management server XCAP Root URI	TS 24.483 [13]	
enabled integrity protection is enabled enabled clause 8.2.44F enabled	integrity-protection-enabled	"true"	integrity protection is		
		"true"	integrity protection is		

erivation Path: TS 24.484 [14], Information Element	Value/remark	Comment	Reference	Conditio
TFG1	"150"	Indicates the timer for	TS 24.379 [9]	
		wait for call	TS 24.483 [13]	
		announcement;	clause 8.2.47	
		Values: 0-65535 ms		
TFG2	"2000"	Indicates the timer for	TS 24.379 [9]	
		call announcement;	TS 24.483 [13]	
		Values: 0-65535 ms	clause 8.2.48	
TFG3	"40"	Indicates the timer for	TS 24.379 [9]	
		call probe	TS 24.483 [13]	
		retransmission; Values: 0-65535 ms	clause 8.2.49	
TFG4	"20"	Indicates the timer for	TS 24.379 [9]	
		waiting for the MCData	TS 24.483 [13]	
		user; Values: 0-60 s	clause 8.2.50	
TFG5	"2"	Indicates the timer for	TS 24.379 [9]	
		not present incoming	TS 24.483 [13]	
		call announcements;	clause 8.2.51	
		Values: 0-255 s		
TFG11	"3000"	Indicates the timer for	TS 24.379 [9]	
		MCData emergency	TS 24.483 [13]	
		end retransmission;	clause 8.2.52	
		Values: 0-65535 ms	1.0000 0.2.02	
TFG12	"3000"	Indicates the timer for	TS 24.379 [9]	
		MCData imminent peril	TS 24.483 [13]	
		end retransmission;	clause 8.2.53	
		Values: 0-65535 ms	3.2230 0.2.00	
TFG13	"1"	Indicates the timer for	TS 24.379 [9]	
11 010	'	implicit priority	TS 24.483 [13]	
		downgrade; Values: 0-	clause 8.2.54	
		255 s	3.4400 0.2.07	
TFG14	"1"	Indicates the MCData	TS 24.379 [9]	
014	'	timer for implicit priority	TS 24.483 [13]	
		downgrade (imminent	clause 8.2.54A	
		peril); Values: 0-255 s	5.4400 0.2.04A	
TFP1	"2000"	Indicates the timer for	TS 24.379 [9]	
		private call request	TS 24.483 [13]	
		retransmission; Values:	clause 8.2.55	
		0-65535 ms	3.4430 0.2.00	
TFP2	"50"	Indicates the timer for	TS 24.379 [9]	
<u>-</u>		waiting for call	TS 24.483 [13]	
		response message;	clause 8.2.56	
		Values: 0-60 s		
TFP3	"2000"	Indicates the timer for	TS 24.379 [9]	
		private call release	TS 24.483 [13]	
		retransmission; Values:	clause 8.2.57	
		0-65535 ms		
TFP4	"5000"	Indicates the timer for	TS 24.379 [9]	
		private call release	TS 24.483 [13]	
		retransmission; Values:	clause 8.2.58	
		0-65535 ms		
TFP5	"30"	Indicates the timer for	TS 24.379 [9]	
		call release; Values: 0-	TS 24.483 [13]	
		600 s	clause 8.2.59	
TFP6	"3000"	Indicates the timer for	TS 24.379 [9]	
0		MCData emergency	TS 24.483 [13]	
		private call cancel	clause 8.2.60	
		retransmission; Values:	5.4400 0.2.00	
		0-65535 ms		
TFP7	"6"	Indicates the timer for	TS 24.379 [9]	
		waiting for any	TS 24.483 [13]	
		message with same	clause 8.2.61	
		call identifier; Values:	JIQUSE 0.2.01	
		0-255 s		
		U-Z:0:15	Ĩ	1
TED1	"200"		TC 24 270 [0]	İ
TFB1	"300"	Indicates the timer for max duration; Values:	TS 24.379 [9] TS 24.483 [13]	

erivation Path: TS 24.484 [14] Information Element	Value/remark	Comment	Reference	Conditio
TFB2	"10"	Indicates the timer for	TS 24.379 [9]	
		max duration; Values:	TS 24.483 [13]	
		0-10 s	clause 8.2.63	
TFB3	"20"	Indicates the timer for	TS 24.379 [9]	
11 50	20	waiting for the MCData	TS 24.483 [13]	
		user; Values: 0-60 s	clause 8.2.64	
T201	"1000"	Indicates the timer for	TS 24.380 [10]	
1201	1000			
		floor request; Values:	TS 24.483 [13]	
		0-65535 ms	clause 8.2.65	
T203	"5"	Indicates the timer for	TS 24.380 [10]	
		end of RTP media;	TS 24.483 [13]	
		Values: 0-255 s	clause 8.2.66	
T204	"5"	Indicates the timer for	TS 24.380 [10]	
		floor queue position	TS 24.483 [13]	
		request; Values: 0-255	clause 8.2.67	
		s '		
T205	"1"	Indicates the timer for	TS 24.380 [10]	
00	·	floor granted request;	TS 24.483 [13]	
		Values: 0-255 s	clause 8.2.68	
T230	"10"	Indicates the timer for	TS 24.380 [10]	
1230	10		10 24.300 [10]	
		inactivity; Values: 0-		
		255 s		
T233	"10"	Indicates the timer for	TS 24.380 [10]	
		pending user action;	TS 24.483 [13]	
		Values: 0-255 s	clause 8.2.70	
TFE1	"30"	Indicates the timer for	TS 24.379 [9]	
		MCData emergency	TS 24.483 [13]	
		alert; Values: 0-65535	clause 8.2.71	
		s		
TFE2	"10"	Indicates the timer for	TS 24.379 [9]	
11 62	10		TS 24.483 [13]	
		MCData emergency	clause 8.2.72	
		alert re-transmission;	clause 6.2.72	
		Values: 0-10 s	<b>=</b> 0 0 1 000 fo 12	
TFS1	"40"	Value in ms	TS 24.282 [91]	
			clause F.3.1	
TFS2	"40"	Value in ms	TS 24.282 [91]	
			clause F.3.1	
TFS3	"120"	Value in ms	TS 24.282 [91]	
			clause F.3.1	
Counters				
CFP1	"3"	Indicates the counter	TS 24.379 [9]	
		for private call request	TS 24.483 [13]	
		retransmission	clause 8.2.74	
CED2	"5"		TS 24.379 [9]	
CFP3	٥	Indicates the counter		
		for private call release	TS 24.483 [13]	
0554	101	retransmission	clause 8.2.75	
CFP4	"2"	Indicates the counter	TS 24.379 [9]	
		for private call accept	TS 24.483 [13]	
		retransmission	clause 8.2.76	
CFP6	"2"	Indicates the counter	TS 24.379 [9]	
		for private call accept	TS 24.483 [13]	
		retransmission	clause 8.2.77	
CFP11	"2"	Indicates the counter	TS 24.379 [9]	
J. 7 1 1	-	for MCData group call	TS 24.483 [13]	
			clause 8.2.78	
		emergency end	ciause 0.2.70	
OFD40	"0"	retransmission	TO 04 070 (0)	
CFP12	"2"	Indicates the counter	TS 24.379 [9]	
		for MCData imminent	TS 24.483 [13]	
		peril call emergency	clause 8.2.79	
		end retransmission		
C201	"3"	Indicates the counter	TS 24.379 [9]	
		for floor request	TS 24.483 [13]	
	ı		clause 8.2.80	l

Derivation Path: TS 24.484 [14], clause 7.2					
Information Element	Value/remark	Comment	Reference	Condition	
C204	"2"	Indicates the counter for floor queue position	TS 24.379 [9] TS 24.483 [13]		
C205	"4"	Indicates the counter for floor granted	Clause 8.2.81 TS 24.379 [9] TS 24.483 [13]		
CFS1	"5"	request	clause 8.2.82 TS 24.282 [91] clause G.3.1		
CFS2	"5"		TS 24.282 [91] clause G.3.1		

Condition	Explanation	
IPv4	IP address is IPv4 address	
IPv6	IP address is IPv6 address	

## 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** 

Derivation Path: TS 24.484 [14] of Information Element	Value/remark	Comment	Reference	Condition
mcdata-UE-configuration	Talas/Islian		110.0701100	55.7411.01
domain attribute	px_MCX_DomainName _Organization_A	Mandatory attribute: domain name of the mission critical		
common		organization		
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				
MCDATA-Group-ID	px_MCData_Group_A_	Identifies a MCData	TS 24.483	
group-priority-hierarchy	ID   "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	

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 MCDATA 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> elements is not needed.</relayed-mcdata-group></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

Derivation Path: TS 24.484, clau Information Element	Value/remark	Comment	Reference	Condition
mcdata-user-profile				
XUI-URI attribute	px_MCData_User_XUI _URI	Contains the XUI of the MCData user for whom this MCData user profile configuration document is intended and does not appear in the user profile configuration managed object specified in 3GPP TS 24.483 [4].		
user-profile-index attribute	"0"	Indicates the particular MCData user profile configuration document in the collection and corresponds to the "MCDataUserProfileInd ex" element of clause 10.2.8 in 3GPP TS 24.483 [4].		
Status	"true"	MCData user profile is enabled		
Common				
index attribute	"0"	Index for the particular MCDATA user profile	TS 24.483 [13] clause 10.2.6	
UserAlias				
alias-entry	px_MCData_User_A_A lias	Alphanumeric aliases of MCDATA user	TS 24.483 [13] clause 10.2.11	
MCDATAUserID				
entry	px_MCData_ID_User_ A			
MissionCriticalOrganization	px_MCData_User_A_O rganization	Indicates the organization an MCData user belongs to	TS 24.483 [13] clause 10.2.16	
FileDistribution				
FD-cancel-List-Entry				
MCData-ID	px_MCData_ID_User_ A	Contains the MCData 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];	TS 24.483 clause 10.2.21 A	

Derivation Path: TS 24.484, clau Information Element	vse 10.3.2.1 Value/remark	Common <sup>4</sup>	Doforonas	Condition
		Comment	Reference	Condition
MCData_ID_KMSURI	tsc_MCX_KMS_Hostna me	Contains the KMS URI 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 <kmssec> element of the <app-server-info> of</app-server-info></kmssec>	TS 24.483 [13] clause 10.2.21 A	Condition
		the MCS UE initial configuration document as specified in clause 7.2.2.1		
TxRxControl				
MaxData1To1	"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	
MaxTime1to1	"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	
TxReleaseList	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 transmission	TS 24.483 [13] clause 10.2.30	
GroupEmergencyAlert		Indicates the MCData group recipient for an MCData emergency Alert	TS 24.483 [13] clause 10.2.38	
entry	px_MCData_ID_User_ A			
OnNetwork				
index attribute	"0"	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].		
MCDataGroupInfo				
MCData-Group-ID	px_MCData_Group_A_ ID	Indicates the MCData group ID for the on- network MCData group that the MCData user is allowed to use.	TS 24.483 clause 10.2.47	
GMS-App-Serv-ID				
entry	tsc_MCX_GMS_Hostn ame	Placeholder for one or more Group Management Server configurations.		

Derivation Path: TS 24.484, claus	e 10.3.2.1			
Information Element	Value/remark	Comment	Reference	Condition
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
Dalatina and dian Drivita	"https://[" & px_MCX_IdMS_token_I PAddress & "]:" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath "7"	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv6
Relativepresentation Priority	"10"		TO 04 400	
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 users	TS 24.483 clause 10.2.71	
One-To-One-EmergencyAlert		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 name of the MCData user recipient for an on- network MCData emergency one-to-one alert	TS 24.43 clause 10.2.92	
OffNetwork		diore		
index attribute	"0"			
MCDataGroupInfo	Ŭ			
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	
GMS-App-Serv-Id	tsc_MCX_GMS_Hostn			
IdMS-Token-Endpoint	ame  "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, claus	e 10.3.2.1			
Information Element	Value/remark	Comment	Reference	Condition
Information Element RelativePresentationPriority	Value/remark	When it appears in: the <mcdatagroupinfo> element of the <onnetwork> element, 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];</onnetwork></mcdatagroupinfo>	Reference	Condition
		and  the <mcdatagroupinfo> element of the  <offnetwork> element, 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];</offnetwork></mcdatagroupinfo>		
User-Info-Id	px_MCData_User_A_I D			
ruleset				
rule				
actions				
allow-create-delete-user- alias	"true"			
allow-create-group- broadcast- group	"true"			
allow-create-user- broadcast-group	"true"			
allow-transmit-data	"true"			
allow-request-affiliated- groups	"true"			
allow-request-to-affiliate- other-users	"true"			
allow-recommend-to-	"true"			
affiliate-other-users	116			
allow-regroup	"true"			
allow-presence-status	"true"			
allow-request-presence allow-activate-emergency- alert	"true" "true"			
allow-cancel-emergency-	"true"			
allow-cancel-emergency- alert-any-user	"true"			
allow-enable-disable-user	"true"			

Derivation Path: TS 24.484, clause 10.3.2.1				
Information Element	Value/remark	Comment	Reference	Condition
allow-enable-disable-UE	"true"			
allow-off-network-manual-	"true"			
switch				
allow-off-network	"true"			
allow-create-delete-user-	"true"			
alias				

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 10.4.2.1. Single MCVideo 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],		Commont	Deference	Can ditia
Information Element	Value/remark	Comment	Reference	Condition
service configuration domain attribute	my MOD-4- 11 A O	Manalata 44-41		1
domain attribute	px_MCData_User_A_O	Mandatory attribute: domain name of the		
	rganization			
		mission critical		
an naturall		organization		
on-network				
tx-and-rx-control	"4000000"	The constitution of the		
max-data-size-sds-bytes	"10000000"	The maximum data		
		that the originating		
		client can send in an		
<del> </del>		SDS message		
max-payload-size-sds-	"1000"	The maximum payload		
cplane-bytes		data that the originating		
		client can send in an		
		SDS message over C-		
		plane		
max-data-size-fd-bytes	"100000000"	The maximum data		
		that the originating		
		client can send in an		
		FD message		
max-data-size-auto-recv-	"10000000"	The maximum data		
bytes		that the server can		
		send to the terminating		
		client without		
		requesting the user to		
		indicate a present need		
		for the data		
default-file-availability	"10000000"	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	"10000000"	The maximum time for		
•		which a file can be		
		made available on the		
		server for download		
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		
g, p. 0.00.011		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		
	1	protection of MCData		
		signalling is enabled		
		between MCData		
		servers		
off-network		237.0.0		
default-prose-per-packet-				
priority				
mcdata-one-to-one-call-	"1"		TS 24.483 [13]	
signalling			clause 11.2.11	

Derivation Path: TS 24.484 [14], clause 10.4				
Information Element	Value/remark	Comment	Reference	Condition
mcdata-one-to-one-call-	"1"		TS 24.483 [13]	
media			clause 11.2.12	

- 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)

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	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	'0000001'B or '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	2 if #CS > 0	GENÉRIC-ID	
1 71	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	
			<u> </u>

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC 3	830 [24]		
Field	Value/remark	Comment	Condition
Session Data Length	Length of Session Data (in bytes)	16 bits the length of	
	( 2):23)	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	
Session Data {	Present if Session Data	message. session data for	
Session Data (	Length > 0	the crypto session	
SSRC	Any value	specifies the	
	7, 7	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	
252	1 1 1 1 1 1 1	field is set to '0'	
SEQ	Any value if S flag is set,	current/initial	
1	not present otherwise	sequence number	
SPI Length	Length of the SPI	SPI MAY be	
Si i Lengui	Length of the SFT	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.	
}		Reye can be deed.	
}			
Timestamp Payload (T) {		Addressed by	
		'00000101'B in the	
		'Next payload'	
		field of the	
Next payland	Identifier for the road	previous payload	
Next payload	Identifier for the next payload (NOTE 1)		
TS Type	'00000000'B	NTP-UTC (0): 64-	
1,750	33333333	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)	
}		(010)	
	1	1	l .

Derivation path: RFC 6509 [23], RFC 6043 [25], Field	Value/remark	Comment	Condition
RAND Payload {	value/remark	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	
	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
}		A 1 1	
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	1	URI	
ID len ID data	Length of ID Data  Same URI as used as request URI of the SIP message containing the MIKEY-SAKKE I_MESSAGE	URI of the server to which the message is sent	
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 Type	1 (15.5)	URI	
ID len ID data	Length of ID Data tsc_MCX_KMS_Hostnam e	KMS of the initiating user (UE)	
}			

Derivation path: RFC 6509 [23], RFC 6043 [25	5J, RFC 3830 [24]	Comment	Condition
Field	Value/remark	Comment	Condition
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 Type	1	ÙRI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
	e	responder (MCX	
		domain)	
}		Addressed by	
,		'00001010'B in the	
		'Next payload'	
		field of the	
Oiti- Daniti	D 17 #00 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		
	header payload		
Prot type	0	SRTP	
Policy param length			
Policy param {			
s			
Type	0	Encryption	
туре	0	Algorithm	
la in orth		Algorithm	
length		450.0014	
value	6	AES-GCM	
}			
{			
Туре	1	Session	
		encryption key	
		length	
length			
value	16	16 octets	
}			
{			
Type	4	Session salt key	
1,700	7	length	
longth		iongui	
length	10	10 ootsts	
value	12	12 octets	
}			
{			
Туре	5	SRTP PRF	
length			
value	0	AES-CM	
}			
•			
{		Mary daviruation	
	1.6	Key derivation	
{ Type	6	Key derivation	
	6	rate	
Type  length value	0		

Derivation path: RFC 6509 [23], RFC 6043 [25	Value/remark	Comment	Condition
}	raigo, i oniun		23.14161011
{			
Type	20	AEAD	
. , , , ,		authentication tag	
		length	
length		.0g	
value	16	16 octets	
}		10 001010	
}			
<u> </u>			
SAKKE payload {		Addressed by	
or with payload (		'00011010'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	Identifier for the next	provious payload	
Next payload	payload (NOTE 1)		
SAKKE params {	1	Parameter Set 1	
or and paramo (	,	according to RFC	
		6509 [23],	
		Appendix A	
ID scheme	2	'3GPP MCX	
55.757716	_	hashed UID'	
		(33.180 [94]	
		E.1.2)	
SAKKE data length	Length of SAKKE data	22)	
or trace data forigin	(in bytes)		
SAKKE data	Encapsulated CSK	The CSK is	
Of this data	Endapodiated COT	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	
( 111) 111		'00000100'B in the	
		'Next payload'	
		field of the	
		previous payload	
S type	2	ECCSI signature	
S len	Length of the signature	12 bits	
	field (in bytes)		
S data	Signature:	The signature	
	Shall be validated by the	shall be validated	
	ss	according to RFC	
		3830 [24]	
		clause 5.3 using	
		the algorithm	
		according to RFC	
		0=0=1001	
		6507 [98]	
		clause 5.2.2 using	
		clause 5.2.2 using the UID generated	
		clause 5.2.2 using the UID generated from the MC	
		clause 5.2.2 using the UID generated from the MC Service user ID	
		clause 5.2.2 using the UID generated from the MC Service user ID associated with	
		clause 5.2.2 using the UID generated from the MC Service user ID associated with the initiating user	
		clause 5.2.2 using the UID generated from the MC Service user ID associated with the initiating user (provided in IDRi	
		clause 5.2.2 using the UID generated from the MC Service user ID associated with the initiating user	

NOTE 1: MIKEY payloads may occur in any order apart from the header payload which is always the first payload and the signature payload which is always the last payload

Editor's note: A further table may be needed for CSK download by the SS

- Private call (MIKEY-SAKKE sent by the SS)

Table 5.5.9.1-2: MIKEY-SAKKE I\_MESSAGE (Private call) by the SS

Derivation path: RFC 6509 [23], RFC 6043 [25]			
Field	Value/remark	Comment	Condition
MIKEY Common Header {	(222222417		
version	'00000001'B '00011010'B	CAKKE mag (26)	
Data Type Next payload	'00001010B	SAKKE msg (26) Next payload is	
Next payload	00000101B	timestamp	
V	'0'B	p	
PRF func	'0000001'B	PRF-HMAC-SHA-	
		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	
"00	(0000000015	generated	
#CS	'00000000'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		
}			
Timestamp Payload (T) {			
Next payload	'00001011'B	Next payload is	
TO T	(222222217	RAND	
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 {	(00004440)D	Mayd needee 11	
Next payload	'00001110'B	Next payload is IDRi	
RAND len	'00010000'B	16 Bytes RAND	
RAND	128-bit random number		
}			
IDRi payload {	(0000111017	N	
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	140) ((550
	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
	PA_INIODAIA_ID_036I_B	See	WODATA
		TS 33.180 [94]	
		clause E.4.1	

	RFC 3830 [24]		
Field	Value/remark	Comment	Condition
}			
IDRr payload {	(00004440)D	A1 ( 1 12	
Next payload	'00001110'B	Next payload is IDRkmsi	
ID Role	2	Responder (IDRr)	
ID Type	0	Responder (IDRI)	
ID len	Length of ID Data		
ID data	px_MCPTT_ID_User_A	MCPTT ID	
ib data	px_moi ii_ib_osei_A	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	
- ID D .		IDRkmsr	
ID Role	6	Initiator's KMS	
ID Type	0	(IDRkmsi)	
ID Type ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
ID data	e	initiating user	
1	e	milialing user	
IDRkmsr payload {			
Next payload	'00001010'B	Next payload is	
None payrodd	000010102	Security	
		Properties	
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	
	е	responding user	
		(UE)	
SAKKE mordered (			
SAKKE payload {	(00000400/P	Next perdeed in	
Next payload	'00000100'B	Next payload is SIGN	
SAKKE params {	1	Parameter Set 1	
SARKE params (	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	
	(in bytes)		
SAKKE data	Encapsulated PCK	The PCK is	
		encapsulated by	
		using the public	
		key (PubEncKey	
		in KMS	
			1
		Certificate) and	
		the UID generated	
		the UID generated from the MC	
		the UID generated from the MC Service user ID of	
		the UID generated from the MC Service user ID of the terminating	
}		the UID generated from the MC Service user ID of	
} SIGN (ECCSI) payload {		the UID generated from the MC Service user ID of the terminating	

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: 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		
}				

Editor's note: Table 5.5.9.1-2 needs to be reviewed

- 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 [25] Field	, RFC 3830 [24]   Value/remark	Comment	Condition
MIKEY Common Header {	value/lelilaik	Comment	Condition
version	'0000001'B		
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	Identifier for the next	Or it it is mog (20)	
. Tom payroad	payload (NOTE 1)		
V	'0'B		
PRF func	'0000001'B	PRF-HMAC-SHA-	
		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	'00000001'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 33.180 [94] E.1.2)	
CS ID map type	2 if #CS > 0	GENERIC-ID	
OO 10 map type	1 if #CS == 0	empty map	
CS ID map Info {	Present only if #CS > 0	Jinety map	
CS ID	'00000000'B or	CS ID of the	MCPTT
	'0000001'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)	MOVUDEO
	'0000011'B	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	
C	Approalise	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	i contract of the contract of

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	
Consider Data Langeth	Longth of Consider Date	4C hita	
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)		
TS Type	'00000000'B	NTP-UTC (0): 64- bits	

Derivation path: RFC 6509 [23], RFC 6043 [		Commont	Condition
TS Value	Value/remark Any value	64bit UTC value representing the number of seconds since 0h	Condition
		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 RAND	'00010000'B Any value	16 Bytes RAND 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 associated with the initiating user	
	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	px_MCPTT_ID_User_B	MCPTT ID associated to the receiving user	
	px_MCVideo_ID_User_B px_MCData_ID_User_B	MDSI of the MCVideo Domain MDSI of the	MCVIDEO MCDATA
}	,	MCData Domain	
IDRkmsi payload {		Addressed by '00001110'B in the 'Next payload' field of the previous payload	

Derivation path: RFC 6509 [23], RFC 6043 [25	], RFC 3830 [24] Value/remark	Comment	Condition
Next payload	Identifier for the next	Comment	Condition
Next payload	payload (NOTE 1)		
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	
1	е	initiating user (UE)	
IDRkmsr payload {		Addressed by	
IDIKITISI Payload (		'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	
ID Typo	1	(IDRkmsr) URI	
ID Type ID len	Length of ID Data	UNI	
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
300	e	responding user	
}		Addressed by	
•		'00001010'B in the	
		'Next payload'	
		field of the	
0 1 1 1	D +:( #00 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		
Policy no	payload (NOTE 1) same as Policy_no_1 in		
Policy no	the CS ID map info of the		
	header payload		
Prot type	0	SRTP	
Policy param length		_	
Policy param {			
{			
Туре	0	Encryption	
		Algorithm	
length	6	AES COM	
value	6	AES-GCM	
<u> </u>			
Type	1	Session	
. , , , , ,	'	encryption key	
		length	
length			
value	16	16 octets	
}			
,			
	1 1	Session salt key	
Type	4		
	4	length	
length		length	
	12		
length		length	
length		length	

Derivation path: RFC 6509 [23], RFC 604: Field	Value/remark	Comment	Condition
value	0	AES-CM	
}			
		17 1 1 1	
Type	6	Key derivation	
length		rate	
value	0	No session key	
value		refresh.	
}			
{			
Туре	20	AEAD	
		authentication tag	
		length	
length			
value	16	16 octets	
}			
}			
SAKKE payload {		Addressed by	
SARKE Payloau (		'00011010'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	Identifier for the next	providuo puyrouu	
	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]	
SAKKE data length	Length of SAKKE data	E.1.2) 16 bits	
SARRE data length	(in bytes)	10 DILS	
SAKKE data	Encapsulated PCK	The PCK is	
o, ii ii L daid	2 Troupoulation 1 Ort	encapsulated by	
		using the public	
		key (PubEncKey	
		in KMS	
		Certificate) and	
		the UID generated	
		from the MC	
		Service user ID of	
		the terminating	
,		user	
) CION (ECCCI) = -: 1 1 (		A alalus ! !	
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	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 apart from the header payload which is always the first payload and the signature payload which is always the last payload

- GMK distribution (MIKEY-SAKKE sent by the SS)

Table 5.5.9.1-3: MIKEY-SAKKE I\_MESSAGE (GMK distribution by the SS)

Derivation path: RFC 6509 [23], RFC 6043 [25], R			
Field	Value/remark	Comment	Condition
MIKEY Common Header {	Any		
version	'00000001'B		
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	'00000101'B	Next payload is	
		timestamp	
V	'0'B		
PRF func	'000001'B	PRF-HMAC-SHA-	
		256	
CSB ID	GUK-ID:	Group User Key	
	4 bit purpose tag ('0000'B	Identifier	
	for GMK) & 28 bit	Derived from	
	identifier	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	
Trom payload	000010112	RAND	
TS Type	'00000000'B	NTP-UTC (0): 64-	
10 1960	000000002	bits	
TS Value	Current system time	64bit UTC value	
10 value	Ourient system time	representing the	
		number of	
		seconds since 0h	
		on 1 January	
		1900 with respect	
		to the Coordinated	
		Universal Time	
		(UTC)	
}		(010)	
RAND Payload {			
Next payload	'00001110'B	Next payload is	
Next payload	00001110 B	IDRi	
RAND len	'00010000'B	16 Bytes RAND	
RAND	128-bit random number	10 Dyles KAND	
RAIND	arbitrarily selected by the		
	SS Selected by the		
1	00		
IDRi payload {			
Next payload	'00001110'B	Next payload is	
i next payloau	00001110 B	IDRr	
	1	Initiator (IDRi)	
ID Polo		i inilialui (IDKI)	
ID Role			
ID Type	1	URI	
ID Type ID len	1 Length of ID Data	URI	
ID Type	1 Length of ID Data tsc_MCX_GMS_Hostna	URI URI of the group	
ID Type ID len	1 Length of ID Data	URI URI of the group management	
ID Type ID len	1 Length of ID Data tsc_MCX_GMS_Hostna	URI URI of the group	
ID Type ID len ID data }	1 Length of ID Data tsc_MCX_GMS_Hostna	URI URI of the group management	
ID Type ID len ID data  } IDRr payload {	1 Length of ID Data tsc_MCX_GMS_Hostna me	URI of the group management server	
ID Type ID len ID data }	1 Length of ID Data tsc_MCX_GMS_Hostna	URI URI of the group management server  Next payload is	
ID Type ID len ID data  } IDRr payload { Next payload	1 Length of ID Data tsc_MCX_GMS_Hostna me  '00001110'B	URI URI of the group management server  Next payload is IDRkmsi	
ID Type ID len ID data  } IDRr payload { Next payload ID Role	1 Length of ID Data tsc_MCX_GMS_Hostna me  '00001110'B	URI URI of the group management server  Next payload is	
ID Type ID len ID data  } IDRr payload { Next payload	1 Length of ID Data tsc_MCX_GMS_Hostna me  '00001110'B	URI URI of the group management server  Next payload is IDRkmsi	

value/remark  px_MCPTT_ID_User_A  px_MCVideo_ID_User_A	Comment  MCPTT ID  associated to the group  management client	Condition
px_MCVideo_ID_User_A	client	
px_MCVideo_ID_User_A		
	MCVideo ID associated to the group management client	MCVIDEO
px_MCData_ID_User_A	MCData ID associated to the group management client	MCDATA
'00001110'B	Next payload is IDRkmsr	
6	Initiator's KMS (IDRkmsi)	
1	URI	
Length of ID Data tsc_MCX_KMS_Hostnam e		
(00011010/P	Novt poulood is	
	SAKKE (26)	
	(IDRkmsr)	
tsc_MCX_KMS_Hostnam e	KMS of the UE	
(00040404)P	Navt payland in	
	General Extension	
1	according to RFC 6509 [23], Appendix A	
	'3GPP MCX hashed UID' (33.180 [94] E.1.2)	
Length of SAKKE data (in bytes)		
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 IDD)	
	'00001110'B  6  1 Length of ID Data tsc_MCX_KMS_Hostnam e  '00011010'B  7  1 Length of ID Data tsc_MCX_KMS_Hostnam e  '00010101'B  1  2  Length of SAKKE data (in bytes)	associated to the group management client  '00001110'B Next payload is IDRkmsr  6 Initiator's KMS (IDRkmsi)  1 URI  Length of ID Data  tsc_MCX_KMS_Hostnam e  '00011010'B Next payload is SAKKE (26)  7 Responder's KMS (IDRkmsr)  1  Length of ID Data  tsc_MCX_KMS_Hostnam KMS of the UE e  '00010101'B Next payload is General Extension  1 Parameter Set 1 according to RFC 6509 [23], Appendix A  2 '3GPP MCX hashed UID' (33.180 [94] E.1.2)  Length of SAKKE data (in bytes)  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

Derivation path: RFC 6509 [23], RFC 6043 [25]			
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)	0.0000 2.00.	
Data {		See TS 33.180 [94] clause E.6	
Key Type	'00000000'B	GMK	
Status	'1'	Not-revoked	
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	
Text	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.  no text: Text element shall contain Length sub-element with	
		the value 0 (see TS 33.180 [94] E.6.5)	
Group IDs {		,	

3830 [24]		
Value/remark	Comment	Condition
px_MCPTT_Group_A_ID	The ID for the group associated with the key.	
px_MCVideo_Group_A_I D	The ID for the group associated with the key.	MCVIDEO
px_MCData_Group_A_I D	The ID for the group associated with the key.	MCDATA
2	ECCSI signature	
Length of the signature field (in bytes)	12 bits	
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	
	Value/remark  px_MCPTT_Group_A_ID  px_MCVideo_Group_A_I D  px_MCData_Group_A_I D	Value/remark         Comment           px_MCPTT_Group_A_ID         The ID for the group associated with the key.           px_MCVideo_Group_A_ID         The ID for the group associated with the key.           px_MCData_Group_A_ID         The ID for the group associated with the key.           px_MCData_Group_A_ID         The ID for the group associated with the key.           2         ECCSI signature           Length of the signature field (in bytes)         12 bits           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

- 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	'00000001'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	
		generated	
#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	
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)	
} PAND Payload (			-
RAND Payload {	(00004440)P	Novt poulog die	
Next payload	'00001110'B	Next payload is IDRi	
RAND len	'00010000'B	16 Bytes RAND	
RAND	128-bit random number	10 Dyles KAND	
ואחושט	arbitrarily selected by the		
	SS		
1	აა		
IDRi payload {			
Next payload	'00001110'B	Next payload is	
Tront payload	0000111015	IDRr	
ID Role	1	Initiator (IDRi)	
ID Type	11	URI	
	Length of ID Data	OTA .	
ID len	px_MCPTT_PublicServic	The public service	
ID data		identity identifying	
	eld_A	identity identifying	
		the participating	
ID data }		the participating	
		the participating	

D Role	Derivation path: RFC 6509 [23], RFC 6043		Commont	Condition
D Type	Field	Value/remark	Comment	Condition
Discriminating   Disc				
D data			URI	
Book   Book				
IDRkmsi payload {	ID data	px_MCPTT_ID_User_A		
DRkmsi payload {			associated to the	
Next payload   100001110'B   Next payload is IDRkmsr   IDRkmsr			terminating user	
Next payload   100001110'B   Next payload is IDRkmsr   IDRkmsr	}			
IDRkmsr   IDRkmsr   Initiator's KMS   Initiator's KMS   Initiator's KMS   (IDRkmsi)   ID Type	IDRkmsi payload {			
IDRkmsr   IDRkmsr   Initiator's KMS   Initiator's KMS   Initiator's KMS   (IDRkmsi)   ID Type	Next payload	'00001110'B	Next payload is	
ID Type	• •			
(IDType	ID Role	6	Initiator's KMS	
ID Type				
D   ID   ID   ID   ID   ID   ID   ID	ID Type	1		
ID data		Length of ID Data		
DRkmsr payload {				
IDRkmsr payload {   Next payload     SIGN     SAKKE params     1	15 data			
Next payload   '00011010'B	l	6		
Next payload   100011010'B   Next payload is SAKKE (26)     ID Role	IDPkmer payload (			
SAKKE (26)     ID Role		'00011010'P	Next poyland in	
ID Role	ічехі рауюао	00011010B		
ID Type	10.0.1			
ID Type	ID Role	1		
ID len				
ID data  tsc_MCX_KMS_Hostnam e  SAKKE payload {  Next payload is SIGN  SAKKE params  1 Parameter Set 1 according to RFC 6509 [23], Appendix A hashed UID' (33.180 [94] E.1.2)  SAKKE data length  SAKKE data  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 {  S type  2 ECCSI signature	ID Type	•	URI	
SAKKE payload {   Next payload     Next payload     SAKKE params     SAKKE params     SAKKE params     1				
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)  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 {  S type  2  ECCSI signature	ID data	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)  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 {  S type 2 ECCSI signature		е		
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 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 {  S type 2 ECCSI signature	}			
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 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 {  S type 2 ECCSI signature	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)  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 {		'0000100'B	Next payload is	
SAKKE params  1	1 7			
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 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 {  S type  2 ECCSI signature	SAKKE params	1		
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 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 {  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)  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 {  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)  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 {  S type  2 ECCSI signature				
SAKKE data length  Length of SAKKE data (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  SIGN (ECCSI) payload {  S type  2  ECCSI signature	ID Schomo	2	12 CDD MCY	
SAKKE data length  Length of SAKKE data (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  SIGN (ECCSI) payload {  S type  2  ECCSI signature	ID Scheme	2		
SAKKE data length  Length of SAKKE data (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  SIGN (ECCSI) payload {  S type  2 ECCSI signature				
SAKKE data length  Length of SAKKE data (in bytes)  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 {  S type  2 ECCSI signature				
SAKKE data  Encapsulated MSCCK  Encapsulated 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 {  S type  2 ECCSI signature		I II CONCICE I	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 { S type  2 ECCSI signature	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 ECCSI signature	211117		- NO. C	
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	SAKKE data	Encapsulated MSCCK		
public key and the UID generated from the MC Service user ID of the terminating user  } SIGN (ECCSI) payload { S type 2 ECCSI signature				
UID generated from the MC Service user ID of the terminating user  SIGN (ECCSI) payload { S type 2 ECCSI signature				
UID generated from the MC Service user ID of the terminating user  SIGN (ECCSI) payload { S type 2 ECCSI signature				1
from the MC Service user ID of the terminating user  SIGN (ECCSI) payload { S type 2 ECCSI signature			UID generated	
the terminating user  SIGN (ECCSI) payload { S type 2 ECCSI signature			from the MC	
Image: state of the s			Service user ID of	
Image: state of the s			the terminating	
SIGN (ECCSI) payload { S type 2 ECCSI signature				
S type 2 ECCSI signature	}			
S type 2 ECCSI signature	SIGN (ECCSI) payload {			
		2	FCCSI signature	
Length of the signature   12 bits				
field (in bytes)	O IOII		12 010	

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC 3830 [24]			
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	
}			

- MuSiK distribution (MIKEY-SAKKE sent by the SS)

Table 5.5.9.1-5: MIKEY-SAKKE I\_MESSAGE (MuSiK distribution by the SS)

Derivation path: RFC 6509 [23], RFC 6043 Field	Value/remark	Comment	Condition
MIKEY Common Header {	Any	Johnnent	CONTUNITION
version	'0000001'B		
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	'00000101'B	Next payload is	
Non payload	000001012	timestamp	
V	'0'B	timootamp	
PRF func	'0000001'B	PRF-HMAC-SHA-	
TRI TUTIO	00000012	256	
CSB ID	'0110xxxx xxxxxxxx'B	32-bit MuSiK-ID	
332.12	011000000000000000000000000000000000000	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	'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	
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	
2		(UTC)	
PAND Payload (			
RAND Payload {	'00001110'B	Next payload is	
Next payload	00001110 B	Next payload is IDRi	
RAND len	'00010000'B	16 Bytes RAND	+
RAND	128-bit random number	10 Dyles NAIND	
NAND	arbitrarily selected by the		
	SS Selected by the		
}			
IDRi payload {			
Next payload	'00001110'B	Next payload is	
	333311132	IDRr	
ID Role	1	Initiator (IDRi)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	px_MCPTT_PublicServic	The public service	
	eld_A	identity identifying	
		the participating	
		MCPTT function	
}			
J IDRr payload {		1	
Next payload	'00001110'B	Next payload is	
	3000111015	IDRkmsi	
ID Role	2	Responder (IDRr)	1

Derivation path: RFC 6509 [23], RFC 604 Field	Value/remark	Comment	Condition
			Condition
ID Type ID len	1	URI	
ID data	Length of ID Data px_MCPTT_ID_User_A	MCPTT ID	
id data	px_wcP11_ib_osei_A	associated to the	
		terminating user	
}			
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		
	е		
}			
IDRkmsr payload {			
Next payload	'00011010'B	Next payload is	
	333.1010 2	SAKKE (26)	
ID Role	7	Responder's KMS	
ID Noic	,	(IDRkmsr)	
ID Type	1	URI	
ID len	•	UNI	
	Length of ID Data	IZMO -4 th - LIE	
ID data	tsc_MCX_KMS_Hostnam	KMS of the UE	
	e		
}			
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]	
		È.1.2)	
SAKKE data length	Length of SAKKE data	,	
<b>3</b>	(in bytes)		
SAKKE data	Encapsulated MuSiK	The MuSiK is	
J	Zirosposiatos Maerit	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	12 bits	
	field (in bytes)		1

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC 3830 [24]			
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 36.579-2 [2], TS 36.579-6 [84], or TS 36.579-7 [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.

### 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 the 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	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

Considerations in regard to describing specific values:

#### - SSRC

- Synchronization SouRCe (SSRC) values are used in most of the messages specified in clause 5.5.6. The SSRC value is randomly chosen by the participant in, and globally unique within, an RTP session as specified in IETF RFC 3550 [76]. Because the value chosen by the UE (MCVideo client) cannot be controlled, specifying a "hard coded" value to be used by the SS (MCVideo Server) or the SS-UE (MCVideo Client) is prone to triggering a collision by choosing a value which may be the same as the one chosen by the UE. How to resolve SSRC collisions is described in IETF RFC 3550 [76] however, resolving them as part of the MCVideo test case definitions e.g. in TS 36.579-6 [84] is not foreseen and is left to the test implementation.
- For the purposes of default and specific messages definition throughout the present specification, as well as, throughout the rest of the MCPTT conformance test specifications e.g. the TS 36.579-6 [84] no explicit SSRC values are defined and instead the following notation is used to clarify the messages origin/destination:

- When there is no danger for misunderstanding the notation 'The SSRC of the message sender' and the 'The SSRC of the intended recipient of the message' are used whereas the "sender" and the "recipient" are to be understood in the context of the test i.e. the test entities being involved to exchange messages.

# 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
Subtype	"00000"	Transmission control messages sent by the transmission control participant to the transmission control server	TC 24.581 [88] clause 9.2.7 and Table 9.2.2.1-1	
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission participant sending the Transmission Request message. The participant has permission to send media.	IETF RFC 35 50 [3].	
Transmission Priority			TC 24.581 [88] clause 9.2.3.2	
Transmission Priority Field ID	"0000000"	8-bit binary value		
Transmission Priority Length	"0000010"	A binary value that has the value '2'		
		Indicates the total length in octets of the <transmission priority=""> value item and the spare bits.</transmission>		
Transmission Priority Value	Any allowed value	Consists of 8 bit parameter giving the transmission priority ('0' to '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.		
Spare bits	"0000000"	An 8-bit binary value set to zero.		
User ID	Not Present	10 2010.		ON- NETWORK

Derivation Path: TS 24.581 [88]	Table 9.2.4-1			
Information Element	Value/remark	Comment	Reference	Condition
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.	TC 24.581 [88] clause 9.3.2.8	OFF- NETWORK
User ID field ID	"00000110"			
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
Transmission Indicator			TC 24.581 [88] clause 9.2.3.1 1	
Transmission Indicator field ID	"00001101"		TC 24.581 [88] clause 9.2.3.1 1	
Transmission Indicator Length	"10"	value is a binary value and has the value '2'		

erivation Path: TS 24.581 [88 Information Element	Value/remark	Comment	Reference	Condition
Information Element Fransmission Indicator	"10000000000000"	Contains additional information about a received transmission control message. It is a 16 bit bit-map named as shown in Table 9.2.3.11.2 (a thru P). When set to 1, the bit has the following meaning:  A = Normal call  B = Broadcast group call  C = System call  D = Emergency call	TC 24.581 [88] clause 9.2.3.1	Solidido
		E = Imminent peril call		
		NOTE 1: The indicators C, D and E are only informative. There are no procedures specified for the C, D and E indicators in this release of the present document and the use of the indicators are implementation specific.		
		Bits F to P are reserved for future use and are set to 0.		
		There can be more than one bit set to 1 at the same time. The local policy in the transmission control server decides which combinations are possible and the priority of the indications.		

#### 5.5.11.1.2 Transmission Release

Table: 5.5.11.1.2-1 Transmission Release

Derivation Path: TS 24.581 [88 Information Element	Value/remark	Comment	Reference	Condition
Subtype	"00010"	Transmission control messages sent by the transmission control participant to the transmission control server	TC 24.581 [88] clause 9.2.7 and Table 9.2.2.1-1	
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission participant with permission to send media.	IETF RFC 35 50 [3].	
User ID	Not Present			ON- NETWORK
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.	TC 24.581 [88] clause 9.3.2.8	OFF- NETWORK
User ID field ID	"00000110"			
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
Transmission Indicator				
Transmission Indicator field ID	"00001101"		TC 24.581 [88] clause 9.2.3.1 1	
Transmission Indicator Length	"10"	value is a binary value and has the value '2'		

Information Element	Value/remark	Comment	Reference	Condition
ransmission Indicator	"1000000000000000"	Contains additional	TC	
		information about a	24.581 [88]	
		received transmission	clause 9.2.3.1	
		control message.	1	
		It is a 16 bit bit-map		
		named as shown in		
		Table 9.2.3.11.2 (a thru		
		P).		
		When set to 1, the bit		
		has the following		
		meaning:		
		A = Normal call		
		B = Broadcast group		
		call		
		C = System call		
		•		
		call		
		NOTE 1: The		
		indicators C, D and E		
		are only informative.		
		There are no		
		procedures specified for		
		the C, D and E		
		indicators in this release		
		of the present document		
		and the use of the		
		indicators are		
		implementation specific.		
		Dita E ta D ana manana		
		Bits F to P are reserved		
		for future use and are		
		set to 0.		
		There can be more than		
		one bit set to 1 at the		
		same time. The local		
		policy in the		
		transmission control		
		server decides which		
		combinations are		
		possible and the priority		
	I	of the indications.		l

# 5.5.11.1.3 Queue Position Request

Table: 5.5.11.1.3-1 Queue Position Request

Derivation Path: TS 24.581 [88]	able 9.2.11-1			
Information Element	Value/remark	Comment	Reference	Condition
Subtype	"00011"	Server → client	TS 24.581 [88] 9.2.2.1-1	
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission participant requesting information about its position in the transmission request queue.	RFC 3550 [3], Appendix 6 shows how to generate a random 32-bit identifier	
User ID	Not Present			ON- NETWOR K

Derivation Path: TS 24.581 [88] Table 9.2.11-1				
Information Element	Value/remark	Comment	Reference	Condition
User ID			TS 24.581 [88] 9.2.3.8	OFF- NETWOR K
User ID field ID	"00000110"			
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
Track Info	Not present	The MCVideo call does not involve a non- controlling MCVideo function	TS 24.581 [88] 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
Subtype	"00100"	Server → client	TS 24.581 [88] 9.2.2.1-1	
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission participant requesting the reception of the media from another user.	RFC 3550 [3], Appendix 6 shows how to generate a random 32-bit identifier	
User ID		The User ID field is used to carry the identity of the user who is requesting the reception of the media  Note: If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
User ID field ID	"00000110"			

Derivation Path: TS 24.581 [88] T				
Information Element	Value/remark	Comment	Reference	Condition
User ID length	a binary value	value is a binary value and includes the value indicating the length in octets of the <user id=""> value item except padding.</user>	TS 24.581 [88] 9.2.3.8	
User ID	px_MCVideo_ID_User_ A		TS 24.581 [88] Table 9.2.3.8- 2	
SSRC of transmitter	The SSRC of the user transmitting the media	The SSRC of transmitter field carries the SSRC of the user transmitting the media		
Media ID	Not present	The Media ID field is present only if media multiplexing is used. The Media ID field identified a media flow within a media multiplex.		
Transmission Indicator		The Transmission Indicator contains additional information about a received transmission control message.	TS 24.581 [88] 9.2.3.11	
		The <transmission field="" id="" indicator=""> value is a binary value and is set according to table 9.2.3.1-1. The <transmission indicator="" length=""> value is a binary value and has the value '2'. The <transmission indicator=""> value is a 16 bit bit-map. When set to 1 these meanings apply:</transmission></transmission></transmission>		
		A = Normal call B = Broadcast group call C = System call D = Emergency call E = Imminent peril call		
Transmission Indicator field ID	"00001101"	An 8-bit binary value set according to TS 24.581 [88] 9.2.3.1-1.	TS 24.581 [88] Table 9.2.3.1- 1-1	
Transmission Indicator Length	"00000010"	An 8-bit binary value (2 in binary)	TS 24.581 [88] Table 9.2.3.1- 1-1	
Transmission Indicator	"10000000000000000"	A 16 bit bit-map	TS 24.581 [88] Table 9.2.3.11-2	

Derivation Path: TS 24.581 [88]	Value/remark	Commont	Poforonco	Condition
Information Element	value/remark	Comment	Reference	Condition
Reception Priority		Describes the level of		
		reception priority		
		requested in a		
		Reception Request		
		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 field ID	"00010011"	Uniquely identifies the		
, , ,		instance of the		
		Reception Priority Field		
Reception Priority length	"0000010"	Indicates the total	TS 24.581 [88]	
	00000010	length in octets of the <	9.2.3.19	
		Reception Priority>	3.2.0.13	
		value item and the		
		spare bits.		
Reception Priority value	Any allowed value	The reception priority	TS 24.581 [88]	
Reception i nonty value	Arry allowed value	('0' to '255') where '0' is	9.2.3.19	
		the lowest reception	9.2.3.19	
		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-	9.2.3.13	
		controlling MCVideo		
	1	1 00.10011119 1110 11000		1

# 5.5.11.1.5 Transmission Cancel Request

**Table: 5.5.11.1.5-1 Transmission Cancel Request** 

Derivation Path: TS 24.581 [88] Table 9.2.17-1						
Information Element	Value/remark	Comment	Reference	Condition		
Subtype	"00101"	Server → client	TS 24.581 [88] 9.2.2.1-1			
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission control server.	RFC 3550 [3], Appendix 6 shows how to generate a random 32-bit identifier			
User ID			TS 24.581 [88] 9.2.3.8			
User ID field ID	"00000110"					

Derivation Path: TS 24.581 [88] Table 9.2.17-1				
Information Element	Value/remark	Comment	Reference	Condition
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
Media ID	Not present	The Media ID field is present only if media multiplexing is used. The Media ID field identified a media flow within a media multiplex.		

### 5.5.11.1.6 Remote Transmission Request

Table: 5.5.11.1.6-1 Remote Transmission Request

Derivation Path: TS 24.581 [8 Information Element	Value/remark	Comment	Reference	Condition
Subtype	"00111"	Transmission control messages sent by the transmission control participant to the transmission control server	TC 24.581 [88] clause 9.2.7 and Table 9.2.2.1-1	Condition
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission participant requesting the reception of the media from another user.	IETF RFC 35 50 [3].	
Remote ID		Carries the identity of the user whose media transmission is requested.	TC 24.581 [88] clause 9.3.2.8	
User ID field ID	"00000110"			
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			

Derivation Path: TS 24.581 [88] Table 9.2.22-1				
Information Element	Value/remark	Comment	Reference	Condition
User ID	px_MCVideo_ID_User_ B	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
User ID			TC 24.581 [88] clause 9.3.2.8	
User ID field ID	"00000110"			
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
Media ID	Not present	The Media ID field is present only if media multiplexing is used. The Media ID field identified a media flow within a media multiplex.		

# 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 [88 Information Element	Value/remark	Comment	Reference	Condition
Subtype	"01000"	Transmission control messages sent by the transmission control participant to the transmission control server	TC 24.581 [88] clause 9.2.7 and Table 9.2.2.1-1	
SSRC	The SSRC of the message sender.	The SSRC field carries the SSRC of the transmission participant requesting the reception of the media from another user.	IETF RFC 35 50 [3].	

Derivation Path: TS 24.581 [88]				
Information Element	Value/remark	Comment	Reference	Condition
User ID		The User ID field is used in off-network only. The User ID field carries the identity of the user whose media transmission is requested for cancellation.	TC 24.581 [88] clause 9.3.2.8	
User ID field ID	"00000110"			
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
Media ID	Not present	The Media ID field is present only if media multiplexing is used. The Media ID field identified a media flow within a media multiplex.		

# 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] Table 9.2.5-1					
Information Element	Value/remark	Comment	Reference	Condition	
Subtype	"00000"	Server → client	TS 24.581 [88 ] 9.2.2.1-2		
SSRC	The SSRC of the message sender	The SSRC of the Transmission Control server for on-network and transmission arbitrator for offnetwork. Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].			
name	MCV1	Transmission Control messages sent by the transmission control server and transmission control participant			
Duration					
Duration field ID	"0000001"				
Duration length	"10"	value is a binary value and has the value '2' indicating the total length in octets of the <duration> value item</duration>			
Duration	"00000000 10000000"	128 sec (an arbitrary value)			
SSRC of granted transmission participant	The SSRC of the intended recipient of the message	Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].			
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			
User ID	Not present			ON- NETWORK	
User ID				OFF- NETWORK	
User ID field ID	"00000110"				
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>				

Derivation Path: TS 24.581 [88] Ta	able 9.2.5-1			
Information Element	Value/remark	Comment	Reference	Condition
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
Queue Size	Not present			ON- NETWORK
Queue Size	"0"	the number of queued MCVideo clients in the MCVideo call		OFF- NETWORK
SSRC of queued floor participant	Not present			
Queued User ID	Not present			
Queue Info	Not present			
Transmission Indicator				
Transmission Indicator field ID	"00001101"	An 8-bit binary value set according to TS 24.581 [88] 9.2.3.1-1.	TS 24.581 [88 ] Table 9.2.3.1-1-1	
Transmission Indicator Length	"0000010"	An 8-bit binary value (2 in binary)	TS 24.581 [88 ] Table 9.2.3.1-1-1	
Transmission Indicator	"100000000000000"	A 16 bit bit-map	TS 24.581 [88 ] Table 9.2.3.11-2	

# 5.5.11.2.2 Transmission Rejected

Table: 5.5.11.2.2-1 Transmission Rejected

Derivation Path: TS 24.581 [88]	Table 9.2.6-1			
Information Element	Value/remark	Comment	Reference	Condition
Subtype	"00001"	Server → client	TS 24.581 [88] 9.2.2.1-2	
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission control server.	RFC 3550 [3], Appendix 6 shows how to generate a random 32-bit identifier	
Reject Cause		Includes the reason for the rejecting the transmission request 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.	TS 24.581 [88] 9.2.3.4	
Reject Cause field ID	"0000010"	,	TS 24.581 [88] Table 9.2.3.1-	

Derivation Path: TS 24.581 [88] Ta	ble 9.2.6-1			
Information Element	Value/remark	Comment	Reference	Condition
Reject Cause length		The <reject cause<="" td=""><td></td><td></td></reject>		
-		length> value is a		
		binary value and		
		indicates the total		
		length in octets of the		
		<reject cause=""> value</reject>		
		and the <reject< td=""><td></td><td></td></reject<>		
		Phrase> value items		
		excluding any padding		
		octets. If the length field		
		is set to '2', there is no		
		<reject phrase=""> value</reject>		
		in the Reject Cause		
		field.		
		If the length of the		
		<reject cause=""> value</reject>		
		is not (2 + multiple of 4)		
		bytes, the Reject		
		Cause field is padded		
		to (2 + multiple of 4)		
		bytes. The value of the		
		padding bytes is set to		
		zero. The padding		
		bytes are ignored by		
		the receiver.		

Point Causa	"255"	Cause #1 -	TC 24 E04 [00]	
Reject Cause	200	Transmission limit	TS 24.581 [88] 9.2.6.2	
		reached	5.2.5.2	
		T. B.		
		The <reject cause=""> value set to '1'</reject>		
		indicates that the		
		number of transmitters		
		have reached		
		maximum.		
		Cause #2 - Internal		
		transmission control		
		server error		
		The <reject cause=""></reject>		
		value set to '2' indicates that the transmission		
		control server cannot		
		grant the transmission		
		request due to an		
		internal error.		
		Cause #3 - Only one		
		participant		
		The <reject cause=""></reject>		
		value set to '3' indicates that the transmission		
		control server cannot		
		grant the transmission		
		request, because the		
		requesting party is the		
		only participant in the MCVideo session.		
		WO VIGCO SCSSION.		
		Cause #4 - Retry-after		
		timer has not expired		
		The <reject cause=""></reject>		
		value set to '4' indicates		
		that the transmission		
		control server cannot		
		grant the transmission request, because timer		
		T9 (Retry-after) has not		
		expired after		
		permission to send		
		media has been revoked.		
		TOVORCU.		
		Cause #5 - Receive		
		only		
		The <reject cause=""></reject>		
		value set to '5' indicates		
		that the transmission		
		control server cannot		
		grant the transmission request, because the		
		requesting party only		
		has receive privilege.		
		Cause #6 - No		
		resources available		
		The <reject cause=""></reject>		
		value set to '6' indicates that the transmission		
		control server cannot		
	I .	CONTROL SELVER CANNOL		

Information Element	Table 9.2.6-1 Value/remark	Comment	Reference	Condition
	Value	grant the transmission request due to congestion.	1.0.0.0	Condition
		Cause #255 - Other reason		
		The <reject cause=""> value set to '255' indicates that the transmission control server does not grant the transmission request due to the transmission control server local policy.</reject>		
Reject Cause Phrase	"Other reason"	A text string encoded the text string in the SDES item CNAME.	IETF RFC 355 0 [3]	
User ID	Not present			ON- NETWOR K
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] 9.2.3.8	OFF- NETWOR K
User ID field ID	"00000110"			
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		

Derivation Path: TS 24.581 [88] T	able 9.2.6-1			
Information Element	Value/remark	Comment	Reference	Condition
Information Element Transmission Indicator	Value/remark	The Transmission Indicator contains additional information about a received transmission control message.  The <transmission field="" id="" indicator=""> value is a binary value and is set according to table 9.2.3.1-1. The <transmission indicator="" length=""> value is a binary value and has the value '2'. The <transmission indicator="" length=""> value is a binary value and has the value by the value is a binary value and has the value by the set to 1 these meanings apply:  A = Normal call B = Broadcast group call C = System call D = Emergency call</transmission></transmission></transmission>	Reference TS 24.581 [88] 9.2.3.11	Condition
		E = Imminent peril call	TO 04 F04 (22)	
Transmission Indicator field ID	"00001101"		TC 24.581 [88] clause 9.2.3.1.	
Transmission Indicator Length	"10"	value is a binary value and has the value '2'		

Information Element	Value/remark	Comment	Reference	Condition
Transmission Indicator	"10000000000000000"	Contains additional	TC 24.581 [88]	
		information about a	clause 9.2.3.1.	
		received transmission	1	
		control message.		
		It is a 16 bit bit-map		
		named as shown in		
		Table 9.2.3.11.2 (a thru		
		P).		
		When set to 1, the bit		
		has the following		
		meaning:		
		A = Normal call		
		B = Broadcast group		
		call		
		C = System call		
		D = Emergency call		
		E = Imminent peril		
		call		
		NOTE 1: The		
		indicators C, D and E		
		are only informative.		
		There are no		
		procedures specified		
		for the C, D and E		
		indicators in this		
		release of the present		
		document and the use		
		of the indicators are		
		implementation		
		specific.		
		Bits F to P are reserved		
		for future use and are		
		set to 0.		
		There can be more		
		than one bit set to 1 at		
		the same time. The		
		local policy in the		
		transmission control		
		server decides which		
		combinations are		
		possible and the priority		
		of the indications.		

#### 5.5.11.2.3 Transmission Arbitration Taken

Table: 5.5.11.2.3-1 Transmission Arbitration Taken

Derivation Path: TS 24.581 [88]	Table 9.2.8-1			
Information Element	Value/remark	Comment	Reference	Condition
Subtype	"00010"	Server → client	TS 24.581 [88] 9.2.2.1-2	
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission control server.	RFC 3550 [3], Appendix 6 shows how to generate a random 32-bit identifier	
Granted Party's Identity		Identifies the MCVideo user that is granted to send media.	TS 24.581 [88] 9.2.3.6	
Granted Party's Identity Field ID	"00000100"		TS 24.581 [88] 9.2.3.1.1	

Derivation Path: TS 24.581 [88] Ta		Comment	Deference	Condition
Information Element	Value/remark	Comment	Reference	Condition
Granted Party's Identity length	value is a binary value and includes the value indicating the length in octets of the <user id=""> value item except padding</user>		TS 24.581 [88] 9.2.3.8	
Granted Party's Identity	px_MCVideo_ID_User_ A	If the length of the <granted party's=""> value is not (2 + multiple of 4) bytes, the Granted Party's Identity field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is set to zero. The padding bytes are ignored by the receiver.</granted>	TS 24.581 [88] 9.2.3.8	
Permission to Request the Transmission		Indicates whether receiving parties are allowed to request the transmission.	TS 24.581 [88] 9.2.3.8	
Permission to Request the Transmission Field ID	"00000101"		TS 24.581 [88] 9.2.3.1.1	_
Permission to Request the Transmission length	"10"	The <permission length="" request="" the="" to="" transmission=""> value is a binary value and has the value '2' indicating the total length in octets of the <duration> value item.</duration></permission>	TS 24.581 [88] 9.2.3.7	
Permission to Request the Transmission	"1"	O The receiver is not permitted to request transmission.  The receiver is permitted to request transmission.	TS 24.581 [88] 9.2.3.7	
User ID	Not Present			ON- NETWOR K
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] 9.2.3.8	OFF- NETWOR K
User ID field ID	"00000110"			
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			

Derivation Path: TS 24.581 [88] Ta	able 9.2.8-1			
Information Element	Value/remark	Comment	Reference	Condition
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
Message Sequence Number		Used to bind a number of Transmission Arbitration Taken or bind a number of Transmission Idle messages together	TS 24.581 [88] 9.2.3.9	
Message Sequence Number field ID	"00001000"		TS 24.581 [88] 9.2.3.1.1	
Message Sequence Number length	"10"	Has the value '2' indicating the total length in octets of the <message number="" sequence=""> value item.</message>		
Message Sequence Number	"1"	The <message number="" sequence=""> value can be between '0' and '65535'. When the '65535' value is reached, the <message number="" sequence=""> value starts from '0' again.</message></message>		
Transmission Indicator		The Transmission Indicator contains additional information about a received transmission control message.  The <transmission field="" id="" indicator=""> value is a binary value and is set according to table 9.2.3.1-1. The <transmission indicator="" length=""> value is a binary value and has the value '2'. The <transmission indicator=""> value is a 16 bit bit-map. When set to 1 these meanings apply:  A = Normal call B = Broadcast group call C = System call D = Emergency call E = Imminent peril call</transmission></transmission></transmission>	TS 24.581 [88] 9.2.3.1.1	

Derivation Path: TS 24.581 [88] T Information Element	Value/remark	Comment	Reference	Condition
Transmission Indicator field ID	"00001101"		TC 24.581 [88] clause 9.2.3.1.	
			1	
Transmission Indicator Length	"10"	value is a binary value		
		and has the value '2'		
Transmission Indicator	"100000000000000"		TC 24.581 [88] clause 9.2.3.1.	
		specific. Bits F to P are reserved for future use and are set to 0.		
		There can be more than one bit set to 1 at the same time. The		
		local policy in the transmission control		
		server decides which combinations are possible and the priority		
		of the indications.		
SSRC of Granted	The SSRC of the	or the maleations.	IETF RFC 355	
Transmission Participant	intended recipient of		0 [3]	

#### 5.5.11.2.4 Transmission Arbitration Release

Table: 5.5.11.2.4-1 Transmission Arbitration Release

Derivation Path: TS 24.581 [88] T	able 9.2.9-1			
Information Element	Value/remark	Comment	Reference	Condition
Subtype	"00010"	Server → client	TS 24.581 [88]	
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission control server.	9.2.2.1-2  RFC 3550 [3],  Appendix 6  shows how to  generate a  random 32-bit identifier	
Granted Party's Identity		Identifies the MCVideo user that is granted to send media.	TS 24.581 [88] 9.2.3.6	
Granted Party's Identity Field ID	"00000100"		TS 24.581 [88] 9.2.3.1.1	
Granted Party's Identity length	value is a binary value and includes the value indicating the length in octets of the <user id=""> value item except padding</user>		TS 24.581 [88] 9.2.3.8	
Granted Party's Identity	px_MCVideo_ID_User_ A	If the length of the <granted party's=""> value is not (2 + multiple of 4) bytes, the Granted Party's Identity field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is set to zero. The padding bytes are ignored by the receiver.</granted>	TS 24.581 [88] 9.2.3.8	
Permission to Request the Transmission		Indicates whether receiving parties are allowed to request the transmission.	TS 24.581 [88] 9.2.3.8	
Permission to Request the Transmission Field ID	"00000101"		TS 24.581 [88] 9.2.3.1.1	
Permission to Request the Transmission length	"10"	The <permission length="" request="" the="" to="" transmission=""> value is a binary value and has the value '2' indicating the total length in octets of the <duration> value item.</duration></permission>	TS 24.581 [88] 9.2.3.7	
Permission to Request the Transmission	"1"	O The receiver is not permitted to request transmission.  The receiver is permitted to request transmission.	TS 24.581 [88] 9.2.3.7	
User ID	Not Present			ON- NETWOR K

Derivation Path: TS 24.581 [88] T Information Element	Value/remark	Comment	Reference	Condition
	value/remark			
User ID		The User ID field is	TS 24.581 [88]	OFF-
		used in off-network	9.2.3.8	NETWOR
		only. The User ID		K
		carries the MCVideo ID		
		of the transmission		
		participant sending the		
		Transmission		
		Arbitration Release		
		message.		
User ID field ID	"00000110"			
User ID length	a binary value that			
200. 12 10g	includes the value			
	indicating the length in			
	octets of the <user id=""></user>			
	value item except			
	padding.			
User ID	px_MCVideo_ID_User_	If the length of the		
	Α	<user id=""> value is not</user>		
		(2 + multiple of 4) bytes		
		User ID field shall be		
		padded to		
		(2 + multiple of 4)		
		bytes. The value of the		
		padding bytes is to		
		zero. The padding		
		bytes are ignored by		
		the receiver.		
Message Sequence Number		Used to bind a number	TC 24 F04 [00]	
message sequence number			TS 24.581 [88]	
		of Transmission	9.2.3.9	
		Arbitration Taken or		
		bind a number of		
		Transmission Idle		
		messages together		
Message Sequence Number	"00001000"		TS 24.581 [88]	
field ID			9.2.3.1.1	
Message Sequence Number	"10"	Has the value '2'		
length		indicating the total		
		length in octets of the		
		<message sequence<="" td=""><td></td><td></td></message>		
		Number> value item.		
		Number> value item.		
Message Sequence Number	"1"	The <message< td=""><td></td><td></td></message<>		
-		Sequence Number>		
		value can be between		
		'0' and '65535'. When		
		J and boods. When		
		the ISSESSI value is		
		the '65535' value is		
		reached, the <message< td=""><td></td><td></td></message<>		
		reached, the <message Sequence Number&gt;</message 		
		reached, the <message< td=""><td></td><td></td></message<>		

Derivation Path: TS 24.581 [88] T	able 9.2.9-1			
Information Element	Value/remark	Comment	Reference	Condition
Transmission Indicator	valuonoman	The Transmission Indicator contains additional information about a received transmission control message.  The <transmission field="" id="" indicator=""> value is a binary value and is set according to</transmission>	TS 24.581 [88] 9.2.3.1.1	Condition
		table 9.2.3.1-1. The <transmission indicator="" length=""> value is a binary value and has the value '2'. The <transmission indicator=""> value is a 16 bit bit-map. When set to 1 these meanings apply:</transmission></transmission>		
		A = Normal call B = Broadcast group call C = System call D = Emergency call E = Imminent peril call		
Transmission Indicator field ID	"00001101"		TC 24.581 [88] clause 9.2.3.1.	
Transmission Indicator Length	"10"	value is a binary value and has the value '2'		

Derivation Path: TS 24.581 [88] Ta	able 9.2.9-1			
Information Element	Value/remark	Comment	Reference	Condition
Transmission Indicator  SSRC of Granted	"100000000000000"  The SSRC of the	Contains additional information about a received transmission control message. It is a 16 bit bit-map named as shown in Table 9.2.3.11.2 (a thru P).  When set to 1, the bit has the following meaning:  A = Normal call  B = Broadcast group call  C = System call  D = Emergency call  E = Imminent peril call  NOTE 1: The indicators C, D and E are only informative. There are no procedures specified for the C, D and E indicators in this release of the present document and the use of the indicators are implementation specific.  Bits F to P are reserved for future use and are set to 0.  There can be more than one bit set to 1 at the same time. The local policy in the transmission control server decides which combinations are possible and the priority of the indications.	TC 24.581 [88] clause 9.2.3.1.	
Transmission Participant	intended recipient of		0 [3]	
·	the message			

#### 5.5.11.2.5 Transmission Revoked

Table: 5.5.11.2.5-1 Transmission Revoked

Derivation Path: TS 24.581 [88]	Derivation Path: TS 24.581 [88] Table 9.2.10-1					
Information Element	Value/remark	Comment	Reference	Condition		
Subtype	"00100"	Server → client	TS 24.581 [88] 9.2.2.1-2			
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission control server.	RFC 3550 [3], Appendix 6 shows how to generate a random 32-bit identifier			

Information Element	Value/remark	Comment	Reference	Condition
Reject Cause		Message includes <reject cause=""> cause 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>	TS 24.581 [88] 9.2.3.4	
Reject Cause field ID	"00000010"		TS 24.581 [88] Table 9.2.3.1-	
Reject Cause length		The <reject cause="" length=""> value is a binary value and indicates the total length in octets of the <reject cause=""> value and the <reject phrase=""> value items excluding any padding octets. If the length field is set to '2', there is no <reject phrase=""> value in the Reject Cause field. If the length of the <reject (2="" +="" 4)="" are="" by="" bytes="" bytes,="" bytes.="" cause="" field="" ignored="" is="" multiple="" not="" of="" padded="" padding="" receiver.<="" reject="" set="" td="" the="" to="" value="" zero.=""><td></td><td></td></reject></reject></reject></reject></reject>		

Reject Cause Value	"7"	Cause #1 - Only one	TS 24 504 [00]	
Reject Cause value	'	Cause #1 – Only one MCVideo client	TS 24.581 [88] 9.2.10.2	
		The <reject< th=""><th>0.2.10.2</th><th></th></reject<>	0.2.10.2	
		Cause> value set to '1'		
		indicates that the		
		MCVideo client is the		
		only MCVideo client in		
		the MCVideo session or		
		the only participant		
		connected to a		
		transmission control		
		server. No additional		
		information included.		
		Cause#2 – Media burst		
		too long		
		The <reject< th=""><th></th><th></th></reject<>		
		Cause> value set to '2'		
		indicates that the		
		MCVideo User has		
		transmitted too long		
		(e.g., the stop- transmission timer has		
		expired). No additional		
		information included.		
		Cause#3 - No		
		permission to send a		
		Media Burst		
		The <reject< th=""><th></th><th></th></reject<>		
		Cause> value set to '3'		
		indicates that the		
		MCVideo client does		
		not have permission to		
		send media. No		
		additional information is		
		included.		
		Cause#4 - Media Burst		
		pre-empted		
		The <reject cause=""> value set to '4'</reject>		
		indicates that the		
		MCVideo client 's		
		permission to send a		
		media is being pre-		
		empted. No additional		
		information is included.		
		Cause#5 - Terminate		
		the RTP stream		
		The <reject< th=""><th></th><th></th></reject<>		
		Cause> value set to '5'		
		indicates that the		
		MCVideo client's		
		permission to send a		
		media is being revoked.  No additional		
		information is included.		
		Cause#6 - No		
		resources available		
		The <reject< th=""><th></th><th></th></reject<>		
		Cause> value set to '6'		
		indicates that the		
		transmission control		
		server can no longer		
		grant MCVideo client to		
		send media due to		
		congestion. No		
		additional information is		
		included.		

Derivation Path: TS 24.581 [88] Information Element	Value/remark	Comment	Reference	Condition
illioillation Liellent	Value/Telliark	Cause#7 - Queue the	Kelefelice	Condition
		transmission		
		The <reject< td=""><td></td><td></td></reject<>		
		Cause> value set to '7'		
		indicates that the		
		MCVideo client's		
		permission to send a		
		media is being queued.		
		No additional		
		information is included.		
		Cause #8 - No		
		receiving participant		
		The <reject cause=""></reject>		
		value set to '8' indicates		
		that the MCVideo		
		client's permission to		
		send a media is being		
		revoked because there		
		is no participant to		
		receive the stream.		
		receive the stream.		
		Cause#255 – Other		
		reason		
		The <reject< td=""><td></td><td></td></reject<>		
		Cause> value set to		
		'255' indicates that the		
		transmission control		
		server can no longer		
		grant MCVideo client to		
		send media due to the		
		transmission control		
		server local policy. No		
		additional information is		
		included.		
Reject Cause Phrase	"Queue the	A text string encoded	TS 24.581 [88]	
	transmission"	the text string in the	9.2.10.2	
		SDES item CNAME.		

Derivation Path: TS 24.581 [88] T	able 9.2.10-1			
Information Element	Value/remark	Comment	Reference	Condition
Transmission Indicator	Value/Terriark	The Transmission Indicator contains additional information about a received transmission control message.  The <transmission field="" id="" indicator=""> value is a binary value and is set according to table 9.2.3.1-1.</transmission>	TS 24.581 [88] 9.2.3.11	Condition
		The <transmission indicator="" length=""> value is a binary value and has the value '2'. The <transmission indicator=""> value is a 16 bit bit-map. When set to 1 these meanings apply:</transmission></transmission>		
		<ul> <li>A = Normal call</li> <li>B = Broadcast group call</li> <li>C = System call</li> <li>D = Emergency call</li> <li>E = Imminent peril call</li> </ul>		
Transmission Indicator field ID	"00001101"		TC 24.581 [88] clause 9.2.3.1.	
Transmission Indicator Length	"10"	value is a binary value and has the value '2'		

erivation Path: TS 24.581 [88] Information Element	Value/remark	Comment	Reference	Condition
ransmission Indicator	"1000000000000000"	Contains additional information about a received transmission control message. It is a 16 bit bit-map named as shown in Table 9.2.3.11.2 (a thru P). When set to 1, the bit has the following meaning:	TC 24.581 [88] clause 9.2.3.1.	
		A = Normal call		
		B = Broadcast group call		
		C = System call		
		D = Emergency call		
		E = Imminent peril call		
		NOTE 1: The indicators C, D and E are only informative. There are no procedures specified for the C, D and E indicators in this release of the present document and the use of the indicators are implementation specific.		
		Bits F to P are reserved for future use and are set to 0.		
		There can be more than one bit set to 1 at the same time. The local policy in the transmission control server decides which combinations are possible and the priority		

#### 5.5.11.2.6 Queue Position Info

Table: 5.5.11.2.6-1 Queue Position Info

Derivation Path: TS 24.581 [88] Information Element	Value/remark	Comment	Reference	Condition
Subtype	"00101"	Server → client	TS 24.581 [88] 9.2.2.1-1	
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission control server.	RFC 3550 [3], Appendix 6 shows how to generate a random 32-bit identifier	
User ID	Not present			ON- NETWOR
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] 9.2.3.8	OFF- NETWOR K
User ID field ID	"00000110"			
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			
User ID	px_MCVideo_ID_User _A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
SSRC of Queued Transmission Participant	Not present			ON- NETWOR K
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 [3].	OFF- NETWOR K
Queued User ID	Not present			ON- NETWOR
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] 9.2.3.8	OFF- NETWOR K

Information Element	able 9.2.12-1 Value/remark	Comment	Reference	Conditio
Queue Info		Defines the queue	TS 24.581 [88]	
		position and granted	9.2.3.5	
		transmission control		
		priority in the queue.	_	
Queue Info field ID	"00000011"		TS 24.581 [88]	
			9.2.3.1	
Queue Info length	"10"	value is a binary value		
		and has the value '2'		
Queue Position Info	"0000001"	value is a binary value.		
		The <queue position<="" td=""><td></td><td></td></queue>		
		Info> value has the		
		value '254' if the		
		MCVideo client is not		
		queued. The <queue< td=""><td></td><td></td></queue<>		
		Position Info> value		
		has the max value		
		('255') if the MCVideo		
		client is queued but the		
		MCVideo server is		
		unable to determine the		
		queue position or if		
		MCVideo server policy		
		is not to release		
		information of the		
		queue position to the		
		MCVideo client.		
Queue Priority Level	"00000000"	value consists of 8 bit	TS 24.581 [88]	
		parameter giving the	9.2.3.2	
		transmission priority ('0'		
		to '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		
anak lufa	Netsses	as normal priority.	TO 04 504 5007	1
rack Info	Not present	The MCVideo call does	TS 24.581 [88]	
		not involve a non-	9.2.3.13	
		controlling MCVideo		
ransmission Control		function	TC 04 F04 [00]	
			TS 24.581 [88]	
Indicator	"00004404"		9.2.3.11	
Transmission Indicator field ID	"00001101"		TC 24.581 [88]	
			clause 9.2.3.1.	
Transmission to disease 1 1 12	"40"	valua is a bisa	1	
Transmission Indicator Length	"10"	value is a binary value		
		and has the value '2'		

Derivation Path: TS 24.581 [88]	Table 9.2.12-1			
Information Element	Value/remark	Comment	Reference	Condition
Transmission Indicator	"1000000000000000"	Contains additional	TC 24.581 [88]	
		information about a	clause 9.2.3.1.	
		received transmission	1	
		control message.		
		It is a 16 bit bit-map		
		named as shown in		
		Table 9.2.3.11.2 (a thru		
		P).		
		When set to 1, the bit		
		has the following		
		meaning:		
		A = Normal call		
		B = Broadcast group		
		call		
		C = System call		
		D = Emergency call		
		E = Imminent peril		
		call		
		NOTE 1: The		
		indicators C, D and E		
		are only informative.		
		There are no		
		procedures specified		
		for the C, D and E		
		indicators in this		
		release of the present		
		document and the use		
		of the indicators are		
		implementation		
		specific.		
		Bits F to P are reserved		
		for future use and are		
		set to 0.		
		There can be more		
		than one bit set to 1 at		
		the same time. The		
		local policy in the		
		transmission control		
		server decides which		
		combinations are		
		possible and the priority		
		of the indications.		

#### 5.5.11.2.7 Media Transmission Notification

**Table: 5.5.11.2.7-1 Media Transmission Notification** 

Information Element	Value/remark	Comment	Reference	Condition
Subtype	"00110"	Server → client	TS 24.581 [88] 9.2.2.1-2	
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission control server	RFC 3550 [3], Appendix 6 shows how to generate a random 32-bit identifier	

Derivation Path: TS 24.581 [88] 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 requesting transmission participant to which the Transmission Rejected message is sent.	TS 24.581 [88] 9.2.3.8	Condition
User ID field ID User ID length	"00000110"  a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			
User ID	px_MCVideo_ID_User_A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
SSRC of transmitter	The SSRC of the user transmitting the media	The SSRC of transmitter field carries the SSRC of the user transmitting the media		
Permission to Request the Transmission		Indicates whether receiving parties are allowed to request the transmission.	TS 24.581 [88] 9.2.3.8	
Permission to Request the Transmission Field ID	"00000101"		TS 24.581 [88] 9.2.3.1.1	
Permission to Request the Transmission length	"10"	The <permission length="" request="" the="" to="" transmission=""> value is a binary value and has the value '2' indicating the total length in octets of the <duration> value item.</duration></permission>	TS 24.581 [88] 9.2.3.7	
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	TS 24.581 [88] 9.2.3.7	

Derivation Path: TS 24.581 [88] T				
Information Element	Value/remark	Comment	Reference	Condition
Transmission Indicator		The Transmission Indicator contains additional information about a received transmission control message.	TS 24.581 [88] 9.2.3.1.1	
		The <transmission field="" id="" indicator=""> value is a binary value and is set according to table 9.2.3.1-1. The <transmission indicator="" length=""> value is a binary value and has the value '2'. The <transmission indicator=""> value is a 16 bit bit-map. When set to 1 these meanings apply:</transmission></transmission></transmission>		
		A = Normal call B = Broadcast group call C = System call D = Emergency call E = Imminent peril call		
Transmission Indicator field ID	"00001101"		TC 24.581 [88] clause 9.2.3.1.	
Transmission Indicator Length	"10"	value is a binary value and has the value '2'		

Derivation Path: TS 24.581 [88] Information Element	Value/remark	Comment	Reference	Condition
Transmission Indicator	"10000000000000000"	Contains additional	TC 24.581 [88]	Jonation
		information about a	clause 9.2.3.1.	
		received transmission	1	
		control message.		
		It is a 16 bit bit-map		
		named as shown in		
		Table 9.2.3.11.2 (a		
		thru P).		
		When set to 1, the bit		
		has the following		
		meaning:		
		A = Normal call		
		B = Broadcast		
		group call		
		C = System call		
		D = Emergency call		
		E = Imminent peril		
		call		
		NOTE 1: The		
		indicators C, D and E		
		are only informative.		
		There are no		
		procedures specified		
		for the C, D and E		
		indicators in this		
		release of the present		
		document and the use		
		of the indicators are		
		implementation		
		specific.		
		Bits F to P are		
		reserved for future use		
		and are set to 0.		
		There can be more		
		than one bit set to 1 at		
		the same time. The		
		local policy in the		
		transmission control		
		server decides which		
		combinations are		
		possible and the		
		priority of the		
Media ID	Not propert	indications.  The Media ID field is	TC 24 F04 [00]	
Wedia ID	Not present		TS 24.581 [88]	
		present only if media	9.2.3	
		multiplexing is used. The Media ID field		
		identified a media flow		
		within a media		
Track Info	Not propert	multiplex. The MCVideo call	TC 24 F04 [00]	
Track IIIIO	Not present	does not involve a	TS 24.581 [88] 9.2.3.13	
			J.Z.J. 13	
		non-controlling		
		MCVideo function	1	

### 5.5.11.2.8 Receive Media Response

#### Table: 5.5.11.2.8-1 Receive Media Response

Derivation Path: TS 24.581 [88] Table 9.2.15-1						
Information Element	Value/remark	Comment	Reference	Condition		
Subtype	"00111"	Server → client	TS 24.581 [88] 9.2.2.1-1			

Derivation Path: TS 24.581 [88] Information Element	Value/remark	Comment	Reference	Condition
SSRC	The SSRC of the	The SSRC field carries	RFC 3550 [3],	
	message sender	the SSRC of the	Appendix 6	
	3	transmission participant	shows how to	
		requesting the	generate a	
		reception of the media	random 32-bit	
		from another user.	identifier	
Result		Indicates whether		
		media reception is		
		possible as per the		
		request		
Result field ID	"00001111"	request	TS 24.581 [88]	
Robalt Hold ID	00001111		Table 9.2.3.1-	
			1	
Result length	"2"	value is a binary value	TS 24.581 [88]	
Nesult length		and has the value '2'	9.2.3.17	
		indicating the total	0.2.0.17	
		length in octets of the		
		<result> value item</result>		
DIt	"1"	and the spare bits	TO 04 504 [00]	
Result	"1"	0 - The receiver is not	TS 24.581 [88]	
		permitted (rejected) to	9.2.3.17	
		receive the media		
		transmission.		
		1 - The receiver is		
		permitted (granted) to		
		receive the media		
		transmission.		
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		
SSRC of transmitter	The SSRC of the user	The SSRC of		
	transmitting the media	transmitter field carries		
	adiomining the modia	the SSRC of the user		
		transmitting the media		
Media ID	Not present	The Media ID field is	TS 24.581 [88]	
	Not prodont	present only if media	9.2.3.x	
		multiplexing is used.	3.2.3.8	
		The Media ID field		
		identified a media flow		
		within a media		
		multiplex.	1	

Derivation Path: TS 24.581 [88] Table 9.2.15-1				
Information Element	Value/remark	Comment	Reference	Condition
Transmission Indicator		The Transmission Indicator contains additional information about a received transmission control message.	TS 24.581 [88] 9.2.3.11	
		The <transmission field="" id="" indicator=""> value is a binary value and is set according to table 9.2.3.1-1. The <transmission indicator="" length=""> value is a binary value and has the value '2'. The <transmission indicator=""> value is a 16 bit bit-map. When set to 1 these meanings apply:  A = Normal call</transmission></transmission></transmission>		
		B = Broadcast group call C = System call D = Emergency call E = Imminent peril call		
Transmission Indicator field ID	"00001101"	An 8-bit binary value set according to TS 24.581 [88] 9.2.3.1-1.	TS 24.581 [88] Table 9.2.3.1- 1-1 Transmission Indicator Length	
Transmission Indicator Length	"0000010"	An 8-bit binary value (2 in binary)	TS 24.581 [88] Table 9.2.3.1- 1-1	
Transmission Indicator	"10000000000000000"	A 16 bit bit-map	TS 24.581 [88] Table 9.2.3.11-2	

## 5.5.11.2.9 Media Reception Notification

Table: 5.5.11.2.9-1 Media Reception Notification

Derivation Path: TS 24.581 [88]		Derivation Path: TS 24.581 [88] Table 9.2.16-1					
Information Element	Value/remark	Comment	Reference	Condition			
Subtype	"01000"	Server → client	TS 24.581 [88] 9.2.2.1-2				
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission control server	RFC 3550 [3], Appendix 6 shows how to generate a random 32-bit identifier				
User ID		The User ID field carries the MCVideo ID of the user transmitting the media. Note: If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>	TS 24.581 [88] 9.2.3.8				
User ID field ID	"00000110"						
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>						
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>					
Media ID	Not present	The Media ID field is present only if media multiplexing is used. The Media ID field identified a media flow within a media multiplex.	TS 24.581 [88] 9.2.3				

#### 5.5.11.2.10 Transmission Cancel Response

**Table 5.5.11.2.10-1 Transmission Cancel Response** 

Derivation Path: TS 24.581 [88]	Derivation Path: TS 24.581 [88] Table 9.2.18-1					
Information Element	Value/remark	Comment	Reference	Condition		
Subtype	"01001"	Server → client	TS 24.581 [88] 9.2.2.1-2 and clause 9.2.18			
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission control server.	RFC 3550 [3], Appendix 6 shows how to generate a random 32-bit identifier			
Media ID	Not present	The Media ID field is present only if media multiplexing is used. The Media ID field identified a media flow within a media multiplex.	TS 24.581 [88] 9.2.3.x			

## 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]	Derivation Path: TS 24.581 [88] Table 9.2.19-1					
Information Element	Value/remark	Comment	Reference	Condition		
Subtype	"01010"	Server → client	TS 24.581 [88] 9.2.2.1-2 and clause 9.2.19			
SSRC	The SSRC of the message sender	The SSRC of the Transmission Control server for on-network and transmission arbitrator for offnetwork.  Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].				
Media ID	Not present	The Media ID field is present only if media multiplexing is used. The Media ID field identified a media flow within a media multiplex.	TS 24.581 [88 ] 9.2.3.x			

#### 5.5.11.2.12 Remote Transmission Response

Table: 5.5.11.2.12-1 Remote Transmission Response

Information Element	Value/remark	Comment	Reference	Condition
Subtype	"01011"	Server → client	TS 24.581 [88 ] 9.2.2.1-2 and clause 9.2.20	
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission control server.  Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].		
Media ID	Not present	The Media ID field is present only if media multiplexing is used. The Media ID field identified a media flow within a media multiplex.	TS 24.581 [88 ] 9.2.3.x	

#### 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]	Derivation Path: TS 24.581 [88] Table 9.2.25-1				
Information Element	Value/remark	Comment	Reference	Condition	
Subtype	"01100"	Server → client	TS 24.581 [88 ] 9.2.2.1-2 and clause 9.2.20		
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission participant requesting the reception of the media from another user.  Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].			
Media ID	Not present	The Media ID field is present only if media multiplexing is used. The Media ID field identified a media flow within a media multiplex.	TS 24.581 [88 ] 9.2.3.x		

## 5.5.11.2.14 Media Reception Override Notification

Table: 5.5.11.2.14-1 Media Reception Override Notification

Derivation Path: TS 24.581 [88 Information Element	Value/remark	Comment	Reference	Condition
Subtype	"01101"	Server → client	TS 24.581 [88] 9.2.2.1-2 and clause 9.2.20	
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission participant requesting the reception of the media from another user.  Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].		
User ID	16-bit binary value	Carries the identity of the user who is requesting the reception of the media.	TS 24.581 [88 ] 9.2.3.8	
User ID field ID	"00000110"			
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
SSRC of transmitter	The SSRC of the user transmitting the media	The SSRC of transmitter field carries the SSRC of the user transmitting the media		
Overriding ID	16-bit binary value	Carries the identity of the user of the overriding media.	TS 24.581 [88 ] 9.2.3.8	
User ID field ID	"00000110"			
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			

Derivation Path: TS 24.581 [88 Information Element	Value/remark	Comment	Reference	Condition
User ID	px_MCVideo_ID_User_ B	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
Media ID	Not present	The Media ID field is present only if media multiplexing is used. The Media ID field identifies the communication of overriding media within a media multiplex.	TS 24.581 [88 ] 9.2.3.x	
Overridden ID	16-bit binary value	Carries the identity of the user of the overridden media.	TS 24.581 [88 ] 9.2.3.8	
User ID field ID	"00000110"			
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
Media ID	Not present	The Media ID field is present only if media multiplexing is used. The Media ID field identifies the communication of overriding media within a media multiplex.	TS 24.581 [88 ] 9.2.3.x	

## 5.5.11.2.15 Transmission End Notify

Table: 5.5.11.2.15-1 Transmission End Notify

Information Element	Value/remark	Comment	Reference	Condition
Subtype	"01110"	Server → client	TS 24.581 [88 ] 9.2.2.1-2 and clause 9.2.20	
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission control server.  Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].		
User ID		Carries the identity of the user whose media transmission has been released	TS 24.581 [88 ] 9.2.3.8	
User ID field ID	"00000110"			
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
SSRC of transmitter	The SSRC of the user transmitting the media	The SSRC of transmitter field carries the SSRC of the user transmitting the media		
Media ID	Not present	The Media ID field is present only if media multiplexing is used. The Media ID field identified a media flow within a media multiplex.	TS 24.581 [88 ] 9.2.3.x	

#### 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
Subtype	"01111"		TS 24.581 [88	
			] 9.2.2.1-2	

Derivation Path: TS 24.581 [88] Table 9.2.30-1				
Information Element	Value/remark	Comment	Reference	Condition
SSRC	The SSRC of the message sender	The SSRC of the Transmission Control server for on-network and transmission arbitrator for offnetwork.  Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].		
name	"MCV1"	Transmission Control messages sent by the Transmission Control Server and the Transmission Control Participant.		
Message Sequence Number				
Message Sequence Number field ID	"00001000"			
Message Sequence Number length	"10"	value is a binary value and has the value '2' indicating the total length in octets of the <message number="" sequence=""> value item.</message>		
Message Sequence Number	"1"	value is a binary value. The <message number="" sequence=""> value can be between '0' and '65535'. When the '65535' value is reached, the <message number="" sequence=""> value starts from '0' again</message></message>		
Transmission Indicator				
Transmission Indicator field ID	"00001101"		TC 24.581 [88] clause 9.2.3.1 .1	
Transmission Indicator Length	"10"	value is a binary value and has the value '2'		

	Derivation Path: TS 24.581 [88] Table 9.2.30-1						
		Comment	Reference	Condition			
Derivation Path: TS 24.581 [88] Tenformation Element  Transmission Indicator	Fable 9.2.30-1  Value/remark  "10000000000000000"	Contains additional information about a received transmission control message. It is a 16 bit bit-map named as shown in Table 9.2.3.11.2 (a thru P). When set to 1, the bit has the following meaning:  A = Normal call  B = Broadcast group call  C = System call  D = Emergency call  E = Imminent peril call  NOTE 1: The indicators C, D and E are only informative. There are no procedures specified for the C, D and E indicators in this release	Reference TC 24.581 [88] clause 9.2.3.1 .1	Condition			
		procedures specified for the C, D and E indicators in this release of the present document and the use of the					
		indicators are implementation specific.					
		Bits F to P are reserved for future use and are set to 0.					
		There can be more than one bit set to 1 at the same time. The local policy in the transmission control server decides which combinations are					
		possible and the priority of the indications.					

# 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
Subtype	"00000"		TS 24.581 [88	
			] 9.2.2.1-2	

Derivation Path: TS 24.581 [88]				
Information Element	Value/remark	Comment	Reference	Condition
SSRC	The SSRC of the message sender	The SSRC of the Transmission Control server for on-network and transmission arbitrator for off- network. Notation in accordance with clause 5.5.6.1. Coded as specified in		
User ID		IETF RFC 3550 [76].  The User ID field is used to carry the identity of the user whose media transmission is requested to be terminated.		
User ID field ID User ID length	"00000110" a binary value that			
	includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
Media ID	Not Present	The Media ID field is present only if media multiplexing is used. The Media ID field identified a media flow within a media multiplex.		

# 5.5.11.3.2 Transmission End Response

Table: 5.5.11.3.2-1 Transmission End Response

Derivation Path: TS 24.581 [88] Information Element	Value/remark	Comment	Reference	Condition
Subtype	"00001"		TS 24.581 [88 ] 9.2.2.1-2	
SSRC	The SSRC of the message sender	The SSRC of the Transmission Control server for on-network and transmission arbitrator for offnetwork. Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].		
User ID		The User ID field is used to carry the identity of the user whose media transmission is requested to be terminated.		
User ID field ID	"00000110"			
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
Media ID	Not Present	The Media ID field is present only if media multiplexing is used. The Media ID field identified a media flow within a media multiplex.		

#### 5.5.11.3.3 Media Reception End Request

#### Table: 5.5.11.3.3-1 Media Reception End Request

Derivation Path: TS 24.581 [88] Table 9.2.26-1				
Information Element	Value/remark	Comment	Reference	Condition
Subtype	"00010"	Server → client	TS 24.581 [88	
			19.2.2.1-3	

Derivation Path: TS 24.581 [88]				
Information Element	Value/remark	Comment	Reference	Condition
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission control server or the transmission control participant requesting the end of reception of the media from another	RFC 3550 [3], Appendix 6 shows how to generate a random 32-bit identifier	
SSRC of transmitter	The SSRC of the user	user. The SSRC of		
SSRC of transmitter	transmitting the media	transmitter field carries the SSRC of the user transmitting the media		
Media ID	Not present	The Media ID field is present only if media multiplexing is used. The Media ID field identified a media flow within a media multiplex.	TS 24.581 [88 ] 9.2.3.x	
Transmission Indicator		The Transmission Indicator contains additional information about a received transmission control message.  The <transmission field="" id="" indicator=""> value is a binary value and is set according to table 9.2.3.1-1. The <transmission indicator="" length=""> value is a binary value and has the value '2'. The <transmission indicator=""> value is a 16 bit bit-map. When set to 1 these meanings apply:  A = Normal call B = Broadcast group call C = System call D = Emergency call</transmission></transmission></transmission>	TS 24.581 [88] 9.2.3.11	
Transmission Indicator field ID	"00001101"	E = Imminent peril call An 8-bit binary value set according to TS 24.581 [88] 9.2.3.1-	TS 24.581 [88 ] Table 9.2.3.1-1-1	
Transmission Indicator Length	"0000010"	1. An 8-bit binary value (2 in binary)	TS 24.581 [88 ] Table 9.2.3.1-1-1	
Transmission Indicator	Any allowed value	A 16 bit bit-map	TS 24.581 [88 ] Table 9.2.3.11-2	

#### 5.5.11.3.4 Media Reception End Response

Table: 5.5.11.3.4-1 Media Reception End Response

Derivation Path: TS 24.581 [88]	Table 9.2.27-1			
Information Element	Value/remark	Comment	Reference	Condition
Subtype	"00011"	Server → client	TS 24.581 [88 ] 9.2.2.1-3	
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission control server or the transmission control participant requesting the end of reception of the media from another user.	RFC 3550 [3], Appendix 6 shows how to generate a random 32-bit identifier	
SSRC of transmitter	The SSRC of the user transmitting the media	The SSRC of transmitter field carries the SSRC of the user transmitting the media		
Media ID	Not present	The Media ID field is present only if media multiplexing is used. The Media ID field identified a media flow within a media multiplex.	TS 24.581 [88 ] 9.2.3.x	

#### 5.5.11.3.5 Transmission Control Ack

Table: 5.5.11.3.5-1: Transmission Control Ack

Derivation Path: TS 24.581 [88]	Derivation Path: TS 24.581 [88] Table 9.2.31-1					
Information Element	Value/remark	Comment	Reference	Condition		
Subtype	"00100"					
SSRC	The SSRC of the message sender	The SSRC of the Transmission Control server for on-network and transmission arbitrator for off-network.  Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76].				
Source			TS 24.581 [88 ] 9.2.3.12			
Source field ID	"00001010"					
Source length	"10"	value is a binary value and has the value 2 indicating the total length in octets of the <source/> value item				

Derivation Path: TS 24.581 [88] Table 9.2.31-1					
Information Element	Value/remark	Comment	Reference	Condition	
Source	"2"	The <source/> value is a 16 bit binary value where:  '0' the transmission participant is the source  '1' the participating MCVideo function is the source  '2' the controlling MCVideo	ROBING	Condition	
		function is the source  '3' the non-controlling MCVideo function is the source  All other values are reserved for future use			
Message name			TS 24.581 [88 ] 9.2.3.18		
Message Name field ID	"00010000"		, ::=::::::::::::::::::::::::::::::::::		
Message Name Length	"110"	value is a binary value and has the value '6'.			
Message Name	the message name of the received message	value is as coded as an ascii name field			
Message type			TS 24.581 [88 ] 9.2.3.10		
Message Type field ID	"00001100"	<u> </u>			
Message Type Length	"10"	value is a binary value and has the value '2'			
Message Type	"000" <the of<br="" subtype="">the received message&gt;</the>	value is an 8 bit binary value containing the binary value consisting of the 5 bit message subtype as coded in table 9.2.2.1-1, table 9.2.2.1-2 and table 9.2.2.1-3 (including the first bit (used by some transmission control messages to indicate that a Transmission control Ack message is requested) of the five bit subtype) preceded by "000".			

# 5.5.12 MSRP Messages for MCData

- 5.5.12.1 MSRP SEND
- 5.5.12.1.1 MSRP SEND from the UE
- MSRP SEND from the UE with No Chunking Used

Table 5.5.12.1-1: MSRP SEND from the UE

Derivation Path: RFC 4975 [X]				
Information Element	Value/remark	Comment	Reference	Condition
Transaction Identifier				
value	any allowed value			
To-Path				
value	px_MSRP_URI_SS_ID			
From-Path	MODE HELA ID			
value	px_MSRP_URI_A_ID			
Message-ID value	any allowed value	If chunking is done:		
value	any anowed value	The message ID corresponds to the whole message, so the receiver can also use it to reassemble the message and tell which chunks belong with which message.		
Byte-Range		The Byte-Range header field value contains a starting value (range-start) followed by a "-", an ending value (range-end) followed by a "/", and finally the total length. The first octet in the message has a position of one, rather than a zero. The Byte-Range header field identifies the portion of the message carried in this chunk and the total size of the message		
range-start	any allowed value	· ·		
range-end	any allowed value			
total length	any allowed value			
Content-Type			TS 24.582 [89] , clause 6.4	
media-type	"multipart/mixed"	000 010111111111		
MIME body part		SDS SIGNALLING PAYLOAD		
MIME-Content-Type	"application/vnd.3gpp. mcdata-signalling"			
MIME-part-body	As described in Table 5.5.3.8.1-1			
MIME body part		SDS DATA PAYLOAD		
MIME-Content-Type	"application/vnd.3gpp. mcdata-payload"			
MIME-part-body	As described in Table 5.5.3.9-1			
End-line	"" <transaction Identifier value&gt;"\$"</transaction 	an end-line of seven hyphens, the transaction identifier, and a "\$" to indicate that this request contains the end of a complete message		

## - Empty MSRP SEND from the UE for Binding

Table 5.5.12.1-2: Empty MSRP SEND from the UE for Binding

Derivation Path: RFC 4975 [X]				
Information Element	Value/remark	Comment	Reference	Condition
Transaction Identifier				
value	any allowed value			
To-Path				
value	px_MSRP_URI_SS_ID			
From-Path				
value	px_MSRP_URI_A_ID			
Message-ID				
value	any allowed value			
Byte-Range		The Byte-Range header field value contains a starting value (range-start) followed by a "-", an ending value (range-end) followed by a "/", and finally the total length. The first octet in the message has a position of one, rather than a zero. The Byte-Range header field identifies the portion of the message carried in this chunk and the total size of the message		
range-start	"1-"			1
range-end	"0/"			
total length	"0"			
Content-Type	not present			
End-line	"" <transaction identifier="" value="">"\$"</transaction>			

- MSRP SEND from the UE with Chunking Used

Table 5.5.12.1-3: MSRP SEND from the UE with Chunking Used

Derivation Path: RFC 4975 [X]	Valuation and	0	D-f	0
Information Element Transaction Identifier	Value/remark	Comment	Reference	Condition
	and allowed value			
value To-Path	any allowed value			
value	NY MERRILIRI SE IR			
From-Path	px_MSRP_URI_SS_ID	+		
value	px_MSRP_URI_A_ID	+		
Message-ID	px_MSRP_URI_A_ID	+		
value	any allowed value	If chunking is done:		
value	any anowed value	The message ID corresponds to the whole message, so the receiver can also use it to reassemble the message and tell which chunks belong with which message.		
Byte-Range		The Byte-Range header field value contains a starting value (range-start) followed by a "-", an ending value (range-end) followed by a "/", and finally the total length. The first octet in the message has a position of one, rather than a zero.  The Byte-Range header field identifies the portion of the message carried in this chunk and the total size of the message.  Example:  Byte-Range for Chunk 1 of 2: 1-2/8  Byte-Range for Chunk 2 of 2: 5-8/8		
range-start	<any allowed="" value="">"-"</any>	2 01 2. 0 0/0		
range-end	<any allowed="" value="">"/"</any>	The range-end field SHOULD indicate the position of the last byte in the body, if known. It MUST take the value of "*" if the position is unknown, or if the request needs to be interruptible.		
total length	the total length			
Content-Type			TS 24.582 [89] , clause 6.4	
media-type	"multipart/mixed"	000000000000000000000000000000000000000		
MIME body part		SDS SIGNALLING PAYLOAD		
MIME-Content-Type	"application/vnd.3gpp. mcdata-signalling"			
MIME-part-body	As described in Table 5.5.3.8.1-1			
MIME body part		SDS DATA PAYLOAD		
MIME-Content-Type	"application/vnd.3gpp. mcdata-payload"			
MIME-part-body	As described in Table 5.5.3.9-1			

End-line	"" <transaction Identifier value&gt;"+"</transaction 	an end-line of seven hyphens, the transaction identifier, and a "+" to indicate that this request is not the end of a complete message	
		message	

- MSRP SEND from the UE with Chunking Used – Last Chunk

Table 5.5.12.1-4: MSRP SEND from the UE with Chunking Used – Last Chunk

Derivation Path: RFC 4975 [X] Information Element	Value/remark	Comment	Reference	Condition
Transaction Identifier	value/Telliai K	Comment	iveleteting.	Condition
value	any allowed value			
To-Path	any anowed value			
value	px_MSRP_URI_SS_ID			
From-Path	px_wskr_oki_ss_ib			
value	px_MSRP_URI_A_ID			
Message-ID	px_word _ord_A_ib			
value	any allowed value	If chunking is done: The message ID corresponds to the whole message, so the receiver can also use it to reassemble the message and tell which chunks belong with which message.		
Byte-Range		The Byte-Range header field value contains a starting value (range-start) followed by a "-", an ending value (range-end) followed by a "/", and finally the total length. The first octet in the message has a position of one, rather than a zero.  The Byte-Range header field identifies the portion of the message carried in this chunk and the total size of the message.  Example:  Byte-Range for Chunk 1 of 2: 1-2/8  Byte-Range for Chunk 2 of 2: 5-8/8		
range-start range-end	<any allowed="" value="">"-" <the length="" total="">"/"</the></any>	The range-end field for the last chunk of a message should be equal to the total length of the message.		

4 - 4 - 1 . 1	46 - 4-4-11	The Desta Danses		
total length	the total length	The Byte-Range		
		header field value		
		contains a starting		
		value (range-start)		
		followed by a "-", an		
		ending value (range-		
		end) followed by a "/",		
		and finally the total		
		length. The first octet		
		in the message has a		
		position of one, rather		
		than a zero.		
		The Byte-Range		
		header field identifies		
		the portion of the		
		message carried in this		
		chunk and the total size		
		of the message.		
		Example:		
		Byte-Range for Chunk		
		1 of 2: 1-2/8		
		Byte-Range for Chunk		
		2 of 2: 5-8/8		
Content-Type			TS 24.582 [89]	
			, clause 6.4	
media-type	"multipart/mixed"			
MIME body part		SDS SIGNALLING		
MINAT Content Turns	llandiation/und 2000	PAYLOAD		
MIME-Content-Type	"application/vnd.3gpp.			
NAINAE ALL I	mcdata-signalling"			
MIME-part-body	As described in Table			
MIME body part	5.5.3.8.1-1	SDS DATA PAYLOAD		
MIME-Content-Type	"application/vnd.3gpp.	SDS DATA FAILUAD		
white-Content-Type	mcdata-payload"			
MIME part had:	As described in Table			
MIME-part-body	5.5.3.9-1			
End-line	"" <transaction< td=""><td>an end-line of seven</td><td></td><td></td></transaction<>	an end-line of seven		
	Identifier value>"\$"	hyphens, the		
		transaction identifier,		
		and a "\$" to indicate		
		that this request		
		contains the last chunk		
		of a complete message		

#### 5.5.12.1.2 MSRP SEND from the SS

- MSRP SEND from the SS

Table 5.5.12.1.2-1: MSRP SEND from the SS

Derivation Path: RFC 4975 [X] Information Element	Value/remark	Comment	Reference	Condition
Transaction Identifier				
value	"a786hjs2"			
To-Path	a. 66.1j62			
value	px_MSRP_URI_A_ID			
From-Path				
value	px_MSRP_URI_SS_ID			
Message-ID				
value	"87652491"			
Byte-Range		The Byte-Range header field value contains a starting value (range-start) followed by a "-", an ending value (range-end) followed by a "/", and finally the total length. The first octet in the message has a position of one, rather than a zero.  The Byte-Range header field identifies the portion of the message carried in this chunk and the total size of the message		
range-start	1	of the message		
range-end	the length of the message in bytes			
total length	the length of the message in bytes			
Content-Type			TS 24.582 [89] , clause 6.4	
media-type	"multipart/mixed"		-	
MIME body part		SDS SIGNALLING PAYLOAD		
MIME-Content-Type	"application/vnd.3gpp. mcdata-signalling"			
MIME-part-body	As described in Table 5.5.3.8.2-1			
MIME body part		SDS DATA PAYLOAD		
MIME-Content-Type	"application/vnd.3gpp. mcdata-payload"			
MIME-part-body	As described in Table 5.5.3.9-2			
End-line	"a786hjs2\$"	an end-line of seven hyphens, the transaction identifier, and a "\$" to indicate that this request contains the end of a complete message		

#### Empty MSRP SEND from the SS for Binding

Table 5.5.12.1.2-2: Empty MSRP SEND from the SS for Binding

Derivation Path: RFC 4975 [X]				
Information Element	Value/remark	Comment	Reference	Condition
Transaction Identifier				
value	"a786hjs2"			
To-Path				
value	px_MSRP_URI_A_ID			
From-Path				
value	px_MSRP_URI_SS_ID			
Message-ID				
value	"87652491"			
Byte-Range		The Byte-Range header field value contains a starting value (range-start) followed by a "-", an ending value (range-end) followed by a "/", and finally the total length. The first octet in the message has a position of one, rather than a zero. The Byte-Range header field identifies the portion of the message carried in this chunk and the total size of the message		
range-start	1			1
range-end	0			
total length	0			1
Content-Type	not present			
End-line	"a786hjs2\$"			

## 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 [X]				
Information Element	Value/remark	Comment	Reference	Condition
Transaction Identifier				
value	same value as received in the MSRP SEND message			
To-Path				
value	px_MSRP_URI_SS_ID			
From-Path				
value	px_MSRP_URI_A_ID			
End-line	"" <transaction Identifier value&gt;"\$"</transaction 	an end-line of seven hyphens, the transaction identifier, and a "\$" to indicate that this request contains the end of a complete message		

## 5.5.12.2.2 MSRP 200 (OK) from the SS

Table 5.5.12.2.2-1: MSRP 200 (OK) from the SS

Derivation Path: RFC 4975 [X]				
Information Element	Value/remark	Comment	Reference	Condition
Transaction Identifier				
value	same value as received in the MSRP SEND message			
To-Path				
value	px_MSRP_URI_A_ID			
From-Path				
value	px_MSRP_URI_SS_ID			
End-line	"" <transaction Identifier value&gt;"\$"</transaction 	an end-line of seven hyphens, the transaction identifier, and a "\$" to indicate that this request contains the end of a complete message		

# 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

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- 20010315"		
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

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			

## 5.5.13.2 XML <EncryptedData> element for encryption of XML element content

Table 5.5.13.2-1: XML <EncryptedData> element from the UE

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 5.5.13.2-2: XML < Encrypted Data > element from the SS

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

Table 5.5.13.3-1: Encrypted XML URI attribute

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			

## 5.6 Reference configurations

#### 5.6.1 General

The Reference configuration requirements provided in clause 5.6 specify configuration values that are expected to be pre-configured in the UE before a test is started. The exception to this requirement are tests which verify the communication exchange which allows a MCPTT device to be enabled for the provision of MCPTT cervices e.g. test case 5.1 in TS 36.579-2 [2].

## 5.6.2 Key material for provisioning of End-to-end communication security

For any end-point to use or access end-to-end secure communications, it needs to be provisioned with keying material associated to its identity by the KMS as specified in 3GPP TS 33.180 [94]. To avoid dynamic allocation of key material before each test case is run, the following keying information needs to be preconfigured in the UE. For convenience, the information is provided in the form of an XML which can be provided/pre-configured in the UE e.g. by a Key Management Server (KMS) as specified in 3GPP TS 33.180 [94].

```
<?xml version="1.0" encoding="UTF-8"?>
<SignedKmsResponse xmlns= "TOBEDEFINED" xmlns:xsi = "http://www.w3.org/2001/XMLSchema-instance"
    xmlns:ds = "http://www.w3.org/2000/09/xmldsig#" xmlns:se = "TOBEDEFINED"
    xsi:schemaLocation = "TOBEDEFINED SE_KmsInterface_XMLSchema.xsd" Id = "xmldoc">

<KmsResponse xmlns= "TOBEDEFINED" Version = "1.0.0">

<KmsUri>kms.example.org</KmsUri>
    <UserUri>user@example.org</VserUri>
    <Time>2014-01-26T10:07:14</Time>

<KmsId>KMsDrovider12345</KmsId>
    <ClientReqUrl>http://kms.example.org/keymanagement/identity/v1/keyprov</ClientReqUrl>
```

```
<KmsMessage>
    <KmsKeyProv Version = "1.0.0" xsi:type = "se:KmsKeyProvTkType">
      <KmsKeySet Version = "1.1.0">
        <KmsUri>kms.example.org</kmsUri>
        <CertUri>cert1.kms.example.org</CertUri>
        <Issuer>www.example.org</Issuer>
        <UserUri>user@example.org</UserUri>
        <UserID>0123456789ABCDEF0123456789ABCDEF</UserID>
        <ValidFrom>2017-07-31T17:00:00</ValidFrom>
        <ValidTo>2018-07-31T16:59:59</ValidTo>
        <KeyPeriodNo>3710502000</KeyPeriodNo>
        <Revoked>false</Revoked>
        <UserDecryptKey xsi:type = "se:EncKeyContentType">
          <EncryptedKey xmlns = "http://www.w3.org/2001/04/xmlenc#">
            <EncryptionMethod Algorithm="http://www.w3.org/2001/04/xmlenc#kw-aes256"/>
            <ds:KevInfo>
              <ds:KeyName>tk.12.user@example.org</KeyName>
            </ds:KevInfo>
            <CipherData>
              <CipherValue>DEADBEEF</CipherValue>
            </CipherData>
          </EncryptedKey>
        </UserDecryptKey>
        <UserSigningKeySSK xsi:type = "se:EncKeyContentType">
          <EncryptedKey xmlns = "http://www.w3.org/2001/04/xmlenc#">
            <EncryptionMethod Algorithm="http://www.w3.org/2001/04/xmlenc#kw-aes256"/>
            <ds:KeyInfo>
              <ds:KeyName>tk.12.user@example.org</KeyName>
            </ds:KeyInfo>
            <CipherData>
              <CipherValue>DEADBEEF</CipherValue>
            </CipherData>
        </EncryptedKey>
        </UserSigningKeySSK>
        <UserPubTokenPVT xsi:type = "se:EncKeyContentType">
          <EncryptedKey xmlns = "http://www.w3.org/2001/04/xmlenc#">
            <EncryptionMethod Algorithm="http://www.w3.org/2001/04/xmlenc#kw-aes256"/>
            <ds:KevInfo>
              <ds:KeyName>tk.12.user@example.org</KeyName>
            </ds:KeyInfo>
            <CipherData>
              <CipherValue>DEADBEEF</CipherValue>
            </CipherData>
          </EncryptedKey>
        </UserPubTokenPVT>
      </KmsKeySet>
      <NewTransportKey xmlns= "TOBEDEFINED">
            <EncryptedKey xmlns="http://www.w3.org/2001/04/xmlenc#"</pre>
Type="http://www.w3.org/2001/04/xmlenc#EncryptedKey">
              <EncryptionMethod Algorithm="http://www.w3.org/2001/04/xmlenc#kw-aes256"/>
              <ds:KeyInfo>
                <ds:KeyName>tk.12.user@example.org</KeyName>
              </ds:KeyInfo>
              <CipherData>
                <CipherValue>DEADBEEF</CipherValue>
              </CipherData>
              <CarriedKeyName>tk.13.user@example.org</CarriedKeyName>
            </EncryptedKey>
          </NewTransportKey>
    </KmsKeyProv>
  </KmsMessage>
</KmsResponse>
<Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
    <SignedInfo>
      <CanonicalizationMethod Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-20010315"/>
      <SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#hmac-sha256">
        <HMACOutputLength>128/HMACOutputLength>
      </SignatureMethod>
      <Reference URI="#xmldoc">
        <DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
        <DigestValue>nnnn</DigestValue>
      </Reference>
    </SignedInfo>
    <SignatureValue>DEADBEEF</SignatureValue>
      <KeyName>tk.12.user@example.org</KeyName>
    </KeyInfo>
  </Signature>
```

</SignedKmsResponse>

#### 5.6.3 XML schema for MCPTT location information

```
From TS 24.379 clause F.3.2:
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"</pre>
xmlns:mcpttloc="urn:3gpp:ns:mcpttLocationInfo:1.0"
targetNamespace="urn:3gpp:ns:mcpttLocationInfo:1.0" elementFormDefault="qualified"
attributeFormDefault="unqualified"
xmlns:xenc="http://www.w3.org/2001/04/xmlenc#">
    <xs:import namespace="http://www.w3.org/2001/04/xmlenc#"/>
    <xs:element name="location-info" id="loc">
            <xs:documentation>Root element, contains all information related to location
configuration, location request and location reporting for the MCPTT service</xs:documentation>
        </xs:annotation>
        <xs:complexType>
            <xs:choice>
                <xs:element name="Configuration" type="mcpttloc:tConfigurationType"/>
                <xs:element name="Request" type="mcpttloc:tRequestType"/>
                <xs:element name="Report" type="mcpttloc:tReportType"/>
                <xs:any namespace="##other" processContents="lax" minOccurs="0"</pre>
maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
            </xs:choice>
            <xs:anyAttribute namespace="##any" processContents="lax"/>
        </xs:complexType>
    </xs:element>
    <xs:complexType name="tConfigurationType">
        <xs:sequence>
            <xs:element name="NonEmergencyLocationInformation"</pre>
type="mcpttloc:tRequestedLocationType" minOccurs="0"/>
            <xs:element name="EmergencyLocationInformation" type="mcpttloc:tRequestedLocationType"</pre>
minOccurs="0"/>
            <xs:element name="TriggeringCriteria" type="mcpttloc:TriggeringCriteriaType"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:attribute name="ConfigScope">
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:enumeration value="Full"/>
                    <xs:enumeration value="Update"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:attribute>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tRequestType">
        <xs:complexContent>
            <xs:extension base="mcpttloc:tEmptyType">
                <xs:attribute name="RequestId" type="xs:string" use="required"/>
            </xs:extension>
        </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="tReportType">
            <xs:element name="TriggerId" type="xs:string" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="CurrentLocation" type="mcpttloc:tCurrentLocationType"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:attribute name="ReportID" type="xs:string" use="optional"/>
        <xs:attribute name="ReportType" use="required">
            <xs:simpleType>
                <xs:restriction base="xs:string">
                     <xs:enumeration value="Emergency"/>
                    <xs:enumeration value="NonEmergency"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:attribute>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="TriggeringCriteriaType">
```

```
<xs:sequence>
            <xs:element name="CellChange" type="mcpttloc:tCellChange" minOccurs="0"/>
            <xs:element name="TrackingAreaChange" type="mcpttloc:tTrackingAreaChangeType"</pre>
minOccurs="0"/>
            <xs:element name="PlmnChange" type="mcpttloc:tPlmnChangeType" minOccurs="0"/>
            <xs:element name="MbmsSaChange" type="mcpttloc:tMbmsSaChangeType" minOccurs="0"/>
            <xs:element name="MbsfnAreaChange" type="mcpttloc:tMbsfnAreaChangeType" minOccurs="0"/>
<xs:element name="PeriodicReport" type="mcpttloc:tIntegerAttributeType" minOccurs="0"/>
            <xs:element name="TravelledDistance" type="mcpttloc:tIntegerAttributeType"</pre>
minOccurs="0"/>
            <xs:element name="McpttSignallingEvent" type="mcpttloc:tSignallingEventType"</pre>
minOccurs="0"/>
            <xs:element name="GeographicalAreaChange" type="mcpttloc:tGeographicalAreaChange"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tCellChange">
        <xs:sequence>
            <xs:element name="AnyCellChange" type="mcpttloc:tEmptyTypeAttribute" minOccurs="0"/>
            <xs:element name="EnterSpecificCell" type="mcpttloc:tSpecificCellType" minOccurs="0"</pre>
maxOccurs="unbounded"/>
            <xs:element name="ExitSpecificCell" type="mcpttloc:tSpecificCellType" minOccurs="0"</pre>
maxOccurs="unbounded"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tEmptyType"/>
    <xs:simpleType name="tEcgi">
        <xs:restriction base="xs:string">
            <xs:pattern value="\d{3}\d{3}[0-1]{28}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tSpecificCellType">
        <xs:simpleContent>
            <xs:extension base="mcpttloc:tEcgi">
                <xs:attribute name="TriggerId" type="xs:string" use="required"/>
            </xs:extension>
        </xs:simpleContent>
    </xs:complexType>
    <xs:complexType name="tEmptyTypeAttribute">
        <xs:complexContent>
            <xs:extension base="mcpttloc:tEmptyType">
                <xs:attribute name="TriggerId" type="xs:string" use="required"/>
            </xs:extension>
        </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="tTrackingAreaChangeType">
        <xs:sequence>
            <xs:element name="AnyTrackingAreaChange" type="mcpttloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="EnterSpecificTrackingArea" type="mcpttloc:tTrackingAreaIdentity"</pre>
minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="ExitSpecificTrackingArea" type="mcpttloc:tTrackingAreaIdentity"</pre>
minOccurs="0" maxOccurs="unbounded"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:simpleType name="tTrackingAreaIdentityFormat">
        <xs:restriction base="xs:string">
            <xs:pattern value="\d{3}\d{3}[0-1]{16}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tTrackingAreaIdentity">
        <xs:simpleContent>
            <xs:extension base="mcpttloc:tTrackingAreaIdentityFormat">
                <xs:attribute name="TriggerId" type="xs:string" use="required"/>
            </xs:extension>
        </xs:simpleContent>
    </xs:complexType>
    <xs:complexType name="tPlmnChangeType">
        <xs:sequence>
            <xs:element name="AnyPlmnChange" type="mcpttloc:tEmptyTypeAttribute" minOccurs="0"/>
```

```
<xs:element name="EnterSpecificPlmn" type="mcpttloc:tPlmnIdentity" minOccurs="0"</pre>
maxOccurs="unbounded"/>
            <xs:element name="ExitSpecificPlmn" type="mcpttloc:tPlmnIdentity" minOccurs="0"</pre>
maxOccurs="unbounded"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:simpleType name="tPlmnIdentityFormat">
        <xs:restriction base="xs:string">
            <xs:pattern value="\d{3}\d{3}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tPlmnIdentity">
        <xs:simpleContent>
            <xs:extension base="mcpttloc:tPlmnIdentityFormat">
                <xs:attribute name="TriggerId" type="xs:string" use="required"/>
        </xs:simpleContent>
    </xs:complexType>
    <xs:complexType name="tMbmsSaChangeType">
            <xs:element name="AnyMbmsSaChange" type="mcpttloc:tEmptyTypeAttribute" minOccurs="0"/>
            <xs:element name="EnterSpecificMbmsSa" type="mcpttloc:tMbmsSaIdentity" minOccurs="0"/>
<xs:element name="ExitSpecificMbmsSa" type="mcpttloc:tMbmsSaIdentity" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anvAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:simpleType name="tMbmsSaIdentityFormat">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="0"/>
            <xs:maxInclusive value="65535"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tMbmsSaIdentity">
        <xs:simpleContent>
            <xs:extension base="mcpttloc:tMbmsSaIdentityFormat">
                <xs:attribute name="TriggerId" type="xs:string" use="required"/>
            </xs:extension>
        </xs:simpleContent>
    </xs:complexType>
    <xs:complexType name="tMbsfnAreaChangeType">
        <xs:sequence>
            <xs:element name="EnterSpecificMbsfnArea" type="mcpttloc:tMbsfnAreaIdentity"</pre>
minOccurs="0"/>
            <xs:element name="ExitSpecificMbsfnArea" type="mcpttloc:tMbsfnAreaIdentity"</pre>
minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:simpleType name="tMbsfnAreaIdentityFormat">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="0"/>
            <xs:maxInclusive value="255"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tMbsfnAreaIdentity">
        <xs:simpleContent>
            <xs:extension base="mcpttloc:tMbsfnAreaIdentityFormat">
                <xs:attribute name="TriggerId" type="xs:string" use="required"/>
            </xs:extension>
        </xs:simpleContent>
    </xs:complexType>
    <xs:complexType name="tIntegerAttributeType">
        <xs:simpleContent>
            <xs:extension base="xs:integer">
                <xs:attribute name="TriggerId" type="xs:string" use="required"/>
            </xs:extension>
        </xs:simpleContent>
    </xs:complexType>
    <xs:complexType name="tTravelledDistanceType">
        <xs:sequence>
            <xs:element name="TravelledDistance" type="xs:positiveInteger"/>
```

```
<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tSignallingEventType">
        <xs:sequence>
            <xs:element name="InitialLogOn" type="mcpttloc:tEmptyTypeAttribute" minOccurs="0"/>
            <xs:element name="GroupCallNonEmergency" type="mcpttloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="PrivateCallNonEmergency" type="mcpttloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="LocationConfigurationReceived" type="mcpttloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type=" mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tEmergencyEventType">
        <xs:sequence>
            <xs:element name="GroupCallEmergency" type="mcpttloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="GroupCallImminentPeril" type="mcpttloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="PrivateCallEmergency" type="mcpttloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="InitiateEmergencyAlert" type="mcpttloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tRequestedLocationType">
        <xs:sequence>
            <xs:element name="ServingEcqi" type="mcpttloc:tEmptyType" minOccurs="0"/>
            <xs:element name="NeighbouringEcgi" type="mcpttloc:tEmptyType" minOccurs="0"</pre>
maxOccurs="unbounded"/>
            <xs:element name="MbmsSaId" type="mcpttloc:tEmptyType" minOccurs="0"/>
            <xs:element name="MbsfnArea" type="mcpttloc:tEmptyType" minOccurs="0"/>
            <xs:element name="GeographicalCordinate" type="mcpttloc:tEmptyType" minOccurs="0"/>
            <xs:element name="minimumIntervalLength" type="xs:positiveInteger"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tCurrentLocationType">
        <xs:sequence>
            <xs:element name="CurrentServingEcgi" type="mcpttloc:tLocationType" minOccurs="0"/>
            <xs:element name="NeighbouringEcgi" type="mcpttloc:tLocationType" minOccurs="0"</pre>
maxOccurs="unbounded"/>
            <xs:element name="MbmsSaId" type="mcpttloc:tLocationType" minOccurs="0"/>
            <xs:element name="MbsfnArea" type="mcpttloc:tLocationType" minOccurs="0"/>
            <xs:element name="CurrentCoordinate" type="mcpttloc:tPointCoordinate" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:simpleType name="protectionType">
        <xs:restriction base="xs:string">
            <xs:enumeration value="Normal"/>
            <xs:enumeration value="Encrypted"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tLocationType">
        <xs:choice minOccurs="1" maxOccurs="1">
            <xs:element name="Ecgi" type="mcpttloc:tEcgi" minOccurs="0"/>
            <xs:element name="SaId" type="mcpttloc:tMbmsSaIdentity" minOccurs="0"/>
            <xs:element name="MbsfnAreaId" type="mcpttloc:tMbsfnAreaIdentity" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:choice>
```

```
<xs:attribute name="type" type="protectionType"/>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tGeographicalAreaChange">
            <xs:element name="AnyAreaChange" type="mcpttloc:tEmptyTypeAttribute" minOccurs="0"/>
            <xs:element name="EnterSpecificAreaType" type="mcpttloc:tSpecificAreaType"</pre>
minOccurs="0"/>
            <xs:element name="ExitSpecificAreaType" type="mcpttloc:tSpecificAreaType"</pre>
minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tSpecificAreaType">
        <xs:sequence>
            <xs:element name="GeographicalArea" type="mcpttloc:tGeographicalAreaDef"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:attribute name="TriggerId" type="xs:string" use="required"/>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tPointCoordinate">
        <xs:sequence>
            <xs:element name="longitude" type="mcpttloc:tCoordinateType"/>
            <xs:element name="latitude" type="mcpttloc:tCoordinateType"/>
<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tCoordinateType">
        <xs:choice minOccurs="1" maxOccurs="1">
            <xs:element name="threebytes" type="mcpttloc:tThreeByteType" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:choice>
        <xs:attribute name="type" type="protectionType"/>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:simpleType name="tThreeByteType">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="0"/>
            <xs:maxInclusive value="16777215"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tGeographicalAreaDef">
            <xs:element name="PolygonArea" type="mcpttloc:tPolygonAreaType" minOccurs="0"/>
            <xs:element name="EllipsoidArcArea" type="mcpttloc:tEllipsoidArcType" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tPolygonAreaType">
        <xs:sequence>
            <xs:element name="Corner" type="mcpttloc:tPointCoordinate" minOccurs="3"</pre>
maxOccurs="15"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tEllipsoidArcType">
        <xs:sequence>
            <xs:element name="Center" type="mcpttloc:tPointCoordinate"/>
            <xs:element name="Radius" type="xs:nonNegativeInteger"/>
            <xs:element name="OffsetAngle" type="xs:unsignedByte"/>
            <xs:element name="IncludedAngle" type="xs:unsignedByte"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
```

## 5.6.4 XML schema for MCVideo location information

```
From TS 24.281 clause F.3.2:
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"</pre>
xmlns:mcvideoloc="urn:3gpp:ns:mcvideoLocationInfo:1.0"
targetNamespace="urn:3gpp:ns:mcvideoLocationInfo:1.0" elementFormDefault="qualified"
attributeFormDefault="unqualified"
xmlns:xenc="http://www.w3.org/2001/04/xmlenc#">
    <xs:import namespace="http://www.w3.org/2001/04/xmlenc#"/>
    <xs:element name="location-info" id="loc">
        <xs:annotation>
            <xs:documentation>Root element, contains all information related to location
configuration, location request and location reporting for the MCVideo service</xs:documentation>
        </xs:annotation>
        <xs:complexType>
                <xs:element name="Configuration" type="mcvideoloc:tConfigurationType"/>
                <xs:element name="Request" type="mcvideoloc:tRequestType"/>
<xs:element name="Report" type="mcvideoloc:tReportType"/>
                 <xs:any namespace="##other" processContents="lax" minOccurs="0"</pre>
maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
            </xs:choice>
            <xs:anyAttribute namespace="##any" processContents="lax"/>
        </xs:complexType>
    </xs:element>
    <xs:complexType name="tConfigurationType">
        <xs:sequence>
            <xs:element name="NonEmergencyLocationInformation"</pre>
type="mcvideoloc:tRequestedLocationType" minOccurs="0"/>
            <xs:element name="EmergencyLocationInformation" type="mcvideoloc:tRequestedLocationType"</pre>
minOccurs="0"/>
            <xs:element name="TriggeringCriteria" type="mcvideoloc:TriggeringCriteriaType"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:attribute name="ConfigScope">
            <xs:simpleType>
                <xs:restriction base="xs:string">
                    <xs:enumeration value="Full"/>
                     <xs:enumeration value="Update"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:attribute>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tRequestType">
        <xs:complexContent>
            <xs:extension base="mcvideoloc:tEmptyType">
                <xs:attribute name="RequestId" type="xs:string" use="required"/>
            </xs:extension>
        </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="tReportType">
            <xs:element name="TriggerId" type="xs:string" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="CurrentLocation" type="mcvideoloc:tCurrentLocationType"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:attribute name="ReportID" type="xs:string" use="optional"/>
        <xs:attribute name="ReportType" use="required">
            <xs:simpleType>
```

```
<xs:restriction base="xs:string">
                    <xs:enumeration value="Emergency"/>
                    <xs:enumeration value="NonEmergency"/>
                </xs:restriction>
            </xs:simpleType>
        </xs:attribute>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="TriggeringCriteriaType">
            <xs:element name="CellChange" type="mcvideoloc:tCellChange" minOccurs="0"/>
            <xs:element name="TrackingAreaChange" type="mcvideoloc:tTrackingAreaChangeType"</pre>
minOccurs="0"/>
            <xs:element name="PlmnChange" type="mcvideoloc:tPlmnChangeType" minOccurs="0"/>
            <xs:element name="MbmsSaChange" type="mcvideoloc:tMbmsSaChangeType" minOccurs="0"/>
            <xs:element name="MbsfnAreaChange" type="mcvideoloc:tMbsfnAreaChangeType"</pre>
minOccurs="0"/>
            <xs:element name="PeriodicReport" type="mcvideoloc:tIntegerAttributeType"</pre>
minOccurs="0"/>
            <xs:element name="TravelledDistance" type="mcvideoloc:tIntegerAttributeType"</pre>
minOccurs="0"/>
            <xs:element name="McvideoSignallingEvent" type="mcvideoloc:tSignallingEventType"</pre>
minOccurs="0"/>
            <xs:element name="GeographicalAreaChange" type="mcvideoloc:tGeographicalAreaChange"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tCellChange">
        <xs:sequence>
            <xs:element name="AnyCellChange" type="mcvideoloc:tEmptyTypeAttribute" minOccurs="0"/>
            <xs:element name="EnterSpecificCell" type="mcvideoloc:tSpecificCellType" minOccurs="0"</pre>
maxOccurs="unbounded"/>
            <xs:element name="ExitSpecificCell" type="mcvideoloc:tSpecificCellType" minOccurs="0"</pre>
maxOccurs="unbounded"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tEmptyType"/>
    <xs:simpleType name="tEcgi">
        <xs:restriction base="xs:string">
           <xs:pattern value="\d{3}\d{3}[0-1]{28}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tSpecificCellType">
        <xs:simpleContent>
            <xs:extension base="mcvideoloc:tEcgi">
                <xs:attribute name="TriggerId" type="xs:string" use="required"/>
            </xs:extension>
        </xs:simpleContent>
    </xs:complexType>
    <xs:complexType name="tEmptyTypeAttribute">
        <xs:complexContent>
            <xs:extension base="mcvideoloc:tEmptyType">
                <xs:attribute name="TriggerId" type="xs:string" use="required"/>
            </xs:extension>
        </xs:complexContent>
    </xs:complexType>
    <xs:complexType name="tTrackingAreaChangeType">
        <xs:sequence>
            <xs:element name="AnyTrackingAreaChange" type="mcvideoloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="EnterSpecificTrackingArea" type="mcvideoloc:tTrackingAreaIdentity"</pre>
minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="ExitSpecificTrackingArea" type="mcvideoloc:tTrackingAreaIdentity"</pre>
minOccurs="0" maxOccurs="unbounded"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:simpleType name="tTrackingAreaIdentityFormat">
        <xs:restriction base="xs:string">
            <xs:pattern value="\d{3}\d{3}[0-1]{16}"/>
        </xs:restriction>
```

```
</xs:simpleType>
    <xs:complexType name="tTrackingAreaIdentity">
        <xs:simpleContent>
            <xs:extension base="mcvideoloc:tTrackingAreaIdentityFormat">
                <xs:attribute name="TriggerId" type="xs:string" use="required"/>
        </xs:simpleContent>
    </xs:complexType>
    <xs:complexType name="tPlmnChangeType">
        <xs:sequence>
           <xs:element name="AnyPlmnChange" type="mcvideoloc:tEmptyTypeAttribute" minOccurs="0"/>
            <xs:element name="EnterSpecificPlmn" type="mcvideoloc:tPlmnIdentity" minOccurs="0"</pre>
maxOccurs="unbounded"/>
            <xs:element name="ExitSpecificPlmn" type="mcvideoloc:tPlmnIdentity" minOccurs="0"</pre>
maxOccurs="unbounded"/>
           <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:simpleType name="tPlmnIdentityFormat">
        <xs:restriction base="xs:string">
            <xs:pattern value="\d{3}\d{3}"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tPlmnIdentity">
        <xs:simpleContent>
            <xs:extension base="mcvideoloc:tPlmnIdentityFormat">
                <xs:attribute name="TriggerId" type="xs:string" use="required"/>
            </rs:extension>
        </xs:simpleContent>
    </xs:complexType>
    <xs:complexType name="tMbmsSaChangeType">
        <xs:sequence>
            <xs:element name="AnyMbmsSaChange" type="mcvideoloc:tEmptyTypeAttribute" minOccurs="0"/>
            <xs:element name="EnterSpecificMbmsSa" type="mcvideoloc:tMbmsSaIdentity" minOccurs="0"/>
            <xs:element name="ExitSpecificMbmsSa" type="mcvideoloc:tMbmsSaIdentity" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:simpleType name="tMbmsSaIdentityFormat">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="0"/>
            <xs:maxInclusive value="65535"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tMbmsSaIdentity">
        <xs:simpleContent>
            <xs:extension base="mcvideoloc:tMbmsSaIdentityFormat">
               <xs:attribute name="TriggerId" type="xs:string" use="required"/>
            </xs:extension>
        </xs:simpleContent>
    </xs:complexType>
    <xs:complexType name="tMbsfnAreaChangeType">
        <xs:sequence>
            <xs:element name="EnterSpecificMbsfnArea" type="mcvideoloc:tMbsfnAreaIdentity"</pre>
minOccurs="0"/>
           <xs:element name="ExitSpecificMbsfnArea" type="mcvideoloc:tMbsfnAreaIdentity"</pre>
minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:simpleType name="tMbsfnAreaIdentityFormat">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="0"/>
            <xs:maxInclusive value="255"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tMbsfnAreaIdentity">
        <xs:simpleContent>
            <xs:extension base="mcvideoloc:tMbsfnAreaIdentityFormat">
                <xs:attribute name="TriggerId" type="xs:string" use="required"/>
            </xs:extension>
        </xs:simpleContent>
```

```
</xs:complexType>
    <xs:complexType name="tIntegerAttributeType">
        <xs:simpleContent>
            <xs:extension base="xs:integer">
                <xs:attribute name="TriggerId" type="xs:string" use="required"/>
            </xs:extension>
        </xs:simpleContent>
    </xs:complexType>
    <xs:complexType name="tTravelledDistanceType">
        <xs:sequence>
            <xs:element name="TravelledDistance" type="xs:positiveInteger"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tSignallingEventType">
        <xs:sequence>
            <xs:element name="InitialLogOn" type="mcvideoloc:tEmptyTypeAttribute" minOccurs="0"/>
            <xs:element name="GroupCallNonEmergency" type="mcvideoloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="PrivateCallNonEmergency" type="mcvideoloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="LocationConfigurationReceived" type="mcvideoloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type=" mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tEmergencyEventType">
        <xs:sequence>
            <xs:element name="GroupCallEmergency" type="mcvideoloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="GroupCallImminentPeril" type="mcvideoloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="PrivateCallEmergency" type="mcvideoloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="InitiateEmergencyAlert" type="mcvideoloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tRequestedLocationType">
        <xs:sequence>
            <xs:element name="ServingEcgi" type="mcvideoloc:tEmptyType" minOccurs="0"/>
            <xs:element name="NeighbouringEcgi" type="mcvideoloc:tEmptyType" minOccurs="0"</pre>
maxOccurs="unbounded"/>
            <xs:element name="MbmsSaId" type="mcvideoloc:tEmptyType" minOccurs="0"/>
            <xs:element name="MbsfnArea" type="mcvideoloc:tEmptyType" minOccurs="0"/>
            <xs:element name="GeographicalCordinate" type="mcvideoloc:tEmptyType" minOccurs="0"/>
<xs:element name="minimumIntervalLength" type="xs:positiveInteger"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tCurrentLocationType">
            <xs:element name="CurrentServingEcgi" type="mcvideoloc:tLocationType" minOccurs="0"/>
            <xs:element name="NeighbouringEcgi" type="mcvideoloc:tLocationType" minOccurs="0"</pre>
maxOccurs="unbounded"/>
            <xs:element name="MbmsSaId" type="mcvideoloc:tLocationType" minOccurs="0"/>
            <xs:element name="MbsfnArea" type="mcvideoloc:tLocationType" minOccurs="0"/>
            <xs:element name="CurrentCoordinate" type="mcvideoloc:tPointCoordinate" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:simpleType name="protectionType">
        <xs:restriction base="xs:string">
            <xs:enumeration value="Normal"/>
            <xs:enumeration value="Encrypted"/>
```

```
</xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tLocationType">
        <xs:choice minOccurs="1" maxOccurs="1">
            <xs:element name="Ecgi" type="mcvideoloc:tEcgi" minOccurs="0"/>
            <xs:element name="SaId" type="mcvideoloc:tMbmsSaIdentity" minOccurs="0"/>
            <xs:element name="MbsfnAreaId" type="mcvideoloc:tMbsfnAreaIdentity" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax"/>
            <xs:element name="anyExt" type="mcvideoinfo:anyExtType" minOccurs="0"/>
        </xs:choice>
        <xs:attribute name="type" type="protectionType"/>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    <xs:complexType name="tGeographicalAreaChange">
        <xs:sequence>
            <xs:element name="AnyAreaChange" type="mcvideoloc:tEmptyTypeAttribute" minOccurs="0"/>
            <xs:element name="EnterSpecificAreaType" type="mcvideoloc:tSpecificAreaType"</pre>
minOccurs="0"/>
            <xs:element name="ExitSpecificAreaType" type="mcvideoloc:tSpecificAreaType"</pre>
minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tSpecificAreaType">
        <xs:sequence>
            <xs:element name="GeographicalArea" type="mcvideoloc:tGeographicalAreaDef"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
<xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:attribute name="TriggerId" type="xs:string" use="required"/>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tPointCoordinate">
        <xs:sequence>
            <xs:element name="longitude" type="mcvideoloc:tCoordinate"/>
            <xs:element name="latitude" type="mcvideoloc:tCoordinate"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tCoordinateType">
        <xs:choice minOccurs="1" maxOccurs="1">
            <xs:element name="threebytes" type="mcvideoloc:tThreeByteType" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax"/>
            <xs:element name="anyExt" type="mcvideoinfo:anyExtType" minOccurs="0"/>
        </xs:choice>
        <xs:attribute name="type" type="protectionType"/>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:simpleType name="tThreeByteType">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="0"/>
            <xs:maxInclusive value="16777215"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tGeographicalAreaDef">
        <xs:sequence>
            <xs:element name="PolygonArea" type="mcvideoloc:tPolygonAreaType" minOccurs="0"/>
            <xs:element name="EllipsoidArcArea" type="mcvideoloc:tEllipsoidArcType" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tPolygonAreaType">
        <xs:sequence>
            <xs:element name="Corner" type="mcvideoloc:tPointCoordinate" minOccurs="3"</pre>
maxOccurs="15"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
```

```
</xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tEllipsoidArcType">
        <xs:sequence>
            <xs:element name="Center" type="mcvideoloc:tPointCoordinate"/>
             <xs:element name="Radius" type="xs:nonNegativeInteger"/>
            <xs:element name="OffsetAngle" type="xs:unsignedByte"/>
             <xs:element name="IncludedAngle" type="xs:unsignedByte"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
<xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="anyExtType">
        <xs:sequence>
             <xs:any namespace="##any" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
        </xs:sequence>
    </xs:complexType>
</xs:schema>
```

## Annex A (informative): Change history

						Change history	
Date	Meeting	TDoc	CR	R ev	Cat	Subject/Comment	New version
2017-02	R5#74	R5-171298	-	-	-	Introduction of TS 36.579-1.	0.0.1
2017-05	R5#75	R5-172100	-	-	-	Introduction of default message content for some media control messages, some generic procedures from R5-172078 Default MCPTT media plane control messages R5-172079 Generic MCPTT procedures	0.0.2
2017-06	RAN5#75	-	_	† <u>-</u>	-	lifted to v0.1.0 because of technical contents	0.1.0
2017-08	RAN5#76	- R5-173766	-	-	-	Implemented approved: 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 Offnetwork 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	0.1.0
2017-12	RAN5#77	R5-176835	-	-	-	Defaults' Implemented approved: 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	0.3.0
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: 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"	1.1.0
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	_	1_	+-	_	the RAN Plenary Editorial changes and promoted to v13.0.0	13.0.0
2018-06	RAN#79	R5-182418	0001	<del>  -</del>	F	Addition and correction of GNSS information	13.1.0
2018-06	RAN#80	R5-182419	0001	<del> </del>	F	Editorial correction of typos and incorrect references	13.1.0
2018-06	RAN#80	R5-182430	0003	<u> I-</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	RAN#80	R5-182489	8000	-	F	Update of MCPTT TC 6.1.1.1	13.1.0
2018-06	RAN#80	R5-182510	0009	1	F	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
2018-06 2018-06	RAN#80 RAN#80	R5-183167 R5-183168	0006 0007	1	F	Updates of TC 6.3.1 Updates of TC 6.3.2	13.1.0 13.1.0
2018-09	RAN#81	R5-185084	0007	-	F	Update to TLS setup	13.1.0
2018-09	RAN#81	R5-185122	0003	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 Call Call-Back and Ambient listening call	14.0.0
2018-12	RAN#82	R5-186878	0010	-	F	Correction to Generic Test Procedure for MCPTT pre-established	14.1.0
2018-12	RAN#82	R5-186879	0011	<del> </del>	F	session establishment CO Editorial update of the default SDP and Resource-list Messages	14.1.0
2010-12	RAN#82	R5-186880	0011	<del> -</del>	F	Update of default MCPTT media plane control messages and other	14.1.0
2018-12	10 11 11102	1.0 100000	0012			information elements to reflect latest Rel-13 core specs	1 1 .0
2018-12	RAN#82	R5-186881	0013	-	F	Update of XML schema for MCPTT location information to reflect	14.1.0
	RAN#82 RAN#82	R5-186881 R5-187709	0013	1	F F		14.1.0 14.1.0

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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	R5-187713	0018	1	F	Correction to Table 5.5.4.10.1-1 in 36.579-1	14.1.0
2018-12	RAN#82	R5-187714	0019	1	F	Correction to Table 5.5.4.2-1 in 36.579-1	14.1.0
2018-12	RAN#82	R5-187715	0020	1	F	Correction to SIP NOTIFY message in 36.579-1	14.1.0
2018-12	RAN#82	R5-187716	0021	1	F	Correction to SIP SUBSCRIBE message in 36.579-1 Update of Generic Test 5.3.2 in 36.579-1	14.1.0
2018-12 2019-03	RAN#82	R5-187717	0022	1	F		14.1.0
2019-03	RAN#83 RAN#83	R5-191210 R5-191902	0023	+	F	Correction of default contents in SIP INVITE from the UE Update to MCPTT floor control default messages	14.2.0
		R5-191902 R5-192155		-	F		1
2019-03 2019-03	RAN#83 RAN#83	R5-192155	0025 0026	-	F	Update 36.579-1 Section 4.2 and 4.3 Update 36.579-1 Delete clauses inside the present spec	14.2.0
2019-03	RAN#83	R5-192157	0020	+	F	Update 36.579-1 Blue text removal	14.2.0
2019-03	RAN#84	R5-192137	0027	E	F	Correction of default contents in the SIP INVITE from the UE	14.2.0
2019-06	RAN#84	R5-194665	0030	1	F	Typo for MCPTT in 36.579-1	14.3.0
2019-06	RAN#84	R5-195216	0030	1	F	Update of UE registration procedure for location info configuration	14.3.0
2019-06	RAN#84	R5-195217	0023	1	F	References and derivation path updates for SIP messages	14.3.0
2019-09	RAN#85	R5-196773	0045	<del> </del>	F	Updates to conditions Table 5.5.1-1	14.4.0
2019-09	RAN#85	R5-196983	0046	† <u>-</u>	F	Correction of SIP messages	14.4.0
2019-09	RAN#85	R5-197133	0044	1	F	Update for MCVideo and MCData services	14.4.0
2019-09	RAN#85	R5-197229	0038	1	F	Correction of default contents in the SIP REGISTER	14.4.0
2019-09	RAN#85	R5-197293	0043	2	F	Update to Generic Procedure 5.3.3	14.4.0
2019-09	RAN#85	R5-197294	0047	1-	F	Correction and addition of references or values and editorial	14.4.0
			<u>L</u>	1	<u>L</u>	comments	
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		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
221212	D 441//00	5- (000)		ļ.	_	configuration management	
2019-12	RAN#86	R5-199048	0055	1	F	Correction of default SDP message and other information elements	14.5.0
2019-12	RAN#86	R5-199051	0056	1	F	SDP Default for MCVideo and MCData	14.5.0
2019-12	RAN#86	R5-199052	0058	1	F	Adding MCVideo Transmission Control Messages	14.5.0
2019-12 2019-12	RAN#86	R5-199053	0060 0048	2	F	Updates TS 33.179 references to TS 33.180	14.5.0 14.5.0
	RAN#86	R5-199077	0048		F	Correction to default SIP messages  Corrections to default SIP message and other information elements	
2020-03 2020-03	RAN#87 RAN#87	R5-200264 R5-200265	0064	-	F	Addition of further references	14.6.0 14.6.0
2020-03	RAN#87	R5-200203	0065	Ε.	F	Corrections to default HTTP message and other information	14.6.0
2020-03	IXAIN#01	13-200301	0003	-	l'	elements	14.0.0
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
2020-06	RAN#88	R5-202552	0069	1	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	14.7.0
2020-06	RAN#88	R5-202699	0076	1	F	Default MCVideo Transmission Control Messages	14.7.0
2020-06	RAN#88	R5-203001	0077	1	F	SIP 202 (Accepted) message default	14.7.0
2020-06	RAN#88	R5-203073	0067	1	F	Updates to MCX generic test procedures and default message	14.7.0
						contents	
2020-06	RAN#88	R5-203074	0068	1	F	Updates to generic test procedure for MCPTT	14.7.0
0000 00	DANI"SS	DE 00 1000	0000	<u> </u>	<u> </u>	Authorization/Configuration and Key Generation	4465
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
				-		contents	
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		F	PIDF body modifications	14.9.0
	RAN#90	R5-206084	0096		F	Condition updates for default MCS configuration management	14.9.0
2020-12	10 11 11/100	1		L		messages	
2020-12	10 (14///00				F	Update of MCPTT Floor Control Messages for Rel-14	14.9.0
2020-12	RAN#90	R5-206108	0097	<u></u>			
		R5-206108 R5-206445	0097 0087	1	F	Correction to Generic Test Procedure for MCPTT pre-established	14.9.0
2020-12 2020-12	RAN#90 RAN#90	R5-206445	0087		F	Correction to Generic Test Procedure for MCPTT pre-established session establishment CO	14.9.0
2020-12	RAN#90			1		Correction to Generic Test Procedure for MCPTT pre-established session establishment CO Correction to MCPTT Common Procedures for CT/CO session	
2020-12 2020-12 2020-12	RAN#90 RAN#90 RAN#90	R5-206445 R5-206446	0087	1	F F	Correction to Generic Test Procedure for MCPTT pre-established session establishment CO Correction to MCPTT Common Procedures for CT/CO session establishment	14.9.0 14.9.0
2020-12 2020-12	RAN#90 RAN#90	R5-206445	0087		F	Correction to Generic Test Procedure for MCPTT pre-established session establishment CO Correction to MCPTT Common Procedures for CT/CO session	14.9.0

2020-12	RAN#90	R5-206449	0091	1	F	Updates for Group Communications Key retrieval	14.9.0
	RAN#90	R5-206450	0093	1	F	Second group configuration retrieval process modification	14.9.0
	RAN#90	R5-206451	0095	1	F	Existing Generic Test Procedures Updates	14.9.0
	RAN#90	R5-206422	0098	1	F	Update of MCPTT Floor Control Messages for Rel-15	15.0.0
	RAN#90	R5-206423	0099	1	F	MCPTT Configuration Doc Update for Rel-15 Location	15.0.0
	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
	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
	RAN#91	R5-210220	0116	-	F	Update to Default Message Content SUBSCRIBE	15.1.0
	RAN#91	R5-210221	0117	<b> -</b>	F	Update to the MCS GKTP document	15.1.0
	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
	RAN#91	R5-211354	0121	1	F	Update of References in 36.579-1	15.1.0
	RAN#91	R5-211517	0100	1	F	Addition of a generic procedure for MCPTT radio bearer	15.1.0
						establishment for use of pre-established session	
2021-03	RAN#91	R5-211518	0102	1	F	Correction to generic test procedure for MCPTT pre-established 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
	RAN#91	R5-211520	0119	1	F.	MCPTT Info Corrections	15.1.0
	RAN#92	R5-212145	0123	<u> -</u>	F	Removal of redundant references to TS 36.579-1	15.2.0
	RAN#92	R5-212146	0124	-	F	Addition of SIP 487 default message and update of User Profile for	15.2.0
			0.2.			first-to-call and request remotely initiated call	
2021-06	RAN#92	R5-212288	0128	-	F	Correction to generic test procedure 5.3.13	15.2.0
	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
	RAN#92	R5-212291	0131	-	F	Correction to generic test procedure 5.3.22	15.2.0
	RAN#92	R5-212293	0133	-	F	Correction to generic test procedure 5.3.5	15.2.0
	RAN#92	R5-212294	0134	-	F	Correction to Resource List message content	15.2.0
	RAN#92	R5-212295	0135	-	F	Correction to SDP message content	15.2.0
	RAN#92	R5-212298	0138	-	F	Update to Default Message Content - Connect	15.2.0
	RAN#92	R5-212299	0139	-	F	Update to Default Message Content - INVITE	15.2.0
	RAN#92	R5-212301	0141	-	F	Update to Default Message Content - SIP MESSAGE	15.2.0
	RAN#92	R5-212302	0142	-	F	Update to Default Message Content - SIP PUBLISH	15.2.0
	RAN#92	R5-212303	0143	-	F	Update to Default Message Content SIP 4xx	15.2.0
		R5-212304	0144	-	F	Update to general conditions	15.2.0
	RAN#92	R5-212305	0145	-	F	Update to references clause	15.2.0
	RAN#92	R5-212354	0146	-	F	Correction to default message content Location-Info	15.2.0
	RAN#92	R5-212665	0148	-	F	Additions to MCPTT Group Configuration	15.2.0
	RAN#92	R5-213265	0151	-	F	Additions to MCPTT Floor Control Defaults 5.5.6	15.2.0
	RAN#92	R5-213266	0152	-	F	Additions to MCPTT Group Configuration Defaults 5.5.7	15.2.0
	RAN#92	R5-213267	0153	-	F	Update of MCVideo Transmission Control Default Messages 5.5.11	15.2.0
	RAN#92	R5-213588	0149	1	F	Addition of Functional Alias Generic Procedures	15.2.0
	RAN#92	R5-213589	0150	1	F	Addition of Functional Alias to MCPTT Config Documents 5.5.8	15.2.0
2021-06	RAN#92	R5-213653	0126	1	F	Correction to Default Message content HTTP POST, PUT and DELETE	15.2.0
		R5-213654	0127	1	F	Correction to default message content MCPTT-Info	15.2.0
	RAN#92			<u> </u>			
2021-06	RAN#92	R5-213655	0132	1	F	Correction to generic test procedure 5.3.3	15.2.0
2021-06					F F	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

## History

	Document history							
V15.0.0	January 2021	Publication						
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