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Contents

Intelle	ectual Property Rights	2
Legal	Notice	2
Moda	al verbs terminology	2
Forev	vord	10
1	Scope	11
2	References	11
3	Definitions, symbols and abbreviations	15
3.1	Definitions	15
3.2	Symbols	16
3.3	Abbreviations	
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		
5.3.2B	Generic Test Procedure for MCData Authorization/Configuration and Key Generation	
5.3.3 5.3.3 <i>A</i>	•	
3.3.3 <i>P</i> 5.3.4	Generic Test Procedure for MCVIdeo pre-established session establishment/modification without provisional	42
3.3.4	responses other than 100 Trying	42
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	
3.3.7	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		
5.3.12		
5.3.13		
5.3.14		
5.3.15		
5.3.16	Generic Test Procedure for MCPTT Floor Request – Floor Granted	54
5.3.17	Generic Test Procedure for MCPTT Floor Request – Floor Queue Position Info	54
5.3.18	Generic Test Procedure for MCPTT Queuing Position Request	55
5.3.19		
5.3.20	Generic Test Procedure for MCPTT Floor Release – Floor Idle	56

F 2 21	Consideration of the Modern Class Polymer Transfer	
5.3.21	Generic Test Procedure for MCPTT Floor Release – Floor Taken	
5.3.22	Generic Test Procedure for NW initiated temporary group creation	57
5.3.23	Generic Test Procedure for MCPTT CT Call establishment automatic commencement using a pre- established session	60
5.4	Generic test procedures for UE operation over EUTRA/EPS	61
5.4.1	General	
5.4.1A	UE APN/PDN support assumptions	
5.4.2	Generic Test Procedure for MCPTT UE registration	
5.4.2A	Generic Test Procedure for MCVideo UE registration	
5.4.2B	Generic Test Procedure for MCData UE registration	
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	
5.4.4 b 5.4.5	Generic Test Procedure for MCData C1 Communication in E-01RA	1 2
5.4.5	communication out of E-UTRA coverage-establishment	72
5.4.6	Generic Test Procedure for MCPTT CT communication over ProSe direct one-to-one	1 2
5.4.0		75
5 4 T	communication out of E-UTRA coverage-establishment	/5
5.4.7	Generic Test Procedure for MCPTT communication over ProSe direct one-to-one communication	=0
. 0	out of E-UTRA coverage - release by the SS	78
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	
5.4.9	Generic Test Procedure for MCPTT communication in E-UTRA / Change of cells	80
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	82
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	85
5.4.12	Generic Test Procedure for MCPTT communication over MBMS	87
5.4.13	Generic Test Procedure for MCPTT radio bearer establishment for use of pre-established session	88
5.5	Default message and other information elements content	89
5.5.1	General	89
5.5.2	Default SIP message and other information elements	
5.5.2.1	SIP ACK	
5.5.2.1.1	SIP ACK from the UE	
5.5.2.1.2	SIP ACK from the SS	
5.5.2.2	SIP BYE	
5.5.2.2.1	SIP BYE from the UE	
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	
5.5.2.5.1	SIP INVITE from the SS	
5.5.2.6	Void	-
5.5.2.7	SIP MESSAGE	
5.5.2.7.1	SIP MESSAGE from the UE	
5.5.2.7.2	SIP MESSAGE from the SS	
5.5.2.8	SIP NOTIFY	
5.5.2.9	SIP OPTIONS	
5.5.2.10	SIP PRACK	
5.5.2.10.1	SIP PRACK from the UE	
5.5.2.10.2	SIP PRACK from the SS	
5.5.2.11	SIP PUBLISH	134
5.5.2.12	SIP REFER	138
5.5.2.13	SIP REGISTER	146
5.5.2.14	SIP SUBSCRIBE	152
5.5.2.15	SIP UPDATE	
5 5 2 15 1	SID LIDDATE from the LIE	158

5.5.2.15.2	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)	174
5.5.2.17.2	SIP 202 (Accepted)	181
5.5.2.18	SIP 3xx	181
5.5.2.18.1	SIP 302 (Moved Temporarily)	181
5.5.2.19	SIP 4xx	182
5.5.2.19.1	SIP 403 (Forbidden)	182
5.5.2.19.2	SIP 404 (Not Found)	
5.5.2.19.3	SIP 423 (Interval Too Brief)	
5.5.2.19.4	SIP 480 (Temporarily unavailable)	
5.5.2.19.5	SIP 486 (Busy Here)	
5.5.2.19.6	SIP 488 (Not Acceptable Here)	
5.5.2.19.7	SIP 401 (Unauthorized)	
5.5.2.20	SIP 5xx	
5.5.2.20.1	SIP 500 (Server Internal Error)	
5.5.2.21	SIP 6xx	
5.5.2.21.1	SIP 606 (Not Acceptable)	
5.5.3	Default SDP message and other information elements	
5.5.3.1	SDP Message	
5.5.3.1.1		
3.3.3.1.1	SDP Message from the UE	
-		
-	MCVideo	
-	MCData	
5.5.3.1.2	SDP Message from the SS	
-	MCPTT	
-	MCVideo	
-	MCData	
5.5.3.1.3	SDP Message from the UE - Off-network	
-	MCPTT	
-	MCVideo	
-	MCData	
5.5.3.1.4	SDP Message from the SS - Off-network	
-	MCPTT	
-	MCVideo	
-	MCData	
5.5.3.2	MCS Info Lists	
5.5.3.2.1	MCS Info Lists from the UE	228
-	MCPTT	
-	MCVideo	232
_	MCData	235
5.5.3.2.2	MCPTT-Info from the SS	236
_	MCPTT	236
_	MCVideo	237
_	MCData	239
5.5.3.3	Resource-lists	
5.5.3.3.1	Resource-lists from the UE	
-	MCPTT	
_	MCVideo	
_	MCData	
5.5.3.3.2	Resource-lists from the SS	
	MCPTT	
_	MCVideo	
-	MCData	
- 5.5.3.4	Location-info	
5.5.3.4.1	Location-info (Report from the UE)	
-	MCVideo	245
_	IVIL V10PO	77/15

5.5.3.4.2	Location-info (Configuration sent by the SS)	250
-	MCPTT	250
-	MCVideo	253
5.5.3.4.3	Location-info (Request sent by the SS)	255
-	MCPTT	255
-	MCVideo	
5.5.3.5	PIDF	256
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	
	SIGNALLING PAYLOAD FROM THE UE	
	SIGNALLING PAYLOAD FROM THE SSSIGNALLING PAYLOAD USING THE MEDIA PLANE FROM THE UE	
	SIGNALLING PAYLOAD USING THE MEDIA PLANE FROM THE UESIGNALLING PAYLOAD USING THE MEDIA PLANE FROM THE SS	
5.5.3.14 FD		
	MCS group key transport payloads (GKTP) document	
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	304
5.5.5.2	GROUP CALL ANNOUNCEMENT	
5.5.5.2.1	GROUP CALL ANNOUNCEMENT from the UE	
5.5.5.2.2	GROUP CALL ANNOUNCEMENT from the SS	
5.5.5.3	GROUP CALL ACCEPT	307

5.5.5.3.1	GROUP CALL ACCEPT from the UE	207
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	309
5.5.5.6	GROUP CALL BROADCAST	
5.5.5.6.1	GROUP CALL BROADCAST from the UE	310
5.5.5.6.2	GROUP CALL BROADCAST from the SS	310
5.5.5.7	GROUP CALL BROADCAST END	
5.5.5.7.1	GROUP CALL BROADCAST END from the UE	
5.5.5.7.2	GROUP CALL BROADCAST END from the SS	
5.5.5.8	PRIVATE CALL SETUP REQUEST	
5.5.5.8.1	PRIVATE CALL SETUP REQUEST from the UE	
5.5.5.8.2	PRIVATE CALL SETUP REQUEST from the SS	
5.5.5.9	PRIVATE CALL RINGING	
5.5.5.10	PRIVATE CALL ACCEPT	
5.5.5.11	PRIVATE CALL REJECT	
5.5.5.11.1	PRIVATE CALL REJECT from the UE	
5.5.5.11.2	PRIVATE CALL REJECT from the SS	
5.5.5.12	PRIVATE CALL RELEASE	
5.5.5.13	PRIVATE CALL RELEASE ACK	
5.5.5.14	PRIVATE CALL ACCEPT ACK	
5.5.5.15	PRIVATE CALL EMERGENCY CANCEL	
5.5.5.15.1	PRIVATE CALL EMERGENCY CANCEL from the UE	
5.5.5.15.2	PRIVATE CALL EMERGENCY CANCEL from the SS	
5.5.5.16	PRIVATE CALL EMERGENCY CANCEL ACK	
5.5.5.16.1	PRIVATE CALL EMERGENCY CANCEL ACK from the UE	
5.5.5.16.2	PRIVATE CALL EMERGENCY CANCEL ACK from the SS	
5.5.5.17	GROUP EMERGENCY ALERT	
5.5.5.17.1	GROUP EMERGENCY ALERT from the UE	
5.5.5.17.2	GROUP EMERGENCY ALERT from the SS	
5.5.5.18	GROUP EMERGENCY ALERT ACK	316
5.5.5.18.1	GROUP EMERGENC ALERT ACK from the UE	
5.5.5.18.2	GROUP EMERGENC ALERT ACK from the SS	316
5.5.5.19	GROUP EMERGENCY ALERT CANCEL	316
5.5.5.19.1	GROUP EMERGENCY ALERT CANCEL from the UE	316
5.5.5.19.2	GROUP EMERGENCY ALERT CANCEL from the SS	316
5.5.5.20	GROUP EMERGENCY ALERT CANCEL ACK	316
5.5.5.20.1	GROUP EMERGENCY ALERT CANCEL ACK from the UE	316
5.5.5.20.2	GROUP EMERGENCY ALERT CANCEL ACK from the SS	
5.5.6	Default MCPTT media plane control messages and other information elements	
5.5.6.1	General	
5.5.6.2	Floor Request	
5.5.6.3	Floor Granted	
5.5.6.4	Floor Deny	
5.5.6.5	Floor Release	
5.5.6.6	Floor Idle	
	Floor Taken	
5.5.6.7		
5.5.6.8 5.5.6.0	Floor Revoke	
5.5.6.9	Floor Queue Position Request	
5.5.6.10	Floor Queue Position Info	
5.5.6.11	Floor Ack	
5.5.6.12	Connect	
5.5.6.13	Disconnect	
5.5.6.14	Acknowledge	
5.5.6.15	Map Group To Bearer	
5.5.6.16	Unmap Group To Bearer	
5.5.6.17	Application Paging	
5 5 6 18	Regrar Announcement	330

5.5.7	Default MCPTT group management messages and other information elements	339
5.5.7.1	MCPTT Group Configuration	339
5.5.7.2	MCVideo Group Configuration	343
5.5.7.3	MCDATA Group Configuration	
5.5.8	Default MCS configuration management messages and other information elements	358
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	
2.2.11.3	transmission control participant	480
5.5.11.3.1	Transmission End Request	
5.5.11.3.2	Transmission End Response	
5.5.11.3.3	Media Reception End Request	
5.5.11.3.4	Media Reception End Response	
5.5.11.3.5	Transmission Control Ack	
5.5.12	MSRP Messages for MCData	

5.5.12.1	MSRP SEND	487
5.5.12.1.1	MSRP SEND from the UE	487
-	MSRP SEND from the UE with No Chunking Used	487
-	Empty MSRP SEND from the UE for Binding	489
-	MSRP SEND from the UE with Chunking Used	490
-	MSRP SEND from the UE with Chunking Used – Last Chunk	493
5.5.12.1.2	MSRP SEND from the SS	496
-	MSRP SEND from the SS	496
-	Empty MSRP SEND from the SS for Binding	497
5.5.12.2	MSRP 200 (OK)	
5.5.12.2.1	MSRP 200 (OK) from the UE	497
5.5.12.2.2	MSRP 200 (OK) from the SS	498
5.5.13	Default XML messages and elements for XML security	499
5.5.13.1	XML signature for integrity protection of MIME bodies	499
5.5.13.2	XML <encrypteddata> element for encryption of XML element content</encrypteddata>	501
5.6	Reference configurations	502
5.6.1	General	502
5.6.2	Key material for provisioning of End-to-end communication security	502
5.6.3	XML schema for MCPTT location information	504
5.6.4	XML schema for MCVideo location information	509
Annex A	(informative): Change history	515
History		519

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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)".

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

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

[67]	3GPP TS 33.303: "Proximity-based Services (ProSe); Security aspects".
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[69]	3GPP TS 23.003: "Numbering, addressing and identification".
[70]	3GPP TS 33.310: "Network Domain Security (NDS); Authentication Framework (AF)".
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[72]	IETF RFC 2617: "HTTP Authentication: Basic and Digest Access Authentication".
[73]	3GPP TS 31.102: "Characteristics of the Universal Subscriber Identity Module (USIM) application".
[74]	3GPP TS 36.523-3: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification; Part 3: Abstract Test Suites (ATS)".
[75]	3GPP TS 36.523-2: "User Equipment (UE) conformance specification; Part 2: Implementation Conformance Statement (ICS) proforma specification".
[76]	IETF RFC 3550: "RTP: A Transport Protocol for Real-Time Applications".
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[78]	3GPP TS 24.334: "Proximity-services (ProSe) User Equipment (UE) to ProSe function protocol aspects; Stage 3".
[79]	3GPP TS 31.101: "UICC-terminal interface; Physical and logical characteristics.
[80]	3GPP TS 31.103: "Characteristics of the IP Multimedia Services Identity Module (ISIM) application".
[81]	IETF RFC 6809 (November 2012): "Mechanism to Indicate Support of Features and Capabilities in the Session Initiation Protocol (SIP)".
[82]	IETF RFC 7462 (March 2015): "URNs for the Alert-Info Header Field of the Session Initiation Protocol (SIP)".
[83]	IETF RFC 4826 (May 2007): " Extensible Markup Language (XML) Formats for Representing Resource Lists".
[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".
[93]	3GPP TS 22.282: "Mission Critical Data over LTE".

[94]	3GPP TS 33.180: "Security of the mission critical service".
[95]	OpenID Connect 1.0: "OpenID Connect Core 1.0 incorporating errata set 1", http://openid.net/specs/openid-connect-core-1-0.html .
[96]	IETF RFC 3310: "Hypertext Transfer Protocol (HTTP) Digest Authentication Using Authentication and Key Agreement (AKA)".
[97]	IETF RFC 3262: "Reliability of Provisional Responses in the Session Initiation Protocol (SIP)".
[98]	IETF RFC 6507: "Elliptic Curve-Based Certificateless Signatures for Identity-Based Encryption (ECCSI)".
[99]	IETF RFC 6508: "Sakai-Kasahara Key Encryption (SAKKE)".
[100]	IETF RFC 7636: "Proof Key for Code Exchange by OAuth Public Clients".
[101]	IETF RFC 7519: "JSON Web Token (JWT)".
[102]	IETF RFC 7515: "JSON Web Signature (JWS)".
[103]	IETF RFC 4354 "A Session Initiation Protocol (SIP) Event Package and Data Format for Various Settings in Support for the Push-to-Talk over Cellular (PoC) Service"
[104]	IETF RFC 6750 "The OAuth 2.0 Authorization Framework: Bearer Token Usage"
[105]	HTML 4.01 Specification: https://www.w3.org/TR/html401/ .
[106]	IETF RFC 4122: "A Universally Unique IDentifier (UUID) URN Namespace".
[107]	IETF RFC 5874: "An Extensible Markup Language (XML) Document Format for Indicating a Change in XML Configuration Access Protocol (XCAP) Resources".
[108]	W3C: "XML Encryption Syntax and Processing Version 1.1", https://www.w3.org/TR/xmlenc-core1/ .
[109]	IETF RFC 5322: "Internet Message Format".
[110]	3GPP TS 22.280: "Common functional architecture to support mission critical services; Stage 2".
[111]	IETF RFC 2854: "The 'text/html' Media Type".
[112]	IETF RFC 7303: "XML Media Types".
[113]	IETF RFC 3556: "Session Description Protocol (SDP) Bandwidth Modifiers for RTP Control Protocol (RTCP) Bandwidth".
[114]	IETF RFC 3863 (August 2004): "Presence Information Data Format (PIDF)".
[115]	IETF RFC 5245: "Interactive Connectivity Establishment (ICE): A Protocol for Network Address Translator (NAT) Traversal for Offer/Answer Protocols"
[116]	IETF RFC 5576: "Source-Specific Media Attributes in the Session Description Protocol (SDP)"

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 IDentity MCPTT group ID **MEA** MCPTT Emergency Alert **MEG** MCPTT Emergency Group MCPTT Emergency Group Call **MEGC** MCPTT Emergency Private Call **MEPC MEPP** MCPTT Emergency Private Priority **MES** MCPTT Emergency State **MIME** Multipurpose Internet Mail Extensions MIG MCPTT Imminent peril Group MCPTT Imminent peril Group Call MIGC **MONP** MCPTT Off-Network Protocol **MPEA** MCPTT Private Emergency Alert Network Address Translation NAT QoS Class Identifier QCI Real-time Transport Protocol **RTP** Service Area Identifier SAI Session Description Protocol **SDP** SIP Session Initiation Protocol SS System Simulator Synchronization SouRCe **SSRC** Temporary MCPTT Group Identity TGI **TMGI** Temporary Mobile Group Identity TP **Transmission Point**

Uniform Resource Identifier

4 General

URI

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.

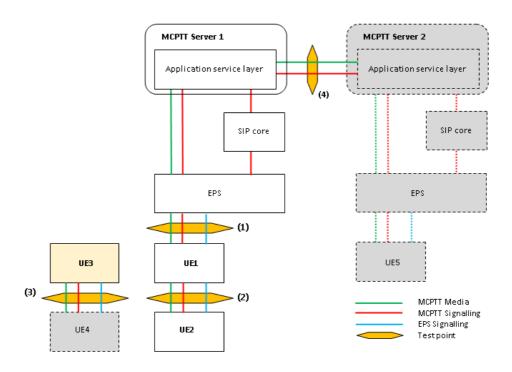


Figure 4.1.1: MCPTT Conformance testing test points model

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].

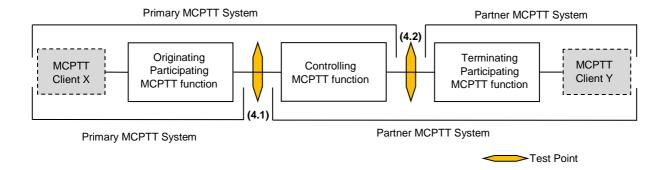


Figure 4.1.2: MCPTT Conformance testing Client-to-Client test points model

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)).

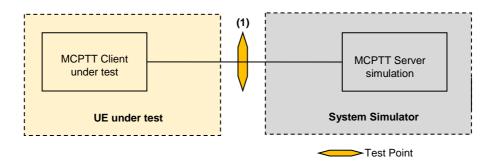


Figure 4.2.1: Testing the MCPTT Client (on-network)

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.

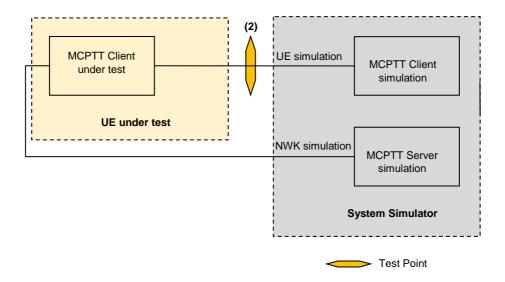


Figure 4.2.2: Testing the MCPTT Client (on-network) Relay side

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.

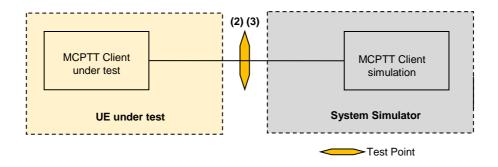


Figure 4.2.3: Testing the MCPTT Client (off-network)

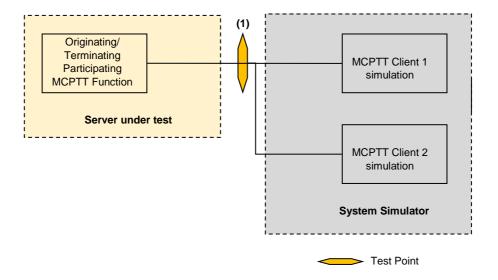


Figure 4.2.4: Testing the MCPTT Server (server-to-client)

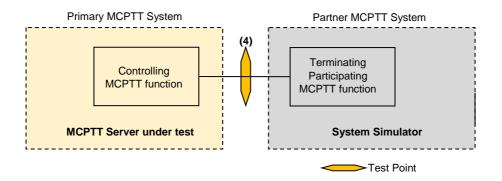


Figure 4.2.5: Testing the MCPTT Server (server-to-server), Controlling function

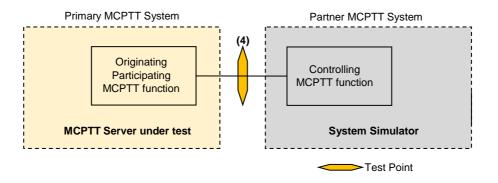


Figure 4.2.6: Testing the MCPTT Server (server-to-server), Originating function

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.

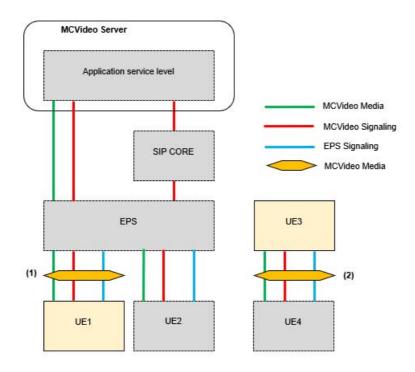


Figure 4.5.1: MCVideo Conformance testing test points model

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)).

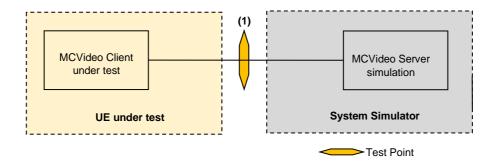


Figure 4.6.1: Testing the MCVideo Client (on-network)

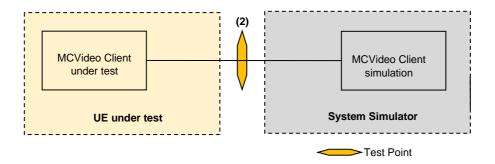


Figure 4.6.2: Testing the MCVideo Client (off-network)

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.

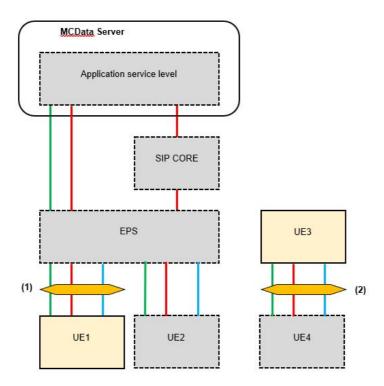


Figure 4.8.1: MCData Conformance testing test points model

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)).

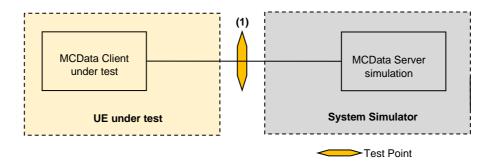


Figure 4.9.1: Testing the MCData Client (on-network)

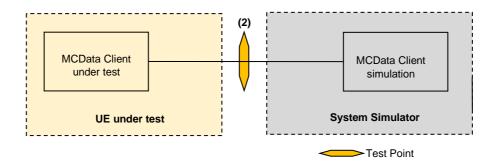


Figure 4.9.2: Testing the MCData Client (off-network)

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	St Procedure		Message Sequence	TP	Verdict
		U - S	Message	Ī	
1	Void	-	-	-	-
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
<u> </u>	Authentication Request using HTTP GET.		LUTTO DOCT (1)	ļ	
3b1	The UE (MCPTT client) sends an OpenID Connect	>	HTTP POST (Authorization)	-	Р
	Authentication Request using HTTP POST.		LUTTO COO (C) C	ļ	
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				
	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		P
9	message to the SS (OIDC Token Request message),	,	11111 1 001	-	'
	passing the authorization code obtained in step 7.				
10	The SS sends a HTTP 200 (OK) providing id_token,	<	HTTP 200 (OK)	_	_
'0	access_token and refresh token.	` -	200 (010)		
_	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>				
	Table 5.5.8.1-1.				
11	The UE (MCPTT client) sends a HTTP POST message	>	HTTP POST	-	Р
1	presenting the access token obtained in step 10 to the SS				•
	over HTTP for Key Management Initialisation.				
	, <u>,</u>				
	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.				
		•	•		

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message		
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)	-	1
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		TP	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	Procedure	Procedure Message Seq		TP	Verdict
		U-S	Message		
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		
			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 (GMK-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	<	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.	<	SIP NOTIFY				
7a2	The UE (MCPTT client) sends a SIP 200 (OK)	>	SIP 200 (OK)				
NOTE	message.1: This completes MCPTT service enabling on the UE.						
NOTE 1: This completes MCPTT service enabling on the UE.							

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	-	Р
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]	
addr-spec	SIP URI			
user-info and host	IP address or FQDN			
	(px_MCPTT_Client_A_I			
	D)			
port	protected server port of	as assigned during		
	UE	registration		
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.		
feature-param	"audio"	This feature tag		
		indicates that the		
		device supports audio		
		as a streaming media		
Accept		type.	RFC 3261 [22]	
media-range[1]	"application/sdp"		KFC 3201 [22]	
Accept-Contact	арріісаціоп/ѕир		RFC 3841 [29]	
ac-value[1]			RFC 3641 [29]	
	II . a. Oara a aaattii			
feature-param	"+g.3gpp.mcptt" "require"			
req-param	require "explicit"			
explicit-param Answer-Mode				
Content-Type	not present			
media-type	"application/sdp"			
Message-body	арріісацоп/ѕар			
SDP Message	SDP message as	Editor's note: If ice		
SUF Message	described in Table	candidates need to be		
	5.5.3.1.1-1	included in the SDP		
	0.0.3.1.1-1	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 requesting the establishment/modification of an MCPTT call.	<	SIP INVITE	-	-
-	EXCEPTION: Step 3a1 describes behaviour that depends on the UE implementation; the "lower case letter" identifies a step sequence that take place if the UE responds to a SIP INVITE with a SIP 100 (Trying)	-	-	-	-
3a1	The UE (MCPTT client) sends SIP 100 (Trying)	>	SIP 100 (Trying)	-	-
4	Check: Does the UE (MCPTT client) respond to the SIP INVITE with SIP 200 (OK)?	>	SIP 200 (OK)	-	Р
5	The SS (MCPTT server) sends a SIP ACK to acknowledge the session establishment/modification	<	SIP ACK	-	-

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

- 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 INVITE requesting the establishment of an 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). - 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 take place if the UE responds reliably or unreliably to a SIP INVITE with a SIP 133 (Session Progress) unreliably? 5a1 Check: Does the UE (MCPTT client) send SIP invITE with a SIP 183 (Session Progress) unreliably? 5a2 The SS stops Timer 1. 5b1 Check: Does the UE (MCPTT client) send SIP 183 (Session Progress) reliably? 5b2 The SS stops Timer 1.	St	Procedure		Message Sequence	TP	Verdict
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 INVITE requesting the establishment of an 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). - EXCEPTION: Step 5a1 to 5c1 describe 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 138 (Session Progress) to 100 (Trying). - EXCEPTION: Step 5a1 to 5c1 describe behaviour that depends on the UE implementation; the 'lower case letter' identifies a step sequence that my 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 183 (Session Progress) unreliably? The SS stops Timer_1. 5b2 The SS stops Timer_1.			U - S			
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 INVITE requesting the establishment of an 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)	-	depends on the E-UTRA RRC state at the time the present procedure is called.	-	-	-	-
INVITE requesting the establishment of an 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) 3a1 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 183 (Session Progress) unreliably? 5a2 The SS stops Timer 1. 5b1 Check: Does the UE (MCPTT client) send SIP 183 (Session Progress) reliably? 5b2 The SS stops Timer 1. 5b3 The SS stops Timer 1. 5b4 The UE (MCPTT Server) acknowledges the receipt of SIP 183 (Session Progress) 5b4 The UE (MCPTT Client) responds PRACK with SIP 200 (OK) 5c1 Check: Does Timer 1 expire? 5A Check: Does the UE (MCPTT client) notify the User of the incoming call request? (NOTE 1) 6 Make UE (MCPTT User) accept the call (NOTE 1) 7 Check: Does the UE (MCPTT client) respond to the SIP INVITE with SIP 200 (OK)? The SS (MCPTT Server) sends a SIP ACK to acknowledge the session establishment	1a1	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.	-	-	-	-
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)	2	INVITE requesting the establishment of an MCPTT group call.	<	SIP INVITE	-	-
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 183 (Session Progress) unreliably? 5a2 The SS stops Timer_1. 5b1 Check: Does the UE (MCPTT client) send SIP 183 (Session Progress) reliably? 5b2 The SS stops Timer_1. 5b3 (Session Progress) reliably? 5b4 The UE (MCPTT Server) acknowledges the receipt of SIP 183 (Session Progress) 5b4 The UE (MCPTT Client) responds PRACK with SIP 200 (OK) 5c1 Check: Does the UE (MCPTT client) notify the User of the incoming call request? (NOTE 1) 6 Make UE (MCPTT User) accept the call (NOTE 1) 7 Check: Does the UE (MCPTT client) respond to the SIP INVITE with SIP 200 (OK) 8 The SS (MCPTT server) sends a SIP ACK to acknowledge the session establishment	-	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)				-
- 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 183 (Session Progress) unreliably? 5a2 The SS stops Timer_1				·		
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 183 (Session Progress) unreliably? 5a2 The SS stops Timer_1. 5b1 Check: Does the UE (MCPTT client) send SIP 183 (Session Progress) - P 5b2 The SS stops Timer_1. 5b2 The SS stops Timer_1. 5b3 The SS (MCPTT Server) acknowledges the receipt of SIP 183 (Session Progress) 5b4 The UE (MCPTT Client) responds PRACK with SIP 200 (OK) 5c1 Check: Does Timer_1 expire? 5c2 Check: Does Timer_1 expire? 5c3 Check: Does the UE (MCPTT client) notify the User of the incoming call request? (NOTE 1) 6 Make UE (MCPTT User) accept the call (NOTE 1) 6 Make UE (MCPTT User) accept the call (NOTE 1) 7 Check: Does the UE (MCPTT client) respond to the SIP INVITE with SIP 200 (OK)? 8 The SS (MCPTT server) sends a SIP ACK to acknowledge the session establishment	4				-	-
183 (Session Progress) unreliably? 5a2 The SS stops Timer_1. 5b1 Check: Does the UE (MCPTT client) send SIP 183 (Session Progress) reliably? 5b2 The SS stops Timer_1. 5b3 The SS (MCPTT Server) acknowledges the receipt of SIP 183 (Session Progress) 5b4 The UE (MCPTT Client) responds PRACK with SIP 200 (OK) 5c1 Check: Does Timer_1 expire? 5A Check: Does the UE (MCPTT client) notify the User of the incoming call request? (NOTE 1) 6 Make UE (MCPTT User) accept the call (NOTE 1) 7 Check: Does the UE (MCPTT client) respond to the SIP INVITE with SIP 200 (OK)? 8 The SS (MCPTT server) sends a SIP ACK to acknowledge the session establishment	-	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)	-		-	-
Sb1 Check: Does the UE (MCPTT client) send SIP 183 (Session Progress) reliably? Sip 183 (Session Progress) - P	5a1		>	SIP 183 (Session Progress)	-	P
183 (Session Progress) reliably? 5b2 The SS stops Timer_1	5a2	The SS stops Timer_1.	-	-	-	-
The SS (MCPTT Server) acknowledges the receipt of SIP 183 (Session Progress) 5b4 The UE (MCPTT Client) responds PRACK with SIP 200 (OK) 5c1 Check: Does Timer_1 expire? 5A Check: Does the UE (MCPTT client) notify the User of the incoming call request? (NOTE 1) 6 Make UE (MCPTT User) accept the call (NOTE 1) 7 Check: Does the UE (MCPTT client) respond to the SIP INVITE with SIP 200 (OK)? 8 The SS (MCPTT server) sends a SIP ACK to acknowledge the session establishment	5b1		>	SIP 183 (Session Progress)	-	Р
receipt of SIP 183 (Session Progress) 5b4 The UE (MCPTT Client) responds PRACK with SIP 200 (OK) 5c1 Check: Does Timer_1 expire? 5A Check: Does the UE (MCPTT client) notify the User of the incoming call request? (NOTE 1) 6 Make UE (MCPTT User) accept the call (NOTE 1) 7 Check: Does the UE (MCPTT client) respond to the SIP INVITE with SIP 200 (OK)? 8 The SS (MCPTT server) sends a SIP ACK to acknowledge the session establishment	5b2		-	-	-	-
SIP 200 (OK) 5c1 Check: Does Timer_1 expire? 5A Check: Does the UE (MCPTT client) notify the User of the incoming call request? (NOTE 1) 6 Make UE (MCPTT User) accept the call (NOTE 1) 7 Check: Does the UE (MCPTT client) respond to the SIP INVITE with SIP 200 (OK)? 8 The SS (MCPTT server) sends a SIP ACK to acknowledge the session establishment	5b3	receipt of SIP 183 (Session Progress)	<		-	-
5A Check: Does the UE (MCPTT client) notify the User of the incoming call request? (NOTE 1) 6 Make UE (MCPTT User) accept the call (NOTE 1) 7 Check: Does the UE (MCPTT client) respond to the SIP INVITE with SIP 200 (OK)? 8 The SS (MCPTT server) sends a SIP ACK to acknowledge the session establishment	5b4		>	SIP 200 (OK)	-	-
User of the incoming call request? (NOTE 1) 6 Make UE (MCPTT User) accept the call (NOTE 1) 7 Check: Does the UE (MCPTT client) respond to the SIP INVITE with SIP 200 (OK)? 8 The SS (MCPTT server) sends a SIP ACK to acknowledge the session establishment	5c1	Check: Does Timer_1 expire?	-	-	-	
6 Make UE (MCPTT User) accept the call (NOTE	5A	Check: Does the UE (MCPTT client) notify the User of the incoming call request? (NOTE 1)	-	-	-	P
the SIP INVITE with SIP 200 (OK)? 8 The SS (MCPTT server) sends a SIP ACK to acknowledge the session establishment	6	Make UE (MCPTT User) accept the call (NOTE	-	-	-	-
8 The SS (MCPTT server) sends a SIP ACK to acknowledge the session establishment < SIP ACK	7	the SIP INVITE with SIP 200 (OK)?	>	SIP 200 (OK)	-	Р
	8	The SS (MCPTT server) sends a SIP ACK to	<	SIP ACK	-	-
	NOTE	1: This expected to be done via a suitable impleme	entation de	ependent MMI.		•

5.3.5.4 Specific message contents

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

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		
-	EXCEPTION: Step 1a1 describes behaviour that	-	-	-	-
	depends on the E-UTRA RRC state at the time				
1a1	the present procedure is called.				
lai	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	>	SIP INVITE	-	Р
	INVITE requesting the				
	establishment/modification of an MCPTT call?				
3	The SS sends SIP 100 Trying	<	SIP 100 (Trying)	-	-
4	The SS (MCPTT server) responds with a SIP	<	SIP 200 (OK)	-	-
	200 (OK)		OID AOI/		-
5	Check: Does the UE (MCPTT Client) send a SIP	>	SIP ACK	-	Р
	ACK to acknowledge the session establishment/modification?				
<u> </u>	EXCEPTION: Steps 6a1 describes behaviour	_	_	<u> </u>	_
	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				
6a1	(NOTE1)	<	Floor Granted	-	
bai	The SS (MCPTT server) sends a Floor Granted	<	Floor Granted	-	<u> </u>
	message.	1		1	

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	-	Р
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	-	Р
-	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	TP	Verdict
		U - S	Message		
1	The SS (MCPTT Server) sends a SIP BYE request to terminate the MCPTT session.	<	SIP BYE	-	-
2	Check: Does the UE (MCPTT Client) respond with a SIP 200 (OK) message?	>	SIP 200 (OK)	-	Р
-	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		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 releases the RRC connection.	-	-	-	-

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)	-	-
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	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)	-	-
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	-	Р
	Floor Request message?				
2	The SS (MCPTT Server) sends a Floor	<	Floor Granted	-	-
	Granted message with an acknowledgement				
	required.				
3	Check: Does the UE (MCPTT Client) send a	>	Floor Ack	-	Р
	Floor Ack message in response to the Floor				
	Granted message?				

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	-	Р
	Floor Request message?				
2	The SS (MCPTT Server) sends a Floor Queue	<	Floor Queue Position Info	-	-
	Position Info message indicating that the Floor				
	Request was queued message with no				
	acknowledgement required.				

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		Verdict
		U-S	Message		
1	Check: Does the UE (MCPTT Client) send a Floor Request message?	>	Floor Request	-	Р
2	The SS (MCPTT Server) sends a Floor Deny message with no acknowledgement required	<	Floor Deny	-	-

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	-	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 Taken	<	Floor Taken	-	-
	message with no acknowledgement required.				

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 informing that the group A configuration document has been updated.	<	SIP NOTIFY	-	-
2	The UE sends a SIP 200 (OK) message to the SS.	>	SIP 200 (OK)	-	-
3	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	-	-
4	The SS (MCPTT server) sends the HTTP 200 (OK) message including the updated Group Document	<	HTTP 200 (OK)	-	-
5	The SS (MCPTT server) sends a SIP NOTIFY message to the UE containing the group key transport payloads (GKTP) document including the temporary group keys.	<	SIP NOTIFY	-	-
6	The UE (MCPTT client) sends a SIP 200 (OK) message.	>	SIP 200 (OK)	-	-

5.3.22.4 Specific message contents

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

Table 5.3.22.4-1: SIP NOTIFY (Step 1)

Derivation Path: TS 36.579-1 [2], Table 5.5.2.8-1, condition GROUPCONFIG

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

Derivation Path: TS 36.579-1 [2], Table 5.5.2.17.1.1-1

Table 5.3.22.4-3: HTTP GET (Step 3)

Derivation Path: TS 36.579-1 [2], Table 5.5.4.2-1, condition GROUPCONFIG

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

Derivation Path: TS 36.579-1 [2], 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)

Information Element	Value/remark	Comment	Reference	Condition
list-service[1]				
mcpttgi:on-network-			TS 24.481 [31]	
regrouped			clause 7.2.4.2	
temporary-MCPTT-group-ID	px_MCPTT_Group_B_I	MCS temporary group	TS 24.481 [31]	
attribute	D	identity	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.		
constituent-MCPTT-group-IDs			TS 24.481 [31]	
			clause 7.2.4.2	
constituent-MCPTT-group-	px_MCPTT_Group_A_I	MCS group ID of a	TS 24.481 [31]	
ID[1]	D	constituent MCS group	clause 7.2.4.2	
		of the temporary MCS		
		group		
protect-media	"true"	Indicates whether	TS 24.481 [31]	
		confidentiality and	clause 7.2.4.2	
		integrity of media is		
		required on the MCPTT		
		temporary group		
protect-floor-control-signalling	"true"	Indicates whether	TS 24.481 [31]	
		confidentiality and	clause 7.2.4.2	
		integrity of floor control		
		signalling is required on		
		the temporary MCPTT		
		group		

Table 5.3.22.4-6: SIP NOTIFY (Step 5)

Derivation Path: TS 36.579-1 [2], 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)

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 A 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] 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	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_B_I D				
GKTP[1]	MIKEY message as described in Table 5.3.22.4-9	MIKEY message containing the GMK for Group B	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)

Derivation Path: TS 36.579-1 [2], Table 5.5.9.1-5	3		
Field	Value/remark	Comment	Condition
General Extension Payload {			
Data {		See TS 33.180 [94] clause E.6	
Group IDs {			
Number of Group IDs	'1'		
Group ID	px_MCPTT_Group_B_ID	The ID for the group associated with the key.	
	px_MCVideo_Group_B_I D	The ID for the group associated with the key.	MCVIDEO
	px_MCData_Group_B_I D	The ID for the group associated with the key.	MCDATA
}			
}			
}			

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		Message Sequence	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

5.4 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

5.4.2.3 Procedure

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

St	Procedure	Message Sequence	
0.	rioccaute	U-S	Message
0	Switch the UE on.	-	- moodage
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		TWICH BIT COMMEDITION THE REGISTER
	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.		
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.		
-	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		
0.4	ESM information which needs to be transferred.		DDO DU (T. (
9a1	IF the UE sets the ESM information transfer flag in the	<	RRC: DLInformationTransfer
	last PDN CONNECTIVITY REQUEST message THEN		NAS: ESM INFORMATION REQUEST
	the SS transmits an ESM INFORMATION REQUEST		
	message to initiate exchange of protocol configuration options and/or APN.		
9a2	The UE transmits an ESM INFORMATION RESPONSE	>	RRC: ULInformationTransfer
9a2	message to transfer protocol configuration options	>	NAS: ESM INFORMATION RESPONSE
	and/or APN.		TWO. LOW IN CHANGE THE CONCE
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		
4.5	ATTACH ACCEPT. (NOTE 1)	_	DDC:
15	The UE transmits an RRCConnectionReconfigurationComplete message to	>	RRC: RRCConnectionReconfigurationComplet
	confirm the establishment of default bearer.		
<u> </u>	EXCEPTION: In parallel to the event described in steps	_	e -
1 -	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		
	place.		
			•

St	Procedure	Message Sequence		
		U - S	Message	
-	EXCEPTION: IF the UE is configured to register for IMS	-	-	
	as first PDN during initial registration, THEN in parallel			
	to the event described in steps 16 and 16A below the			
	generic procedure for IMS signalling in the U-plane			
	specified in TS 36.508 clause 4.5A.3 takes place if			
	requested by the UE			
16	This message includes the ATTACH COMPLETE	>	RRC: ULInformationTransfer	
	message. The ACTIVATE DEFAULT EPS BEARER		NAS: ATTACH COMPLETE	
	CONTEXT ACCEPT message is piggybacked in		NAS: ACTIVATE DEFAULT EPS	
	ATTACH COMPLETE.		BEARER CONTEXT ACCEPT	
-	EXCEPTION: Depending on the UE capability step 16A	-	-	
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.		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		DDC: III Información Transfer
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		
	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.		
5	The SS transmits a SecurityModeCommand message	<	RRC: SecurityModeCommand
	to activate AS security.		550.0 ".11.10
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).		
8	The UE transmits an	>	RRC:
0	RRCConnectionReconfigurationComplete message to	/	RRCConnectionReconfigurationComplet
	confirm the establishment of the new data radio bearer,		e
	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.	-	-
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	>	DIRECT_COMMUNICATION_REQUES
	message, IP Address Config IE set to "address		T
	allocation not supported".		
5	SS-UE1 sends a	<	DIRECT_SECURITY_MODE_COMMAN
	DIRECT_SECURITY_MODE_COMMAND message.		D
6	UE sends a DIRECT_SECURITY_MODE_COMPLETE	>	DIRECT_SECURITY_MODE_COMPLET
	message ciphered and integrity protected with the new		E
	security context.		
7	SS-UE1 sends a	<	DIRECT_COMMUNICATION_ACCEPT
	DIRECT_COMMUNICATION_ACCEPT message.		
8	EXCEPTION: After the communication is established,	-	-
	an IP address configuration procedure is performed		
	depending on what the UE has indicated in the IP		
	Address Config IE (if it is not "address allocation not		
	supported") in the		
	DIRECT_COMMUNICATION_REQUEST message,		
	and, the SS-UE1 itself indicating "address allocation not		
	supported" in the		
-	DIRECT_COMMUNICATION_ACCEPT message.		
-	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.		DIDECT COMMUNICATION (CESSAL)
9a1	UE sends a DIRECT_COMMUNICATION_KEEPALIVE	>	DIRECT_COMMUNICATION_KEEPALI
	message.		VE
9a2	SS-UE1 sends a	<	DIRECT_COMMUNICATION_KEEPALI
	DIRECT_COMMUNICATION_KEEPALIVE_ACK		VE_ACK
	message.		

5.4.5.4 Specific message contents

Table 5.4.5.4-1: DIRECT_COMMUNICATION_ACCEPT (step 7 Table 5.4.5.3-1)

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

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 _D 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 _{D-sess} ID	the 8 most significant bits of the KD-sess ID		
K _D 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 _D ID	Any allowed value		
K _D 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		
		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.	-	-		
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	: UEs which are capable of Announcing for group member discover	v may start a	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		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				
3a1	discovery. IF pc_ProSeMonForGtoupMemberDiscovery	<	PC5_DISCOVERY		
Jai	(TS 36.523-2 [75]) THEN the SS-UE1 starts		T CO_DIOCOVERT		
	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.				
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		
002	PC5_DISCOVERY message for Group Member		1 00_B1000 VERVI		
	Discovery Solicitation applying DUIK, DUSK, and				
	DUCK with the associated Encrypted Bitmask, along				
	with the UTC-based counter to the PC5_DISCOVERY				
3b3	message. SS-UE1 transmits a PC5_DISCOVERY message for	<	PC5_DISCOVERY		
	Group Member Discovery Response applying DUIK,		1 00_B1000 VERVI		
	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				
	discovery Group to be discovery group to be discovered in step 2b2.				
-	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	>	STCH PDCP SDU packet		
	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.				
_	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	<	STCH PDCP SDU packet		
	interface in the next transmission period using the timing reference provided by the GNSS simulator				
	(same to be used by the UE).				
	NOTE 3.				
	•				

St	Procedure		Message Sequence
		U - S	Message
NOTE	E 1: UEs which are not capable of Monitoring for group member discovery may start Discoverer procedure automatically.		
NOTE	E 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	3: Which MCPTT protocol data units are included in the sidelink communication is defined in the test case using the present generic procedure.		
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	<	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.		222
6	The UE transmits a SecurityModeComplete message	>	RRC: SecurityModeComplete
	and establishes the initial security configuration.		DD0 DD00 # D # #
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

ON-NETWORK	Message/IE sent only in on-network scenario.
OFF-NETWORK	Message/IE sent only in off-network scenario.
PRIVATE-CALL	Message/IE sent only as part of a Private call handling.
GROUP-CALL	Message/IE sent only as part of a Group call handling.
EMERGENCY-CALL	Message/IE sent only as part of an Emergency call handling.
IMMPERIL-CALL	Message/IE sent only as part of an Immanent Peril call handling.
BROADCAST-GROUP-CALL	Message/IE sent only as part of a Broadcast group call scenario.
CHAT-GROUP-CALL	Message/IE sent only as part of a Chat group call scenario.
EMERGENCY-ALERT	Message/IE sent only as part of an Emergency Alert.
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
LOCATION-INFO	Message containing location info
UDP	UE uses UDP for sending a request (this implies UDP to be used for a
	corresponding response)
TCP	UE uses TCP for sending a request (this implies TCP to be used for a
	corresponding response)
MO_CALL	Call (dialog) has been initiated by the UE (mobile originated call)
MT_CALL	Call (dialog) has been initiated by the SS (mobile terminated call)
MCPTT	MCPTT specific message content
MCVIDEO	MCVideo specific message content
MCDATA	MCData specific message content

5.5.2 Default SIP message and other information elements

5.5.2.1 SIP ACK

5.5.2.1.1 SIP ACK from the UE

Table 5.5.2.1.1-1: SIP ACK from the UE

Derivation Path: TS 24.229 [1	6], clause A.2.1.4.2, A.2.2.4.2			0
Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22]	
Method	"ACK"			
Request-URI	same URI as the SS has sent earlier in the Contact header of a response within the same dialog			
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
sent-protocol	"SIP/2.0/UDP" "SIP/2.0/TCP"			UDP TCP
sent-by	Same value as in INVITE message			
via-branch	Value starting with 'z9hG4bK'			
Route			RFC 3261 [22]	
route-param list	URIs of the Record- Route header sent to the UE in the response which has established the dialog, in reverse order			
From			RFC 3261 [22]	
addr-spec	same value as in the INVITE message	Local URI of the dialog (from the UE's point of view)		
tag	same value as in the INVITE	Local tag of the dialog ID (from the UE's point of view)		
То		,	RFC 3261 [22]	
addr-spec	same value as in the INVITE	Remote URI of the dialog (from the UE's point of view)		
tag	same tag as in the To- header of the response which has established the dialog	Remote tag of the dialog ID (from the UE's point of view)		
Call-ID			RFC 3261 [22]	
callid	same value as in INVITE message			
Cseq			RFC 3261 [22]	
value	same value as in INVITE message			
method	"ACK"			
Max-Forwards			RFC 3261 [22]	
value	any allowed value	Non-zero value		
Content-Length	if present		RFC 3261 [22]	
value	"0"	No message body included		

5.5.2.1.2 SIP ACK from the SS

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	- 1 -1	

5.5.2.2 SIP BYE

5.5.2.2.1 SIP BYE from the UE

Table 5.5.2.2.1-1: SIP BYE from the UE

Derivation Path: TS 24.229 [16], Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22]	22
Method	"BYE"		10 0 0201 [22]	
	same URI as the SS	Contact URI of the		
Request-URI				
	has sent earlier in the	recipient of the BYE		
	Contact header of a			
	message within the			
	same dialog			
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
sent-protocol	"SIP/2.0/UDP"			UDP
	"SIP/2.0/TCP"			TCP
sent-by	same value as in			MO_CALL
•	INVITE message			_
sent-by				MT_CALL
host	IP address or FQDN	Either the UE's IP		
11001	ii dddioos oi i qbit	address or its home		
		domain name		
nort	protected conver port of			
port	protected server port of the UE	as assigned during		
via branch		registration		
via-branch	Value starting with			
B	'z9hG4bK'		DE0 222 : 522	
Route			RFC 3261 [22]	
route-param list	URIs of the Record-			MO_CALL
	Route header sent to			
	the UE in the response			
	which has established			
	the dialog, in reverse			
	order			
	URIs of the Record-			MT_CALL
	Route header sent to			WII_O/KEE
	the UE in the INVITE			
From	the OE in the HAVITE		RFC 3261 [22]	
	Same URI of the UE as	Local LIDL of the dialog	10 0 0 0 0 1 [22]	
addr-spec		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]	
addr-spec	Same URI of the SS as	Remote URI of the		
	used earlier in the	dialog (from the UE's		
	dialogURI	point of view)		
tag	Same tag of the SS as	Remote tag of the		
-	used earlier in the	dialog ID (from the UE's		
	dialog	point of view)		
Call-ID	"	,	RFC 3261 [22]	
callid	same value as in		5 5251 [22]	
Jama	INVITE message			
CSeq	I WITE mossage		RFC 3261 [22]	
	Value of Ceas cant by	+	NEC 3201 [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	<u> </u>		RFC 3261 [22]	
y			RFC 3329 [53]	
option-tag	"sec-agree"	<u> </u>	5 5525 [60]	
Security-Verify	Jeo-agree	1	RFC 3329 [53]	
occurity-verily	1	 	NEC 3328 [33]	
	como valua as Carinita			
sec-mechanism	same value as Security -Server header sent by			

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	3	,	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		DEC 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			MODATA
	px_MCData_Client_A_I D			MCDATA
SIP-Version	"SIP/2.0"			
Via	SII 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		
From		'z9hG4bK'	RFC 3261 [22]	
addr-spec	px_MCPTT_Client_A_I		RFC 3201 [22]	
addi-spec	D			
	px_MCVideo_Client_A			MCVIDEO
	px_MCData_Client_A_I			MCDATA
	D			
tag	"1"			
То			RFC 3261 [22]	
addr-spec	tsc_MCPTT_PublicSer		RFC 5031 [54]	
addi-spec	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			
CSeq	INVITE		DEC 2064 [22]	
value	value of CSeq sent by		RFC 3261 [22]	
value	the SS within its			
	previous request in the			
	same dialog but			
	increased by one			
Method	"INFO"		1	
Max-Forwards	70	- · ·	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		
Operand Local Control		hops	DEC 222: 222	
Content-Length	law with at war are are		RFC 3261 [22]	
value	length of message body			
Message Body	any allowed value			
ooougo Bouy	arry anowed value	J		

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"			
Session-Expires			RFC 4028 [30]	
delta-seconds	any allowed value			
Require			RFC 3261 [22] RFC 3312 [56] RFC 3329 [53]	
option-tag	"sec-agree"			
Proxy-Require			RFC 3261 [22] RFC 3329 [53]	
option-tag	"sec-agree"			
Security-Verify			RFC 3329 [53]	
sec-mechanism	same value as Security -Server header sent by SS during registration			
Contact	<u> </u>		RFC 3261 [22 RFC 3840 [33]	

Information Element	Value/remark	Comment	Reference	Condition
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"	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) service.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) communication.		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
feature-param	"audio"	This feature tag indicates that the device supports audio as a streaming media type.		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		MCDATA
		type.		

Derivation Path: TS 24.229 [16]		Comment	Deference	Condition
Information Element	Value/remark	Comment	Reference	Condition
value P-Access-Network-Info	any allowed value	Non-zero value	RFC 7315 [52]	
access-net-specs	Access network	AUTO	KFC 7313 [32]	
access-net-specs	technology and, if	7010		
	applicable, the cell ID			
Accept			RFC 3261 [22]	
media-range[1]	"application/sdp"		•	
media-range[2]	"application/vnd.3gpp.			
	mcptt-info+xml"			
	application/vnd.3gpp.m			MCVIDEO
	cvideo-info+xml			MODATA
	"application/vnd.3gpp. mcdata-info+xml"			MCDATA
P-Preferred-Service	Ilicuata-Ilii0+xiiii		RFC 6050 [31]	
Service-ID	"urn:urn-7:3gpp-		1(1 0 0000 [51]	
001 VI00 12	service.ims.icsi.mcptt"			
	"urn:urn-7:3gpp-			MCVIDEO
	service.ims.icsi.mcvide			
	о"			
	"urn:urn-7:3gpp-			MCDATA
	service.ims.icsi.mcdata.			
D. Dunfarra d. Idantitu	sds"		DEC 2005 [00]	
P-Preferred-Identity PPreferredID-value	if present same URI as in From-		RFC 3325 [32]	
PPreferredib-value	header			
Accept-Contact	rieadei		RFC 3841 [29]	
ac-value[1]			1(1 0 3041 [23]	
feature-param	"+g.3gpp.icsi-			
routuro param	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcvide			
	o" "+g.3gpp.icsi-			MCDATA
	ref=urn:urn-7:3gpp-			MCDATA
	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 Priv Angwer Mode	"explicit"			
Priv-Answer-Mode Answer-Mode	not present not present		RFC 5373 [34]	re_INVITE
Answer-Mode	not present		RFC 5373 [34]	IG_IINVIIE
answer-mode-value	"Auto"		111 0 007 0 [04]	
answer-mode-value	"Manual"			MANUAL
Resource-Priority			RFC 4412 [40]	EMERGEN
•			RFC 7134 [57]	CY-CALL
			RFC 8101 [45]	or
				IMMPERIL
				-CALL
r-value				EMERGEN CY-CALL

Derivation Path: TS 24.229 [16], c				
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 <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-priority>	5.5.8.4-1		
	element contained in	0.0.0.1		
	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			
r-value				IMMPERIL
				-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 <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		
	priority-priority>	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			
	document			
Content-Type	document		RFC 5621 [58]	
media-type	"multipart/mixed"			
Content-Length	present in case of TCP		RFC 3261 [22]	
-	and when there is a			
	message body			
	(otherwise optional)			
value	any value	length of message-		
Moseago-hody		body	DEC 2264 [20]	
Message-body		SDB massage	RFC 3261 [22]	
MIME body part		SDP message		
MIME-part-headers Content-Type	"application/ada"		DEC 4566 [07]	
	"application/sdp"		RFC 4566 [27]	
		Î.	1	
MIME-part-body	SDP Message as			
	described in Table			
	described in Table 5.5.3.1.1-1			MCV/IDEO
	described in Table 5.5.3.1.1-1 SDP Message as			MCVIDEO
	described in Table 5.5.3.1.1-1 SDP Message as described in Table			MCVIDEO
	described in Table 5.5.3.1.1-1 SDP Message as described in Table 5.5.3.1.1-2			
	described in Table 5.5.3.1.1-1 SDP Message as described in Table 5.5.3.1.1-2 SDP Message as			MCVIDEO MCDATA
	described in Table 5.5.3.1.1-1 SDP Message as described in Table 5.5.3.1.1-2 SDP Message as described in Table			
MIME-part-body	described in Table 5.5.3.1.1-1 SDP Message as described in Table 5.5.3.1.1-2 SDP Message as	MCPTT		
	described in Table 5.5.3.1.1-1 SDP Message as described in Table 5.5.3.1.1-2 SDP Message as described in Table	MCPTT Info/MCVideo/MCData		

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Content-Type	"application/vnd.3gpp.	30	111111111111111111111111111111111111111	2 2
	mcptt-info+xml"			
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml" "application/vnd.3gpp.			MCDATA
	mcdata-info+xml"			IVICDATA
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 described in Table		TS 24.379 [9] clause F.1	
	5.5.3.2.1-1		Clause F. I	
	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] clause D.1	MCDATA
	described in Table 5.5.3.2.1-3		Clause D.1	
MIME body part	0.0.0.2.10	Resource list	RFC 5366 [35]	PRIVATE-
•				CALL OR
NAINAE ()				MCD_1to1
MIME-part-headers Content-Type	"application/resource-			
Content-Type	lists+xml"			
Content-ID	any value	Unique URL identifying	TS 24.379 [9]	
		the Resource-lists XML	clause 6.6.3.1	
		MIME body; used as reference in the		
		signature MIME body		
MIME-part-body	As described in Table			
	5.5.3.3.1-1			
	As described in Table			MCVIDEO
	5.5.3.3.1-2 As described in Table			MCDATA
	5.5.3.3.1-3			MODITIVE
MIME body part		Location info		EMERGEN
, ·				CY-ALERT
				OR (EMERGE
				NCY-CALL
				AND
				ALERT_IN
				D)
MIME-part-headers				
Content-Type	"application/vnd.3gpp.	This MIME part shall be		
	mcptt-location-	included if the MCPTT-		
	info+xml"	Info 'alert-ind' element 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		
		1 1010101100 111 1110	Ĩ	i

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	In case of EMERGENCY-CALL depending on UE implementation the UE may set the <alert-ind> element of the mcptt-info to true in which case the Location info shall be present</alert-ind>	
NOTE: For further conditions see tak	ole 5.5.1-1	

5.5.2.5.2 SIP INVITE from the SS

Table 5.5.2.5.2-1: SIP INVITE from the SS

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Request-Line	- araon oman	- John Hollt	RFC 3261 [22]	Condition
			RFC 5031 [54]	
Method	"INVITE"			
Request-URI	SIP URI of the UE's			
	contact address as			
	provided in the			
	Contact-header of the			
Deguest LIDI	REGISTER message same URI as the UE	Contact URI of the UE		re_INVITE
Request-URI	has sent earlier in the	("callee")		ie_iivvii∈
	Contact header of a	(canee)		
	response within the			
	same dialog			
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
			RFC 3581 [55]	
sent-protocol[1]	"SIP/2.0/TCP"			
sent-by[1]		Address of the P-CSCF		
		that communicates with		
h a a t	D 0005 - 44 (4	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			
	SS starting with			
	'z9hG4bK'			
sent-protocol[2]	"SIP/2.0/UDP"			
sent-by[2]		Address of the other		
		endpoint (the caller)		
host	Host name of the SIP			
	URI being used in the			
port	From header Same port number as	Caller's port number		
port	in Contact-header	Caller's port number		
via-branch[2]	Value assigned by the			
via pranon[2]	SS starting with			
	'z9hG4bK'			
Record-Route		Record-Route	RFC 3261 [22]	
		corresponding to the		
		Via header		
addr-spec[1]	SIP URI	SIP URI corresponding		
		to first entry of Via		
constitute and to set	D CCCE address of the	header		
user-info and host	P-CSCF address of the SS	P-CSCF address as assigned to the UE via		
	33	NAS signalling or P-		
		CSCF discovery		
port	protected server port of	as assigned during		
P	the SS	registration		
uri-parameters	"Ir"			
addr-spec[2]	SIP URI			
user-info and host	"term@scscf1.3gpp.org			
	"			
port	not present			
uri-parameters	"Ir"			
addr-spec[3]	SIP URI			
user-info and host	"orig@scscf2.3gpp.org"			
port	not present			
uri paramatara		Î.	1	I
uri-parameters	I .			
uri-parameters addr-spec[4] user-info and host	SIP URI "pcscf2.3gpp.org"			

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
	"lr"	Comment	Keieleuce	Condition
uri-parameters Record-Route	same as in the 180,		RFC 3261 [22]	re_INVITE
Record-Route	183 or 200 response		KFC 3201 [22]	AND
	sent to the UE during			MO_CALL
	MO call establishment			WO_OALL
	in reverse order			
From	111000100 01001		RFC 3261 [22]	
addr-spec				
user-info and host	tsc_MCPTT_PublicServ	SIP URI of the calling		
	iceld_A	UE		
	px_MCVideo_PublicSer viceId_A	SIP URI of the calling UE		MCVIDEO
	px_MCData_PublicServ	SIP URI of the calling		MCDATA
	iceld_A	UE		
port	not present			
tag	Value assigned by the			
9	SS			
From			RFC 3261 [22]	re_INVITE
addr-spec	Same URI of the SS as	Remote URI of the	• •	
· 	used earlier in the dialog	dialog (from the UE's point of view)		
tag	Same tag of the SS as	Remote tag of the		
	used earlier in the dialog	dialog (from the UE's point of view)		
То			RFC 3261 [22]	
			RFC 5031 [54]	
addr-spec				
user-info and host	px_MCX_SIP_PublicUs erld_A_1	Default public user ID (IMPU) as stored in the UICC		
port	not present			
tag	not present			
То			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	Local tag of the dialog (from the UE's point of		
Call-ID	dialog	view)	RFC 3261 [22]	
callid	Value assigned by the SS		KFC 3201 [22]	
Call-ID	33		RFC 3261 [22]	re_INVITE
callid	same value as in INVITE creating the		10 0 0 0 1 [22]	TE_INVITE
00	dialog		DE0 0004 [00]	
CSeq	Malua : 11 d		RFC 3261 [22]	
value	Value assigned by the SS			
value	value of CSeq sent by			re_INVITE
	the endpoint within its			
	previous request in the			
	same dialog but increased by one			
method	"INVITE"		1	
Supported	HAVIIE		RFC 3261 [22]	
option-tag	"100rel"	This option tag indicates that the UA can send or receive reliable provisional responses.	N 0 0201 [22]	
option-tag	"timer"	responses.		
option-tag	"tdialog"		1	
option-tag	"norefersub"		ļ	

Derivation Path: TS 24.229 [16]				
Information Element	Value/remark	Comment	Reference	Condition
P-Called-Party-ID			RFC 7315 [52]	
called-pty-id-spec	Same public user ID as used in the To-header			
Session-Expires	used in the 10-header		RFC 4028 [30]	
generic-param	"1800"	The recommended	10 4020 [30]	
genene param		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"		DEC 2004 (00)	
Proxy-Require			RFC 3261 [22] RFC 3329 [53]	
option-tag	"sec-agree"			
P-Asserted-Identity			RFC 3325 [32]	
addr-spec	aama LIDI aa in Frans		1	
user-info and host	same URI as in From- header			
port	not present			
Contact			RFC 3261 [22]	
addr an a	SIP URI		RFC 3840 [33]	
addr-spec user-info and host	tsc_MCPTT_PublicServ			
user-into and nost	iceld_A			
	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	
	"+g.3gpp.mcvideo"	This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Video (MCVideo) communication.	RFC 3840 [33] clause 9	MCVIDEO
	"+g.3gpp.mcdata.sds"	This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Data (MCData) communication.	RFC 3840 [33] clause 9	MCDATA

	clause A.2.1.4.7, A.2.2.4.7	_		·
Information Element	Value/remark	Comment	Reference	Condition
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 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	RFC 3261 [22]	
Accept media-range[1]	"application/sdp "		RFC 3261 [22]	
media-range[2]	"application/vnd.3gpp. mcptt-info+xml" "application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml" "application/vnd.3gpp. mcdata-info+xml"			MCDATA
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"	1	I	Ī

Information Element	, clause A.2.1.4.7, A.2.2.4.7 Value/remark	Comment	Reference	Condition
explicit-param	"explicit"	Comment	IVELET ELLCE	Condition
ac-value[2]	σλριισίτ	+		
feature-param	"+g.3gpp.mcptt"			
leature-param	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA
rog porom	"require"			WCDATA
req-param	"explicit"			
explicit-param			DEC 5070 [04]	INIV/ITE
Answer-Mode	not present		RFC 5373 [34] TS 24.379 [9] clause 6.3.2.2.6.3	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
namespace	value of the <resource- priority-namespace=""> element contained in the <emergency- resource-priority=""> element contained in the <onnetwork> element of the MCX service configuration documents</onnetwork></emergency-></resource->	As configured in Table 5.5.8.4-1		
r-priority	value of the <resource- priority-priority=""> element contained in the <emergency- resource-priority=""> 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	- Goodmen			IMMPERIL -CALL
Namespace	value of the <resource-priority-namespace> element contained in the <imminent-perilresource-priority> element contained in the <onnetwork> element of the MCX service configuration documents</onnetwork></imminent-perilresource-priority></resource-priority-namespace>	As configured in Table 5.5.8.4-1		
r-priority	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 document</onnetwork></imminent-peril-></resource->	As configured in Table 5.5.8.4-1		
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"	†		

Value Message-body MIME body part	length of message-		RFC 3261 [22]	
Message-body	length of message-			
	body			
MIME body part			RFC 3261 [22]	
		SDP message		
MIME-part-headers				
MIME-Content-Type	"application/sdp"			
MIME-part-body	SDP Message as described in Table 5.5.3.1.2-1		RFC 4566 [27]	
	SDP Message as described in Table 5.5.3.1.2-2		RFC 4566 [27]	MCVIDEO
	SDP Message as described in Table 5.5.3.1.2-3		RFC 4566 [27]	MCDATA
MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-headers				
MIME-Content-Type	"application/vnd.3gpp. mcptt-info+xml"			
	"application/vnd.3gpp. mcvideo-info+xml"			MCVIDEO
	"application/vnd.3gpp. mcdata-info+xml"			MCDATA
Content-ID	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	MCPTT-Info as described in Table 5.5.3.2.2-1	Signature WINE Body		
	MCVideo-Info as described in Table 5.5.3.2.2-2			MCVIDEO
	As described in Table 5.5.3.2.2-3			MCDATA
MIME body part		Resource lists	RFC 5366 [35]	PRIVATE- CALL
MIME-part-headers				
MIME-Content-Type	"application/resource- lists+xml"			
Content-ID	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the Resource-lists XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Resource-lists as described in Table 5.5.3.3.2-1			
	Resource-lists as described in Table 5.5.3.3.2-2			MCVIDEO
	Resource-lists as described in Table 5.5.3.3.2-3			MCDATA
MIME body part		Location info		EMERGEN CY-CALL or IMMPERIL
MIME-part-headers				-CALL

Derivation Path: TS 24.229 [16],	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		
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"		RFC 3261 [22]	
via			RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"		Ki C 3301 [33]	UDP
3011 protocol	"SIP/2.0/TCP"			TCP
sent-by	311 /2.0/ 1 31			
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			
E	'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			

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"		DEC 0004 [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		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	TS 24.379 [9] clause 6.6.3.1	
NAINATE or not be a de-	MODIT Info	signature MIME body	TO 04 070 [0]	
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"			
Content-ID	any value	Unique URL identifying the affiliation-command XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	MCPTT-Affiliation- Command as described in Table 5.5.3.7-1		TS 24.379 [9] clause F.4	
	MCVideo-Affiliation- Command as described in Table 5.5.3.7-2		TS 24.281 [86] clause F.4	MCVIDEO
MIME body part		Resource lists	RFC 5366 [35]	PRIVATE- CALL OR MCD_1to1
MIME-part-headers				

MIME-Content-Type	"application/resource- lists+xml"			
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	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
	As described in Table 5.5.3.3.1-3			MCDATA
MIME body part		Location info	TS 24.379 [9] clause F.3	EMERGEN CY-ALERT
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-location- info+xml"	This MIME part shall be included if the MCPTT-Info 'alert-ind' element sent in the MCPTT-Info is set to true.		
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			
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		SDS SIGNALLING PAYLOAD		MCDATA
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcdata-signalling"			
MIME-part-body	As described in Table 5.5.3.8.1-1		TS 24.282 [87]	
MIME body part		DATA PAYLOAD		MCDATA
MIME-part-headers				
Content-Type	application/vnd.3gpp.m cdata-payload			
MIME-part-body	As described in Table 5.5.3.9-1		TS 24.282 [87]	
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-1		TS 24.379 [9]	

Condition	Explanation
MCD_1to1	A one-to-one MCData call
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	Value/Terriark	Comment	RFC 3261 [22]	Condition
1			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]	
	HOLD (O. O./TOD!)		RFC 3581 [55]	
sent-protocol[1]	"SIP/2.0/TCP"	A		
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 registration		
via-branch[1]	Value assigned by the SS starting with 'z9hG4bK'			
sent-protocol[2]	"SIP/2.0/UDP"			
sent-by[2]				
host	"scscf.3gpp.org"			
port	Value assigned by the SS	Caller's port number		
via-branch[2]	Value assigned by the SS starting with 'z9hG4bK'			
sent-protocol[3]	"SIP/2.0/UDP"			
sent-by[3]				
host	host name of the MC server			
port	not present			
via-branch[3]	Value assigned by the SS starting with 'z9hG4bK'			
From			RFC 3261 [22]	
addr-spec				
user-info and host	tsc_MCPTT_PublicSer viceId_A			
	px_MCVideo_PublicSer viceId_A			MCVIDEO
	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"			

Derivation Path: TS 24.229 [16], clause A.2.1.4.7a, A.2.2.4.7a					
Information Element	Value/remark	Comment	Reference	Condition	
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			

Derivation Path: TS 24.229 [16], Information Element	Value/remark	Comment	Reference	Condition
P-Asserted-Service	Value/Tellial K	Comment	RFC 6050 [31]	MCDATA
Service-ID	"urn:urn-7:3gpp-		KFC 0030 [31]	WICDATA
Get vice-in	service.ims.icsi.mcdata.			
Accept-Contact				LOCATIO N-INFO
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
req-param	"require"			
explicit-param	"explicit"			
Accept-Contact			RFC 3841 [29]	MCDATA
ac-value[1]				
feature-param	"+g.3gpp.mcdata.sds"			
req-param	"require"			
explicit-param ac-value[2]	"explicit"			
feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			
req-param	"require"			
explicit-param	"explicit"			
P-Asserted-Identity	- CALLETTE CONTROL OF THE CONTROL OF		RFC 3325 [32]	MCDATA
name-addr	px_MCData_ID_User_ B	The public user identity of the originating MCData User		
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"			
Content-Length			RFC 3261 [22]	
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	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	MCPTT-Info as described in Table 5.5.3.2.2-1	oignature mime body	TS 24.379 [9] clause F.1	
	MCVideo-Info as described in Table 5.5.3.2.2-2		TS 24.281 [86] clause F.1	MCVIDEO
	MCData-Info as described in Table 5.5.3.2.2-3		TS 24.282 [87] clause D.1.2	MCDATA
MIME body part		Affiliation-Command		AFFILIATI ON

Derivation Path: TS 24.229 [16],				
Information Element	Value/remark	Comment	Reference	Condition
MIME-part-headers	II II II II II II			
MIME-Content-Type	"application/vnd.3gpp. mcptt-affiliation- command+xml"			
	"application/vnd.3gpp. mcvideo-affiliation- command+xml"			MCVIDEO
Content-ID	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the affiliation-command XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	MCPTT-Affiliation- Command as described in Table 5.5.3.7-1		TS 24.379 [9] clause F.4	
	MCVideo-Affiliation- Command as described in Table 5.5.3.7-2		TS 24.281 [86] clause F.4	MCVIDEO
MIME body part		Resource lists	RFC 5366 [35]	PRIVATE- CALL
MIME-part-headers	II II (1)			
MIME-Content-Type	"application/resource- lists+xml"			
Content-ID	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the Resource-lists XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Resource-lists as described in Table 5.5.3.3.2-1			
	Resource-lists as described in Table 5.5.3.3.2-2			MCVIDEO
	Resource-lists as described in Table 5.5.3.3.2-3			MCDATA
MIME body part		Location info		LOCATIO N-INFO OR EMERGEN CY-CALL OR IMMPERIL -CALL Editor's note: EMERGEN CY-CALL and IMMPERIL -CALL to be removed when being replaced by LOCATIO N-INFO in all references to this table
MIME-part-headers				table

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
		Comment	Reference	Condition
MIME-Content-Type	"application/vnd.3gpp.			
	mcptt-location-			
	info+xml"			140) ((550
	"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		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	
	5.5.3.4.2-2			
MIME body part		SDS SIGNALLING		MCDATA
		PAYLOAD		
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			
MIME body part		DATA PAYLOAD		MCDATA
MIME-part-headers				
Content-Type	application/vnd.3gpp.m			
	cdata-payload			
MIME-part-body	As described in Table		TS 24.282 [87]	
	5.5.3.9-2			
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp.		TS 24.379 [9]	
·	mcptt-signed+xml"			
MIME-part-body	Signatures for XML		TS 24.379 [9]	
	MIME bodies as			
	described in Table			
	5.5.13.1-2			

5.5.2.8 SIP NOTIFY

This message is sent by the SS.

Table 5.5.2.8-1: SIP NOTIFY

Information Element	clause A.2.1.4.8, A2.2.4.8 Value/remark	Commont	Dofores	Condition
	value/remark	Comment	Reference	Condition
Request-Line	"NOTIFY"		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	31F/2.0		RFC 3261 [22]	
sent-protocol[1]	"SIP/2.0/TCP"		KFC 3201 [22]	
sent-by[1]	31F/2.0/1CF			
host	P-CSCF address of the	P-CSCF address as		
11051	SS SS	assigned to the UE via		
	33	NAS signalling or P-		
		CSCF discovery		
port	protected server port of	decir discovery		
port	the SS			
via-branch[1]	Value assigned by the			
via Branon[1]	SS starting with			
	'z9hG4bK'			
sent-protocol[2]	"SIP/2.0/UDP"			
sent-by[2]				
host	"scscf.3gpp.org"			
port	not present			
via-branch[2]	Value assigned by the			
	SS starting with			
	'z9hG4bK'			
sent-protocol[3]	"SIP/2.0/UDP"			
sent-by[3]	J.: 72:0702:			
host	host name of the MC			
· 	server			
	tsc_MCX_CMS_Hostna			CONFIG
	me			· · · ·
	tsc_MCX_GMS_Hostn			GROUPC
	ame			ONFIG
port	not present			
via-branch[3]	Value assigned by the			
• •	SS starting with			
	'z9hG4bK'			
From			RFC 3261 [22]	
addr-spec	same URI as received	Remote URI of the		
•	in the To header of the	dialog (from the UE's		
	SUBSCRIBE message	point of view)		
tag	same tag as in the To-	Remote tag of the		
	header of the response	dialog (from the UE's		
	which has established	point of view)		
	the dialog			
То			RFC 3261 [22]	
addr-spec	same URI as received	Local URI of the dialog		
	in the From header of	(from the UE's point of		
	the SUBSCRIBE	view)		
	message			
tag	same value as received	Local tag of the dialog		
<u> </u>	in From tag of the	(from the UE's point of		
	SUBSCRIBE message	view)		
Call-ID			RFC 3261 [22]	
callid	same as value received			
	in SUBSCRIBE			
0	message		DE0	
Cseq			RFC 3261 [22]	
value	value of CSeq sent by			
	the SS within its			
	previous request in the			
	same dialog but			
and the ad	increased by one			
method	"NOTIFY"	i	1	

Derivation Path: TS 24.229 [16]				
Information Element	Value/remark	Comment	Reference	Condition
Contact			RFC 3261 [22]	
addr-spec	/ MODIT DILL O			
user-info and host	tsc_MCPTT_PublicSer viceId_A			
	px_MCVideo_PublicSer viceId_A			MCVIDEO
	px_MCData_PublicSer viceId_A			MCData
	"sip:" & tsc_MCX_CMS_Hostna			CONFIG
	me "sip:" & tsc_MCX_GMS_Hostn ame			GROUPC ONFIG
port	not present			
Event			RFC 6665 [39] RFC 3842 [61]	
event-type	"presence"		111 0 0042 [01]	PRESENC E-EVENT
	"xcap-diff"			CONFIG. GROUPC ONFIG
Max-Forwards			RFC 3261 [22]	OIVI IG
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	111 0 3231 [22]	
		message sent to the UE	750 222 1221	
Subscription-State			RFC 6665 [39]	
substate-value	"active"			
expires	"7200"		DE0 0004 [00]	
Content-Type			RFC 3261 [22] RFC 3842 [61]	
media-type	"multipart/mixed"			
Content-Length			RFC 3261 [22]	
value	length of message- body			
Message-body			RFC 3261 [22]	
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 8.4.1	MCDATA
MIME body part		xcap-diff		CONFIG, GROUPC ONFIG
MIME-part-headers				514110
Content-Type	"application/xcap- diff+xml"			
MIME-part-body	xcap-diff document as described in Table 5.5.3.12-1			CONFIG
	xcap-diff document as described in Table 5.5.3.12-2			GROUPC ONFIG
MIME body part		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	- alao/ioillain	- Commont	1.010101100	Jonation
Method	"OPTIONS"			
Request-Disposition	px_MCPTT_Client_A_I			
• •	D			
	px_MCVideo_Client_A			MCVIDEO
	_ID			
	px_MCData_Client_A_I			MCDATA
OID) (D			
SIP-Version	"SIP/2.0"		DE0 0004 [00]	
Via			RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"		KFC 3361 [33]	
sent-by	any allowed value	IP address or FQDN		
Sent-by	arry allowed value	and protected server		
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 D			MCDATA
tag	"1"			
То			RFC 3261 [22]	
- d do	to a MODITE Dublic Com		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	100		RFC 3261 [22]	
value	value of CSeq sent by			
	the SS within its			
	previous request in the same dialog but			
	increased by one			
Method	"INFO"			
Contact	1111 3		RFC 3261 [22	
			RFC 3840 [33]	
addr-spec	SIP URI			
user-info and host	IP address or FQDN			
	(px_MCPTT_Client_A_I			
	D)			
	IP address or FQDN			MCVIDEO
	(px_MCVideo_Client_A _ID)			
	IP address or FQDN			MCDATA
	(px_MCData_Client_A_			
feature-param	ID)	T	1	
	"+g.3gpp.mcptt"	This media feature tag		
		when used in a SIP request or a SIP		
		request or a SIP response indicates that		
		the function sending		
		the SIP message		
		supports Mission		
		Critical Push To Talk		
		(MCPTT)		
		communication.		1

when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Video (MCVideo) (MCVide					
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Push to talk (MCPTT) Service.		service.ims.icsi.mcptt"			
Service.					
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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
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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	6] clause A.2.1.4.10, A2.2.4.10	<u> </u>		
Information Element	Value/remark	Comment	Reference	Condition
Status-Line			RFC 3261 [22]	
Method	"PRACK"			
Request-URI	same URI as the SS has sent earlier in the Contact header of a response within the same dialog			
SIP-Version	"SIP/2.0"			
Via	J.: ,: 0		RFC 3261 [22]	
sent-protocol	"SIP/2.0/UDP" "SIP/2.0/TCP"			UDP TCP
sent-by	same value as in INVITE message			
via-branch	Value starting with 'z9hG4bK'			
Route			RFC 3261 [22]	
route-param list	URIs of the Record- Route header sent to the UE in the response which has established the dialog, in reverse order			
From			RFC 3261 [22]	
addr-spec	same value as in the INVITE message	Local URI of the dialog (from the UE's point of view)		
tag	same value as in the INVITE	Local tag of the dialog ID (from the UE's point of view)		
То			RFC 3261 [22]	
addr-spec	same value as in the INVITE	Remote URI of the dialog (from the UE's point of view)		
tag	same tag as in the To- header of the response which has established the dialog	Remote tag of the dialog ID (from the UE's point of view)		
Call-ID			RFC 3261 [22]	
callid	same value as in INVITE message			
CSeq			RFC 3261 [22]	
value	value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one			
method	"PRACK"			
Max-Forwards			RFC 3261 [22]	
value	any allowed value	Non-zero value	DE0 0004 7007	
response-num	same value as in RSeq header of the reliable response		RFC 3261 [22]	
cseq-num	same value as in CSeq of reliable response			
method	same value as in CSeq of reliable response			
P-Access-Network-Info			RFC 7315 [52]	
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		

5.5.2.10.2 SIP PRACK from the SS

Table 5.5.2.10.2-1: SIP PRACK from the SS

Information Element	6] clause A.2.1.4.10, A2.2.4.10	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"		550 000/ 500	
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

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Request-Line	value/reillark	Comment	RFC 3261 [22] RFC 5031 [54]	Condition
Method	"PUBLISH"		RFC 5031 [54]	
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"		DE0 0004 (00)	
Route	CID LID!		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 port	"scscf.3gpp.org" not present			
uri-parameters	"Ir"			
Via	"		RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP" "SIP/2.0/TCP"			UDP TCP
sent-by				
user-info and host	IP address or FQDN	Either the UE's IP address or its home domain name		
port	protected server port of the UE	as assigned during registration		
via-branch	Value starting with 'z9hG4bK'			
From			RFC 3261 [22]	
addr-spec user-info and host	Default public user id (px_MCX_SIP_PublicU serId_A_1)			
port	any value of present			
tag	any value		DE0 222 : 222	
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec	anno LIDI : !			
user-info and host	same URI as used as Request URI			
port	not present			
tag Expires	not present		RFC 3261 [22]	
delta-seconds	"4294967295"		RFC 3903 [43]	

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Require	Value/Terrial K	Comment	RFC 3261 [22]	Condition
Require			RFC 3329 [53]	
option-tag	"sec-agree"		0 0020 [00]	
Proxy-Require			RFC 3261 [22]	
			RFC 3329 [53]	
option-tag	"sec-agree"			
Security-Verify			RFC 3329 [53]	
sec-mechanism	same value as Security			
	-Server header sent by			
	SS during registration		DE0 0004 (00)	
Cseq			RFC 3261 [22]	
value	any allowed value "PUBLISH"			
method	"PUBLISH"		DEC 2204 [22]	
Call-ID callid	any allowed value		RFC 3261 [22]	
Max-Forwards	any allowed value		DEC 2204 [22]	
value	any allowed value	+	RFC 3261 [22]	
P-Access-Network-Info	arry anoweu value		RFC 7315 [52]	1
F-ACCESS-INCLWOLK-IIIIO			RFC 7315 [52]	
access-net-spec	Access network		5 / 5 / 5 5 5	
dococo not opoc	technology and, if			
	applicable, the cell ID			
Event			RFC 3903 [43]	
event-type	"presence"			PRESENC
				E-EVENT
	"poc-settings"			CONFIG
				OR POC-
				SETTINGS
D.D. Committee			DE0 0050 [04]	-EVENT
P-Preferred-Service	Thursday 7,2 sans		RFC 6050 [31] TS 24.379 [9]	
Service-ID	"urn:urn-7:3gpp- service.ims.icsi.mcptt"		clause 7.2.1A	
	"urn:urn-7:3gpp-	+	TS 24.281 [86]	MCVIDEO
	service.ims.icsi.mcvide		clause 7.2.1A	MCVIDEO
	o"		010000 7.2.171	
	"urn:urn-7:3gpp-		TS 24.282 [87]	MCDATA
	service.ims.icsi.mcdata		clause 7.2.1A	
	11			
Accept			RFC 3261 [22]	PRESENC
				E-EVENT
media-range	"application/pidf+xml"			
port	not present			
Content-Type	H 101 17 18		RFC 5621 [58]	
media-type	"multipart/mixed"		5-0	
Content-Length	present in case of TCP		RFC 3261 [22]	
	and when there is a			1
	message body (otherwise			1
	optional)length of			1
	message-body			
value	any value			1
Message-body			RFC 3261 [22]	
MIME body part		MCPTT/MCVideo/MCD ata Info	. 1	
MIME-part-headers				
Content-Type	"application/vnd.3gpp.			
- ·	mcptt-info+xml"			
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml"			
	"application/vnd.3gpp.			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				
Content-Type	"application/mikey"		RFC 3830 [24]	
MIME-part-body	MIKEY message as described in Table 5.5.9.1-1	MIKEY message, containing the CSK	TS 33.180 [94]	
MIME body part		PoC-Settings		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	Value/Terrial K	Comment	RFC 3261 [22]	Condition
Request-Line			RFC 5261 [22] RFC 5031 [54]	
Method	"REFER"		10 0 0001 [04]	
Request-URI	tsc_MCX_SessionID_B	session identity of the		
request-orti	ISC_WOX_Gessionib_B	pre-established session		
SIP-Version	"SIP/2.0"	pre-established session		
Via	011 72.0		RFC 3261 [22]	
Via			RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"		Ki C 3301 [33]	UDP
Sent-protocor	"SIP/2.0/TCP"			TCP
aget by	31F/2.0/1CF			TCF
sent-by host	IP address or FQDN	Either the UE's IP		
11051	IF address of FQDIN	address or its home		
		domain name		
nort	protected converger part of	domain name		
port	protected server port of the UE			
via hyanah				
via-branch	Value starting with			
Doute	'z9hG4bK'		DEC 2004 [00]	
Route	OID LIDI	<u> </u>	RFC 3261 [22]	
addr-spec[1]	SIP URI	D 000E 11		
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		
	the SS	registration		
uri-parameters	"Ir"			
addr-spec[2]	SIP URI			
user-info and host	"scscf.3gpp.org"			
port	not present			
uri-parameters	"Ir"			
From			RFC 3261 [22]	
addr-spec			· · · · · · · · · · · · · · · · · · ·	
user-info and host	Default public user id			
acci illic alla licci	(px_MCX_SIP_PublicU			
	serId_A_1)			
port	not present			
tag	any allowed value			
To	any anowed value		RFC 3261 [22]	
10			RFC 5201 [22]	
addr-spec			10 0001 [04]	
	Come LIDI on regulant			
user-info and host	Same URI as request			
no a sub	URI			
port	not present			
tag	not present	<u> </u>	DE0 0004 (00)	
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-	Callid as used by the	2 .300 [01]	
Same	established session	UE in the INVITE for		
	00.00.00100	establishment of the		
		pre-established session		
Require	+	pro colabiloried acasiOH	RFC 3261 [22]	
roquiic			RFC 3201 [22]	

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
option-tag	"sec-agree"	Comment	Veletelice	Condition
option-tag	"multiple-refer"			
Proxy-Require	maniple fold		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			
Contact	SS during registration		DEC 2204 [22	
Contact			RFC 3261 [22 RFC 3840 [33]	
addr-spec	SIP URI		10 3040 [33]	
user-info and host	IP address or FQDN			
feature-param	"+g.3gpp.mcptt"	This media feature tag		
	3.0355	when used in a SIP		
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports Mission		
		Critical Push To Talk (MCPTT)		
		communication.		
	"+g.3gpp.mcvideo"	This media feature tag		MCVIDEO
	· g.ogppovidoo	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.5gpp.mcdata.sds	when used in a SIP		WODATA
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports Mission		
		Critical Data (MCData)		
footure no		communication.		
feature-param	"+g.3gpp.icsi-	This URN indicates that the device has the		
	ref=urn:urn-7:3gpp- service.ims.icsi.mcptt"	capabilities to support		
	ooi viooaimoaamopu	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)		
	"La 2app issi	service. This URN indicates that		MCDATA
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp-	the device has the		MCDATA
	service.ims.icsi.mcdata.	capabilities to support		
	sds"	the mission critical data		
		(MCData) service.		
feature-param	"audio"	This feature tag		MCPTT
I		indicates that the		OR
		device supports audio		MCVIDEO
		as a streaming media		
		type.		

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
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
Refer-To		1,500.	RFC 3515 [38]	
addr-spec	a Content-ID ("cid") Uniform Resource Locator (URL) as specified in IETF RFC 2392 that points to an application/resource- lists+xml MIME body as specified in IETF RFC 5366			
Refer-To			RFC 3515 [38]	METHOD- BYE
addr-spec	tsc_MCX_SessionID_B	The session identity of the pre-established session to leave.		
method	"BYE"	NOTE: "method" is URI parameter but not header parameter		
Max-Forwards			RFC 3261 [22]	
value	any allowed value	Non-zero value	DE0 7045 [50]	
P-Access-Network-Info access-net-specs	Access network technology and, if applicable, the cell ID		RFC 7315 [52]	
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			MCDATA
P-Preferred-Identity	If present		RFC 3325 [32]	
PPreferredID-value	same URI as in From- header			
Resource-Priority			RFC 4412 [40] RFC 7134 [57] RFC 8101 [45] TS 24.379 [9] clause 6.2.8.1.15	EMERGEN CY-CALL AND (GROUP- CALL OR PRIVATE- CALL)
r-value namespace	value of the <resource- priority-namespace=""> element contained in the <emergency- resource-priority=""> element contained in the <onnetwork> element of the MCX service configuration documents</onnetwork></emergency-></resource->	As configured in Table 5.5.8.4-1	TS 24.484 [14]	

Derivation Path: TS 24.229 [16 Information Element	Value/remark	Comment	Reference	Condition
r-priority	value of the <resource- priority-priority> element contained in the <emergency- resource-priority> element contained in</emergency- </resource- 	As configured in Table 5.5.8.4-1	TS 24.484 [14]	Condition
	the <onnetwork> element of the MCX service configuration document</onnetwork>			
Resource-Priority			RFC 4412 [40] RFC 7134 [57] RFC 8101 [45] TS 24.379 [9] clause 6.2.8.1.15	IMMPERIL -CALL AND (GROUP- CALL OR PRIVATE- CALL)
r-value				
namespace	value of the <resource- priority-namespace> element contained in the <imminent-peril- resource-priority> element contained in the <onnetwork> element of the MCX service configuration documents</onnetwork></imminent-peril- </resource- 	As configured in Table 5.5.8.4-1	TS 24.484 [14]	
r-priority	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 document</onnetwork></imminent-peril-></resource->	As configured in Table 5.5.8.4-1	TS 24.484 [14]	
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"			
Content-Length	present in case of TCP and when there is a message body (otherwise optional)		RFC 3261 [22]	
Value	any value	length of message- body		
Message-body	not present			METHOD- BYE
Message-body			RFC 3261 [22]	
MIME body part		Resource list	RFC 5366 [35]	
MIME-part-headers Content-Type	"application/resource- lists+xml"			
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	

Derivation Path: TS 24.229 [16	6] clause A.2.1.4.11, A.2.2.4.11	1		
Information Element	Value/remark	Comment	Reference	Condition
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 Resource-lists as</entry>			MCVIDEO
	described in Table 5.5.3.3.1-2 Resource-lists as described in Table			MCDATA
	5.5.3.3.1-3			(1100000
MIME body part		Location info		(MCPTT OR MCVIDEO) AND PRIVATE- CALL
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-location- info+xml"			
	"application/vnd.3gpp. mcvideo-location- info+xml"			MCVIDEO
Content-ID	any value	Unique URL identifying the Location-info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Location-info as described in Table 5.5.3.4.1-1		TS 24.379 [9] clause F.3	
	Location-info as described in Table 5.5.3.4.1-2		TS 24.281 [86] clause F.3	MCVIDEO
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-1		TS 24.379 [9]	

Table 5.5.2.12-2: SIP header fields extending the uri attribute of the resource-lists' single entry

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" if force of automatic answer-modecommencement 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-part-<u>head</u>ers 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		Deference	Condition
Request-Line	value/remark	Comment	Reference	Condition
	"DEOLOTED"		RFC 3261 [22]	
Method	"REGISTER"	Depending of the U.S.		
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"			
Route	Not present		RFC 3261 [22]	
Via			RFC 3261 [22]	
			RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"	UE uses UDP for		UDP
Com protocol	1	registration		
	"SIP/2.0/TCP	UE uses TCP for		TCP
],,	registration		
sent-by		regionation		
host	IP address or FQDN			
port	any value if present			SIP_REGI
port	any value ii present			STER_INI
				TIAL
	any value if present			TCP
				UDP
	protected server port of			UDP
	the UE when using			
	UDP			
via-branch	Value starting with			
F	'z9hG4bK'		DEC 0004 [00]	
From			RFC 3261 [22]	
addr-spec	a a mana a value a a in the			
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			IIAL
	from the IMSI otherwise	public user id (e.g.		
	ITOTH THE HVIST 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		
		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
•				STER_INI
				TIAL
	protected comics port of			· · · · · <u>-</u>
	1 DIOIECTED SERVER DOLLAR			
	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" "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" "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	REGISTER		DEC 2204 [22]	
			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			
	inbound SA at the			
	protected client port			
spi-s	SPI number of the			
-r -	inbound SA at the			
	protected server port			
port c	protected client port			
port-c	protected client port			
port-s			DEO 0000 (50)	OID DEC!
Security-Verify	Not present		RFC 3329 [53]	SIP_REGI
				STER_INI
				TIAL
Security-Verify			RFC 3329 [53]	
sec-mechanism	same value as Security			
	Server header sent by			
	SS			
Authorization			RFC	SIP_REGI
Addionization			2617 [72],	STER_INI
			RFC 3310 [96]	TIAL
	Debeta consid	Daniel die eine de la LIE	KFC 3310 [90]	HAL
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)		
u a alua		OSINI OHIY)		
realm	same home domain			
	name as used in			
	Request-URI			
nonce	""	Empty string		
digest-uri	same SIP-URI as used			
	as Request-URI			
opaque	any value if present			
qop				
cnonce	I ally value ii breseni			
	any value if present			
no	any value if present			
nc olgorithm	any value if present any value if present			
algorithm	any value if present			
algorithm response	any value if present any value if present	Empty string		
algorithm	any value if present any value if present	Empty string	RFC	
algorithm response	any value if present any value if present	Empty string	2617 [72],	
algorithm response	any value if present any value if present	Empty string		
algorithm response	any value if present any value if present	Empty string	2617 [72],	
algorithm response Authorization	any value if present any value if present any value if present ""	Empty string	2617 [72],	
algorithm response Authorization	any value if present any value if present any value if present "" same value as for condition	Empty string	2617 [72],	
algorithm response Authorization	any value if present any value if present any value if present "" same value as for condition SIP_REGISTER_INITI	Empty string	2617 [72],	
algorithm response Authorization username	any value if present any value if present any value if present "" same value as for condition SIP_REGISTER_INITI AL	Empty string	2617 [72],	
algorithm response Authorization	any value if present any value if present any value if present "" same value as for condition SIP_REGISTER_INITI AL same value as received	Empty string	2617 [72],	
algorithm response Authorization username	any value if present any value if present any value if present "" same value as for condition SIP_REGISTER_INITI AL same value as received in the realm directive in	Empty string	2617 [72],	
algorithm response Authorization username	any value if present any value if present any value if present "" same value as for condition SIP_REGISTER_INITI AL same value as received	Empty string	2617 [72],	

			1	Т
nonce	same value as in WWW-Authenticate header sent by SS			
digest-uri	same SIP-URI as used as Request-URI			
opaque	same value as sent by the server in "401 Unauthorized for REGISTER"			
qop	"auth"			
cnonce	any value	value assigned by UE affecting the response calculation		
nc	nonce-count value	counter to indicate how many times the UE has sent the same value of nonce within successive REGISTERs, initial value shall be 1		
algorithm	"AKAv1-MD5"			
response	Digest response	calculated by the client according to RFC 2617		
Max-Forwards			RFC 3261 [22]	
value	any allowed value	Non-zero value		
P-Access-Network-Info			RFC 7315 [52]	
access-net-specs	Access network technology and, if applicable, the cell ID			
Content-Type			RFC 5621 [58]	CONFIG
media-type	"multipart/mixed"			
Content-Length	present in case of TCP and when there is a message body (otherwise optional)		RFC 3261 [22]	
value	any value	length of the message body		
Message-body			RFC 3261 [22]	CONFIG
MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-info+xml"			MCVIDEO
	"application/vnd.3gpp. mcvideo-info+xml" "application/vnd.3gpp.			MCDATA
	mcdata-info+xml"		TO 0 / 2 = 2 = 2	
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	-	MIKEY		
MIME-part-headers				
Content-Type	"application/mikey"		RFC 3830 [24]	

MIME-part-body	MIKEY message as described in Table 5.5.9.1-1	MIKEY message, containing the CSK	TS 33.180 [94]
MIME body part		Signature	
MIME-part-headers			
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-1		TS 24.379 [9]

Condition	Explanation
SIP_REGISTER_INITIAL	Initial unprotected REGISTER
For further conditions see table 5.5.1-1	

5.5.2.14 SIP SUBSCRIBE

This message is sent by the UE.

Table 5.5.2.14-1: SIP SUBSCRIBE

Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22] RFC 5031 [54]	
Method	"SUBSCRIBE"		KFC 5051 [54]	
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:" & 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_SUBSO RIBE
SIP-Version	"SIP/2.0"			
Route			RFC 3261 [22]	
addr-spec[1] user-info and host	SIP URI 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 uri-parameters	not present "Ir"			
uri-parameters Route	II II		RFC 3261 [22]	re_SUBSC
route-param list	URIs of the Record- Route header sent to the UE in the response which has established the dialog, in reverse order			RIBE
Via	5.40.		RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"		5 5551 [55]	UDP

Derivation Path: TS 24.229 [16] Information Element	Value/remark		Doforonos	Condition
information Element		Comment	Reference	Condition
a and law	"SIP/2.0/TCP"			TCP
sent-by				
host	IP address or FQDN	Either the UE's IP address or its home domain name		
port	protected server port of the UE	as assigned during registration		
via-branch	value starting with 'z9hG4bK'			
From			RFC 3261 [22]	
addr-spec				
user-info and host	Default public user id (px_MCX_SIP_PublicU serId_A_1)			
port	not present			
tag	any value			
From			RFC 3261 [22]	re_SUBSC RIBE
addr-spec	Same URI of the UE as used earlier in the dialog	Local URI of the dialog (from the UE's point of view)		
tag	Same tag of the UE as used earlier in the dialog	Local tag of the dialog ID (from the UE's point of view)		
То	dialog	OI VIOW)	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			
То			RFC 3261 [22]	re_SUBSC RIBE
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)		
Contact		ĺ	RFC 3261 [22]	
addr-spec	SIP URI		• 1	
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"	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

Derivation Path: TS 24.229 [16]				
Information Element	Value/remark	Comment	Reference	Condition
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"	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
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
Expires			RFC 3261 [22] RFC 3903 [43]	
value	any value			
Require			RFC 3261 [22] RFC 3329 [53]	
option-tag Proxy-Require	"sec-agree"		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 the endpoint within its previous request in the same dialog but increased by one			re_SUBSC RIBE
method	"SUBSCRIBE"			
Call-ID			RFC 3261 [22]	
callid	any allowed value same value as in SUBSCRIBE creating the dialog			re_SUBSC RIBE
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	Access network technology and, if applicable, the cell ID		
Event			RFC 6665 [39]	
event-type	"presence" "xcap-diff"			CONFIG GROUPC ONFIG

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
	"poc-settings"			MCDATA
Accept	ļ ļ		RFC 3261 [22]	
media-range	"application/pidf+xml"		. 1	
Ğ	"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			
	"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		TO 04 600 1000	1405:=:
	MCData-Info as		TS 24.282 [87]	MCDATA
	described in Table		clause D.1	
NAINAE la automant	5.5.3.2.1-3	CIMPLE EILTED		DDECENO
MIME body part		SIMPLE-FILTER		PRESENC E-EVENT
MIME-part-headers	+	+		C-CVEINI
Content-Type	"application/simple-			
Contont-Type	filter+xml"			
MIME-part-body	SIMPLE-FILTER as		TS 24.379 [9]	
while part body	described in Table		clause 9.3.2	
	5.5.3.6-1		3.2.30 0.0.2	
	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]	- Contantion
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 a a t h v	"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
rodio param 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)		
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)	DEC 0004 705	
То			RFC 3261 [22]	
- dal	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]	
Cama	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			

		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	OFBATE		RFC 3261 [22]	
Require			RFC 3329 [53]	
option-tag	"sec-agree"		KFC 3329 [33]	
Proxy-Require	Sec-agree		RFC 3261 [22]	1
Proxy-Require			RFC 3329 [53]	
ontion tog	"aga agrag"		KFC 3329 [33]	
option-tag Security-Verify	"sec-agree"		DEC 2220 [52]	
Security-verify			RFC 3329 [53]	
sec-mechanism	same value as Security			
	-Server header sent by			
	SS during registration			
Max-Forwards	o a manning region amon		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			
	message body			
	(otherwise optional)			
value	any value	length of message- body		
Message-body			RFC 3261 [22]	
SDP Message	SDP Message as		· ·	
5 -	described in Table			
	5.5.3.1.1-1			
	SDP Message as			MCVIDEO
	described in Table			
	5.5.3.1.1-2			
	SDP Message as			MCDATA
	described in Table			
	5.5.3.1.1-3			
	0.0.0.1.170	1		

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	MCVI	DEO
	SDP Message as described in Table 5.5.3.1.2-3	MCD.	ATA

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	v alue/i eilldi K	Comment	i/eieieiice	Condition
SIP-Version	"SIP/2.0"			
Status-Code	"180"			
Reason-Phrase				
Record-Route	"Ringing"		RFC 3261 [22]	
rec-route	same as received in		KFC 3201 [22]	
rec-route				
Via	INVITE message same as received in		RFC 3261 [22]	
Via	INVITE message		RFC 3581 [55]	
Poquiro	IIIVITE message		KFC 3361 [33]	100rol
Require	"400rol"			100rel
option-tag	"100rel"			
From				
addr-spec	same value as received in INVITE message			
to a				
tag	same value as received			
T-	in INVITE message			
To	nome value se se se s			
addr-spec	same value as received			
40.0	in INVITE message			
tag	same value as received			
	in the INVITE message			
	or any value if missing			
011	in the INVITE message.			
Contact	0.0.1.0.			
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"			
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcvide o"			
	"+g.3gpp.icsi-			MCDATA
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcdata.			
	sds"			
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		
1				<u> </u>

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

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"			
	"+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

Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"183"			
Reason-Phrase	"Session progress"			
Record-Route			RFC 3261 [22]	
rec-route	same as received in			
	INVITE message			
Via	same as received in		RFC 3261 [22]	
	INVITE message		RFC 3581 [55]	
Require	in the same same			100rel
option-tag	"100rel"			100101
From	100.01			
addr-spec	same value as received			
addi opoo	in INVITE message			
tag	same value as received			
ag	in INVITE message			
То	III II VIII E III COCAGO			
addr-spec	same value as received			
addi opoo	in INVITE message			
tag	same value as received			
₩ 9	in the INVITE message			
	or any value if missing			
	in the INVITE message.			
Contact	the having message.			
addr-spec	SIP URI			
user-info and host	IP address or FQDN			
port	protected server port of	as assigned during		
port	UE	registration		
feature-param	"+g.3gpp.mcptt"	registration		
ieature-param	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA
footure perem	"+g.3gpp.ircuata.sus			WCDATA
feature-param	urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-			MCVIDEO
	service.ims.icsi.mcvide			
	o"			
	"+g.3gpp.icsi-			MCDATA
	ref=urn:urn-7:3gpp-			MCDATA
	service.ims.icsi.mcdata.			
	sds"			
feature-param	"audio"			MCPTT
ισαισ-ραιαπ	addio			OR
				MCVideo
feature-param	"video"			MCVIDEO
feature-param	"text"			MCDATA
feature-param	"isfocus"			IVICUATA
Supported	1310003			
option-tag	"norefersub"			
	Horeleton			100rol
Rseq	provious DCs a record			100rel
response-num	previous RSeq number			
	sent in the same			
	direction incremented			
Call-ID	by one			
	nome value on receive			
callid	same value as received			
000	in INVITE message			
CSeq	 			
value	same value as received			
	in INVITE message			
P-Answer-State	if present			
value	"unconfirmed"			
Content-Length	if present	1	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	. and on online	30		22.12.11011
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		RFC 3261 [22]	
W.	5.5.2.17.1.2-1 with condition INVITE-RSP		DEC 2004 (00)	
Via	same as received in the INVITE message		RFC 3261 [22] RFC 3581 [55]	100
Require				100rel
option-tag	"100rel"			
From	1			
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	Thissing in the request			
addr-spec				
user-info and host	Public user id of the callee (px_IMS_CalleeContact	Callee contact Uri		
	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"			
	"+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				
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 viceId_A			MCVIDEO
	px_MCData_PublicSer viceId_A			MCDATA
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 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 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 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	same value as received in the request or any value if missing in the			TKO!
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				
port	- 1			INVITE- RSP
port	IP address or FQDN			
feature-param	protected server port of UE	as assigned during registration		
roomana pamami	"+g.3gpp.mcptt"	- region anon		
	"+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		RFC 4028 [30] TS 24.229 [16]	7.07
refresher	INVITE		cl.5.1.4.1	
Content-Type	INVITE "uas"		CI.5.1.4.1 RFC 5621 [58]	INVITE-

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
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		
P-Answer-State	If present		RFC 4964 [118] TS 24.379 [9] clause 6.2.3.1.2	INVITE- RSP AND GROUP- CALL
answer-type	"confirmed"			
Message-body	not present		RFC 3261 [22]	
Message-body			RFC 3261 [22]	INVITE- RSP
MIME body part		SDP message		
MIME-part-header				
MIME-Content-Type	"application/sdp"		RFC 4566 [27]	
MIME-part-body	SDP message as described in Table 5.5.3.1.1-1			
	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 $\,$

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Status-Line		2 2222	2 222	
SIP-Version	"SIP/2.0"			
Status-Code	"200"			
Reason-Phrase	"OK"			
Via	same as received in the request		RFC 3261 [22] RFC 3581 [55]	
Record-Route			RFC 3261 [22]	INVITE- RSP
addr-spec[1]	SIP URI			
user-info and host	pcscf.other.com			
port	not present			
uri-parameters	"lr"			
addr-spec[2]	SIP URI			
user-info and host	scscf.other.com			
port	not present "Ir"			
uri-parameters	1			
addr-spec[3] user-info and host	SIP URI			
port one nost	orig@scscf.3gpp.org			
uri-parameters	not present "Ir"			
addr-spec[4]	SIP URI			
user-info and host	same address as sent by the UE in the first entry of the Route	P-CSCF address		
	header of the INVITE			
port	not present "Ir"			
uri-parameters Record-Route	"Ir"		DEC 2264 [22]	CLIDCCDI
	OID LID!		RFC 3261 [22]	SUBSCRI BE-RSP
addr-spec[1] user-info and host	SIP URI P-CSCF address of the	P-CSCF address as		
user-fillo and flost	SS SS	assigned to the UE via NAS signalling or P- CSCF discovery (px_MCPTT_PCSCF_A URI)		
port	not present			
uri-parameters	"Ir"			
From				
addr-spec	same value as in the request			
tag	same value as in the request			
То				
addr-spec	same value as in the request			
tag	same value as in the request or To-tag assigned by the SS if missing in the request			
Expires	ssmig in the request		RFC 3261 [22] RFC 3903 [43]	SUBSCRI BE-RSP, PUBLISH- RSP
value	same value as in the request			
Contact				REGISTE R-RSP
addr-spec	same value as received in the REGISTER			
feature-param	"+g.3gpp.mcptt"			MOVIDEO
	"+g.3gpp.mcvideo" "+g.3gpp.mcdata.sds"			MCVIDEO MCDATA

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Contact	value/remark	Comment	Reference	SUBSCRI
Contact				BE-RSP
addr-spec				
user-info and host	tsc_MCPTT_PublicSer			
	viceId_A			
	px_MCVideo_PublicSer			MCVIDEO
	viceId_A			
	px_MCData_PublicSer			MCDATA
	viceId_A "sip:" &			CONFIG
	tsc_MCX_CMS_Hostna			CONFIG
	me			
	"sip:" &			GROUPC
	tsc_MCX_GMS_Hostn			ONFIG
	ame			
port	not present			
Contact				INVITE-
- d do				RSP
addr-spec	too MCDTT DublisCox			1
user-info and host	tsc_MCPTT_PublicSer viceId_A			
	px_MCVideo_PublicSer			MCVIDEO
	viceId_A			IVICVIDEO
	px_MCData_PublicSer			MCDATA
	viceId_A			
port	not present			
feature-param	"audio"			MCPTT
				OR
				MCVIDEO
feature-param	"video"			MCVIDEO
feature-param Call-ID	"text"			MCDATA
callid	same value as received			
calliu	in the request			
CSeq	III the request			
value	same value as received			
	in the request			
Require				INVITE-
				RSP
option-tag	"timer"			
Session-Expires				INVITE-
gonorio norom	"3600"			RSP
generic-param refresher	"uac"			
Supported	uuo			INVITE-
				RSP
option-tag	"tdialog"			
option-tag	"norefersub"			
option-tag	"explicitsub"			
option-tag	"nosub"			
Refer-Sub			RFC 4488 [36]	REFER-
noton oub velve	"f_l"			RSP
refer-sub-value P-Associated-URI	"false"		DEC 2004 [00]	DECIST
r-Associated-UKI			RFC 3261 [22]	REGISTE R-RSP
addr-spec[1]	SIP URI			IN-INOI
host	px_MCX_SIP_PublicUs			
3	erld_A_1			
port	not present			
Service-Route			RFC 3261 [22]	REGISTE
				R-RSP
addr-spec[1]	SIP URI			.
host	scscf.3gpp.org			ļ
port	not present		1	1

Information Element	Value/remark	Comment	Reference	Condition
uri-parameters	"Ir"			
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]	Value/remark	Comment	Reference	Condition
Status-Line	T GILLOTT CITTLE IN		RFC 3261 [22]	
SIP-Version	"SIP/2.0"		1 0 020 1 [22]	
Status-Code	"202"			
Reason-Phrase	"Accepted"			
Via	same value as received in request		RFC 3261 [22]	
From	·		RFC 3261 [22]	
addr-spec	same value as received in request			
tag	same value as received in request			
То	·		RFC 3261 [22]	
addr-spec	same value as received in request			
tag	same value as in the request or To-tag assigned by the SS if missing in the request			
Call-ID			RFC 3261 [22]	
callid	same value as received in request			
CSeq	·		RFC 3261 [22]	
value	same value as received in request			
Content-Length	·		RFC 3261 [22]	
value	"0"		, ,	

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)

Table 5.5.2.19.1-1: SIP 403 (Forbidden)

Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"403"			
Reason-Phrase	"Forbidden"			
Warning				
mcptt-warn-code	"100"			
mcptt-warn-text	"function not allowed due to" <detailed reason=""></detailed>			
Content-Length			RFC 3261 [22]	
value	"0"	No message body included - end of SIP message		

Editor's note: Table 5.5.2.19.1-1 needs to be reviewed

5.5.2.19.2 SIP 404 (Not Found)

Table 5.5.2.19.2-1: SIP 404 (Not Found)

Delivery Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"404"			
Reason-Phrase	"Not Found"			
Content-Length			RFC 3261 [22]	
value	"0"	No message body included - end of SIP message		

Editor's note: Table 5.5.2.19.2-1 needs to be reviewed

5.5.2.19.3 SIP 423 (Interval Too Brief)

Table 5.5.2.19.3-1: SIP 423 (Interval Too Brief)

Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"423"			
Reason-Phrase	"Internal Too Brief"			
Content-Length			RFC 3261 [22]	
value	"0"	No message body		
		included - end of SIP		
		message		

Editor's note: Table 5.5.2.19.3-1 needs to be reviewed

5.5.2.19.4 SIP 480 (Temporarily unavailable)

This message is sent by the UE.

Table 5.5.2.19.4-1: SIP 480 (Temporarily unavailable)

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Request-Line	Talasi silari	30	11010101100	Containen
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				
warn-code	"110"			
warn-text	"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)

Derivation Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"486"			
Reason-Phrase	"Busy Here"			
Content-Length			RFC 3261 [22]	
value	"0"	No message body included - end of SIP message		

Editor's note: Table 5.5.2.18.5-1 needs to be reviewed

5.5.2.19.6 SIP 488 (Not Acceptable Here)

Table 5.5.2.19.6-1: SIP 488 (Not Acceptable Here)

Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"488"			
Reason-Phrase	"Not Acceptable Here"			
Content-Length			RFC 3261 [22]	
value	"0"	No message body included - end of SIP message		

Editor's note: Table 5.5.2.19.6-1 needs to be reviewed

5.5.2.19.7 SIP 401 (Unauthorized)

Table 5.5.2.19.7-1: SIP 401 (Unauthorized)

Derivation Path: RFC 3261 [22]	1			
Information Element	Value/remark	Comment	Reference	Condition
Status-Line	#01D/0.0#		RFC 3261 [22]	
SIP-Version	"SIP/2.0" "401"			
Status-Code Reason-Phrase	"Unauthorized"			
Via	Same value as		RFC 3261 [22]	
Via	received in the		KFC 3201 [22]	
	REGISTER message			
То	REGIOTER message		RFC 3261 [22]	
addr-spec	Same value as		10 0 0201 [22]	
addi opoc	received in the			
	REGISTER message			
tag	To-tag assigned by the			
13.9	SS			
From	Same value as		RFC 3261 [22]	
	received in the		, ,	
	REGISTER message			
Call-ID	Same value as		RFC 3261 [22]	
	received in the			
	REGISTER message			
CSeq	Same value as		RFC 3261 [22]	
	received in the			
	REGISTER message			
WWW-Authenticate			RFC 2617 [72]	
			RFC 3310 [96]	
Realm	px_MCX_DomainName			
	_Organization_A			
algorithm	"AKAv1-MD5"			
qop-value	"auth"			
nonce	Base 64 encoding of			
	RAND and AUTN			
opaque	arbitrary value (to be			
	returned by the UE in			
	subsequent			
0	REGISTER)		DEC 0000 [50]	
Security-Server	lines a 2 mm l		RFC 3329 [50]	
mechanism-name	"ipsec-3gpp"			
algorithm[1]	px_lpSecAlgorithm (hmac-md5-96 or			
	hmac-sha-1-96)			
spi-c[1]	SPI number of the			
spi-c[1]	inbound SA at the			
	protected client port			
spi-s[1]	SPI number of the			
٥٢. ٥[١]	inbound SA at the			
	protected server port			
port-c[1]	protected client port of			
	SS			
port-s[1]	protected server port of			
	SS			
Encrypt-algorithm[1]	des-ede3-cbc or aes-			
	cbc			
q[1]	"0.9"			
mechanism-name[2]	"Ipsec-3gpp"			
algorithm[2]	Algorithm not selected			
	by px_lpSecAlgorithm			
	(hmac-sha-1-96 or			
	hmac-md5-96)			
spi-c[2]	SPI number of the			
	inbound SA at the			
	protected client port			
spi-s[2]	SPI number of the			
	inbound SA at the			
	protected server port			
port-c[2]	protected client port of			
	SS			

port-s[2]	protected server port of		
	SS		
encrypt-algorithm[2]	des-ede3-cbc or aes-		
	cbc		
q[2]	"0.7"		
Content-Length		RFC 3261 [22]	
value	"0"		

5.5.2.20 SIP 5xx

5.5.2.20.1 SIP 500 (Server Internal Error)

Table 5.5.2.20.1-1: SIP 500 (Server Internal Error)

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	Fynlanation Fynlanation

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])
WITH_FLOORCONTROL	Floor control to be used for the call. Unless otherwise stated in
	the test case this condition is assumed to be true.

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

Session description: Protocol Version Origin Origin username sess-id	"0" Same o=line as in the previous SDP message sent by the UE except that sess-version is incremented by one any allowed value any allowed value	v= line o= line O= line A numeric string such that the tuple of <username>, <sess-< th=""><th>Reference</th><th>FIRST_SD P_FROM_ UE</th></sess-<></username>	Reference	FIRST_SD P_FROM_ UE
Origin Origin username	Same o=line as in the previous SDP message sent by the UE except that sess-version is incremented by one	o= line o= line A numeric string such that the tuple of		P_FROM_
Origin username	previous SDP message sent by the UE except that sess-version is incremented by one any allowed value	o= line A numeric string such that the tuple of		P_FROM_
username	any allowed value	A numeric string such that the tuple of		P_FROM_
username		A numeric string such that the tuple of		P_FROM_
		that the tuple of		l
sess-id	any allowed value	that the tuple of		
		id>, <nettype>, <addrtype>, and <unicast-address> forms a globally unique identifier for the session</unicast-address></addrtype></nettype>		
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		TS 26.114 [64] Table K.6	
Time description				
Timing	"0"	t= line		
start-time	"0"			
stop-time 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"			<u> </u>
Addrtype	"IP4" or "IP6" depending on IP address"			

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
Bandwidth	value/remark	b= line	Reference	Condition
bwtype	"AS"	b= line bwtype:bandwidth		
bandwidth	any allowed value	bwtype.banawiatii	TS 26.114 [64]	
banawan	any anomou value		Table K.6	
bwtype	"RS"		RFC 3556	
			[113]	
bandwidth	any value if present			
bwtype	"RR"		RFC 3556	
la e e ela cidalda			[113]	
bandwidth media attribute	any value if present	a= line		
media attribute		attribute = rtpmap		
rtpmap	"rtpmap"	аштрисе – притар		
payload type	same value as format			
payload type	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		
function	"fmtp"	attribute = fmtp		
fmtp format	a value given in fmt in			
Tomat	the audio media			
	description			
format specific parameters	decemption	Parameters of WB-		
romat opcomo parametero		AMR codec		
		NOTE: In addition to		
		the parameters below		
		the UE may provide		
1.11	101	further parameters	DEC 4007 (50)	
mode-change-capability	"2"	To be able to	RFC 4867 [59] clause 8.2	
		interoperate fully with gateways to circuit	clause 6.2	
		switched networks		
max-red	"0"	No redundancy will be	RFC 4867 [59]	
		used	clause 8.2	
media attribute		a= line		
		attribute =ptime		
ptime	any allowed value	packet time		
media attribute		a= line		
		attribute =maxptime		
maxptime media attribute	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	a=line	RFC 5576	
	lines if present	attribute=ssrc	[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			
attributo	according to RFC 5576			
	[116]			
	(NOTE 1)			
media attribute	, ,	a=line	RFC 5245	ICE_SUPP
		attribute="candidate"	[115]	ORTED
candidate		candidate for RTP		

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
foundation	any value		11010101100	- Communicati
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			
priority	any value			
connection-address	same IP address as in speech media's c= line or in the session's c= line if the speech media does not have a c= line	default candidate		
port	same port number as in the m= line for speech			
cand-type	"host"			
media attribute		a=line attribute="candidate"	RFC 5245 [115]	ICE_SUPP ORTED
candidate		candidate for RTCP		
foundation	any value			
component-id	2	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"		ļ	
priority	any value	1.6.16.29.1		
connection-address	same IP address as in speech media's c= line or in the session's c= line if the speech media does not have a c= line	default candidate		
port	same port number as in the m= line for speech incremented by 1			
cand-type	"host"			
media attribute		a= line		PRIVATE-
Irou mamt		attribute = key-mgmt	TS 24.379 [9]	CALL
key-mgmt			clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2A		RFC 4567 [44]	
media description		m= line media = application SDP media-level section for a media- floor control entity		WITH_FLC ORCONTR OL
media	"application"			
port	any allowed value	The port for the media- floor control entity		
proto	"udp"		ļ	
fmt Date	"MCPTT"	- Co-		
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			
media attribute		a= line attribute = fmtp		
fmtp				
format	"MCPTT"			1

Information Element	Value/remark	Comment	Reference	Condit
format specific parameters				SDP_O ER, INITIAL DP_OF
			TO 04 000 1401	R R
mc_queueing	optional	Parameter has no value	TS 24.380 [10] cl. 12.1.2.3	
mc_priority	any allowed value	Any integer value in the range of 1255	TS 24.380 [10] cl. 12.1.2.3	
mc_granted	not present			
	present	Parameter has no value	TS 24.380 [10] cl. 12.1.2.3	INITIAL DP_OFI R
mc_implicit_request	not present			
	present	Parameter has no value	TS 24.380 [10] cl. 12.1.2.3	IMPLICI GRANT EQUES D
format specific parameters				SDP_AI WER
mc_queueing	optional	Parameter has no value	TS 24.380 [10] cl. 12.1.2.3	
mc_priority	same value as in the offer		TS 24.380 [10] cl. 12.1.2.3	
mc_granted	not present		TS 24.380 [10] cl. 12.1.2.3	
mc_implicit_request	not present		TS 24.380 [10] cl. 12.1.2.3	
mc_ssrc	not present		TS 24.380 [10] cl. 12.1.2.3	
nedia attribute		a=line attribute="candidate"	RFC 5245 [115]	ICE_SU 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			
connection-address	same IP address as in application media's c= line or in the session's c= line if the application media does not have a c= line	default candidate		
port	same port number as in the m= line for application			
cand-type	"host"			
	the m= line for application			_

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:				
Protocol Version	"0"	v= line		

Derivation Path: RFC 4566 [27]	Value/ramaris	Commont	Deference	Candista
Information Element Origin	Value/remark Same o=line as in the	Comment o= line	Reference	Condition
Origin	previous SDP message	o= line		
	sent by the UE except			
	that sess-version is			
	incremented by one			
Origin		o= line		FIRST_SD
				P_FROM_
				UE
username	px_ MCVideo	Username of client		
id	_User_A_ID any allowed value	A source onic string a source		
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		
	<u> </u>	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-	s= line		
	encoded character, or if			
	no name is given, a			
	single empty space			
Connection Data	not required if included	c= line		
nettyne	in all media "IN"			
nettype Addrtype	"IP4" or "IP6"			
Additype	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		4 P		
Timing	"0"	t= line		
start-time	"0"			
stop-time Media descriptions	U			
media description		m= line	RFC 4867 [59]	
modia accomplicit		media = audio	111 0 4007 [08]	
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	c= line		
	contain a c=line;			
	optional otherwise			
nettype	"IN"			
Addrtype	"IP4" or "IP6"			
- 31	depending on IP			
	address"			
connection-address	IP address of the UE			

Derivation Path: RFC 4566 [27]				
Information Element	Value/remark	Comment	Reference	Condition
Bandwidth		b= line		
bwtype	"AS"	bwtype:bandwidth	TO 00 444 F047	
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]	

Perivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
media description		m= line		
•		media = video		
		SDP media-level		
		section for a media-		
		transmission control		
	<u> </u>	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;			
	optional otherwise			
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	
bwtype	"RS"		RFC 3556	
7F-			[113]	
bandwidth	any value if present			
bwtype	"RR"		RFC 3556	
A1			[113]	
bandwidth	any value if present			
media attribute	,	a= line		
		attribute = rtpmap		
rtpmap	"rtpmap"	1 -1		
payload type				
encoding name	"H.264"			
clock rate			RFC 4867 [59]	
			clause 8.3	
encoding parameter	"" if present	Channel number	3.00000	
media attribute	11 p100011t	a= line		PRIVATI
		attribute = key-mgmt		CALL
key-mgmt			TS 24.281 [86]	
	MUZENZONIZIZE		clause 6.2.1	
mikey	MIKEY-SAKKE	Use condition	RFC 4567 [44]	
	I_MESSAGE as specified in Table	MCVIDEO		

Derivation Path: RFC 4566 [27]				
Information Element	Value/remark	Comment	Reference	Condition
media description		m= line media = application		
		SDP media-level section for a media-		
media	"application"	floor control entity	3GPP TS 24.581 [88] clause 12	
port	any allowed value	The port for the media- floor control entity	ciause 12	
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 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			
media attribute		a= line attribute = fmtp		
fmtp			3GPP TS 24.581 [88] clause 12, clause 14	
format	"MCVideo"			
format specific parameters				SDP_OFF ER, INITIAL_S DP_OFFE R
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	

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	

- MCData

Table 5.5.3.1.1-3: SDP Message from the UE for MCData

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
Session description:	- 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		
CLOSIGII Namio	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 own MSRP URI.	TS 24.282 [31]	
		An example: msrp://mcdata.example .com:7654/abcde1; tcp		
media attribute		a= line		
media attribute		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 attribute = key-mgmt		MCD_1to1
key-mgmt			TS 24.379 [9] clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2A	Use condition MCDATA	RFC 4567 [44]	

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				
Information	Value/remar	Comment	Reference	Condition
Element	k			
Session				
description:	"0"	Bo -		
Protocol Version Origin	Same o=line	v= line o= line		
Origin	as in the	o= iii ie		
	previous SDP			
	message sent			
	by the SS			
	except that			
	sess-version			
	is			
	incremented			
Origin	by one	a line		FIRST CDD FDOM CC
Origin	"_"	o= line "-" indicating the concept of		FIRST_SDP_FROM_SS
username	-	user IDs not being supported		
sess-id	"12345678"	A numeric string such that		
JUJJ-IU	12040070	the tuple of <username>,</username>		
		<pre><sess-id>, <nettype>,</nettype></sess-id></pre>		
		<addrtype>, and <unicast-< td=""><td></td><td></td></unicast-<></addrtype>		
		address> forms a globally		
		unique identifier for the		
		session.		
sess-version	"12345678"			
nettype	"IN" "IP4" or "IP6"	This depends on the coning of		
Addrtype		This depends on the unicast address of the UE		
	depending on IP address"	address of the OE		
unicast-address	IP address of			
dinodot additood	the SS			
Session Name	" "	s= line		
		single empty space		
		indicating no session name		
Bandwidth		b= line		
bwtype	"AS"	bwtype:bandwidth		
bandwidth	"38"	kilobits per second;	TS 26.114 [64	
		Maximum AMR-WB at 23.85] Table K.6	
		kbps but limit to 12.65 kbps plus overhead		
Time description		pius overnieau		
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Media				
descriptions				
media		m= line	RFC 4867 [59]	
description	H=1" "	media = audio		
media	"audio"	The transport of the transport	DEC 2005 [22]	
port	port number	The transport port to which	RFC 6335 [63]	
	assigned by the SS (even	the media stream is sent	clause 6	
	integer)			
proto	"RTP/SAVP"			
fmt	"99"	RTP/SAVP payload type for		INITIAL_SDP_OFFER
		AMR-WB is dynamic		
	value for	,		
	AMR-WB as			
	used in initial			
	offer			
media title	"speech"	i= line		
Connection Data	"IN"	c= line		
nettype	IIN			

Derivation Path: RFC				
Information Element	Value/remar k	Comment	Reference	Condition
Addrtype	"IP4" or "IP6" depending on IP address"	This depends on the connection address		
connection- address	IP address of the SS			
Bandwidth		b= line		
bwtype	"AS"	bwtype:bandwidth		
bandwidth	38		TS 26.114 [64] Table K.6	
bwtype	"RS"		RFC 3556 [113]	
bandwidth	0			
bwtype	"RR"		RFC 3556 [113]	
bandwidth	2000			
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"99" value for AMR-WB as used in initial offer			INITIAL_SDP_OFFER
encoding name	"AMR-WB"			
clock rate	16000		RFC 4867 [59] clause 8.3	
encoding	"1"	Channel number		
parameter				
media attribute		a= line attribute = fmtp		
fmtp format	"99"			INITIAL_SDP_OFFER
iomat	value for AMR-WB as used in initial offer			INTIAL_OBT_OFFER
format specific parameters		Parameters of WB-AMR codec		
mode-change- capability	"2"	To be able to interoperate fully with gateways to circuit switched networks	RFC 4867 [59] clause 8.2	
max-red	"0"	No redundancy will be used	RFC 4867 [59] clause 8.2	
media attribute		a= line attribute =ptime		
ptime media attribute	"20"	packet time a= line		
	"040"	attribute =maxptime	-	
maxptime media attribute	"240"	maximum packet time a= line attribute = key-mgmt		PRIVATE-CALL
key-mgmt		aunoute = key-mymt	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]	
media description		m= line media = application		WITH_FLOORCONTROL
		SDP media-level section for a media-floor control entity		

Derivation Path: RFC				
Information	Value/remar	Comment	Reference	Condition
Element	k			
media	"application"			
port	port number	The port for the media-floor		
	assigned by	control entity		
	the SS being			
	different than			
	the port			
	number of the			
	audio channel			
	(RTP) and its associated			
	control			
	channel			
	(RTCP)"			
proto	"udp"			
fmt	"MCPTT"			
Connection Data		c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6"	This depends on the		
31	depending on	connection address		
	IP address			
connection-	IP address of			
address	the SS			
media attribute		a= line		
		attribute = fmtp		
fmtp	"MAGETT"			
format	"MCPTT"			000 05550
format specific				SDP_OFFER
parameters mc_queueing	Present	Parameter has no value	TS 24.380 [10	
inc_queueing	FIESEIIL	Farameter has no value	13 24.360 [10	
			cl. 12.1.2.3	
mc_priority	"3"	"3" is the value of the <user-< td=""><td>TS 24.380 [10</td><td></td></user-<>	TS 24.380 [10	
mo_pnonty		priority> element for user A	1	
		in the MCPTT Group	cl. 12.1.2.3	
		Configuration (Table 5.5.7.1-	and cl. 143.3	
		1)		
mc_granted	not present		TS 24.380 [10	
]	
			cl. 12.1.2.3	
	not present		TS 24.380 [10	
mc_implicit_reques]	
t to make the second of the se			cl. 12.1.2.3	ODD ANOWED
format specific				SDP_ANSWER
parameters mc_queueing	present if	Parameter has no value	TS 24.380 [10	
mo_queueing	included in	i didilicioi lias lio value	1024.000[10	
	the offer		cl. 12.1.2.3	
mc_priority	if a value is	"3" is the value of the <user-< td=""><td>TS 24.380 [10</td><td></td></user-<>	TS 24.380 [10	
	provided in	priority> element for user A]	
	the offer: "3"	in the MCPTT Group	cl. 12.1.2.3	
	or the value	Configuration (Table 5.5.7.1-	and cl. 14.3.3	
	provided in	1)		
	the offer,	NOTE: <num-levels-priority-< td=""><td></td><td></td></num-levels-priority-<>		
	whichever is	hierarchy> has a value of 10		
	the lower	for on-network i.e. it is		
	value;	greater than 3		
	otherwise not			
mc_granted	present		TS 24.380 [10	
mc_granteu	not present		10 24.300 [10	
			cl. 12.1.2.3	
	present	Parameter has no value	TS 24.380 [10	IMPLICIT_FLOOR_GRANTED
	1]	
			cl. 12.1.2.3	
	•		·	•

Derivation Path: RFC	4566 [27]			
Information	Value/remar	Comment	Reference	Condition
Element	k			
	not present		TS 24.380 [10	
mc_implicit_reques	-]	
t			cl. 12.1.2.3	
	present	Parameter has no value	TS 24.380 [10	IMPLICIT_GRANT_REQUESTE D
			cl. 12.1.2.3	
mc_ssrc	not present		TS 24.380 [10	
_			1	
			cl. 12.1.2.3	
	same value		TS 24.380 [10	IMPLICIT_GRANT_REQUESTE
	as in the offer		1	D
	if provided in		cl. 12.1.2.3	
	the offer and			
	there is no			
	collision with			
	the value			
	used by the			
	SS;			
	otherwise			
	value			
	assigned by			
	the SS			

- MCVideo

Table 5.5.3.1.2-2: SDP Message from the SS for MCVideo

Derivation Path: RFC 4566 [27]				
Information Element	Value/remark	Comment	Reference	Condition
Session description:				
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_	Username of client		
	В	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		
Bandwidth		b= line		
bwtype	"AS:"	bwtype:bandwidth		

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
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		t= line		
start-time	"0"			
stop-time Media descriptions	"0"	_		
media description		m= line	RFC 4867 [59]	
-		media = audio	KFC 4007 [59]	
media	"audio"	T	DE0 0005 [00]	
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		a= line attribute =maxptime		
maxptime	"240"	maximum packet time		
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 5.5.9.1-2	Use condition MCVIDEO	RFC 4567 [44]	

Information Element	Value/remark	Comment	Reference	Condition
media description		m= line		
•		media = video		
		SDP media-level		
		section for a media-		
		transmission control		
		entity		
media	"video"			
port	port number of the	The port for the media-		
	audio stream	transmission control		
	incremented by 2	entity		
	(resulting in even			
	integer)			
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		
a a the rea	"IN"	SDP		
nettype	"IP4" or "IP6"			
Addrtype				
	depending on IP			
aconomica address	address IP address of the SS			
connection-address media attribute	ir address of the 55	a= line		
media attribute		a= iine attribute = rtpmap		
rtpmap	"rtpmap"	ашвисе – пршар		
payload type	III			
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]	
			clause 6.2.1	
mikey	MIKEY-SAKKE	Use condition	RFC 4567 [44]	
•	I_MESSAGE as	MCVIDEO		1
	specified in Table			1
	5.5.9.1-2			
media description		m= line		
-		media = application		
		SDP media-level		
		section for a media-		1
		floor control entity		1
	1		1	1

Derivation Path: RFC 4566 [27] 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 channels (RTCP)"	The port for the media- floor control entity		
proto	"udp"			
fmt	"MCVideo"			
Connection Data		c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address	This depends on the connection address		
connection-address	IP address of the SS			
media attribute		a= line attribute = fmtp		
fmtp				
format	"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	No present if not	3GPP	
	or	present in the SDP	TS 24.581 [88]	
	"10"	offer. If present in the	clause 12,	
		SDP offer, then the	clause 14	
		arbitrarily chosen value		
		of "10 should be used		

- MCData

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

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
Session description:	value/i ciliai k	Johnnettt	IVOIGIGIICE	Condition
Protocol Version	"0"	v= line		
Origin	0	o= line		
username	px_MCDATA_ID_User	Username of client		
username	B	Osemanie of chem		
sess-id	"12345678"	A numeric string such		
		that the tuple of		
		<username>, <sess-< td=""><td></td><td></td></sess-<></username>		
		id>, <nettype>,</nettype>		
		<addrtype>, and</addrtype>		
		<unicast-address></unicast-address>		
		forms a globally unique		
		identifier for the		
		session.		
sess-version	"12345678"			
nettype	"IN"			
Addrtype	"IP4" or "IP6"			
	depending on IP			
	address			
unicast-address	IP address of the SS	<u>.</u>		
Session Name	"-"	s= line		
Session Information	"message"	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 automata.		
Connection Data	not required if included	c= line		
Connection Data	in all media	Included if the media		
	iii aii iiieula	plane control channel		
		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			
Bandwidth		b= line		
bwtype	"AS:"	bwtype:bandwidth		
bandwidth	"38"	kilobits per second;	TS 26.114 [64]	
		Maximum AMR-WB at	Table K.6	
		23.85 kbps but limit to		
		12.65 kbps plus		
		overhead		
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Media descriptions		P.	DEC 1005 1501	
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	"*"			
media title	"message"	i= line		

Derivation Path: RFC 4566 [27] 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	iveleteting	Condition
Protocol Version	"0"	v= line		
Origin	0	o= line		
	11_11	o= line		
username sess-id	any allowed value	A numeric string such		
sess-iu	any allowed value	A numeric string such that the tuple of		
		<pre><username>, <sess-< pre=""></sess-<></username></pre>		
		id>, <nettype>,</nettype>		
		<addrtype>, and</addrtype>		
		<unicast-address></unicast-address>		
		forms a globally unique		
		identifier for the		
		session.		
sess-version	any allowed value			
nettype	"IN"			
addrtype	"IP4"	"IP4" or "IP6"		
unicast-address	px_MCPTT_IP_Connec			
aaast aaa. 555	tionAddressAll			
Session Name	"_"	s= line		
Connection Data		c= line		1
nettype	"IN"			1
addrtype	"IP4"	"IP4" or "IP6"		
connection-address	px_MCPTT_IP_Connec	Set to the multicast IP		1
	tionAddressAll	address of the MCPTT		
		group		
Bandwidth		b= line		
bwtype	"AS:"	bwtype:bandwidth		
bandwidth	any allowed value	71		
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Media descriptions	3			
media description		m= line		
		media = audio		
media	"audio"			
port	any allowed value	Set to a port number for		
F		MCPTT speech of the		
		MCPTT group		
proto	"RTP/AVP"	3 - 1		
fmt	any allowed value(s)	Indicating RTP payload		
	,	type numbers		1
media title	"speech"	i= line		
media attribute		a= line		
		attribute = rtpmap		
rtpmap	"rtpmap"	1 -1		
payload type	"99"			
encoding name	"AMR-WB"			
clock rate	16000			
encoding parameter	"1" if present	Channel number		
media attribute	,	a= line		1
modia attributo		attribute = fmtp		
fmtp	"fmtp"	1		
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		<u> </u>
max-red	"0"	No redundancy will be		
	Ī	used		1

Information Element	Value/remark	Comment	Reference	Condition
media attribute		a= line		
		attribute =ptime		
ptime	any allowed value	packet time		
media attribute		a= line		
		attribute =maxptime		
maxptime	any allowed value	maximum packet time		
media description		m= line		
•		media = application		
media	"application"			
port	any allowed value	Set to a port number for		
•		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	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			
	5.5.9.1-2			

- MCVideo

Table 5.5.3.1.3-2: SDP Message from the UE - Off-network for MCVideo

Derivation Path: RFC 4566 [27]				
Information Element	Value/remark	Comment	Reference	Condition
Session description:				
Protocol Version	"0"	v= line		
Origin		o= line		
username	"-"			
sess-id	any allowed value	A numeric string such that the tuple of <username>, <sess- id="">, <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	

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 averated		priority is required.	2000	
mc_granted		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
mikey	I_MESSAGE as	security parameters	10 4307 [44]	
	specified in Table	needed for		
	6.1.1.1.3.3-3	setting up the security		
	0.1.1.1.0.0 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	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			

- MCData

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:	Value/Terrial K	Comment	Reference	Condition
Protocol Version	"0"	v= line		+
Origin	0	o= line		
	n_n	0= line		1
username sess-id	"12345678"	A numeric string such		
5622-iu	12343076	that the tuple of		
		<username>, <sess-< td=""><td></td><td></td></sess-<></username>		
		id>, <nettype>,</nettype>		
		<addrtype>, and</addrtype>		
		<unicast-address></unicast-address>		
		forms a globally unique		
		identifier for the		
		session.		
sess-version	"12345678"			
nettype	"IN"			
addrtype	"IP4"			
unicast-address	px_MCPTT_IP_Connec			
	tionAddressAll			
Session Name	"_"	s= line		
Connection Data		c= line		
nettype	"IN"			
addrtype	"IP4"	"IP4" or "IP6"		
connection-address	px_MCPTT_IP_Connec	Set to the multicast IP		
	tionAddressAll	address of the MCPTT		
5 1 1 1 1 1		group		
Bandwidth	"40"	b= line		
bwtype	"AS:"	bwtype:bandwidth		
bandwidth	any allowed value			
Time description		4 line		
Timing	"0"	t= line		
start-time	"0"			1
stop-time Media descriptions	0			
media description		m= line		
media description		media = audio		
media	"audio"	media = addio		
port	"49152"	Set to a port number for		
ροπ	40102	MCPTT speech of the		
		MCPTT group		
proto	"RTP/AVP"	c. ii gidap		
fmt	"99"	Indicating RTP payload		
		type numbers		
media title	"speech"	i= line		
media attribute	1	a= line		
		attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"99"			
encoding name	"AMR-WB"			
clock rate	16000			
encoding parameter	"1" if present	Channel number		
media attribute		a= line		
		attribute = fmtp		
fmtp	"fmtp"			
format	"99"			
format specific parameters		Parameters of WB- 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		1
		attribute =ptime		

Information Element	Value/remark	Comment	Reference	Condition
ptime	"20"	packet time		
media attribute		a= line		
		attribute =maxptime		
maxptime	"240"	maximum packet time		
media description		m= line		
		media = application		
media	"application"			
port	"49153"	Set to a port number for		
		media-floor control		
		entity of the MCPTT		
		group		
proto	"udp"			
fmt	"MCPTT"			
media attribute		a= line		
		attribute = fmtp		
fmtp				
format	"MCPTT"			
format specific parameters				
mc_queueing	Present	Parameter has no		
		value		
mc_priority	"5"	Any integer value in the		
		range of 1255		
mc_granted	Present	Parameter has no		
		value		
mc_implicit_request	Present	Parameter has no		
		value		
media attribute		a= line		
		attribute = key-mgmt		
key-mgmt				
mikey	MIKEY-SAKKE			
	I_MESSAGE as			
	specified in Table			
	5.5.9.1-2			1

- MCVideo

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

Derivation Path: RFC 4566 [27]					
Information Element	Value/remark	Comment	Reference	Condition	
Session description:					
Protocol Version	"0"	v= line			
Origin		o= line			
username	"_"				
sess-id	"12345678"	A numeric string such that the tuple of <username>, <sess- id="">, <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 ectionAddressAll	Set to the multicast IP address of the MCVideo group		
Bandwidth		b= line		
bwtype	"AS:"	bwtype:bandwidth		
bandwidth	any allowed value	z y p o a a a		
Time description	any anomou rando			
Timing		t= line		1
start-time	"0"	1- 1110		1
stop-time	"0"			
Media descriptions	<u> </u>			
media description		m= line media = audio		
media	"audio"			
port	"49152"	Set to a port number for MCVideo speech of the MCVideo group		
proto	"RTP/AVP"			
fmt	"99"	Indicating RTP payload type numbers		
media title	"speech"	i= line		
media attribute	-1	a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"99"			
encoding name	"AMR-WB"			
clock rate	16000			1
encoding parameter	"1" if present	Channel number		
media attribute	i ii present	a= line attribute = fmtp		
fmtp	"fmtp"	attribute = mitp		
format	"99"			
format specific parameters		Parameters of WB- AMR codec		
mode-change-capability	"2"	To be able to interoperate fully with gateways to circuit switched networks		
max-red	"0"	No redundancy will be used		
media attribute		a= line attribute =ptime		
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"	ayatem.		
Connection Data		c= line		
		Included if the media		
		plane control channel		
		uses a different IP		
		address than other		
		media described in the		
		SDP		
nettype	"IN"			
addrtype	"IP4"			
connection-address	px_MCVideo_IP_Conn			
	ectionAddressApp			
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type				
encoding name	"H.264"		DEC 4007 [50]	
clock rate			RFC 4867 [59] clause 8.3	
encoding parameter	"" if present	Channel number		
media attribute		a= line		
		attribute = fmtp		
		attribute - imp		
fmtp			3GPP	
			TS 24.581 [88]	
			clause 12,	
			clause 14	
format	"MCVideo"			
format specific parameters				
mc_queueing	optional	Parameter has no	3GPP	
		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.		

Derivation Path: RFC 4566 [27]	V-11	0	Deferre	00
Information Element	Value/remark	Comment	Reference	Condition
mc_priority	not present	Any integer value in the	3GPP	
	or any allowed value	range of 1255	TS 24.581 [88] clause 12,	
	any anowed 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	
	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		
mc_granted	present	priority is required. Parameter has no	3GPP	
mo_granted	Pieseiii	value	TS 24.581 [88]	
			clause 12.	
		Shall include the	clause 14	
		"mc_granted" fmtp		
		attribute in the SDP		
		offer of an initial SIP		
		INVITE request when it		
		is acceptable for the		
		MCVideo client to		
		receive a granted		
		indication in the SIP 200 (OK) response to		
		an initial INVITE		
		request.		
mc_implicit_request	present	Parameter has no	3GPP	
mo_implion_request	present	value	TS 24.581 [88]	
		74.00	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.		
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.		<u> </u>

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	"49153"	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	!! !!! 4 C \ /: -! !!			
format	"MCVideo"			
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		
_5		value		
mc_implicit_request	Present	Parameter has no		
		value		
media attribute		a= line		
		attribute = key-mgmt		
key-mgmt				
mikey	MIKEY-SAKKE			
	I_MESSAGE as			
	specified in Table			
	5.5.9.1-2			

- MCData

Table 5.5.3.1.4-3: SDP Message from the SS - Off-network for MCData

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5.5.3.2 MCS Info Lists

5.5.3.2.1 MCS Info Lists from the UE

Table 5.5.3.2.1-1: MCPTT-Info from the UE

Derivation Path: TS 24.379 [9] of Information Element	Value/remark	Comment	Poforonos	Condition
	value/remark	Comment	Reference	Condition
mcpttinfo				
mcptt-Params	not propont			
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			
21.7	"prearranged"			(GROUP- CALL OR BROADCA ST- GROUP- CALL) AND INVITE_R EFER
	"private"			PRIVATE- CALL AND INVITE_R
	"chat"			EFER 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 BROADCA ST- 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>			
	not present			CONFIG, GROUPC ONFIG, POC- SETTINGS -EVENT
mcptt-called-party-id	not present			

Derivation Path: TS 24.379 [9] cla	ause F.1.2			
Information Element	Value/remark	Comment	Reference	Condition
	not present or encrypted (NOTE 2) <mcptt-called-party-id> with mcpttURI set to px_MCPTT_ID_User_B</mcptt-called-party-id>			PRIVATE- CALL AND INVITE_R EFER
	not present or encrypted (NOTE 2) <mcptt-called-party-id> with mcpttURI set to px_MCPTT_ID_User_A</mcptt-called-party-id>			NOT INVITE_R EFER
mcptt-calling-group-id	not present			
required emergency-ind	not present not present or encrypted (NOTE 2) <emergency-ind> with mcpttBoolean set to "false" Encrypted (NOTE 2)</emergency-ind>			EMERGEN
	<pre><emergency-ind> with mcpttBoolean set to "true"</emergency-ind></pre>			CY-CALL AND INVITE_R EFER
alert-ind	not present or encrypted (NOTE 2) <alert-ind> with mcpttBoolean set to "false"</alert-ind>			
	Encrypted (NOTE 2) <emergency-ind> with mcpttBoolean set to "true"</emergency-ind>			EMERGEN CY-ALERT AND INVITE_R EFER
imminentperil-ind	not present or encrypted (NOTE 2) <imminentperil-ind> with mcpttBoolean set to "false"</imminentperil-ind>			
	Encrypted (NOTE 2) <emergency-ind> with mcpttBoolean set to "true"</emergency-ind>			IMMPERIL -CALL AND INVITE_R EFER
broadcast-ind	not present or "false"			
	"true"			BROADCA ST- GROUP- CALL
mc-org"	not present			1
floor-state associated-group-id	not present px_MCPTT_Group_A_I D if mcptt-request-uri contains a temporary group identity; otherwise, not present	if the <mcptt-request- uri=""> element contains a group identity then this element can include an MCPTT group ID associated with the group identity in the <mcptt-request-uri> element. E.g. if the <mcptt-request-uri> element contains a temporary group identity (TGI), then the <associated-group-id> element can contain the constituent MCPTT group ID</associated-group-id></mcptt-request-uri></mcptt-request-uri></mcptt-request->	TS 24.379 [9] clause F.1.3	GROUP- CALL

Information Element	Value/remark	Comment	Reference	Condition
	not present			PRIVATE-
				CALL
originated-by	not present			
MKFC-GKTPs	not present			
mcptt-client-id	not present			
	encrypted (NOTE 2) <mcptt-client-id> with mcpttString set to valid UUID URN (NOTE 1)</mcptt-client-id>	The UUID URN of the MCPTT Client	RFC 4122 [106] TS 24.379 [9] clause 4.10	(GROUP- CALL OR BROADCA ST- GROUP- CALL OR CHAT- GROUP- CALL OR EMERGEN CY-CALL OR IMMPERIL -CALL OR EMERGEN CY- ALERT) AND INVITE_R EFER
	not present or encrypted (NOTE 2) <mcptt-client-id> with mcpttString set to valid UUID URN (NOTE 1)</mcptt-client-id>			PRIVATE- CALL ANI 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- SETTING -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:XXXXXXXX-YYYY-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
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] c	Value/remark	Comment	Reference	Condition
type attribute	"Encrypted"		1101010101	
EncryptedData	EncryptedData as described in Table 5.5.13.2-1 containing encrypted element content of the mcptt parameter			

MCVideo

Table 5.5.3.2.1-2: MCVideo-Info from the UE

Information Element	Value/remark	Comment	Reference	Condition
ncvideoinfo				
mcvideo-Params				
mcvideo-access-token	not present			
	"eyJhbGciOiJSUzI1NiJ9	The access token is	TS 33.180 [94	CONFIG
	.eyJtY3B0dF9pZCl6ImF	opaque to the], clause B.4	
	saWNIQG9yZy5jb20iLC	MCVideo client	RFC	
	JleHAiOjE0NTM1MDYx		6749 [77]	
	MjEsInNjb3BIIjpbIm9wZ			
	W5pZCIsljNncHA6bWN			
	wdHQ6cHR0X3NlcnZlci			
	JdLCJjbGllbnRfaWQiOi			
	JtY3B0dF9jbGllbnQifQ.			
	XYIqai4YKSZCKRNMLi			
	pGC_5nV4BE79IJpvjex			
	WjlqqcqiEx6AmHHIRo0			
	mhcxeCESrXei9krom9e			
	8Goxr_hgF3szvgbwl8J			
	RbFuv97XgepDLjEq4jL			
	3Cbu41Q9b0WdXAdFm			
	eEbiB8wo_xggiGwv6ID			
	R1b3TgAAsdjkRxSK4ct			
	IKPaOJSRmM7MKMcK			
	hlug3BEkSC9-			
	aXBTSIv5fAGN-			
	ShDbPvHycBpjzKWXBv			
	MIR5PaCg-			
	9fwjELXZXdRwz8C6Jb RM8aqzhdt4CVhQ3-			
	Arip-S9CKd0tu-			
	qhHfF2rvJDRlg8ZBiihd			
	PH8mJs-qpTFep_1-			
	kON3mL0_g54xVmlMw			
	N0XQA"			
session-type	not present			
3033iOH-type	"prearranged"			GROUP-
	preamanged			CALL AND
				INVITE R
				FER

1				
	"private"		 	PRIVATE-
			į į	CALL AND
			İ	INVITE_RE FER
	"chat"			CHAT-
	cnat		İ	GROUP-
			<u> </u> 	CALL AND
			<u> </u> 	INVITE_RE
			İ	FER
mcvideo-request-uri	px_MCVideo_Group_A	The URI of the group		GROUP-
movideo request un	ID	The Ord of the group	į į	CALL
	not present or	The URI of the invited		PRIVATE-
	px_MCVideo_User_B_I	MCVideo Client	İ	CALL
	D		İ	
mcvideo-calling-user-id	not present or			
	px_MCVideo_ID_User_		İ	
	A			
mcvideo-called-party-id	not present			
	not present or		į į	PRIVATE-
	px_MCVideo_ID_User_		İ	CALL AND
	В		İ	INVITE_RE
				FER
	not present or		į į	NOT INVITE_RE
	px_MCVideo_ID_User_ A		İ	FER
mcvideo-calling-group-id	not present			I LIX
required	not present			
emergency-ind	not present or if present			
chiergency ma	then="false"		į į	
	"true"			EMERGEN
			į į	CY-CALL
alert-ind	not present or if present			
	then="false"		İ	
	"true"			EMERGEN
				CY-ALERT
imminentperil-ind	not present or if present		į į	
	then="false"			
	"true"		į į	IMMPERIL-
				CALL
broadcast-ind	not present or "false"	-		DDOADOA
	"true"		į į	BROADCA ST-
			į į	GROUP-
			<u> </u> 	CALL
mc-org"				
	not present			CALL
transmission-state	not present not present			CALL
transmission-state associated-group-id	not present	if the <mcvideo-< td=""><td>TS 24.281 [86</td><td></td></mcvideo-<>	TS 24.281 [86	
transmission-state associated-group-id	not present px_MCVideo_Group_A		TS 24.281 [86] clause F.1.3	GROUP- CALL
	not present	if the <mcvideo- request-uri> element contains a group</mcvideo- 		GROUP-
	not present px_MCVideo_Group_A _ID if mcvideo-request-	request-uri> element contains a group identity then this		GROUP-
	not present px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary	request-uri> element contains a group identity then this element can include an		GROUP-
	not present px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity;	request-uri> element contains a group identity then this element can include an MCVideo group ID		GROUP-
	not present px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity;	request-uri> element contains a group identity then this element can include an MCVideo group ID associated with the		GROUP-
	not present px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity;	request-uri> element contains a group identity then this element can include an MCVideo group ID associated with the group identity in the		GROUP-
	not present px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity;	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></mcvideo-request-uri>		GROUP-
	not present px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity;	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>		GROUP-
	not present px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity;	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></mcvideo-request-uri></mcvideo-request-uri>		GROUP-
	not present px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity;	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</mcvideo-request-uri></mcvideo-request-uri>		GROUP-
	not present px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity;	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</mcvideo-request-uri></mcvideo-request-uri>		GROUP-
	not present px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity;	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</mcvideo-request-uri></mcvideo-request-uri>		GROUP-
	not present px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity;	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</mcvideo-request-uri></mcvideo-request-uri>		GROUP-
	not present px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity;	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>		GROUP-
	not present px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity; otherwise, not present	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</associated-group-id></mcvideo-request-uri></mcvideo-request-uri>		GROUP- CALL
	not present px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity;	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</associated-group-id></mcvideo-request-uri></mcvideo-request-uri>		GROUP- CALL
	not present px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity; otherwise, not present	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</associated-group-id></mcvideo-request-uri></mcvideo-request-uri>		GROUP- CALL

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 BROADCA ST-GROUP-CALL OR CHAT-GROUP-CALLOR EMERGEN CY-CALL OR IMMPERIL-CALL OR EMERGEN CY-ALERT) AND INVITE_REFER
	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		TO 04 004 705	
anyExt	not present or any allowed value		TS 24.281 [86] 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 MCPTT-Info from the SS

Table 5.5.3.2.2-1: MCPTT-Info from the SS

Derivation Path: TS 24.379 [9] Information Element	Value/remark	Comment	Reference	Condition
mcpttinfo	70.007.0110.11		11010101100	
mcptt-Params				
mcptt-access-token	not present			
session-type	not present			
3e33ion-type	"prearranged"			GROUP- CALL
	"private"			PRIVATE- CALL
	"chat"			CHAT- GROUP- CALL
mcptt-request-uri	px_MCPTT_ID_User_A	The URI of the called user		
mcptt-calling-user-id	px_MCPTT_ID_User_B	The URI of the calling user		
mcptt-called-party-id	not present			
mcptt-calling-group-id	not present			
	px_MCPTT_Group_A_I	The URI of the group		GROUP- CALL OR BROADCA ST- GROUP- CALL OR CHAT- GROUP- CALL
required	not present			07.22
emergency-ind	not present			
emergency ma	"true"			EMERGEN CY-CALL
alert-ind	not present			
	"true"			EMERGEN CY-ALERT
imminentperil-ind	not present			
·	"true"			IMMPERIL -CALL
broadcast-ind	not present			
	"true"			BROADCA ST- GROUP- CALL
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	

MCVideo

Table 5.5.3.2.2-2: MCVideo-Info from the SS

Derivation Path: TS 24.281 [86]	Clause F.1.2			
Information Element	Value/remark	Comment	Reference	Condition
mcvideoinfo				
mcvideo-Params mcvideo-access-token	not present "eyJhbGciOiJSUzI1NiJ 9.eyJtY3B0dF9pZCI6I mFsaWNIQG9yZy5jb20 iLCJIeHAiOjE0NTM1M DYxMjEsInNjb3BIIjpbI m9wZW5pZCIsIjNncHA 6bWNwdHQ6cHR0X3N IcnZIciJdLCJjbGIIbnRfa WQiOiJtY3B0dF9jbGIIb nQifQ.XYIqai4YKSZCK RNMLipGC_5nV4BE79 IJpvjexWjIqqcqiEx6Am HHIR00mhcxeCESrXei 9krom9e8Goxr_hgF3sz vgbwl8JRbFuv97Xgep DLjEq4jL3Cbu41Q9b0 WdXAdFmeEbiB8wo_x ggiGwv6IDR1b3TgAAs djkRxSK4ctIKPaOJSR mM7MKMcKhlug3BEk SC9-aXBTSIv5fAGN- ShDbPvHycBpjzKWXB vMIR5PaCg- 9fwjELXZXdRwz8C6Jb RM8aqzhdt4CVhQ3- Arip-S9CKd0tu-	The access token is opaque to the MCVideo client	TS 33.180 [94] clause B.4 RFC 6749 [77]	CONFIG
session-type	qhHfF2rvJDRIg8ZBiihd PH8mJs-qpTFep_1- kON3mL0_g54xVmIMw N0XQA" "prearranged"			GROUP-
	"private"			CALL PRIVATE- CALL
mcvideo-request-uri	px_MCVideo_Group_A _ID	The URI of the group		GROUP- CALL
	px_MCVideo_Client_B _ID	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 or px_MCVideo_ID_User_ B			
mcvideo-calling-group-id	not present			
required	not present			
emergency-ind	not present or if present then="false" "true"			EMERGEN CY-CALL
alert-ind	not present or if present then="false" "true"			EMERGEN CY-ALERT
imminentperil-ind	not present or if present then="false" "true"			IMMPERIL -CALL

Derivation Path: TS 24.281 [86]				
Information Element	Value/remark	Comment	Reference	Condition
broadcast-ind	not present			
mc-org"	not present			
floor-state associated-group-id	not present px_MCVideo_Group_A _ID if mcvideo-request-	if the <mcvideo- request-uri> element</mcvideo- 	TS 24.281 [86] clause F.1.3	GROUP- CALL
	uri contains a temporary group identity; otherwise, not present	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>	ciause 1.1.3	CALL
	not present	me made group is		PRIVATE- CALL
originated-by	not present			
MKFC-GKTPs	not present			
mcvideo-client-id	px_MCVideo_Client_A _ID	The URI of the MCVideo Client		PRIVATE- CALL GROUP- CALL EMERGEN CY-CALL IMMPERIL -CALL EMERGEN CY-ALERT
	"eyJhbGciOiJSUzI1NiJ 9.eyJzdWliOilxMjM0NT Y3ODkwliwiYXVkljoib WNwdHRfY2xpZW50li wiaXNzljoiSWRNUy5z ZXJ2ZXluY29tOjkwMz EiLCJpYXQiOjE0NTM0 OTgxNTgslmV4cCl6M TQ1MzQ5ODQ1OCwib WNwdHRfaWQiOiJhbG ljZUBvcmcuY29tln0.Dp n7AhlMaqMEgg12NYU UfJGSFJMPG8M2li9FL tPotDlHvwU2emBws8z 5JLw81SXQnoLqZ8ZF 8tlhZ1W7uuMbufF4Ws r7PAadZixz3CnV2wxF V9qR_VA1- 0ccDTPukUsRHsic0Sg Z3albcYKd6VsehFe_G DwfqysYzD7yPwCfPZo	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
alert-ind-rcvd	not present			
			H	
anyExt	not present or any		TS 24.281 [86]	

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_ B			
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	Commont	Deference	Condition
		Comment	Reference	Condition
resource-lists	encrypted (NOTE 4)			
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		
	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-
		0.0.1.0.1		CALL)
	SIP-URI with	SIP-URI:		PRE-
	px_MCPTT_ID_User_B	MCPTT ID of the called		ESTABLIS
	(NOTE 8) extended	user extended with		H AND
	with SIP URI header	header fields		PRIVATE-
	fields as specified for			CALL
	the SIP REFER			
P. I	message			
display-name	not present		TC 24 404 [44]	CONFIG
resource-lists	encrypted (NOTE 4)		TS 24.481 [11] TS 24.484 [14]	OR
			13 24.404 [14]	GROUPC
				ONFIG
list[1]	encrypted (NOTE 4)			ONFIG
name attribute	not present			
display-name	Not present			
entry[1]	NOTE 4, 5		TS 24.484 [14]	CONFIG
uri attribute	AUID1 & "/users/" &	UE Configuration	10 24.404 [14]	CONTIG
un attribute	XUID & "/" & MCSUEID	document		
	& "/"	(NOTE 1a, 2, 3)		
	"AUID1 & "/users/" &	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	Corver goto it nom		
entry[2]	NOTE 4, 5		TS 24.484 [14]	CONFIG
uri attribute	AUID2 & "/users/" &	UE User Profile		5510
	XUID & "/"	document		
	7.0.2 4	(NOTE 1b, 2)		
display-name	Not present	, -,		
entry[3]	NOTE 4, 5		TS 24.484 [14]	CONFIG
uri attribute	AUID3 &	UE Service		
	"/global/service-	Configuration		
	config.xml"	document		
	J	(NOTE 1c)		
display-name	Not present	,		
entry[1]	NOTE 4, 5		TS 24.484 [14]	GROUPC
	<u> </u>			ONFIG
uri attribute	"org.openmobileallianc	UE Group		
	e.groups/global/byGrou	Configuration		
	pID/" &	document		
	px_MCPTT_Group_A_I			
	D			
display-name	Not present			
ontn/[2]	optional,	1	TS 24.481 [11]	GROUPC
entry[2]	NOTE 4, 5		1020.[]	ONFIG

uri attribute	Doc-Sel & "~~" & Node-	MCPTT-GKTP		
	Sel	document (NOTE 6, 7)		
display-name	Not present			
entry[1]	NOTE 4, 5		TS 24.481 [11]	GROUPKE
				Υ
uri attribute	Doc-Sel & "~~" & Node-	MCPTT-GKTP		
	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 & "/"

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
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 EMERGEN CY-ALERT	
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			
entry[2]	NOTE 5		TS 24.484 [14]	CONFIG
uri attribute	AUID2 & "/users/" & XUID & "/"	UE User Profile document (NOTE 1b, 2)		
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" NOTE 1b: AUID2 = "org.3gpp.mcvideo.user-profile" NOTE 1c: AUID3 = "org.3gpp.mcvideo.service-config"

NOTE 2: XUID = "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 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

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

- MCPTT

Table 5.5.3.3.2-1: Resource-lists from the SS for MCPTT

Information Element	Value/remark	Comment	Reference	Condition
resource-lists	Editor's note: XML element content encryption to be added			
name attribute	Not present			
display-name	Not present			
list				
entry[1]				
uri attribute	px_MCPTT_ID_User_A	The MCPTT ID of the invited user		
display-name	Not present			

- MCVideo

Table 5.5.3.3.2-2: Resource-lists from the SS for MCVideo

Derivation Path: RFC 5366 [35] / RFC 4826 [83]					
Information Element	Value/remark	Comment	Reference	Condition	
resource-lists	Editor's note: XML element content encryption to be added				
list					
entry	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] (Information Element	Value/remark	Comment	Reference	Condition
location-info	- 2000000000000000000000000000000000000			2 3
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	any value if present	This is optional depending on the configuration sent by the SS		
NeighbouringEcgi	any value if present	This is optional depending on the configuration sent by the SS		
MbmsSald	any value if present	This is optional depending on the configuration sent by the SS		
MbsfnArea	any value if present	This is optional depending on the configuration sent by the SS		
CurrentCoordinate	any value if present	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 <requests> element. Only present in response to a Location-Info Request.</requests></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"	Editor's note: tEmergencyEventType is not part of location- info; it needs to be clarify whether or how it shall be included		GROUP- CALL and EMERGEN CY-CALL
	"GroupCallImminentPer il"	Editor's note: tEmergencyEventType is not part of location- info; it needs to be clarify whether or how it shall be included		GROUP- CALL and IMMPERIL -CALL

Derivation Path: TS 24.379 [9] clause F.3				
Information Element	Value/remark	Comment	Reference	Condition
	"PrivateCallEmergency"	Editor's note: tEmergencyEventType is not part of location- info; it needs to be clarify whether or how it shall be included		PRIVATE- CALL and EMERGEN CY-CALL
	"InitiateEmergencyAlert	Editor's note: tEmergencyEventType is not part of location- info; it needs to be clarify whether or how it shall be included		IMMPERIL -CALL

- 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				
Report				
TriggerID	not present	An element which can occur multiple times. Contains the value of the <triggerid> attribute associated with a trigger that has</triggerid>		
		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)

Table 5.5.3.4.2-1: Location-info (Configuration sent by the SS) for MCPTT

Derivation Path: TS 24.379 [9] cla	Value/remark	Comment	Reference	Condition
location-info	Value/Terrial K	Comment	Reference	Condition
Configuration				
ConfigScope	"Full"	The MCPTT Client		
		shall replace any		
		previous configuration.		
NonEmergencyLocationInformat ion				
ServingEcgi	present	An optional element		
		specifying that the		
		serving E-UTRAN Cell		
		Global Identity (ECGI) needs to be reported		
NeighbouringEcgi	present	An optional element		
. tolghoodinig_ogi	procent	that can occur multiple		
		times, specifying that		
		neighbouring ECGIs		
		need to be reported		
MbmsSald	present	An optional element		
		specifying that the serving MBMS Service		
		Area Id needs to be		
		reported;		
MbsfnArea	present	An optional element		
		specifying that the		
		MBSFN area Id needs		
		to be reported;		
GeographicalCoordinate	present	An optional element specifying that the		
		geographical		
		coordinate specified in		
		clause 6.1 in 3GPP		
		TS 23.032 [65] needs		
		to be reported		
minimumIntervalLength	"10"	A mandatory element		
		specifying the minimum		
		time the MCPTT client needs to wait between		
		sending location		
		reports. The value is		
		given in seconds		
EmergencyLocationInformation"				
ServingEcgi	present	An optional element		
		specifying that the		
		serving E-UTRAN Cell Global Identity (ECGI)		
		needs to be reported		
NeighbouringEcgi	present	An optional element		1
110.g.1200g_0g.		that can occur multiple		
		times, specifying that		
		neighbouring ECGIs		
MhmaCald	propert	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;		

Information Element	Value/remark	Comment	Reference	Condition
GeographicalCoordinate	present	An optional element specifying that the geographical coordinate specified in clause 6.1 in 3GPP TS 23.032 [65] needs to be reported		
minimumIntervalLength	"5"	A mandatory element specifying the minimum time the MCPTT client needs to wait between sending location reports. The value is given in seconds		
TriggeringCriteria				
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] cl	Value/remark	Comment	Reference	Condition
location-info	Value/Terrial K	Comment	Reference	Condition
Configuration				1
ConfigScope	"Full"	The MCVideo Client shall replace any previous configuration.		
NonEmergencyLocationInformat ion				
ServingEcgi	present	An optional element specifying that the serving E-UTRAN Cell Global Identity (ECGI) needs to be reported		
NeighbouringEcgi	present	An optional element that can occur multiple times, specifying that neighbouring ECGIs need to be reported		
MbmsSald	present	An optional element specifying that the serving MBMS Service Area Id needs to be reported;		
MbsfnArea	present	An optional element specifying that the MBSFN area Id needs to be reported;		
GeographicalCoordinate	present	An optional element specifying that the geographical coordinate specified in clause 6.1 in 3GPP TS 23.032 [65] needs to be reported		
minimumIntervalLength	"10"	A mandatory element 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 that can occur multiple times, specifying that neighbouring ECGIs need to be reported		
MbmsSald	present	An optional element specifying that the serving MBMS Service Area Id needs to be reported;		
MbsfnArea	present	An optional element specifying that the MBSFN area Id needs to be reported;		

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			

5.5.3.5 PIDF

5.5.3.5.1 PIDF from the UE

- MCPTT

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

- MCPTT

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

- MCPTT

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=" & px_MCPTT_Client_A_I D & "]" "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 According to TS 24.379 Not present According to TS 24.379 Not present According to TS 24.379 Not present RFC 4661 [48] "//presence/tuple[@id=" & 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_	MCData group name			
	ID				
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]				
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		
	<u> </u>	seconds).	TO 04 000 1071	
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		
Massaga ID	Any allowed value	unique identifier.	TC 24 202 [07]	
Message ID	Arry allowed value	The Message ID contains a number	TS 24.282 [87]	
		uniquely identifying a	ciause 13.2.10	
		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	
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] 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	5.5.3.10-1	Payload Message			
Payload			TS 24.282 [87]	MCD_grp	
			clause 15.2.13		
Payload content type	"00000001"	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		
	1 61(18	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		
Daylood				+
Payload		Protected Payload		
	((0000004))	(Ciphertext)		+
Payload content type	"0000001"	TEXT		<u> </u>
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]				
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> 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 MCData are IMEI according to 23.003 ex attribute of the correspon	ding document	

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

Derivation Path: RFC 5854 [107]	Derivation Path: RFC 5854 [107] clause 4				
Information Element	Value/remark	Comment	Reference	Condition	
xcap-diff	encrypted (NOTE 1)				
xcap-root	tsc_MCX_GMSXCAPR ootURI	same URI as <gms- XCAP-root-URI> 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	"00000010"	FD SIGNALLING	TS 24.282 [87]	Condition
identity	00000010	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	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		
		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]	
	1		clause 15.2.11	
Application ID	Not present		TS 24.282 [87]	
ED 1: 10: 11	"0004"	FILE BOYANII OAB	clause 15.2.7	
FD disposition request type	"0001"	FILE DOWNLOAD	TS 24.282 [87]	
Manadatam dayuri	Network	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 000010000001100000 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="">":hash:sha-1:58:23:1F:E8:65:3B:BC:F3:71:36:2F:86:D4:71:91:3E:E4:B1:DF:2F"</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></dquot 			
file-availability	"file-availability:" <date- time></date- 	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			
		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			
		unique identifier.	TO 04 000 F0T		
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	identifier	TS 24.282 [87]		
inkepty to message ib	Not present		clause 15.2.11		
Application ID	Not present		TS 24.282 [87]		
Application 1D	Not present		clause 15.2.7		
FD disposition request type	"0001"	FILE DOWNLOAD	TS 24.282 [87]		
rb disposition request type	0001	COMPLETED UPDATE	clause 15.2.4		
Mandatory download	"0001"	MANDATORY	TS 24.282 [87]		
Manuatory download	0001	DOWNLOAD	clause 15.2.16		
Payload	Not present	DOWNLOAD	TS 24.282 [87]		
i ayload	Not present		clause 15.2.13		
Metadata	Not present		TS 24.282 [87]		
Mctauata	Not present		clause 15.2.17		
			Gause 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],	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]		
	000001000000100000	contains a number	clause 15.2.9		
	0010000000100000001	uniquely identifying the			
	0000000100000001000	conversation. The			
	0000100000001000000	value is a universally			
	010000001000000010	unique identifier.			
	000000100000001"				
Message ID	"0000001000000100	The Message ID	TS 24.282 [87]		
	000001000000100000	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]		
			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		

5.5.3.14 MCS group key transport payloads (GKTP) document

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

Derivation Path: TS 24.481 [11] clause 7.7					
Information Element	Value/remark	Comment	Reference	Condition	
GKTP 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] Information Element	Value/remark	Comment	Reference	Condition
Request-Line	Valuoriomark	Commone	Reference	Condition
Method	"GET"			
Request-URI	1 32.			
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 Authorization	"no-cache"		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	VUID3	= "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	ICSUEID	= 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] Information Element	Value/remark	Comment	Reference	Condition
Status-Line	Turas, oman	Commone	11010101100	- Contained
Method	"POST"			
Request-URI				
uri	tsc_MCX_IdMS_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
HTTP-Version	"HTTP/1.1"			
Cache-Control			RFC 2616 [26]	
cache-directive	"no-cache"		DE0 0047 [70]	LANGUNUT
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]	
Message-body			– j	AUTH
Authentication Request	As described in Table 5.5.4.10.1-1			
Message-body			HTML 4.01 Specification [105]	USERAUT H
user	px_MCX_User_A_user name			
password	px_MCX_User_A_pass word			
Message-body				TOKEN
Token request	As described in Table 5.5.4.10.3-1			

Message-body		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		

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	px_MCPTT_GroupConf	Points to the group	TS 24.481 [11]	GROUPC
•	igDoc_URI	configuration document		ONFIG
Content-Type				
media-type	application/vnd.oma.po			
71	c.groups+xml			
Message-body				
group				
xmlns:rl	"urn:ietf:params:xml:ns:	resource-lists xml	TS 24.481 [11]	
	resource-lists"	namespace identifier		
xmlns:cp	"urn:ietf:params:xml:ns:	common-policy xml	TS 24.481 [11]	
	common-policy"	namespace identifier		
xmlns:ocp	"urn:oma:xml:xdm:com	common-policy xml	TS 24.481 [11]	
	mon-policy"	namespace identifier		
xmlns:oxe	"urn:oma:xml:xdm:exte	extensions xml	TS 24.481 [11]	
	nsions"	namespace identifier		
xmlns:rmcpttgi	"urn:3gpp:ns:mcpttGrou	MCPTT group info	TS 24.481 [11]	
	pInfo:1.0"	namespace identifier		
list-service				
uri	px_MCPTT_Group_B_I	uri of the MCPTT group	TS 24.481 [11]	
	D	-		
display-name	px_MCPTT_Group_B_	group display name	TS 24.481 [11]	
	name			
list				
entry				
uri	px_MCPTT_Client_A_I	User ID allowed to	TS 24.481 [11]	
	D	participate in this group		
display-name	px_MCPTT_User_A_Pr	User display name	TS 24.481 [11]	
	ofile_Name			
user-priority	1	User priority	TS 24.481 [11]	
entry				
uri	px_MCPTT_Client_B_I	User ID allowed to	TS 24.481 [11]	
	D	participate in this group		
display-name	px_MCPTT_User_B_Pr	User display name	TS 24.481 [11]	
	ofile_Name			
user-priority	2	User priority	TS 24.481 [11]	
entry				
uri	px_MCPTT_Client_C_I	User ID allowed to	TS 24.481 [11]	
	D	participate in this group		
display-name	px_MCPTT_User_C_Pr	User display name	TS 24.481 [11]	
	ofile_Name			
user-priority	3	User priority	TS 24.481 [11]	
invite-members	"true"	Allow users to invite	TS 24.481 [11]	
		members to this group		
max-participant-count	"3"	Maximum number of	TS 24.481 [11]	
		users in the group		
ruleset				
rule id	"a7c"		TS 24.481 [11]	
actions				
allow-initiate-conf	"true"	All conference calls	TS 24.481 [11]	
join-handling	"true"	Allow group join	TS 24.481 [11]	
emergency-call	"true"	Allow emergency call	TS 24.481 [11]	
imminent-peril-call	"true"	Allow imminent peril	TS 24.481 [11]	
		call		<u></u>
emergency-alert	"true"	All emergency alert	TS 24.481 [11]	
supported-services				
service-enabler	"urn:urn-7:3gpp-		TS 24.481 [11]	
	service.ims.icsi.mcptt"			
group-priority	"5"	New group priority	TS 24.481 [11]	

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	Value/Tellial K	Johnnent	1/elelelice	Solidition
Method	"DELETE"			
	I .	Deinte to the group	TC 04 404 [44]	CDOUDC
Request-URI	px_MCPTT_GroupConf igDoc_URI	Points to the group configuration document	TS 24.481 [11]	GROUPC ONFIG
Content-Type				
media-type	application/vnd.3gpp.G MOP+xml; charset="utf-8			
Message-body				
gmop:document				
xmlns	"urn:oma:xml:poc:list-	list-service xml	TS 24.481 [11]	
	service"	namespace identifier		
xmlns:rl	"urn:ietf:params:xml:ns:	resource-lists xml	TS 24.481 [11]	
	resource-lists"	namespace identifier		
xmlns:cp	"urn:ietf:params:xml:ns:	common-policy xml	TS 24.481 [11]	
	common-policy"	namespace identifier		
xmlns:ocp	"urn:oma:xml:xdm:com	common-policy xml	TS 24.481 [11]	
	mon-policy"	namespace identifier		
xmlns:oxe	"urn:oma:xml:xdm:exte	extensions xml	TS 24.481 [11]	
	nsions"	namespace identifier		
xmlns:rmcpttgi	"urn:3gpp:ns:mcpttGrou	MCPTT group info	TS 24.481 [11]	
	pInfo:1.0"	namespace identifier		
xmlns:gmop	"urn:3gpp:ns:mcpttGM OP:1.0"			
gmop:request				
group				
list-service				
uri	"sip:mcptt-group- T@mcptt-op.gov"	Group identifier	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	- STOOT STITUTE	30		22.12.11011
HTTP-Version	"HTTP/1.1"			
Status-Code	"200"			
Reason-Phrase	"OK"			
Cache-Control	011		RFC 2616 [26]	
cache-directive	"no-store"		111 0 2010 [20]	
Pragma	110 01010		RFC 2616 [26]	
pragma-directive	"no-cache"		141 0 2010 [20]	
Content-Length	THE CACHE			
value	length of message- body			
Content-Type	, seay			
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	- g p			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				UEINITIAL CONFIG
mcptt-initial-UE-configuration	As described in Table 5.5.8.1-1	Initial UE Configuration document returned		
Message-body				UECONFI G
mcptt-UE-configuration	As described in Table 5.5.8.2-1	UE Configuration document returned		_
Message-body				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 [9				
Information Element	Value/remark	Comment	Reference	Condition
response-type	"code"	For native MCPTT clients the value shall be set to "code"	OpenID Connect 1.0 [95]	
client_id	px_MCX_OAuth_ClientId_ A	Identifier of the MCPTT client making the API request	OpenID Connect 1.0 [95]	
Scope	"openid"	Scope values are expressed as a list of space-delimited, case-sensitive strings which indicate which MCS resource servers the client is requesting access to. "openid" is defined by the OpenID Connect standard and is mandatory	TS 33.180 [94] OpenID Connect 1.0 [95]	
	"3gpp:mc:ptt_service" "3gpp:mc:ptt_key_manage ment_service" "3gpp:mc:ptt_config_mana gement_service" "3gpp:mc:ptt_group_manag ement_service" NOTE: The list may contain further scope values which are not checked	Additional authorization scopes when the UE supports MCPTT		MCPTT
	"3gpp:mc:video_service" "3gpp:mc:video_key_mana gement_service" "3gpp:mc:video_config_ma nagement_service" "3gpp:mc:video_group_ma nagement_service" NOTE: The list may contain further scope values which are not checked	Additional authorization scopes when the UE supports MCVideo		MCVIDEO
	"3gpp:mc:data_service" "3gpp:mc:data_key_manag ement_service" "3gpp:mc:data_config_man agement_service" "3gpp:mc:data_group_man agement_service" NOTE: The list may contain further scope values which are not checked	Additional authorization scopes when the UE supports MCData		MCDATA
redirect_uri	px_MCX_OAuth_RedirectU RI_A	The URI of the MCPTT client to which the IdM server will redirect the MCPTT client's user agent in order to return the authorization code	OpenID Connect 1.0 [95]	
state	any value as selected by the UE	An opaque value used by the MCPTT client to maintain state between the authentication request and authentication response	OpenID Connect 1.0 [95]	

acr-values	"3gpp:acr:password"	Space-separated string that specifies the acr values that the IdM server is being requested to use for processing this authentication request	TS 33.180 [94]
code-challenge	any value	base64url-encoded SHA-256 challenge: hash of the code_verifier selected by the UE	TS 33.180 [94] RFC 7636 [100]
codechallenge-method	"S256"	The hash method used to transform the code verifier to produce the code challenge	TS 33.180 [94] RFC 7636 [100]

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				
Information Element	Value/remark	Comment	Reference	Condition
access_token		The access token. The	RFC 6749 [77]	
		access token is opaque	TS 33.180 [94]	
1		to the MCPTT client		
1		Header Algorithm		
"kid"	"jws-rsa"	hint indicating which	RFC 7515 [102]	
Niu	jws-13a	key was used to secure	N C 7515 [102]	
		the JWS: name of the		
		RSA public key in case		
		of RS256		
		Editor's note:		
U = 1 = U	"DOOCO"	value to be confirmed	DEO 7545 [400]	
"alg"	"RS256"	identifies the cryptographic algorithm	RFC 7515 [102]	
		used to secure the		
		JWS: RSASSA-		
		PKCS1-v1_5 SHA-256		
		digital signature		
		Editor's note:		
		value to be confirmed		
}		Davidson I.D. (DE0 7540 (104)	
{ 	THE MCDTT ID Hear A	Payload Data	RFC 7519 [101]	
"mcptt_id"	px_MCPTT_ID_User_A	URI of the MCPTT client User this is a	TS 24.380 TS 24.483	
		globally unique	13 24.403	
		identifier within the		
		MCPTT service that		
		represents the MCPTT		
		user		
"scope"	"openid"	list of space-delimited,	RFC 6749 [77]	
		case-sensitive strings	TS 33.180 [94]	
		to inform the client of	B.2.2.2 OpenID Connect	
		the scope of the access token issued and is	1.0 [95]	
		OPTIONAL, if identical	[55]	
		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		
	"3gpp:mc:ptt_service"			MCPTT
	"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"			MCVIDEO
	"3gpp:mc:video_key_ma			
	nagement_service"			
	"3gpp:mc:video_config_			
	management_service"			
	"3gpp:mc:video_group_m anagement_service"			
	"3gpp:mc:data_service"			MCDATA
	"3gpp:mc:data_key_man			IVIODATA
	agement_service"			
	"3gpp:mc:data_config_m			
	anagement_service"			
	"3gpp:mc:data_group_m			
	anagement_service"			

"exp"	Current system time + 7199 seconds; the system time is the number of seconds since 00:00:00 UTC on 1 January 1970	Number containing a NumericData value identifies the expiration time on or after which the JWT MUST NOT be accepted for processing Editor's note: value to be confirmed	RFC 7519 [101] TS 33.180 [94]
"client_id"	Same value as received in the token request	Identifier of the 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	RFC 6749 [77]
id_token		authentication again The MCPTT client may validate the user with the ID token and configure itself for the user	RFC 6749 [77] TS 33.180 [94]
{			
{		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	
}			
{	1100== := ::	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
"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		
Time	the SS	message		
ClientReqUrl	tsc_MCX_KMS_Client	URL of the client		
Shork toqon	ReqUrl_init	making the key request		
KmsMessage	- 1	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		
KmsInit				
Version	"1.0.0"			
KmsCertificate				
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		
	N	Certificate		
Issuer	Not present	(Optional) String		
		describing the issuing		
ValidFrom	Not present	entity (Optional) Date from		+
validifioni	Not present	which the Certificate		
		may be used		
ValidTo	Not present	(Optional) Date at		
valid 10	That process	which the Certificate		
		expires		
Revoked	false	(Optional) A Boolean		
		value defining whether		
		a Certificate has been		
		revoked		
UserIDFormat	"2"	Shall contain the value		
		'2'		1
UserKeyPeriod	"2592000"	The number of seconds		
		that each user key		
		issued by this KMS		
		should be used		
		(2592000 seconds are		
UserKeyOffset	CurrentTimestamp	30 days) UserKeyOffset so that		+
OserneyOnset	MODULO	KeyPeriod starts at		
	UserKeyPeriod	current system time;		
	Joseph Griod	CurrentTimestamp is		
		the current system time		
		in seconds since 0h on		
		1 st Jan 1900		

Dub Enal/au	CAKKE Dublic Kov. 7. T	The SAKKE Public	DEC 0500 [00]
PubEncKey	SAKKE Public Key Z_T derived from master	Key, "Z_T". This is an	RFC 6508 [99]
	secret z_T according to	OCTET STRING	
	RFC 6508	encoding of an elliptic	
	RFC 0500		
Duk Auth Kau	FCCCI Dublic Kov	curve point	DEC 0507 [00]
PubAuthKey	ECCSI Public Key	The ECCSI Public Key,	RFC 6507 [98]
	KPAK derived from	"KPAK". This is an	
	private key KSAK	OCTET STRING	
	according to RFC 6507	encoding of an elliptic	
	N	curve point	
ParameterSet	Not present	(Optional) The choice	
		of parameter set used	
		for SAKKE and ECCSI	
KmsDomainList	Not present	(Optional) List of	
		domains associated	
		with the certificate	
SignedInfo			
CanonicalizationAlgorithm	"xml-c14n"	XML Signature	
		processing	
SignatureAlgorithm	"HMAC-SHA-256"	Hashing algorithm to be	
		applied to sign the	
		SignedInfo with the key	
		given in the KeyInfo	
Reference			
URI	"#kmsResponse"	referring to the data	
		object for which the	
		hash is generatet (KMS	
		response element in	
		this case)	
DigestAlgorithm	"SHA-256"	Hashing algorithm to be	
		applied to sign the data	
		object	
DigestValue	Hash signing the data		
•	object (referred to by		
	the URI)		
SignatureValue	Hash signing the	The signing key is	
<u> </u>	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		\p\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
KeyName	base64 encoded InK-ID		
	(px_MCX_InK_ID)		
	_ ' /	1	· I

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	Turas/Turas/T	- Commone	11010101100	Containen
Id	"kmsResponse"	arbitrarily selected id which the Signature's Reference URI refers to		
KmsUri	tsc_MCX_KMS_Hostna me	The URI of the KMS which issued the key set		
UserUri	tsc_MCX_MC_ID_User _A Editor's note: to be clarified whether the MC ID can be used in this context or whether there are restrictions how to set the UserUri	The MC ID with which the user has used for authentication		
Time	Current system time of the SS	Time stamp of KMS message		
ClientReqUrl	tsc_MCX_KMS_Client ReqUrl_keyprov	URL of the client making the key request		
KmsMessage				
KmsKeyProv				
Version	"1.0.0"	The version number of the key provision XML		
KmsKeySet[1]				
Version	"1.1.0"	The version number of the key set XML		
KmsUri	tsc_MCX_KMS_Hostna me	The URI of the KMS which issued the key set		
CertUri	Not present	(Optional) The URI of the Certificate which may be used to validate the key set		
Issuer	Not present	(Optional) String describing the issuing entity		
UserUri	px_MCPTT_ID_User_A px_MCVideo_ID_User_ A	The user's MCPTT ID The user's MCVideo ID		MCVIDEO
	px_MCData_ID_User_ A	The user's MCData ID		MCDATA
UserID	UID generated according to annex 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 base64 encoding)	UID corresponding to the key set	TS 33.180 [94]	
ValidFrom	Not present	(Optional) Date and time from which the key set may be used		
ValidTo	Not present	(Optional) Date and time at which the key set expires		

Information Element	clause D.3.2.2 Value/remark	Comment	Reference	Condition
	value/remark	Comment	Reference	Condition
Signed KmsResponse	FLOOD//O IT	0 11/ 5 1	TO 00 400 [04]	
KeyPeriodNo	FLOOR((CurrentTimest	Current Key Period:	TS 33.180 [94]	
	amp - UserKeyOffset) /	CurrentTimestamp is		
	UserKeyPeriod)	the current system time		
		in seconds since 0h on		
		1 st Jan 1900;		
		UserKeyOffset and		
		UserKeyPeriod are		
		given in the KMS		
		Certificate (Table		
		5.5.4.10.6-1) in		
		seconds		
Revoked	"false"	(Optional) A Boolean		
		value defining whether		
		the key set has been		
		revoked		
UserDecryptKey		The SAKKE "Receiver	RFC 6508 [99]	
Osci Deci yptikey		Secret Key" (RSK).	111 0 0000 [33]	
		This is an OCTET		
		STRING encoding of		
	#A E 00 E 0 #	an elliptic curve point		
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	RFC 6507 [98]	
occioigiiiigi to joon		Key, "SSK". This is an	141 0 0007 [00]	
		OCTET STRING		
		encoding of an integer;		
		the PVT is generated		
		using the UID as		
		contained in the UserID		
Enoruption Algorithms	"^=5356"	of the KSM message Encryption algorithm to		
EncryptionAlgorithm	"AES256"	,, ,		
KeyInfo		use		
KeyName	base64 encoded TrK-			
Neymanne				
CipherDete	ID (px_MCX_TrK_ID)			
CipherData	an am into d COV	The enemonation to the contract to the contrac		
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		
	Ì	(px_MCX_TrK_ID)	Ĩ	Ī

Derivation Path: TS 33.180 [94] Information Element	Value/remark	Comment	Reference	Condition
Signed KmsResponse	Value/Terrial K	Comment	Reference	Condition
UserPubTokenPVT		The ECCSI public	RFC 6507 [98]	
OSEI FUDI OREIIF VI		validation token, "PVT".	KFC 0001 [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"	Encryption algorithm to		
		use		
KeyInfo				
KeyName	base64 encoded TrK-			
,	ID (px_MCX_TrK_ID)			
CipherData	\(\frac{1}{2} = \frac{1}{2} = \frac{1}{2}			
CipherValue	Encrypted PVT	The encryption key is		
Oiprioi value		derived from the TrK		
		(px_MCX_TrK)		
		according to		
		TS 33.180 [94] Annex F.1.4 with		
		FC = 0x51		
		XPK-ID = TrK-ID		
		(px_MCX_TrK_ID)		
Signature				
SignedInfo				
CanonicalizationAlgorithm	"xml-c14n"	XML Signature		
		processing		
SignatureAlgorithm	"HMAC-SHA-256"	Hashing algorithm to be		
		applied to sign the		
		SignedInfo with the key		
		given in the KeyInfo		
Reference				
URI	"#kmsResponse"	referring to the data		
	·	object for which the		
		hash is generatet (KMS		
		response element in		
		this case)		
DigestAlgorithm	"SHA-256"	Hashing algorithm to be		
Digoda agonann	0.17.200	applied to sign the data		
		object		
DigestValue	Hash signing the data	Object		
Digestvalue	object (referred to by			
Ciara atura Valura	the URI)	The simple of the city		
SignatureValue	Hash signing the	The signing key is		
	SignedInfo	derived from the InK		
		(px_MCX_lnK)		
		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			
		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	value/Telliai K	Comment	I/CICI CIICE	Condition
KmsRequest				
Id attribute	any value	value as used as		
id attribute	any value	reference in the		
		signature		
Version attribute	"1.1.0"	eignature		
UserUri	px_MCPTT_ID_User_A	The user's MCPTT ID		
000.011	px_MCVideo_ID_User_	The user's MCVideo ID		MCVIDEO
	A			
	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		
DeviceId	any value if present	A string representing		
		the device		
ClientReqUrl	URI with same path as	The resource URI to		
	in the request URI of	which the HTTP POST		
	the HTTP request	request is sent		
KrrList	not present			
ClientError	not present			
Signature				
SignedInfo	W // 0 /TD/	V441 0:		
CanonicalizationAlgorithm	"http://www.w3.org/TR/ 2001/REC-xml-c14n- 20010315"	XML Signature processing		
SignatureAlgorithm	"http://www.w3.org/200	Hashing algorithm to be		
	1/04/xmldsig-	applied to sign the		
	more#hmac-sha256"	SignedInfo with the key		
		given in the KeyInfo		
Reference				
URI	URI referring to the Id	same value as the ld		
	of the request	attribute of the request		
		with leading "#"		
DigestAlgorithm	"http://www.w3.org/200	Hashing algorithm		
	1/04/xmlenc#sha256"	applied to sign the data		
Digost\/oluo	Hook signing the data	object		+
DigestValue	Hash signing the data			
	object (referred to by the URI)			
SignatureValue	Hash signing the	The signing key is		
Oigilatule value	SignedInfo;	derived from the InK		
	shall be validated by	(px_MCX_InK)		
	the SS	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		

5.5.5.2.2 GROUP CALL ANNOUNCEMENT from the SS

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	"0000010"	Broadcast Group Call	
Originating MCPTT user ID	px_MCPTT_ID_User_B		
MCPTT group ID	px_MCPTT_Group_A_ID		
SDP	As described in Table 5.5.3.1.4-1		

5.5.5.7 GROUP CALL BROADCAST END

5.5.5.7.1 GROUP CALL BROADCAST END from the UE

Table 5.5.5.7.1-1: GROUP CALL BROADCAST END from the UE

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	"00000000"	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

Derivation Path: 24.379 [9], Table 15.1.12.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCPTT user ID of the caller	px_MCPTT_ID_User_A		
MCPTT user ID of the callee	px_MCPTT_ID_User_B		

5.5.5.15.2 PRIVATE CALL EMERGENCY CANCEL from the SS

Table 5.5.5.15.2-1: PRIVATE CALL EMERGENCY CANCEL from the SS

Derivation Path: 24.379 [9], Table 15.1.12.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCPTT user ID of the caller	px_MCPTT_ID_User_B		
MCPTT user ID of the callee	px_MCPTT_ID_User_A		

5.5.5.16 PRIVATE CALL EMERGENCY CANCEL ACK

5.5.5.16.1 PRIVATE CALL EMERGENCY CANCEL ACK from the UE

Table 5.5.5.16.1-1: PRIVATE CALL EMERGENCY CANCEL ACK from the UE

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			
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	MCPT	010000 0.0.0.1.	
Floor priority	Not present or Any allowed value	If present, a value between '0' and '255' where '0' is the lowest priority If the Floor Priority field is not	
		included in the message the default priority (='0') is used as the Floor Priority value	
		The max floor priority that can be requested in a Floor Request message is negotiated between the MCPTT client and the controlling MCPTT function using the "mc_priority" fmtp parameter e.g. at call setup	
User ID	Not present		ON- NETWORK
000i ID			OFF- NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT User ID of the floor participant requesting the floor.	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator	40000 500005	<u> </u>	
Floor Indicator	10000x000000000	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	dition Explanation	
REL-15	In effect when PICS "PICS FFS" is in effect	

5.5.6.3 Floor Granted

Table 5.5.6.3-1: Floor Granted

Derivation Path: 24.380 [10], Table 8.2.5-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	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	100001000000000	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	
		RFC 3550 [76]	
name	MCPT		
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	
Track Info	Not propost	releasing the floor. The MCPTT call	
Track Info	Not present	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	
nomo	MCPT	specified in IETF RFC 3550 [76].	
name Message Sequence Number	MCPT		
Message Sequence Number	The value sent in the previous Floor Idle message, if any, increased with 1	Any value between '0' and '65535' When the '65535' value is reached, the <message Sequence Number> 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.	V-1	Come:	Con-litte
Information Element	Value/remark	Comment	Condition
RTCP header	00010	Floor Taken with	
Subtype	00010	acknowledgment	
SSRC	The SSRC of the	not required The SSRC of the	
55KC		floor control	
	message sender	server for on-	
		network and floor	
		arbitrator for off-	
		network.	
		network.	
		Notation in	
		accordance with	
		clause 5.5.6.1.	
		Coded as	
		specified in IETF	
		RFC 3550 [76].	
	Not present		Multi-Talker
name	MCPT		
User ID	Not present		ON-
	<u> </u>		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	
0 10 11 2	N. F	granted the floor.	A 4 10 = "
Granted Party's Identity Permission to Request the Floor	Not Present		Multi-Talker
Permission to Request the Floor Permission to Request the Floor	"1"	The receiver is	
i emilosion to Nequest the Fi001	'	permitted to	
		request floor	
Message Sequence Number		1394000 11001	
Message Sequence Number	The value sent in the	Any value	
mossage education rumber	previous Floor Taken	between '0' and	
	message, if any,	'65535'	
	increased with 1	When the '65535'	
		value is reached,	
		the <message< td=""><td></td></message<>	
		Sequence	
		Number> value	
		starts from '0'	
		again	
	+	The MCPTT call	
Track Info	Not present	THE WENT TO CALL	
Track Info	Not present		
Track Info	Not present	does not involve a	
Track Info	Not present		
Floor Indicator		does not involve a non-controlling MCPTT function	
	Not present 1000010000000000	does not involve a non-controlling MCPTT function Normal call,	
Floor Indicator		does not involve a non-controlling MCPTT function Normal call, queueing	
Floor Indicator Floor Indicator	100001000000000	does not involve a non-controlling MCPTT function Normal call, queueing supported	
Floor Indicator Floor Indicator	1000010000000000 SS-UE1 (MCPTT Client)	does not involve a non-controlling MCPTT function Normal call, queueing supported The SSRC of the	
Floor Indicator Floor Indicator	100001000000000	does not involve a non-controlling MCPTT function Normal call, queueing supported The SSRC of the granted floor	
Floor Indicator Floor Indicator SSRC of granted floor participant	1000010000000000 SS-UE1 (MCPTT Client) SSRC	does not involve a non-controlling MCPTT function Normal call, queueing supported The SSRC of the	
Floor Indicator Floor Indicator SSRC of granted floor participant	1000010000000000 SS-UE1 (MCPTT Client) SSRC Not present	does not involve a non-controlling MCPTT function Normal call, queueing supported The SSRC of the granted floor participant.	EA AND
Floor Indicator Floor Indicator SSRC of granted floor participant	1000010000000000 SS-UE1 (MCPTT Client) SSRC	does not involve a non-controlling MCPTT function Normal call, queueing supported The SSRC of the granted floor participant. Functional Alias =	FA AND
	1000010000000000 SS-UE1 (MCPTT Client) SSRC Not present	does not involve a non-controlling MCPTT function Normal call, queueing supported The SSRC of the granted floor participant.	FA AND NOT Multi- Talker

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_B		
List of SSRCs of granted floor participants	px_MCPTT_ID_User_C Not present		
List of SSRCs of granted floor participants	Not present		Multi-Talker
Number of SSRCs	'10'		Watti-Talket
SSRC	The SSRC of User B		
SSRC	The SSRC of User C		
List of Functional Aliases	Not present		
List of Functional Aliases			FA AND Multi-Talker
No of FAs	'10'		
Functional Alias	px_MCPTT_ID_FA_B		
Functional Alias	px_MCPTT_ID_FA_C		
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		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'	N	
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	
	MCPT	RFC 3550 [76].	
name	IVICE I		
Reject Cause	"4"		
Reject Cause	·	Cause#4 - Media Burst pre-empted	
Reject Phrase	"Media Burst pre- empted"	a text string encoded the text string in the SDES item CNAME as specified in IETF RFC 3550 [76], clause 6.5.1.	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	100001000000000	Normal call, queueing supported	

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			
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	1000010000000000	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	

5.5.6.12 Connect

Table 5.5.6.12-1: Connect

Derivation Path: 24.380 [10], Table 8.3.4-1. Information Element	Value/remark	Comment	Condition
RTCP header	v alue/l ellial K	Comment	Contaition
	10000	Connect with	
Subtype	10000	acknowledgment	
0000	TI 0000 (11 00	required	
SSRC	The SSRC of the SS	The SSRC of the	
		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	MCPC		
MCPTT Session Identity field			
Session Type	"0000000"	No session type	
	"0000001"	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		PRIVATE-
			CALL
MCPTT Group Identity field			GROUP-
			CALL
MCPTT Group Identity	px_MCPTT_Group_A_ID	a URI, which	
1 9		identifies the	
		MCPTT group	
Media Streams		J 1	
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	
Control Charling		giving the number	
		of the	
		"m=application"	
		m-line negotiated	
		in the pre-	
		established	
	"0"	session	DDI\/ATE
	U	no floor control	PRIVATE- CALL
	•	İ	LOALL
Warning Toyt field	Not Present		
Warning Text field Answer State field	Not Present		

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		

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 Notation in 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		3 2 3 3 4 3 4 4 4	
Subtype	00000	Map 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 TMGI	px_MCPTT_Group_A_ID	The group ID of 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	
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	
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="" number=""> value is set to "0" when the same subchannel is used for media and for floor control.</floor>	

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

Derivation Path: 24.380 [10], Table 8.4.5-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00001	Unmap Group To Bearer	
SSRC	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	The SSRC of the	
	message sender	participating	
		MCPTT function.	
		Notation in	
		accordance with clause 5.5.6.1.	
		Coded as	
		specified in IETF	
		RFC 3550 [76].	
name	MCMC	111 0 0000 [70].	
MCPTT Group ID	px_MCPTT_Group_A_ID	The group ID of	
Mor 11 Group ID	px_ivioi 11_oloup_A_ib	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		
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 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

Derivation Path: TS 24.481 [11] cl		Commont	Doforonce	Condition
Information Element	Value/remark	Comment 4	Reference	Condition
list-service[1]	MODIT	Group 1	TO 04 400 5401	
uri attribute	px_MCPTT_Group_A_I D	Value is a "uri" attribute specified in OMA OMA-TS-XDM_Group-V1_1	TS 24.483 [13] clause 6.2.7	
display-name	px_MCPTT_Group_A_ Name	Value is a <display- name> 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	
entry[2]		group member 2		
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	
entry[3]		group member 3		
uri attribute	px_MCPTT_ID_User_C	Indicates an MCPTT user identity (MCPTT ID) which is a globally unique identifier within the MCPTT service that represents the MCPTT user	TS 24.483 [13] clause 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"1"	Indicates the user priority of the MCPTT group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCPTT_User_C_P articipantType	Participant type of the MCPTT group	TS 24.483 [13] clause 6.2.13	
cp:ruleset				
cp:rule				
cp:id attribute	"rule1"			
cp:actions cp:on-network-allow- getting-member-list	"true"	Indicates that the identity is allowed to get the MCS group member list of the MCS group in on-network procedures		
cp:allow-initiate-conference	"true"			
		i		

Derivation Path: TS 24.481 [11] cl		1		
Information Element	Value/remark	Comment	Reference	Condition
cp:allow-MCPTT- emergency-call	"true"	Indicates whether an MCPTT emergency group call is permitted on the MCPTT group	TS 24.483 [13] clause 6.2.19	
cp:allow-imminent-peril-call	"true"	Indicates whether an MCPTT imminent peril group call is permitted on the MCPTT group	TS 24.483 [13] clause 6.2.20	
cp:allow-MCPTT- emergency-alert	"true"	Indicates whether an MCPTT emergency alert is possible on the MCPTT group	TS 24.483 [13] clause 6.2.21	
cp:on-network-allow- getting-affiliation-list	"true"	Indicates that the identity is allowed to get the list of MCPTT users affiliated to the MCPTT group in onnetwork MCPTT procedures		
cp:on-network-allow- conference-state	"true"	indicates that the identity is allowed to subscribe to the conference event package of an MCPTT group session of the MCPTT group in onnetwork MCPTT procedures		
mcpttgi:owner	px_MCPTT_Group_A_ Owner_Organization	Group's owner (Mission Critical Organisation).	TS 24.483 [13] clause 6.2.15	
mcpttgi:preferred-voice- encodings	- CWIIGI_OTGATILZATION	Ontiour organisation).	0.2.10	
mcpttgi:encoding-	MODIT O		DEC 4500 [07]	
mcpttgi:name[1]	px_MCPTT_Group_A_ preferred_VCodec	Preferred voice codec is a RTP payload. MCPTT clients shall support the AMR-WB codec.	RFC 4566 [27] TS 26.171 [66] TS 24.483 [13] clause 6.2.16	
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	
mcpttgi:level-within-user- hierarchy	"0"	Indicates the level within user hierarchy (only applicable for user-broadcast group).	TS 24.483 [13] clause 6.2.18	
mcpttgi:protect-media	"true"	Indicates whether confidentiality and integrity of media is required on the MCPTT group	TS 24.483 [13] clause 6.2.22	
mcpttgi:protect-floor-control- signalling	"true"	Indicates whether confidentiality and integrity of floor control signalling is required on the MCPTT group	TS 24.483 [13] clause 6.2.23	
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	

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-		value for the	clause 6.2.32	
cancellation-timeout		cancellation of an in		
		progress imminent peril		
		for an MCPTT group		
		call. "PT18H12M15S"		
		corresponds to 65535		
		seconds what is		
		maximum allowed		
		value according to		
		TS 24.483 [13]		
mcpttgi:off-network-hang-	"PT5S"	Indicates the group call	TS 24.483 [13]	
timer		hang timer. "PT5S"	clause 6.2.33	
		corresponds to 5		
		seconds		
mcpttgi:off-network-	"PT1M"	Indicates the max	TS 24.483 [13]	
maximum-duration		duration of group calls.	clause 6.2.34	
		"PT1M" corresponds to		
		1 minute		
mcpttgi:off-network-queue-	"true"	Indicates if queuing is	TS 24.483 [13]	
usage		enabled or not	clause 6.2.34A	
mcpttgi:off-network-ProSe-	"1"	Indicates the default	TS 24.483 [13]	
signalling-PPPP		ProSe Per-Packet	clause 6.2.36	
		Priority (PPPP) value		
mcpttgi:off-network-ProSe-	"1"	Indicates the default	TS 24.483 [13]	
media-PPPP		ProSe Per-Packet	clause 6.2.37	
		Priority (PPPP) value		
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		

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> 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	lause 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	. MODET O		TO 00 000 100	
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	Group's owner (Mission	TS 24.483 [13]	
menttaidovol within arous	_Owner_Organization	Critical Organisation).	clause 6.2.15	
mcpttgi:level-within-group- hierarchy	U	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] cl Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:level-within-user- hierarchy	"0"	Indicates the level within user hierarchy (only applicable for user-broadcast group).	TS 24.483 [13] clause 6.2.18	
mcpttgi:mcvideo-on- network-invite-members	"true"	deer steaded greap).		
mcpttgi:mcvideo-on- network-maximum-duration	"1800"	Indicates the max duration of MCVideo group calls.	TS 24.483 [13] clause 6.2.56	
mcpttgi:mcvideo-urgent-real- time-video-mode	"true"	Indicates that urgent real-time video mode is allowed for the MCVideo group.		
mcpttgi:mcvideo-non-urgent- real-time-video-mode	"true"	indicates that non urgent real-time video mode is allowed for the MCVideo group.		
mcpttgi:mcvideo-non-real- time-video-mode	"true"	indicates that non real- time video mode is allowed for the MCVideo group.		
mcpttgi:mcvideo-active-real- time-video-mode	"non-urgent-real-time"	Indicates the the active real time video mode of the current group session		
mcpttgi:mcvideo-maximum- simultaneous-mcvideo- transmitting-group-members	"1"	Indicates the allowed maximum number of simultaneous transmitting MCVideo Group Members.		
mcpttgi:mcvideo-on- network-minimum-number-to- start	"1"	Indicates the minimum number of affiliated group members acknowledging before start of video transmission specified in 3GPP TS 23.281 [24] in on-network MCVideo procedures.		
mcpttgi: mcvideo-on- network-group-priority	"1"	Indicates the priority level of the group in on- network MCVideo procedures. Higher value indicates higher priority. Absence of the <mcvideo-on-network- group-priority=""> element of the list-service> element of the MCVideo group document indicates the lowest possible priority.</mcvideo-on-network->		
mcpttgi:mcvideo-off- network-arbitration-approach	"self"	This leaf node indicates the arbitration approach used for off-network video tranmissions on the group.	TS 24.483 [13] clause 6.2.47	
mcpttgi:mcvideo-off- network-maximum- simultaneous-transmissions	"1"	indicates maximum number of simultaneous transmissions for off- network MCVideo procedures.	TS 24.483 [13] clause 6.2.48	
mcpttgi:mcvideo-off- network-ProSe-signalling- PPPP	"1"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 24.483 [13] clause 6.2.50	

Derivation Path: TS 24.481 [11] c Information Element	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		
0 0		(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- peril-call-signalling-PPPP		ProSe Per-Packet Priority (PPPP) value	clause 6.2.54	
perii-caii-signaming-FFFF		(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	
		Priority (PPPP) value		
mcpttgi:mcvideo-off-	"8"		TS 24.483 [13]	
network-ProSe-emergency-			clause 6.2.53	
call-media-PPPP 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	0.2.33	
po oanoaia i i i i		(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	"05505"	duration of group calls		
mcpttgi:mcvideo-off-	"65535"	Indicates the timeout		
network-in-progress- emergency-state-cancellation-		value for the 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		
list-service[2]		Group 2		
uri attribute	px_MCVideo_Group_D	Value is a "uri" attribute	TS 24.483 [13]	
a atti ibato	_ID	specified in OMA OMA-	clause 6.2.7	
		TS-XDM_Group-V1_1	v.=	
display-name	px_MCVideo_Group_D	Value is a <display-< td=""><td>TS 24.483 [13]</td><td></td></display-<>	TS 24.483 [13]	
	_Name	name> element	clause 6.2.8	
		specified in OMA OMA-		
		TS-XDM_Group-V1_1		
list				
entry[1]	my MO\/3 ID II	group member 1	TO 04 400 [40]	
uri attribute	px_MCVideo_ID_User_	Indicates an MCVideo	TS 24.483 [13]	
	A	user identity (MCVideo ID) which is a globally	clause 6.2.11	
		unique identifier within		
		the MCVideo service		
		that represents the		
		MCVideo user		
	Not propert			
display-name	Not present			
display-name mcpttgi:user-priority	"3"	Indicates the user	TS 24.483 [13]	
	"3"	Indicates the user priority of the MCVideo group member	TS 24.483 [13] clause 6.2.12	

Derivation Path: TS 24.481 [11] c	Value/remark	Comment	Reference	Condition
mcpttgi:participant-type	px_MCVideo_User_A_	Participant type of the	TS 24.483 [13]	
	ParticipantType	MCVideo group	clause 6.2.13	
rl:mcvideo-mcvideo-id				
uri attribute	px_MCVideo_ID_User_			
	Α			
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-	"false"	Indicates that the		
emergency-alert		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] cla	ause 7.2.2			
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- 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 _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	
mcpttgi:level-within-user- hierarchy	"0"	Indicates the level within user hierarchy (only applicable for user-broadcast group).	TS 24.483 [13] clause 6.2.18	
mcpttgi:mcvideo-on- network-invite-members	"true"			
mcpttgi:mcvideo-on- network-maximum-duration	"1800"	Indicates the max duration of MCVideo group calls.	TS 24.483 [13] clause 6.2.56	
mcpttgi:mcvideo-urgent-real- time-video-mode	"true"	Indicates that urgent real-time video mode is allowed for the MCVideo group.		
mcpttgi:mcvideo-non-urgent- real-time-video-mode	"true"	indicates that non urgent real-time video mode is allowed for the MCVideo group.		
mcpttgi:mcvideo-non-real- time-video-mode	"true"	indicates that non real- time video mode is allowed for the MCVideo group.		
mcpttgi:mcvideo-active-real- time-video-mode	"non-urgent-real-time"	Indicates the the active real time video mode of the current group session		
mcpttgi:mcvideo-maximum- simultaneous-mcvideo- transmitting-group-members	"1"	Indicates the allowed maximum number of simultaneous transmitting MCVideo Group Members.		

Derivation Path: TS 24.481 [11] c				
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:mcvideo-on-	"1"	Indicates the minimum		
network-minimum-number-to- start		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:mcpttgi: mcvideo-	"1"	Indicates the priority		
on-network-group-priority		level of the group in on-		
		network MCVideo		
		procedures. Higher		
		value indicates higher priority. Absence of the		
		<pre><mcvideo-on-network-< pre=""></mcvideo-on-network-<></pre>		
		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	TS 24.483 [13]	
network-maximum-	'	number of	clause 6.2.48	
simultaneous-transmissions		simultaneous	0.0000 0.2.10	
		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	"0"	Priority (PPPP) value	TO 04 400 [40]	
mcpttgi:mcvideo-off- network-ProSe-emergency-	"8"	Indicates the default ProSe Per-Packet	TS 24.483 [13] clause 6.2.52	
call-signalling-PPPP		Priority (PPPP) value	clause 6.2.52	
can-signaming-FFFF		(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		
		call signalling.		
mcpttgi:mcvideo-off-	"1"	Indicates the default	TS 24.483 [13]	
network-ProSe-media-PPPP		ProSe Per-Packet	clause 6.2.51	
		Priority (PPPP) value		
mcpttgi:mcvideo-off-	"8"	,	TS 24.483 [13]	
network-ProSe-emergency-			clause 6.2.53	
call-media-PPPP				
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.		
	i .		l .	

Derivation Path: TS 24.481 [11] clause 7.2.2					
Information Element	Value/remark	Comment	Reference	Condition	
mcpttgi:mcvideo-off- network-maximum-duration	"60	Indicates the maximum duration of group calls			
mcpttgi:mcvideo-off- network-in-progress- emergency-state-cancellation- timeout	"65535"	Indicates the timeout value for the cancellation of an in progress emergency in off-network MCVideo procedures			
mcpttgi:mcvideo-off- network-in-progress- imminent-peril-state- cancellation-timeout	"65535"	Indicates the timeout value for the cancellation of an in progress imminent-peril group call in offnetwork 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> 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	1-			
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	Indianta - th	TO 04 400 (40)	
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 cp:rule				

Derivation Path: TS 24.481 [11] c	Value/remark	Comment	Reference	Condition
cp:id attribute	"rule1"		11010101100	0011011011
cp:actions	10.01			
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	"true"	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_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_MCData_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	
mcpttgi:level-within-user- hierarchy	"0"	Indicates the level within user hierarchy (only applicable for user-broadcast group).	TS 24.483 [13] clause 6.2.18	
mcpttgi:mcpttgi:mcdata-on- network-group-priority	"1"	Indicates the priority level of the group in on- network MCData procedures. Higher value indicates higher priority		
mcpttgi:mcdata-on-network- max-data-size-for-SDS	"10000"	Indicates the maximum size of data (in bytes) that the originating MCData client is allowed to send to the MCData server for onnetwork SDS communications		

Derivation Path: TS 24.481 [11] cl				
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:mcdata-on-network- max-data-size-for-FD	"10000"	Indicates the maximum size of data (in bytes)		
		that the originating MCData client is		
		allowed to send to the		
		MCData server for on-		
		network 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		
monttoline alete off	"1"	HTTP Indicates the ProSe		
mcpttgi:mcdata-off-network- ProSe-signalling-PPPP] T"	Indicates the ProSe Per-Packet Priority		
1 1006-3ignamig-FFF		value to be used when		
		transmitting IP packets		
		carrying signalling for a		
		call on the MCData		
		group in off-network		
		MCData procedures		
mcpttgi:mcdata-off-network- ProSe-media-PPPP	"1"	Indicates the ProSe Per-Packet Priority		
F103e-Illeula-FFFF		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] uri attribute	ny MCDATA Croup D	Group 2 Value is a "uri" attribute	TC 04 400 [40]	
urrattribute	px_MCDATA_Group_D _ID	specified in OMA OMA-	TS 24.483 [13] clause 6.2.7	
	_10	TS-XDM_Group-V1_1	014430 0.2.7	
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-		
lin4		TS-XDM_Group-V1_1		
list entry[1]		group member 1		
uri attribute	px_MCData_ID_User_	Indicates an MCData	TS 24.483 [13]	
an attribute	px_iviobata_ib_osei_ A	user identity (MCData	clause 6.2.11	
		ID) which is a globally		
		unique identifier within		
		the MCData service		
		that represents the		
display-name	Not present	MCData user		
mcpttgi:user-priority	"3"	Indicates the user	TS 24.483 [13]	
mopagador priority		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	
	ре			
rl:mcdata-mcdata-id	my MOD-1- ID !!			
uri attribute	px_MCData_ID_User_			
entry[2]	A	Group member 2		
[Gimy[z]	L	Croup member 2	<u> </u>	

Derivation Path: TS 24.481 [11] c	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		TO 04 400 [40]	
mcpttgi:user-priority	_	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 _Owner_Organization	Group's owner (Mission Critical Organisation).	TS 24.483 [13] clause 6.2.15	
mcpttgi:level-within-group-	"0"	Indicates the level	TS 24.483 [13]	
hierarchy		within a group hierarchy (only applicable for group- broadcast group).	clause 6.2.17	

Value/remark	Comment	Reference	Condition
"O"			
"1"			
	network MCData		
	procedures. Higher		
	value indicates higher		
	priority		
"10000"	Indicates the maximum		
	size of data (in bytes)		
	that the originating		
	MCData client is		
	allowed to send to the		
	MCData server for on-		
	network SDS		
	communications		
"10000"	Indicates the maximum		
	allowed to send to the		
	MCData server for on-		
"2000"			
"4"			
'			
"1"			
'			
	group in off-network		
	"1"	"1" Indicates the level within user hierarchy (only applicable for user-broadcast group). "1" Indicates the priority level of the group in onnetwork MCData procedures. Higher value indicates higher priority "10000" Indicates the maximum size of data (in bytes) that the originating MCData client is allowed to send to the MCData server for onnetwork SDS communications "10000" Indicates the maximum size of data (in bytes) that the originating MCData client is allowed to send to the MCData server for onnetwork FD communications "2000" Indicates the maximum size of data (in bytes) which the MCData server always requests the terminating MCData client to automatically download for onnetwork FD communications using HTTP "1" Indicates the ProSe Per-Packet Priority value to be used when transmitting IP packets carrying signalling for a call on the MCData group in off-network MCData procedures "1" Indicates the ProSe Per-Packet Priority value to be used when transmitting IP packets carrying media for a call on the MCData	"1" Indicates the level within user hierarchy (only applicable for user-broadcast group). Indicates the priority level of the group in onnetwork MCData procedures. Higher value indicates higher priority Indicates the maximum size of data (in bytes) that the originating MCData client is allowed to send to the MCData server for onnetwork SDS communications Indicates the maximum size of data (in bytes) that the originating MCData client is allowed to send to the MCData server for onnetwork SDS communications "10000" Indicates the maximum size of data (in bytes) that the originating MCData client is allowed to send to the MCData server for onnetwork FD communications Indicates the maximum size of data (in bytes) which the MCData server always requests the terminating MCData client to automatically download for onnetwork FD communications using HTTP "1" Indicates the ProSe Per-Packet Priority value to be used when transmitting IP packets carrying signalling for a call on the MCData group in off-network MCData procedures "1" Indicates the ProSe Per-Packet Priority value to be used when transmitting IP packets carrying media for a call on the MCData

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	value/remark	Comment	Reference	Condition
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	TS 24.483 [13] clause 8.2.27	
VPLM[1]		management service		

Derivation Path: TS 24.484 [13], c	lause 7.2 Value/remark	Commont	Potoronos	Condition
PLMN attribute	PLMN2	Comment VPLMN configuration	Reference	Condition
F LIVIN attribute	FLIVIINZ	for another PLMN		
		which can be used by		
		the UE to access		
		MCPTT service		
		NOTE: PLMN2 shall be		
		a different PLMN to		
		PLMN1 of a Cell to		
		which the UE will move		
		during testing when		
gardes		specified in a test case.		
service MCPTT-to-con-ref	px_MCPTT_ALL_APN	configuration parameter	TS 24.483 [13]	
Wei ii to con ici	px_inioi 11_/\LL_/\li\	for establishment of the	clause 8.2.33	
		PDN connection for the		
		MCPTT service		
MC-common-core-to-con-	px_MCPTT_ALL_APN	configuration parameter	TS 24.483 [13]	
ref		for establishment of the PDN connection for the	clause 8.2.36	
		MC common core		
		service		
MC-ID-to-con-ref	px_MCPTT_ALL_APN	configuration parameter	TS 24.483 [13]	
		for establishment of the	clause 8.2.39	
		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_IdMS_auth_ UriPath			
	"https://[" &	Identity management	TS 23.003 [69]	IPv6
	px_MCX_ldMS_auth_l	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_IdMS_token_			
	Port & tsc_MCX_IdMS_token_			
	UriPath			
	"https://[" &	Identity management	TS 23.003 [69]	IPv6
	px_MCX_IdMS_token_I	server token endpoint	TS 24.483 [13]	
	PAddress & "]:" &	identity information	clause 8.2.41A	
	px_MCX_IdMS_token_			
	Port & tsc_MCX_IdMS_token_			
	UriPath			
http-proxy	"https://" &	IP address and port	TS 23.003 [69]	IPv4
	px_MCX_HTTP_Proxy	used by the UE for the	TS 24.483 [13]	
	_IPAddress & ":" &	HTTP TCP connection	clause 8.2.41B	
	px_MCX_HTTP_Proxy			
	_Port "https://[" &	IP address and port	TS 23.003 [69]	IPv6
	px_MCX_HTTP_Proxy	used by the UE for the	TS 24.483 [13]	11. 40
	_IPAddress & "]:" &	HTTP TCP connection	clause 8.2.41B	
	px_MCX_HTTP_Proxy			

Derivation Path: TS 24.484 [13], o				
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 aarromidaron	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	
0140 7/042		of groups	TO 00 000 100	
GMS-XCAP-root-URI	tsc_MCX_GMSXCAPR	Indicates the group	TS 23.003 [69]	
	ootURI	management server	1S 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 '01	
TFG2	"2000"	Indicates the timer for	TS 24.379 [9]	
		call announcement;	TS 24.483 [13] clause 8.2.48	
	<u> </u>	Values: 0-65535 ms	∪aust 0.∠.40	

rivation Path: TS 24.484 [13] Information Element	Value/remark	Comment	Reference	Condition
TFG3	"40"	Indicates the timer for	TS 24.379 [9]	Contaition
		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]	
TFG5	"2"	user; Values: 0-60 s	clause 8.2.50	
IFG5	2	Indicates the timer for not present incoming	TS 24.379 [9] TS 24.483 [13]	
		call announcements;	clause 8.2.51	
		Values: 0-255 s	ciause 0.2.51	
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	
TEOU	11411	255 s	TO 04 6== 151	
TFG14	"1"	Indicates the MCPTT	TS 24.379 [9]	
		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	TS 24.379 [9]	
IFFI	2000	private call request	TS 24.379 [9]	
		retransmission; Values:	clause 8.2.55	
		0-65535 ms	clause 6.2.55	
TFP2	"50"	Indicates the timer for	TS 24.379 [9]	
		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	
TEDE	"30"	0-65535 ms	TC 24 270 [0]	
TFP5	30	Indicates the timer for call release; Values: 0-	TS 24.379 [9] TS 24.483 [13]	
		600 s	clause 8.2.59	
TFP6	"3000"	Indicates the timer for	TS 24.379 [9]	
11 1 0	0000	MCPTT emergency	TS 24.483 [13]	
		private call cancel	clause 8.2.60	
		retransmission; Values:	3.2230 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:		
		0-255 s		
TFB1	"300"	Indicates the timer for	TS 24.379 [9]	
		max duration; Values:	TS 24.483 [13]	
TEDO		0-600 s	clause 8.2.62	
TFB2	"10"	Indicates the timer for	TS 24.379 [9]	
		max duration; Values:	TS 24.483 [13]	
TEDO	"20"	0-10 s	clause 8.2.63	
TFB3	"20"	Indicates the timer for	TS 24.379 [9] TS 24.483 [13]	
	I	waiting for the MCPTT	13 24.403 [13]	l

Derivation Path: TS 24.484 [13] Information Element	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	
Toos	"1"	S In dispates the time of for	TC 04 000 [40]	
T205	1	Indicates the timer for floor granted request;	TS 24.380 [10] TS 24.483 [13]	
		Values: 0-255 s	clause 8.2.68	
T230	"10"	Indicates the timer for	TS 24.380 [10]	
1230	10	inactivity; Values: 0-255	13 24.300 [10]	
		s		
T233	"10"	Indicates the timer for	TS 24.380 [10]	
. =00		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	
0		Values: 0-10 s		
Counters	"3"	Indicates the country	TC 04 070 [0]	
CFP1	"3"	Indicates the counter	TS 24.379 [9]	
		for private call request retransmission	TS 24.483 [13] clause 8.2.74	
CFP3	"5"	Indicates the counter	TS 24.379 [9]	
CI I 3	3	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	
05540	101	retransmission	TO 04 070 [0]	
CFP12	"2"	Indicates the counter	TS 24.379 [9]	
		for MCPTT imminent	TS 24.483 [13] clause 8.2.79	
		peril call emergency end retransmission	Clause 6.2.79	
C201	"3"	Indicates the counter	TS 24.379 [9]	
0201		for floor request	TS 24.483 [13]	
		131 11331 1344331	clause 8.2.80	
C204	"2"	Indicates the counter	TS 24.379 [9]	
5 -0 .	_	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

Derivation Path: TS 24.484 [14] 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	px_MCPTT_User_A_AI	Alphanumeric aliases of MCPTT user	TS 24.483 [13] clause 5.2.8	
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		l section general		
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	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]	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				

erivation Path: TS 24.484 [14] Information Element	Value/remark	Comment	Reference	Conditio
entry-info attribute	"UsePreConfigured"	Indicates the criteria to	TS 24.483 [13]	Conditio
,		determine when	clause 5.2.29F	
		initiation of an MCPTT		
		emergency private call		
		uses the MCPTT		
		private recipient ID.		
index attribute	"0"	TI MODIT : (TO 04 400 [40]	
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	TO 0.4.400 [40]	
display-name	"User B Name"	a human readable	TS 24.483 [13]	
ProSeUserID-entry		name for this User	clause 5.2.29E	
index attribute	"0"			
DiscoveryGroupID	"1234"	Discovery group ID in	TS 24.483 [13]	
2.000 (0.1) 0.104212	1201	the ProSe discovery	clause 5.2.29C	
		procedures	5.5.55 5.2.200	
User-Info-ID	"5555"	ProSe user Info ID in	TS 24.483 [13]	
333		the ProSe discovery	clause 5.2.29D	
		procedures		
MCPTT-group-call				
MaxSimultaneousCallsN6	"3"	Indicates the maximum	TS 24.483 [13]	
		number of	clause 5.2.31	
		simultaneously		
		received MCPTT group		
		calls		
EmergencyCall				
MCPTTGroupInitiation				
entry info attribute	"I loo Cumanth C-1t-1	Hoo ourrendly e-14-1	TC 04 400 [40]	
entry-info attribute	"UseCurrentlySelected	Use currently selected	TS 24.483 [13] clause 5.2.34D	
	Group"	MCPTT group for an on-network MCPTT	Clause 5.2.34D	
index attribute	"0"	emergency group call		
uri-entry	px_MCPTT_Group_A_I	The group used upon	TS 24.483 [13]	
a oy		certain criteria on	clause 5.2.34B	
	-	initiation of an MCPTT	514400 0.2.0 10	
		emergency group call		
display-name	px_MCPTT_Group_A_	The display name for	TS 24.483 [13]	
. ,	Name	group used for	clause 5.2.34C	
		emergency		
ImminentPerilCall				
MCPTTGroupInitiation				
entry	<u> </u>			
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		
index attribute	"0"	call		
uri-entry	px_MCPTT_Group_A_I	the group used on	TS 24.483 [13]	
un-enu y	D D D D D	initiation of an MCPTT	clause 5.2.39B	
		imminent peril group	Clause J.Z.Jab	
		call.		
display-name	px_MCPTT_Group_A_	display name for group	TS 24.483 [13]	
aropia, namo	Name	used for the imminent	clause 5.2.39C	
		peril call	3.2.33 3.2.000	
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	ì	i

	Comment	Reference	Condition
I .			Oonanion
1 -			
		010000 0.2. 100	
THE MODIT Crown A		TC 04 400 [40]	
Name			
"10"			
		clause 5.2.43F	
	0-255		
"0"			
"O"			
-	Indicates an off-	TS 24 483 [13]	
		Clause 5.2.55	
	_		
MODEL	I .	TO 04 400 5105	
Name		clause 5.2.53A	
"5555"	ProSe user info ID	TS 23.303 [68]	
		TS 24.483 [13]	
"O"			
0			
	Crown 4 the MCDTT		
	affiliate to		
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	
nx MCPTT Group A		TS 24 483 [13]	
		clause 5 2 48B	
Name	the group		
00		3	
20			
	Group 1 the MCPTT		
	user is implicitly		
	affiliated to		
"0"			
	indicates a MCDTT	TC 24 402 [42]	
ا ا			
		4	
px_MCPTT_Group_A_			
Name	implicitly affiliated	clause 5.2.48C	
	group	5	
		TS 24.483 [13]	
"UsePreConfigured"	Indicates the criteria to		
"UsePreConfigured"	Indicates the criteria to		
"UsePreConfigured"	determine when	clause 5.2.48	
"UsePreConfigured"	determine when initiation of an MCPTT		
"UsePreConfigured"	determine when initiation of an MCPTT emergency private call	clause 5.2.48	
"UsePreConfigured"	determine when initiation of an MCPTT	clause 5.2.48	
	"0" px_MCPTT_Group_A_I D px_MCPTT_Group_A_ Name 20 20 20 px_MCPTT_Group_A_I D px_MCPTT_Group_A_I D	Value/remark Comment px_MCPTT_Group_A_ID Indicates the MCPTT group used upon certain criteria on initiation of an MCPTT emergency alert. px_MCPTT_Group_A_Name Optional; name of emergency alert group Indicates the priority of the MCPTT group calls, 0-255 "0" Indicates an off-network MCPTT group for use by an MCPTT user px_MCPTT_Group_A_ID Indicates an off-network MCPTT group for use by an MCPTT user px_MCPTT_Group_A_ID The display name corresponding to off-network group id "0" Group 1 the MCPTT user is allowed to affiliate to "0" The MCPTT group ID for the on-network MCPTT user is allowed to affiliate to. "0" The MCPTT group that the MCPTT user is allowed to affiliate to. px_MCPTT_Group_A_Name The display name for the group 20 Group 1 the MCPTT user is implicitly affiliated to "0" Group 1 the MCPTT user is implicitly affiliated to px_MCPTT_Group_A_ID Indicates a MCPTT group ID to which the MCPTT user is implicitly affiliated to	Value/remark Comment Reference px_MCPTT_Group_A_I Indicates the MCPTT group used upon certain criteria on initiation of an MCPTT-emergency alert. TS 24.483 [13] clause 5.2.43B px_MCPTT_Group_A_Name Optional; name of emergency alert group. TS 24.483 [13] clause 5.2.43B "10" Indicates the priority of the MCPTT group calls, 0-255 TS 24.483 [13] clause 5.2.43F "0" TS 24.483 [13] clause 5.2.43F "0" TS 24.483 [13] clause 5.2.53 "5555" ProSe user info ID TS 24.483 [13] clause 5.2.53 "0" TS 24.483 [13] clause 5.2.58 "0" TS 24.483 [13] clause 5.2.48B 20 Group 1 the MCPTT user is

Derivation Path: TS 24.484 [14] of Information Element	Value/remark	Comment	Reference	Condition
				Condition
uri-entry	px_MCPTT_ID_User_B	Indicates the default MCPTT user ID to be used upon certain criteria on initiation of an MCPTT private emergency alert for onnetwork	TS 24.483 [13] clause 5.2.48 M	
display-name	px_MCPTT_User_A_AI ias	The display name corresponding to private emergency call id	TS 24.483 [13] clause 5.2.48N	
cp:ruleset				
cp:rule				
cp:id attribute	"rule1"			
cp:actions				
allow-create-delete-user- alias	"false"	Indicates authorisation to create and delete aliases of other MCPTT users	TS 24.483 [13] clause 5.2.9	
allow-private-call	"true"	Indicates the authorisation to make a MCPTT private call	TS 24.483 [13] clause 5.2.13	
allow-private-call-to-any- user	"true"	indicates the authorisation to make a MCPTT private call to any MCPTT user	TS 24.483 [13] clause 5.2.14	
allow-manual- commencement	"true"	Indicates the authorisation to make a MCPTT private call with manual commencement	TS 24.483 [13] clause 5.2.20	
allow-automatic- commencement	"true"	Indicates the authorisation to make a MCPTT private call with automatic commencement	TS 24.483 [13] clause 5.2.21	
allow-force-auto-answer	"true"	Indicates the authorisation of MCPTT user to force automatic answer for a MCPTT private call	TS 24.483 [13] clause 5.2.22	
allow-failure-restriction	"false"	Indicates the authorisation to restrict the provision of a notification of call failure reason for a MCPTT private call	TS 24.483 [13] clause 5.2.23	
allow-private-call-media- protection	"true"	Indicates authorisation to protect confidentiality and integrity of media for MCPTT private calls	TS 24.483 [13] clause 5.2.24	
allow-private-call-floor- control-protection	"true"	Indicates authorisation to protect confidentiality and integrity of floor control signalling for MCPTT private calls.	TS 24.483 [13] clause 5.2.25	
allow-emergency-private- call	"true"	Indicates the authorisation to make an MCPTT emergency private call.	TS 24.483 [13] clause 5.2.27	

Derivation Path: TS 24.484 [14] clarification 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] of Information Element	Value/remark	Comment	Reference	Condition
allow-imminent-peril-	"true"	Indicates the	TS 24.483 [13]	Condition
change		authorisation for a	clause 5.2.57	
		participant to change		
		an off-network group		
		call in-progress to an		
		off-network MCPTT		
		imminent peril group		
		call		
allow-regroup	"true"	Indicates whether the	TS 24.483 [13]	
		MCPTT user is	clause 5.2.48D	
		authorised to perform		
		dynamic regrouping		
		operations		
allow-presence-status	"true"	Indicates the presence	TS 24.483 [13]	
		status on the network	clause 5.2.48E	
		of this MCPTT user is		
		available		
allow-request-presence	"true"	Indicates whether the	TS 24.483 [13]	
		MCPTT user is	clause 5.2.48F	
		authorised to obtain		
		whether a particular		
		MCPTT User is present		
		on the network		
allow-private-call-	"true"	Indicates whether the	TS 24.483 [13]	
participation		MCPTT user is allowed	clause 5.2.48	
		to participate in MCPTT	G	
		private calls that they		
		are invited to		
allow-override-of-	"true"	Indicates whether the	TS 24.483 [13]	
transmission		MCPTT user is	clause 5.2.48H	
		authorised to override		
		transmission in a		
		MCPTT private call		
allow-manual-off-network-	"true"	Indicates whether the	TS 24.483 [13]	
switch		MCPTT user is	clause 5.2.48I	
		authorised to manually		
		switch to off-network		
		operation while in on-		
any Evt		network operation		
anyExt	"foloo"	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	TO 04 400 [40]	
allow-location-info-when-	"false"	When set to "true" the	TS 24.483 [13]	
talking		MCPTT user is	clause 5.2.48	
		authorised to send its	W10	
		location information		
		when it is requesting		
		the floor.		
		When set to "false" the		
		MCPTT user is not		
		authorised to send its		
		location information		
		when it is requesting		
		the floor.	ĺ	

5.5.8.4 MCPTT Service Configuration

The structure of a user profile document is specified in TS 24.484 [14] clause 8.4, single MCPTT group configuration parameters are defined in TS 24.483 [13] clause 7.2.

Table 5.5.8.4-1: MCPTT Service Configuration Defaults

Derivation Path: TS 24.484 [14], o			-	
Information Element	Value/remark	Comment	Reference	Condition
service configuration				
domain attribute	px_MCX_DomainName _Organization_A	Mandatory attribute: domain name of the mission critical organization		
common		Indianta 111	TO 04 400 5405	
min-length-alias	"2"	Indicates minimum length of an alphanumeric identifier (i.e., alias)	TS 24.483 [13] clause 7.2.9	
broadcast-group				
num-levels-group-hierarchy	"1"	Indicates the number of levels of group hierarchy for group-broadcast groups	TS 24.483 [13] clause 7.2.7	
num-levels-user-hierarchy	"1"	Indicates the number of levels of user hierarchy for user-broadcast groups	TS 24.483 [13] clause 7.2.8	
on-network				
emergency-call				
private-cancel-timeout	"PT30M"	30 minutes		
group-time-limit	"PT20M"	20 minutes		
private-call				
hang-time	"PT30S"	30 seconds		
max-duration-with-floor-	"PT30S"	30 seconds		
control				
max-duration-without-floor- control	"PT20M"	20 minutes		
num-levels-priority-hierarchy	10			
transmit-time				
time-limit	"PT30S"	30 seconds		
time-warning	"PT20M"	20 minutes		
hang-time-warning	"PT20M"	20 minutes		
floor-control-queue				
depth	5			
max-user-request-time	"PT20M"	20 minutes		
fc-timers-counters				
T1-end-of-rtp-media	"PT4S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T3-stop-talking-grace	"PT3S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T7-floor-idle	"PT2S"	Depends on the characteristic of the radio access network	TS 24.380 [10] clause 11	
T8-floor-revoke	"PT1S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T11-end-of-RTP-dual	"PT4S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T12-stop-talking-dual	"PT30S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T15-conversation	"PT30S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T16-map-group-to-bearer	"PT0.5S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T17-unmap-group-to-bearer	"PT0.2S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T20-floor-granted	"PT1S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T55-connect	"PT2S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T56-disconnect	"PT2S"	Default value Value in seconds	TS 24.380 [10] clause 11	
C7-floor-idle	10	Default value	TS 24.380 [10] clause 11	

Derivation Path: TS 24.484 [14], o	Value/remark	Comment	Reference	Condition
C17-unmap-group-to-bearer	3	Default value	TS 24.380 [10]	22
O 17 dililiap group to bearer		Delaali valde	clause 11	
C20-floor-granted	3	Default value	TS 24.380 [10]	
3			clause 11	
C55-connect	3	Default value	TS 24.380 [10]	
			clause 11	
C56-disconnect	3	Default value	TS 24.380 [10]	
			clause 11	
signalling-protection				
confidentiality-protection	true			
integrity-protection	true			
protection-between-mcptt-				
servers				
allow-signalling-protection	true			
allow-floor-control-protection	true			
emergency-resource-priority				
resource-priority-namespace	"mcpttp"		RFC 8101	
resource-priority-priority	"8"		RFC 8101	
imminent-peril-resource-				
priority,	" "		DE0 0404	
resource-priority-namespace	"mcpttp"		RFC 8101	
resource-priority-priority	"5"		RFC 8101	
normal-resource-priority	" "		DE0 0404	
resource-priority-namespace	"mcpttp"		RFC 8101	
resource-priority-priority	-1-		RFC 8101	
off-network				
emergency-call	"PT5S"	5 seconds;	TS 24.483 [13]	
private-cancel-timeout	F155	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]	
g. 0 up		Indicates time limit for	clause 7.2.16	
		an in progress MCPTT		
		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-		
may duration with the	"DTGOC"	65535 s	TC 04 400 (40)	
max-duration-with-floor-	"PT60S"	60 seconds;	TS 24.483 [13]	
control		Indicates max private call (with floor control)	clause 7.2.12	
		duration. Values: 0-		
		65535 s		
num-levels-priority-hierarchy	"4"	Indicates the number of	TS 24.483 [13]	
is tolo priority filoratorly		levels of hierarchy for	clause 7.2.17	
		floor control override in	3.5550 7.12.17	
		off-network. Values: 4-		
		256		
transmit-time				
time-limit	"PT60S"	60 seconds;	TS 24.483 [13]	
		Indicates transmit time	clause 7.2.18	
		limit from a single		
		request to transmit in a		
		group or private call.		
		Values: 0-65535 s		ĺ

Information Element	Value/remark	Comment	Reference	Condition
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], clause 7.2				
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				
User-ID attribute	px_MCVideo_ID_User_ A	Default User Identity Values 0-255. Indicates	TS 24.483 [13] clause 8.2.6	
user-profile-index attribute	0	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. Public Land Mobile	TS 23.003 [69] TS 24.483 [13] clause 8.2.16	
		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				
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 N	configuration parameter for establishment of the PDN connection for the MCVideo service	TS 24.483 [13] clause 8.2.33	
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 8.2.36	
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 8.2.39	
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

Derivation Path: TS 24.484 [14],		T .		
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	"150"	Indicates the time of the	TC 04 004 [00]	
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	

Derivation Path: TS 24.484 [14] Information Element	Value/remark	Comment	Reference	Condition
TFG2	"2000"	Indicates the timer for	TS 24.281 [86]	Condition
11 02	2000	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	
TEOE	"2"	0-60 s	TO 04 004 [00]	
TFG5	"2"	Indicates the timer for	TS 24.281 [86]	
		not present incoming call announcements;	TS 24.483 [13] clause 8.2.51	
		Values: 0-255 s	clause 6.2.51	
TFG11	"3000"	Indicates the timer for	TS 24.281 [86]	
11 611	3000	MCVideo emergency	TS 24.483 [13]	
		end retransmission;	clause 8.2.52	
		Values: 0-65535 ms	0.0000 0.2.02	
TFG12	"3000"	Indicates the timer for	TS 24.281 [86]	
-		MCVideo imminent	TS 24.483 [13]	
		peril end	clause 8.2.53	
		retransmission; Values:		
		0-65535 ms		
TFG13	"1"	Indicates the timer for	TS 24.281 [86]	
		implicit priority	TS 24.483 [13]	
		downgrade; Values: 0-	clause 8.2.54	
		255 s		
TFG14	"1"	Indicates the MCVideo	TS 24.281 [86]	
		timer for implicit priority	TS 24.483 [13]	
		downgrade (imminent	clause 8.2.54A	
TED4	"0000"	peril); Values: 0-255 s	TO 04 004 [00]	
TFP1	"2000"	Indicates the timer for	TS 24.281 [86] TS 24.483 [13]	
		private call request retransmission; Values:	clause 8.2.55	
		0-65535 ms	clause 6.2.55	
TFP2	"50"	Indicates the timer for	TS 24.281 [86]	
2		waiting for call	TS 24.483 [13]	
		response message;	clause 8.2.56	
		Values: 0-60 s		
TFP3	"2000"	Indicates the timer for	TS 24.281 [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	
TEDE	"20"	0-65535 ms	TO 04 004 [00]	
TFP5	"30"	Indicates the timer for	TS 24.281 [86]	
		call release; Values: 0-	TS 24.483 [13]	
TFP6	"3000"	600 s Indicates the timer for	clause 8.2.59 TS 24.281 [86]	
IFFU	3000		TS 24.281 [86]	
		MCVideo emergency private call cancel	clause 8.2.60	
		retransmission; Values:	514436 0.2.00	
		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		<u> </u>
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

Perivation Path: TS 24.484 [14] Information Element	Value/remark	Comment	Reference	Condition
TFB2	"10"	Indicates the timer for	TS 24.281 [86]	Janaidi
52		max duration; Values:	TS 24.483 [13]	
		0-10 s	clause 8.2.63	
TFB3	"20"	Indicates the timer for	TS 24.281 [86]	
11 50	20	waiting for the	TS 24.483 [13]	
		MCVideo user; Values:	clause 8.2.64	
		0-60 s	010030 0.2.04	
T201	"1000"	Indicates the timer for	TS 24.581 [88]	
1201	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]	
1203	3	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]	
1204	5			
		floor queue position	TS 24.483 [13] clause 8.2.67	
		request; Values: 0-255	clause 8.2.67	
		S	TO 04 504 (00)	
T205	"1"	Indicates the timer for	TS 24.581 [88]	
		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]	
		inactivity; Values: 0-		
		255 s		
T233	"10"	Indicates the timer for	TS 24.581 [88]	
		pending user action;	TS 24.483 [13]	
		Values: 0-255 s	clause 8.2.70	<u> </u>
TFE1	"30"	Indicates the timer for	TS 24.281 [86]	
		MCVideo emergency	TS 24.483 [13]	
		alert; Values: 0-65535	clause 8.2.71	
		S		
TFE2	"10"	Indicates the timer for	TS 24.281 [86]	
		MCVideo emergency	TS 24.483 [13]	
		alert re-transmission;	clause 8.2.72	
		Values: 0-10 s	5.0000 0.2.72	
Counters		74.400.0 100		1
CFP1	"3"	Indicates the counter	TS 24.281 [86]	
U		for private call request	TS 24.483 [13]	
		retransmission	clause 8.2.74	
CFP3	"5"	Indicates the counter		1
Urra	٥		TS 24.281 [86]	
		for private call release	TS 24.483 [13]	
OED4	II OII	retransmission	clause 8.2.75	1
CFP4	"2"	Indicates the counter	TS 24.281 [86]	
		for private call accept	TS 24.483 [13]	
0550		retransmission	clause 8.2.76	
CFP6	"2"	Indicates the counter	TS 24.281 [86]	
		for private call accept	TS 24.483 [13]	
		retransmission	clause 8.2.77	
CFP11	"2"	Indicates the counter	TS 24.281 [86]	<u> </u>
		for MCVideo group call	TS 24.483 [13]	
		emergency end	clause 8.2.78	1
		retransmission		
CFP12	"2"	Indicates the counter	TS 24.281 [86]	
		for MCVideo imminent	TS 24.483 [13]	
		peril call emergency	clause 8.2.79	
		end retransmission		1
C201	"3"	Indicates the counter	TS 24.281 [86]	1
	"	for floor request	TS 24.483 [13]	
		Tot hoor request	clause 8.2.80	
C204	"2"	Indicates the counter		1
UZU 4	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		TS 24.281 [86]	
		for floor queue position	TS 24.483 [13]	
2005		request	clause 8.2.81	
C205	"4"	Indicates the counter	TS 24.281 [86]	
		for floor granted	TS 24.483 [13]	
	ĺ	request	clause 8.2.82	1

Condition	lition 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] o	Value/remark	Comment	Reference	Condition
mcvideo-UE-configuration	value/lellial K	Comment	I/CICICIICE	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				
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, c Information Element	lause 9.3 Value/remark	Comment	Reference	Condition
mcptt-user-profile	value/remark	Comment	Reference	Condition
XUI-URI attribute	px_MCVideo_User_XU			
Act of autibate	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	1			
index	"1"			
MCVideo Group ID	ny MCVideo Croup A			
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

Derivation Path: TS 24.24.484, cla Information Element	Value/remark	Comment	Reference	Condition
imormation Element	"https://[" &	Identity management	TS 23.003 [69]	IPv6
	px_MCX_IdMS_token_I	server token endpoint	TS 24.483 [13]	IPV6
	PAddress & "]:" &	identity information	clause 8.2.41A	
	px_MCX_IdMS_token_	dentity information	Clause 6.2.41A	
	Port &			
	tsc_MCX_IdMS_token_ UriPath			
RelativePresentationPriority	"7"		TC 24 402 [42]	
Relative Presentation Priority	'		TS 24.483 [13]	
MaxAffiliationsNc2	"10"		clause 13.2.51	
MaxAmilationsNc2	10		TS 24.483 [13]	
MaxTimeSingleTransmit	"600"	Value in seconds	clause 13.2.67 TS 24.483 [13]	
wax rime single transmit	800	value in seconds	clause 13.2.87	
OffNetwork			Clause 15.2.01	
index	"1"			
MCVideoGroupInfo	•			
MCVideo-Group-ID	px_MCVideo_Group_A			
Wo video-Oroup-ID	ID			
GMS-App-Serv-Id	tsc_MCX_GMS_Hostn			
Sinc App Colvid	ame			
IdMS-Token-Endpoint	"https://" &	Identity management	TS 23.003 [69]	IPv4
idivio-Tokeri-Eriapoliti	px_MCX_ldMS_token_l	server token endpoint	TS 24.483 [13]	''
	PAddress & ":" &	identity information	clause 8.2.41A	
	px_MCX_ldMS_token_	lacitaty information	oldusc o.z.+171	
	Port &			
	tsc_MCX_IdMS_token_			
	UriPath			
	"https://[" &	Identity management	TS 23.003 [69]	IPv6
	px_MCX_ldMS_token_l	server token endpoint	TS 24.483 [13]	
	PAddress & "]:" &	identity information	clause 8.2.41A	
	px_MCX_ldMS_token_	identify in entradient	0.000000.211111	
	Port &			
	tsc_MCX_IdMS_token_			
	UriPath			
RelativePresentationPriority	"7"		TS 24.483 [13]	
			clause 13.2.51	
User-Info-Id	px_MCVideo_ID_User_		TS 24.483 [13]	
	A		clause 13.2.10	
			2	
cp:ruleset				
cp:rule				
cp:id attribute	"rule1"			
cp:actions				
allow-create-delete-user-	"true"			
alias				
allow-create-group-	"true"			
broadcast- group				
allow-create-user-	"true"			
broadcast-group				
allow-modify-video	"true"			
allow-renegotiate-codec	"true"			
allow-camera-control	"true"			
allow-remote-control	"true"			
allow-display-remote-ue	"true"			
allow-remote-camera	"true"			
allow-push-video	"true"			
allow-auto-send-notify	"true"			
allow-request-affiliated-	"true"			
groups				
allow-request-to-affiliate-	"true"			
other-users				
allow-recommend-to-	"true"			
affiliate-other-users				
allow-regroup	"true"			
allow-presence-status	"true"			

Derivation Path: TS 24.24.484, cla	Value/remark	Comment	Reference	Condition
allow-request-presence	"true"		1101010101	
allow-activate-emergency-	"true"			
alert				
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				
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				
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				
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]	
T104	"2"	Values 0-255 sec	clause 8.2.13 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	
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. Public Land Mobile	TS 23.003 [69] TS 24.483 [13] clause 8.2.16	
		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], Information Element	Value/remark	Comment	Reference	Condition
MC-ID-to-con-ref	px_MCData_ALL_APN	configuration	TS 24.483 [13]	Condition
		parameter for	clause 8.2.27	
		establishment of the		
		PDN connection for the		
		MC identity		
		management service		
VPLM[1]				
PLMN attribute	PLMN2	VPLMN configuration		
		for another PLMN		
		which can be used by		
		the UE to access		
		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		opcomed in a test case.		
MCPTT-to-con-ref	px_MCData_ALL_APN	configuration	TS 24.483 [13]	
-		parameter for	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]	
ef		parameter for	clause 8.2.36	
		establishment of the		
		PDN connection for the		
		MC common core		
MO ID (MOD (ALL ADA	service	TO 04 400 [40]	
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		
		management service		
App-Server-Info		management service		
idms-auth-endpoint	"https://" &	Identity management	TS 23.003 [69]	IPv4
•	px_MCX_ldMS_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_			
	UriPath // 2	11 0	TO 00 000 100	ID 1
idms-token-endpoint	"https://" &	Identity management	TS 23.003 [69]	IPv4
	px_MCX_IdMS_token_I	server token endpoint	TS 24.483 [13]	
	PAddress & ":" &	identity information	clause 8.2.41A	
	px_MCX_IdMS_token_			
	Port &			
	tsc_MCX_ldMS_token_			
	UriPath	Identity management	TC 22 002 [60]	IDv6
	"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 &			
		•		i .
	tsc_MCX_IdMS_token_ UriPath			

http-proxy	Derivation Path: TS 24.484 [14],				
px_MCX_HTTP_Proxy	Information Element	Value/remark	Comment	Reference	Condition
DX_MCX_HTTP_Proxy Port Proxy Proxy	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 8.2.42 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 8.2.44 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 clientity information in dauge 8.2.43 in dauge 8.2.43 in dauge 8.2.43 in dauge 8.2.43 in dauge 8.2.43 in dauge 8.2.44 in discription in the control of the contr	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 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 pre-shared key for mutual authentication for the TLS tunnel authentication for the TLS tunnel authentication pre-shared key for mutual authentication for the TLS tunnel authentication pre-shared key for mutual authentication for the TLS tunnel authentication for the TLS tunnel authentication proxy function of the GMS URI information which contains the public service identity for performing subscription proxy function of the GMS information which contains the public service identity for performing subscription of groups Indicates the group creation XUI and groups in the public service identity for performing subscription of groups Indicates the group creation XUI and groups in the groups in th	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 GMS and the public service identity for performing subscription proxy function of the GMS and the public service identity for performing subscription proxy function of the GMS and the public service identity for performing subscription proxy function of the GMS and the public service identity for performing subscription proxy function of the GMS and the public service identity for performing subscription proxy function of the GMS and the public service identity for performing subscription proxy function of the GMS and the public service identity for performing subscription proxy function of the GMS and the public service identity for performing subscription proxy function of the GMS and the public service identity for performing subscription proxy function of the GMS and the public service identity for performing subscription proxy function of the GMS and the public service identity for performing subscription proxy function of the GMS and the public service identity for performing subscription proxy function is enabled and the public service in the public service in the public service in the g			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 GMS for performing subscription proxy function of the GMS for performing subscription proxy function of the GMS for performing subscription proxy function of the GMS for performing subscription proxy function of the GMS for performing subscription for creation of groups GMS-XCAP-root-URI tsc_MCX_GMSXCAPR of group function for crea		"C 1 "		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 The group management service URI information which contains the public service identity for performing subscription proxy function of the GMS GMS-VACAP-root-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 "true" Indicates whether integrity protection is enabled confidentiality-protection-enabled off-network TS 24.483 [13] clause 8.2.44E TS 24.483 [13] clause 8.2.44F 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 TS 24.483 [13] clause 8.2.44F enabled			configuration management server XCAP Root URI	TS 24.483 [13]	
enabled integrity protection is enabled clause 8.2.44F enabled	integrity-protection-enabled	"true"	integrity protection is		
		"true"	integrity protection is		
					

Derivation Path: TS 24.484 [14] Information Element	Value/remark	Comment	Reference	Condition
TFG1	"150"	Indicates the timer for	TS 24.379 [9]	Condition
11 61	130	wait for call	TS 24.483 [13]	
		announcement:	clause 8.2.47	
		Values: 0-65535 ms	0.0000 0.2	
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:	clause 8.2.49	
		0-65535 ms		
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		
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		
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 MCData	TS 24.379 [9]	
		timer for implicit priority	TS 24.483 [13]	
		downgrade (imminent	clause 8.2.54Å	
		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	
		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]	
· · · · ·		MCData emergency	TS 24.483 [13]	
		private call cancel	clause 8.2.60	
		retransmission; Values:		
		0-65535 ms		
TFP7	"6"	Indicates the timer for	TS 24.379 [9]	
		waiting for any	TS 24.483 [13]	
		message with same	clause 8.2.61	
		call identifier; Values:	3.2230 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	

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 20	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	= 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],	Derivation Path: TS 24.484 [14], clause 7.2					
Information Element	Value/remark	Comment	Reference	Condition		
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			
CFS1	"5"		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] o		0	Deferre	0.00
Information Element	Value/remark	Comment	Reference	Condition
mcdata-UE-configuration domain attribute	px_MCX_DomainName	Mandatory attribute:		
	_Organization_A	domain name of the mission critical organization		
common				
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		among groups		
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> 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_ ID	Identifies a MCData group	TS 24.483 clause 9.2.15	
group-priority-hierarchy	"7"	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	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_	Identifies a MCData	TS 24.483	
group-priority-hierarchy	ID	group Indicates the requested presentation priority of conversation management transactions	clause 9.2.15 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	value/remark	Comment	Reference	Condition
				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 the MCS UE initial configuration document as specified in clause 7.2.2.1</app-server-info></kmssec>	TS 24.483 [13] clause 10.2.21 A	
TxRxControl		Gladoc 7.2.2.1		
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	ny MCData Corresion A	Indicates the MOD-t-	TC 04 400	
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
	"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
Relativepresentation Priority	"7"			
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				
index attribute	"0"			
MCDataGroupInfo				
MCData-Group-ID	px_MCData_Group_A_ ID	Indicates the MCData group ID for the off- network MCData group that the MCData user is allowed to use.	TS 24.483 [13] clause 10.2.10	
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			
the AMCDataGroupInfoselement of the		Value/remark	Comment	Reference	Condition
the AMCDataGroupInfoselement of the AMCDataGroupInfoselement of the AMCDataGroupInfoselement of the AMCDataGroupInfoselement of the AMCDataGroupInfoselement of the AMCDataGroupInfoselement of the on-network group relative to other on-network group relative to other on-network groups and on-network users, and corresponds to the PresentationPriority' element of Clause 10.2.55 indicating the AMCDataGroupInfoselement of the AMCDataGroupInfoselement of the AMCDataGroupInfoselement of the AMCDataGroupInfoselement of the AMCDataGroupInfoselement of the AMCDataGroupInfoselement of AMCDataGroupInfoseleme			When it appears in:		
CoffNetwork> 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 "Presentation priority" element of clause 10.2.111 in 3GPP TS 24.483 [4]; User-Info-Id			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]; and the <mcdatagroupinfo></mcdatagroupinfo></onnetwork></mcdatagroupinfo>	Reference	Condition
ruleset rule actions allow-create-delete-user- alias allow-create-group- broadcast-group allow-create-user- broadcast-group allow-transmit-data "true" allow-request-affiliate- groups allow-request-to-affiliate- other-users allow-regroup allow-regroup **True** **True** **True** **True** **Itr			<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</offnetwork>		
rule actions allow-create-delete-user- alias allow-create-group- broadcast- group allow-transmit-data "true" allow-request-affiliate- other-users allow-recommend-to- affiliate-other-users allow-regroup "true" allow-regroup "true" allow-resproup "true" allow-recommend-to- affiliate-other-users allow-resproup "true" allow-request-presence "true" allow-request-presence "true" allow-activate-emergency- alert allow-cancel-emergency- alert allow-cancel-emergency- alert-any-user	User-Info-Id				
actions allow-create-delete-user- alias allow-create-group- broadcast- group allow-create-user- broadcast-group allow-transmit-data "true" allow-request-affiliated- groups allow-request-to-affiliate- other-users allow-recommend-to- affiliate-other-users allow-regroup allow-regroup allow-resproup allow-resproup allow-regroup allow-regroup allow-regroup allow-regroup allow-regroup allow-regroup allow-request-presence allow-request-presence allow-cancel-emergency- alert allow-cancel-emergency- alert-any-user	ruleset				
actions allow-create-delete-user- alias allow-create-group- broadcast- group allow-create-user- broadcast-group allow-transmit-data "true" allow-request-affiliated- groups allow-request-to-affiliate- other-users allow-recommend-to- affiliate-other-users allow-regroup allow-regroup allow-resproup allow-resproup allow-regroup allow-regroup allow-regroup allow-regroup allow-regroup allow-regroup allow-request-presence allow-request-presence allow-cancel-emergency- alert allow-cancel-emergency- alert-any-user					
allow-create-group- broadcast- group allow-create-user- broadcast-group allow-transmit-data "true" allow-request-affiliated- groups allow-request-to-affiliate- other-users allow-recommend-to- affiliate-other-users allow-regoup "true" allow-regoup "true" allow-reguest-presence "true" allow-request-presence "true" allow-cancel-emergency- alert allow-cancel-emergency- alert-any-user "true" "true" "true" allow-cancel-emergency- alert-any-user "true" "true" "true" "true" allow-cancel-emergency- alert-any-user					
broadcast- group allow-create-user- broadcast-group allow-transmit-data "true" allow-request-affiliated- groups allow-request-to-affiliate- other-users allow-recommend-to- affiliate-other-users allow-regroup "true" allow-presence-status "true" allow-request-presence "true" allow-activate-emergency- alert allow-cancel-emergency- alert-any-user "true" "true" "true" "true" "true" "true" "true" "true" "true" "true" "true" "true" "true"	alias				
broadcast-group allow-transmit-data "true" allow-request-affiliated- groups allow-request-to-affiliate- other-users allow-recommend-to- affiliate-other-users allow-regroup "true" allow-presence-status "true" allow-request-presence "true" allow-activate-emergency- alert allow-cancel-emergency- alert-any-user	broadcast- group				
allow-request-affiliated- groups allow-request-to-affiliate- other-users allow-recommend-to- affiliate-other-users allow-regroup allow-presence-status allow-request-presence allow-activate-emergency- alert allow-cancel-emergency- alert-any-user "true" "true" "true" "true" "true" "true" "true" "true" "true" "true"	broadcast-group				
groups allow-request-to-affiliate- other-users allow-recommend-to- affiliate-other-users allow-regroup allow-presence-status allow-request-presence allow-activate-emergency- alert allow-cancel-emergency- alert allow-cancel-emergency- alert-any-user "true" "true" "true" "true" "true" "true" "true"					
other-users allow-recommend-to- affiliate-other-users allow-regroup "true" allow-presence-status "true" allow-request-presence "true" allow-activate-emergency- alert allow-cancel-emergency- alert allow-cancel-emergency- alert-any-user "true"	groups				
affiliate-other-users allow-regroup "true" allow-presence-status "true" allow-request-presence "true" allow-activate-emergency-alert allow-cancel-emergency-alert "true" allow-cancel-emergency-alert "true"	other-users				
allow-presence-status "true" allow-request-presence "true" allow-activate-emergency- alert "true" allow-cancel-emergency- alert allow-cancel-emergency- alert allow-cancel-emergency- alert-any-user "true"	affiliate-other-users				
allow-request-presence "true"					
allow-request-presence "true" allow-activate-emergency- alert allow-cancel-emergency- alert allow-cancel-emergency- alert-any-user "true"					
allow-activate-emergency- alert "true" allow-cancel-emergency- alert allow-cancel-emergency- alert-any-user "true"					
allow-cancel-emergency- alert allow-cancel-emergency- alert-any-user "true"	allow-activate-emergency-				
allow-cancel-emergency- alert-any-user "true"	allow-cancel-emergency-	"true"			
	allow-cancel-emergency- alert-any-user				
	allow-enable-disable-user	"true"			

Derivation Path: TS 24.484, claus	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], Information Element	Value/remark	Comment	Reference	Condition
service configuration	value/reillark	Comment	Reference	Condition
domain attribute	ny MCData Harri A. C.	Mondotomy attailente		1
domain attribute	px_MCData_User_A_O	Mandatory attribute:		
	rganization	domain name of the		
		mission critical		
		organization		
on-network				
tx-and-rx-control				
max-data-size-sds-bytes	"10000000"	The maximum data		
,		that the originating		
		client can send in an		
		SDS message		
max-payload-size-sds-	"1000"	The maximum payload		
	1000			
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		
2,.50		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		
max me availability	1000000	which a file can be		
		made available on the		
		server for download		
signalling-protection		Server for download		
	"true"	Indicating whather		
confidentiality-protection	irue	Indicating whether		
		confidentiality		
		protection of MCData		
		signalling is enabled or		
		disabled between the		
		MCData client and		
		MCData server		<u></u>
integrity-protection	"true"	Indicating whether		
3 71 3333		integrity protection of		
		MCData signalling is		
		enabled or disabled		
		between the MCData		
		client and MCData		
musta stieve bestures 1.4		server		1
protection-between-mcdata-				
servers		La dia atia 1 di		1
allow-signalling-protection	:true"	Indicating whether		
		protection of MCData		
		signalling is enabled		
		between MCData		
		servers		
off-network				
default-prose-per-packet-				
priority mcdata-one-to-one-call-	"1"		TS 24.483 [13]	

Derivation Path: TS 24.484 [14], c	lause 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)

MikEY Common Header (Derivation path: RFC 6509 [23], RFC 6043 [25]	5], RFC 3830 [24]		
Version	Field	Value/remark	Comment	Condition
Data Type	,			
Next payload Identifier for the next payload (NOTE 1)				
PRF HMAC-SHA-256			SAKKE msg (26)	
PRF func		payload (NOTE 1)		
CSB ID				
Significant bits set to 1 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			256	
#CS '00000001'B or '0000000B 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 GENERIC-ID enty factor of the crypto session: '6' for CSK use within MCPTT (TS 33.180 [94] E.4.2) Prot type O Any value Any value Ps { Any value Ps { Any value Ps { Any value Any value Ps { Any value	CSB ID	significant bits set to	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	
1 if #CS == 0 empty map	#CS		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]	
1 if #CS == 0 empty map	CS ID map type	2 if #CS > 0		
CS ID map info { CS ID CS ID of the crypto session: '6' for CSK use within MCPTT (TS 33.180 [94] E.4.2) Prot type O 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 { Policy_no_1 Any value Policy_no_1 Any value CS ID of the crypto session: '6' for CSK use within MCPTT (TS 33.180 [94] E.4.2) SRTP the security protocol to be used for the crypto session Is the number of security policies provided for the crypto session Policy_no_1 Any value a policy_no that corresponds to the policy_no of a		1 if #CS == 0	empty map	
CS ID Output CS ID CS ID of the crypto session: '6' for CSK use within MCPTT (TS 33.180 [94] E.4.2) Prot type Output Any value Any value The number of security policies provided for the crypto session Ps { Policy_no_1 Any value CS ID of the crypto session: '6' for CSK use within MCPTT (TS 33.180 [94] E.4.2) SRTP the security protocol to be used for the crypto session S flag to indicate whether the ROC and SEQ fields are provided ('1') or if they are omitted ('0') #P Any value Any value Any value Any value a policy_no that corresponds to the policy_no of a	CS ID map info {	Present only if #CS > 0		
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		'00000110'B	crypto session: '6' for CSK use within MCPTT (TS 33.180 [94] E.4.2)	
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 { Policy_no_1 Any value a policy_no that corresponds to the policy_no of a	, ·		the security protocol to be used for the crypto session	
Ps { Policy_no_1 Any value security policies provided for the crypto session lists the policies for the crypto session Any value a policy_no that corresponds to the policy_no of a		·	whether the ROC and SEQ fields are provided ('1') or if they are omitted ('0')	
Policy_no_1 Any value a policy_no that corresponds to the policy_no of a		1	security policies provided for the crypto session	
corresponds to the policy_no of a			for the crypto session	
	Policy_no_1	Any value	corresponds to the policy_no of a	

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC 3	3830 [24]		
Field	Value/remark	Comment	Condition
Session Data Length Session Data {	Present if Session Data Length > 0	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 for	Condition
SSRC	Any value	the crypto session specifies the	
ROC	Any value if S flag is set,	SSRC that MUST be used for the crypto session current/initial	
	not present otherwise	rollover counter. If the session has not started, this field is set to '0'	
SEQ	Any value if S flag is set, 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 has to be provided in the response message	
SPI	Any value if present	the SPI (or MKI) corresponding to the session key to (initially) be used for the crypto session. Other keys can be used.	
}			
Timestamp Payload (T) {		Addressed by '00000101'B in the 'Next payload' field of the previous payload	
Next payload	Identifier for the next payload (NOTE 1)		
TS Type	(00000000)B	NTP-UTC (0): 64- bits	
TS Value	Any value	64bit UTC value representing the number of seconds since 0h on 1 January 1900 with respect to the Coordinated Universal Time (UTC)	

Derivation path: RFC 6509 [23], RFC 6043 [25], RF Field	C 3830 [24] Value/remark	Commont	Condition
RAND Payload {	value/remark	Comment Addressed by '00001011'B in the 'Next payload' field of the	Condition
Next payload	Identifier for the next	previous payload	
	payload (NOTE 1)		
RAND len RAND	'00010000'B 128-bit random number	At least 16 Bytes 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
} IDRr payload {		Addressed by '00001110'B in the 'Next payload' field of the previous payload	
Next payload	Identifier for the next payload (NOTE 1)	providuo payidad	
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	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	[20], KFU 3830 [24]	Commont	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	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
	e	responder (MCX	
		domain)	
}		Addressed by	
J		'00001010'B in the	
		'Next payload'	
		field of the	
On a suite Dana and	D	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		
. 66)6	the CS ID map info of the		
	header payload		
Prot type	0	SRTP	
Policy param length	0	SIXTI	
Policy param {			
<u> </u>	<u>_</u>		
Туре	0	Encryption	
		Algorithm	
length			
value	6	AES-GCM	
}			
{			
Type	1	Session	
, ·		encryption key	
		length	
length		<u> </u>	
value	16	16 octets	
}		.0 00.0.0	
ſ			
Type	4	Coopies self lies:	
Туре	4	Session salt key	
La carette		length	
length	1.5	40 4 1	
value	12	12 octets	
}			
{			
Type	5	SRTP PRF	
length			
value	0	AES-CM	
}			
<u> </u>			
Type	6	Key derivation	
Туре	Ö		
longth		rate	
length			
value	0	No session key	
		refresh.	

Type 20 AEAD authentication tag length value 16 16 16 octets } } } SAKKE payload { Next payload Next payload Next payload Next payload Next payload Next payload Next payload Next payload Next payload Next payload Next payload Next payload Next payload Next payload Next payload Next payload NoTE 1) Parameter Set 1 according to RPC 6509 [23], Appendix A 3GPP MCX hashed UID (33:180 [94] E.1.2) SAKKE data length Length of SAKKE data (in bytes) SAKKE data Encapsulated CSK The CSK is encapsulated by using the public key (PubEncKey in KMS Certificate) and the UID generated from the MDS of the MCX Domain (provided in IDR) SIGN (ECCSI) payload { Signature: Silen Length of the signature field (in bytes) Signature: Shall be validated by the SS Signature: The signature shall be validated according to RPC 330 [24] clause 5.2 using the algorithm according to RPC 6507 [98] clause 5.2 using the algorithm according to RPC 6507 [98] clause 5.2 using the algorithm according to RPC 330 [24] clause 5.2 using the algorithm according to RPC 330 [24] clause 5.2 using the algorithm according to RPC 330 [24] clause 5.2 using the algorithm according to RPC 330 [24] clause 5.2 using the uID generated from the MC Service user ID associated with the initiating user (provided in IDR)	Derivation path: RFC 6509 [23], RFC 6043			
length value	Field	Value/remark	Comment	Condition
length value	}			
value 16 16 octets 3 3 3 3 3 3 3 3 3		20	authentication tag	
} } SAKKE payload { Addressed by 00011010B in the Next payload' field of the previous payload' selected of the previous payload (MOTE 1) SAKKE params { ID scheme 2		10	40 44	
Next payload Next payload Next payload Identifier for the next payload field of the previous payload SAKKE params { ID scheme 2	value	16	16 octets	
Next payload Next payload Next payload Identifier for the next payload field of the previous payload SAKKE params { ID scheme 2	}			
Next payload Next payload Next payload Identifier for the next payload field of the previous payload SAKKE params { ID scheme 2	}			
SAKKE params { 1	SAKKE payload {		'00011010'B in the 'Next payload' field of the	
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 CSK Encapsulated CSK The CSK is encapsulated by using the public key (PubEncKey in KMS Certificate) and the UID generated from the MDSI of the MCX Domain (provided in IDRr) SIGN (ECCSI) payload { Addressed by '00000100'B in the Next payload' field of the previous payload S type 2 Length of the signature field (in bytes) S data Signature: Shall be validated by the SS Signature: Shall be validated by the SS Length of the signature shall be validated by the SS Signature: Shall be validated by the SS Signature S.2 using the algorithm according to RFC 6507 [98] clause 5.2.2 using the UID generated from the MC Service user ID associated with the initiating user (provided in IDRi)	Next payload			
SAKKE data length Length of SAKKE data (in bytes) Encapsulated CSK Encapsulated DSK Encapsulated by using the public key (PubEncKey in KMS Certificate) and the UID generated from the MDSI of the MCX Domain (provided in IDRr) SIGN (ECCSI) payload { Addressed by '00000100'B in the 'Next payload' field of the previous payload End of the SI signature S type 2 ECSI signature S len Length of the signature field (in bytes) Signature: Shall be validated by the SS Signature: Shall be validated by the SS Signature: Shall be validated by the SS Signature shall be validated from the MC Service user ID associated with the initiating user (provided in IDRi)	SAKKE params {	1	according to RFC 6509 [23], Appendix A	
SAKKE data Length of SAKKE data Encapsulated CSK Encapsulated CSK The CSK is encapsulated by using the public key (PubEncKey in KMS Certificate) and the UID generated from the MDSI of the MCX Domain (provided in IDRr) SIGN (ECCSI) payload { Addressed by '00000100'B in the 'Next payload' field of the previous payload selection of the MCX Domain (provided in IDRr) S type 2 ECCSI signature S len Length of the signature field (in bytes) S data Signature: Shall be validated by the SS Signature: Shall be validated by the SS Signature shall be validated according to RFC (830 [24] clause 5.2.2 using the algorithm according to RFC (6507 [98] clause 5.2.2 using the UID generated from the MC Service user ID associated with the initiating user (provided in IDR)	ID scheme	2	hashed UID' (33.180 [94]	
SAKKE data Encapsulated CSK The CSK is encapsulated by using the public key (PubEncKey in KMS Certificate) and the UID generated from the MDSI of the MCX Domain (provided in IDRr) SIGN (ECCSI) payload { Addressed by '00000100'B in the 'Next payload' field of the previous payload ECCSI signature S len Length of the signature field (in bytes) S data Signature: Shall be validated by the SS Signature: Shall be validated by the SS asage (24) clause 5.3 using the algorithm according to RFC 6507 [98] clause 5.2.2 using the UID generated from the MC Service user ID associated with the initiating user (provided in IDRi)	SAKKE data length		,	
S type 2 ECCSI signature S len Length of the signature field (in bytes) S data Signature: Shall be validated by the SS The signature shall be validated according to RFC 3830 [24] clause 5.3 using the algorithm according to RFC 6507 [98] clause 5.2.2 using the UID generated from the MC Service user ID associated with the initiating user (provided in IDRi	SAKKE data		encapsulated by using the public key (PubEncKey in KMS Certificate) and the UID generated from the MDSI of the MCX Domain	
S len Length of the signature field (in bytes) S data Signature: Shall be validated by the SS The signature shall be validated according to RFC 3830 [24] clause 5.3 using the algorithm according to RFC 6507 [98] clause 5.2.2 using the UID generated from the MC Service user ID associated with the initiating user (provided in IDRi	SIGN (ECCSI) payload {		'00000100'B in the 'Next payload' field of the previous payload	
field (in bytes) Signature: Shall be validated by the SS Signature: Shall be validated by the SS The signature shall be validated according to RFC 3830 [24] clause 5.3 using the algorithm according to RFC 6507 [98] clause 5.2.2 using the UID generated from the MC Service user ID associated with the initiating user (provided in IDRi	S type			
S data Signature: Shall be validated by the SS The signature shall be validated according to RFC 3830 [24] clause 5.3 using the algorithm according to RFC 6507 [98] clause 5.2.2 using the UID generated from the MC Service user ID associated with the initiating user (provided in IDRi	Silen		12 bits	
i davidadi.	S data	Signature: Shall be validated by the	shall be validated according to RFC 3830 [24] clause 5.3 using the algorithm according to RFC 6507 [98] clause 5.2.2 using the UID generated from the MC Service user ID associated with the initiating user	
}	}			

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 [2	5j, RFC 3830 [24] Value/remark	Comment	Condition
MIKEY Common Header {	value/reiliark	Comment	Condition
version	'0000001'B		
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	'00000101'B	Next payload is	
Nox payload	000001012	timestamp	
V	'0'B		
PRF func	'000001'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	'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 RAND	
TS Type	'00000000'B	NTP-UTC (0): 64- bits	
TS Value	Current system time	64bit UTC value	
TO Value	Garrent dyetern ame	representing the	
		number of	
		seconds since 0h	
		on 1 January	
		1900 with respect	
		to the Coordinated	
		Universal Time	
		(UTC)	
} RAND Payload {			
Next payload	'00001110'B	Next payload is	
τοπ ραγισασ	0000111015	IDRi	
RAND len	'00010000'B	16 Bytes RAND	
RAND	128-bit random number	,	
}			
IDRi payload {			
Next payload	'00001110'B	Next payload is	
ID D I		IDRi	
ID Role	1	Initiator (IDRi)	
ID Type	0	URI	
ID len ID data	Length of ID Data px_MCPTT_ID_User_B	MCPTT ID	
iD uala	Px_INICE LI_ID_USEI_B	associated with	
		the initiating user	
	px_MCVideo_ID_User_B	MCVideo ID	MCVIDEO
	PY_INIO NIGGO_ID_0361_B	See	, vio viblo
		TS 33.180 [94]	
		clause E.4.1	
	px_MCData_ID_User_B	MCData ID	MCDATA
	F	See	==
		TS 33.180 [94]	
		clause E.4.1	

Derivation path: RFC 6509 [23], RFC 6043 [25]		Co	0
Field	Value/remark	Comment	Condition
IDPr payload (
IDRr payload { Next payload	'00001110'B	Next payload is	
Next payload	0000111018	IDRkmsi	
ID Role	2	Responder (IDRr)	
ID Type	0	responder (IDIXI)	
ID len	Length of ID Data		
ID data	px_MCPTT_ID_User_A	MCPTT ID	
.5 44.4	PAe	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	
		IDRkmsr	
ID Role	6	Initiator's KMS	_
		(IDRkmsi)	
ID Type	0		
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	1
	е	initiating user	ļ
}			ļ
IDRkmsr payload {			
Next payload	'00001010'B	Next payload is	
		Security	
	_	Properties	
ID Role	7	Responder's KMS	
ID T		(IDRkmsr)	
ID Type	0		
ID len	Length of ID Data	14140 (1)	
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
	е	responding user (UE)	
1		(0E)	
SAKKE payload {			
Next payload	'00000100'B	Next payload is	
Next payload	00000100 B	SIGN	
SAKKE params {	1	Parameter Set 1	
Ortitle paramo ('	according to RFC	
		6509 [23],	
		Appendix A	
ID Scheme	2	'3GPP MCX	
		hashed UID'	1
		(33.180 [94]	1
		E.1.2)	1
SAKKE data length	Length of SAKKE data	16 bits	
-	(in bytes)		<u> </u>
SAKKE data	Encapsulated PCK	The PCK is	
		encapsulated by	
		using the public	
		key (PubEncKey	
		in KMS	
		Certificate) and	
		the UID generated	
		from the MC	
		Service user ID of	1
		the terminating	1
1		user	
31011 (50001)			
SIGN (ECCSI) payload {			ļ
S type	2	ECCSI signature	1

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC 38	830 [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	Value/remark	Comment	Condition
MIKEY Common Header {	valao/ioniain	Johnnone	Contaction
version	'0000001'B		
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	Identifier for the next	07 ii ii 12 iii 0g (20)	
. to h payload	payload (NOTE 1)		
V	'0'B		
PRF func	'000001'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	
#OO	'0000000'B	sessions in the	
	000000002	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	
	1 if #CS == 0	empty map	
CS ID map Info {	Present only if #CS > 0		
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	
		33.180 [94] E.3.3)	
	'00000010'B or	CS ID of the	MCVIDEO
	'0000011'B	crypto session: '2'	
		for PCK use from	
		initiatior or '3' for	
		PCK use from	
		receiver within	
		MCVideo (TS	
		33.180 [94] E.3.3)	
Prot type	0	SRTP	
		the security	
		protocol to be	
		used for the	
S	Any value	crypto session	
5	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 {		crypto session lists the policies	
Ps {		crypto session	

Derivation path: RFC 6509 [23], RFC 6043	3 [25], RFC 3830 [24]		
Field	Value/remark	Comment	Condition
Policy_no_1	Any value	a policy_no that corresponds to the policy_no of a SP payload	
}			
Session Data Length	Length of Session Data (in bytes)	16 bits the length of Session Data (in bytes). For the Prot type SRTP, Session Data MAY be omitted in the initial message (length = 0), but it MUST be provided in the response message.	
Session Data {	Present if Session Data Length > 0	session data for the crypto session	
SSRC	Any value	specifies the SSRC that MUST be used for the crypto session	
ROC	Any value if S flag is set, not present otherwise	current/initial rollover counter. If the session has not started, this field is set to '0'	
SEQ	Any value if S flag is set, not present otherwise	current/initial sequence number	
}			
SPI Length	Length of the SPI	SPI MAY be omitted in the initial message (length = 0), but it MUST be provided in the response message	
SPI	Any value if present	the SPI (or MKI) corresponding to the session key to (initially) be used for the crypto session. Other keys can be used.	
}			
Timestamp Payload (T) {		Addressed by '00000101'B in the 'Next payload' field of the previous payload	
Next payload	Identifier for the next payload (NOTE 1)		
TS Type	'00000000'B	NTP-UTC (0): 64- bits	

Derivation path: RFC 6509 [23], RFC 6043 [2			
Field	Value/remark	Comment	Condition
TS Value	Any value	64bit UTC value	
		representing the	
		number of	
		seconds since 0h	
		on 1 January	
		1900 with respect	
		to the Coordinated	
		Universal Time	
		(UTC)	
PAND Payland (Addressed by	
RAND Payload {		Addressed by '00001011'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	Identifier for the next	promote payiona	
BAND	payload (NOTE 1)	10.0 (0.000	
RAND len RAND	'00010000'B Any value	16 Bytes RAND 128-bit random	
NANU	Ally value	number	
}		паньсі	
IDRi payload {		Addressed by	
		'00001110'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	Identifier for the next		
ID D. I	payload (NOTE 1)	1 ::: ((IDD:)	
ID Role ID Type	1	Initiator (IDRi) URI	
ID len	Length of ID Data	UNI	
ID data	px_MCPTT_ID_User_A	MCPTT ID	
		associated with	
		the initiating user	
	px_MCVideo_ID_User_A	MCVideo ID	MCVIDEO
	px_mevidee_ib_eeeix	See TS 33.180	
		[94] clause E.4.1	
	px_MCData_ID_User_A	MCData ID	MCDATA
	p	See TS 33.180	
		[94] clause E.4.1	
}			
IDRr payload {		Addressed by	
		'00001110'B in the	
		'Next payload'	
		field of the previous payload	
Next payload	Identifier for the next	previous payidau	
	payload (NOTE 1)		
ID Role	2	Responder (IDRr)	
ID Type	1	URI	
ID len	Length of ID Data	MODITIES	
ID data	px_MCPTT_ID_User_B	MCPTT ID	
		associated to the	
		receiving user	1101 // = = 5
	px_MCVideo_ID_User_B	MDSI of the MCVideo Domain	MCVIDEO
	px_MCData_ID_User_B	MDSI of the	MCDATA
	px_ivioData_iD_0sei_B	MCData Domain	MODAIA
}			
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	
	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 Type	1	(IDRkmsr) URI	
ID Type ID len	Length of ID Data	UNI	
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
5444	e	responding user	
}		Addressed by	
-		'00001010'B in the	
		'Next payload'	
		field of the	
0 " 0 " 1 1/	D 1:1:100 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	
. 340	'	encryption key	
		length	
length			
value	16	16 octets	
}			
{			
	4	Session salt key	
Type		length	
		lerigui	
length	12	_	
	12	12 octets	
length	12	_	
length	12	_	

Derivation path: RFC 6509 [23], RFC 604 Field	3 [25], RFC 3830 [24] Value/remark	Comment	Condition
value	0	AES-CM	
}			
{			
Туре	6	Key derivation rate	
length			
value	0	No session key refresh.	
}			
Туре	20	AEAD authentication tag length	
length			
value	16	16 octets	
}			
}			
SAKKE payload {		Addressed by '00011010'B in the 'Next payload' field of the previous payload	
Next payload	Identifier for the next payload (NOTE 1)		
SAKKE params {	1	Parameter Set 1 according to RFC 6509 [23], Appendix A	
ID Scheme	2	'3GPP MCX hashed UID' (33.180 [94] E.1.2)	
SAKKE data length	Length of SAKKE data (in bytes)	16 bits	
SAKKE data	Encapsulated PCK	The PCK is encapsulated by using the public key (PubEncKey in KMS Certificate) and the UID generated from the MC Service user ID of the terminating user	
SIGN (ECCSI) payload {		Addressed by	
Cicit (Loodi) payload ('00000100'B in the 'Next payload' field of the previous payload	
S type	2	ECCSI signature	
Signature len	Length of the signature field (in bytes)	12 bits	

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC 3830 [24]			
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 4. MIKEV neulanda may accur in any andar ana		1:1: 1 (1 (2	

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], RFC 3830 [24]				
Field	Value/remark	Comment	Condition	
MIKEY Common Header {	Any			
version	'0000001'B			
Data Type	'00011010'B	SAKKE msg (26)		
Next payload	'00000101'B	Next payload is timestamp		
V	'0'B			
PRF func	'0000001'B	PRF-HMAC-SHA- 256		
CSB ID	GUK-ID: 4 bit purpose tag ('0000'B for GMK) & 28 bit identifier	Group User Key Identifier Derived from GMK-ID and User Salt according to TS 33.180 [94] clause 5,2,3		
#CS	'00000000'B	no crypto sessions in the CS ID map info.		
CS ID map type	1	empty map		
CS ID map Info	Not present	-		
}				
Timestamp Payload (T) {				
Next payload	'00001011'B	Next payload is RAND		
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 {				
Next payload	'00001110'B	Next payload is IDRi		
RAND len	'00010000'B	16 Bytes RAND		
RAND	128-bit random number arbitrarily selected by the SS			
}				
IDRi payload {				
Next payload	'00001110'B	Next payload is IDRr		
ID Role	1	Initiator (IDRi)		
ID Type	1	URI		
ID len	Length of ID Data			
ID data	tsc_MCX_GMS_Hostna me	URI of the group management server		
}				
IDRr payload {	(22224)			
Next payload	'00001110'B	Next payload is IDRkmsi		
ID Role	2	Responder (IDRr)		
ID Type	1			
ID len	Length of ID Data			

Value/remark px_MCPTT_ID_User_A px_MCVideo_ID_User_A px_MCData_ID_User_A '00001110'B 6	Comment MCPTT ID associated to the group management client MCVideo ID associated to the group management client MCData ID associated to the group management client MCData ID associated to the group management client Next payload is IDRkmsr Initiator's KMS	MCVIDEO MCDATA
px_MCData_ID_User_A '00001110'B 6	client MCVideo ID associated to the group management client MCData ID associated to the group management client Next payload is IDRkmsr Initiator's KMS	
px_MCData_ID_User_A '00001110'B 6	associated to the group management client MCData ID associated to the group management client Next payload is IDRkmsr Initiator's KMS	
'00001110'B	MCData ID associated to the group management client Next payload is IDRkmsr Initiator's KMS	MCDATA
6	IDRkmsr Initiator's KMS	
6	IDRkmsr Initiator's KMS	
	Initiator's KMS	I
1	(IDRkmsi)	
	URI	
Length of ID Data tsc_MCX_KMS_Hostnam e		
'00044040'B	Next payload is	
	SAKKE (26)	
	(IDRkmsr)	
I -		
tsc_MCX_KMS_Hostnam e	KMS of the UE	
(00040404)P	Nove povelogelia	
	General Extension	
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 client (provided in IDDs)	
	e '00011010'B 7 1 Length of ID Data tsc_MCX_KMS_Hostnam e '00010101'B 1 2 Length of SAKKE data (in bytes)	Length of ID Data tsc_MCX_KMS_Hostnam e '00011010'B Next payload is SAKKE (26) Responder's KMS (IDRkmsr) 1 Length of ID Data tsc_MCX_KMS_Hostnam e '00010101'B Next payload is General Extension 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],	RFC 3830 [24]		
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)	Gladde E.G. I	
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	
Expiry Time	0	I_MESSAGE The 'Expiry time' element shall define the time in UTC at which the associated key shall no longer be used in seconds since midnight UTC of January 1, 1970 (not counting leap seconds). It shall be 5 octets in length. A value of 0 shall imply the key shall not expire.	
Text	***	no text: Text element shall contain Length sub-element with the value 0 (see TS 33.180 [94] E.6.5)	
Group IDs {			
Number of Group IDs	'1'		

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC 3830 [24]					
Field	Value/remark	Comment	Condition		
Group ID	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		
}					
}					
SIGN (ECCSI) payload {					
S type	2	ECCSI signature			
S len	Length of the signature field (in bytes)	12 bits			
S data	Signature	The signature shall be created according to RFC 3830 [24] clause 5.2 using the algorithm according to RFC 6507 [98] clause 5.2.1 using the UID generated from the identifier associated with the group management server			
}					

- 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 [2		<u> </u>	
Field	Value/remark	Comment	Condition
MIKEY Common Header {	Any		
version	'0000001'B	0.41(1/5 (0.0)	
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	'00000101'B	Next payload is	
	(215)	timestamp	
V	'0'B	555	
PRF func	'0000001'B	PRF-HMAC-SHA-	
000.10	12424	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	
"00	(0000000D	generated	
#CS	'00000000'B	no crypto	
		sessions in the	
00.10		CS ID map info.	
CS ID map type	1	empty map	
CS ID map Info	Not present		
Timestamp Daylood (T) (
Timestamp Payload (T) {	(00004044/P	November die	
Next payload	'00001011'B	Next payload is	
TO Turns	(00000000)P	RAND NTP-UTC (0): 64-	
TS Type	'00000000'B	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)	
}		\/	
RAND Payload {			
Next payload	'00001110'B	Next payload is	
		IDRi	
RAND len	'00010000'B	16 Bytes RAND	
RAND	128-bit random number		
	arbitrarily selected by the		
	SS		
}			
IDRi payload {	(0000111015	N	
Next payload	'00001110'B	Next payload is	
ID D-I-		IDRr	
ID Role	1	Initiator (IDRi)	
ID Type	1	URI	
ID len	Length of ID Data	The second of	
ID data	px_MCPTT_PublicServic	The public service	
	eld_A	identity identifying	
		the participating	
1		MCPTT function	
IDDs payload (
IDRr payload {	(00004440)D	Massa massa a 11	
Next payload	'00001110'B	Next payload is IDRkmsi	

Derivation path: RFC 6509 [23], RFC 6043 Field	Value/remark	Comment	Condition
ID Role	2	Responder (IDRr)	Condition
ID Type	1	URI	
ID len	Length of ID Data	OIXI	
ID data	px_MCPTT_ID_User_A	MCPTT ID	
1D data	px_worri_ib_osei_A	associated to the	
		terminating user	
1		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	5741	
ID data	tsc_MCX_KMS_Hostnam		
ID data			
l	e		
} IDRkmsr payload {			
Next payload	'00011010'B	Next payload is	
		SAKKE (26)	
ID Role	7	Responder's KMS	
		(IDRkmsr)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam e	KMS of the UE	
SAKKE payload {			
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	
S len	Length of the signature	12 bits	
	field (in bytes)	. = 55	

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			10- ""
Field	Value/remark	Comment	Condition
MIKEY Common Header {	Any		
version	'0000001'B	0.41/1/5 (00)	
Data Type	'00011010'B '00000101'B	SAKKE msg (26) Next payload is	
Next payload	00000101B	timestamp	
V	'0'B	umestamp	
PRF func	'000001'B	PRF-HMAC-SHA-	
TRI Tune	0000001 B	256	
CSB ID	'0110xxxx xxxxxxxx'B	32-bit MuSiK-ID	
		The 4 most	
		significant bits of	
		the MuSiK-ID	
		indicate the	
		purpose of the	
		MuSiK is to	
		protect floor	
		control messages sent over MBMS.	
		The other 28-bits	
		are randomly	
		generated	
#CS	'00000000'B	no crypto	1
		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	
	(22222222	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)	
}		(0.0)	
RAND Payload {	,		
Next payload	'00001110'B	Next payload is IDRi	
RAND len	'00010000'B	16 Bytes RAND	
RAND	128-bit random number	TO DYTES TAIND	
	arbitrarily selected by the		
	SS SS		
}			
ÍDRi payload {			
Next payload	'00001110'B	Next payload is	
ID Role	1	IDRr Initiator (IDRi)	
ID Type	1	URI	
ID len	Length of ID Data	J1(1	
ID data	px_MCPTT_PublicServic	The public service	
	eld_A	identity identifying	
	1	the participating	
		MCPTT function	
}			
IDRr payload {			
Next payload	'00001110'B	Next payload is	
ID D. I		IDRkmsi	<u> </u>
ID Role	2	Responder (IDRr)	

Derivation path: RFC 6509 [23], RFC 604 Field	Value/remark	Comment	Condition
			Condition
ID Type ID len	1 Langth of ID Data	URI	
ID data	Length of ID Data px_MCPTT_ID_User_A	MCPTT ID	
id data	px_wcP11_iD_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		
	e		
}			
IDRkmsr payload {			
Next payload	'00011010'B	Next payload is	1
Ton payload	0001101010	SAKKE (26)	
ID Role	7	Responder's KMS	
ID IVOIC	<i>'</i>	(IDRkmsr)	
ID Toma	1		<u> </u>
ID Type	•	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the UE	
	е		
}			
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	
ID Concine	_	hashed UID'	
		(33.180 [94]	
CAKKE data langth	Longth of CALVE data	E.1.2)	1
SAKKE data length	Length of SAKKE data		
OAKKE data	(in bytes)	The MacONC	
SAKKE data	Encapsulated MuSiK	The MuSiK is	
		encapsulated by	
		using the SAKKE	
		public key and the	
		UID generated	
		from the MC	
		Service user ID of	
		the terminating	
		user	
}		2.501	
SIGN (ECCSI) payload {			1
	2	ECCSI cianatura	
S type S len		ECCSI signature	-
o ien	Length of the signature	12 bits	
	field (in bytes)	i	

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 t	he relevant MCS related services indicated.		

EF_{MST} (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_{MCS} CONFIG (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>		

Derivation Path: TS 24.581 [88] Information Element	Table 9.2.4-1 Value/remark	Comment	Reference	Condition
Transmission Priority 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 '0'. The default priority is sometimes referred to as normal priority. Whether a transmission priority is pre-emptive or not is determined: 1. for on-network by the transmission control server as described in clause x.y; and 2. for off-network by the transmission arbitrator as	Reference	Condition
		described in clause y.z.		
Spare bits	An 8-bit binary value set to zero.			
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	
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	
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]		Commont	Poforonoo	Condition
				Condition
Information Element Transmission Indicator	Table 9.2.4-1 Value/remark "1000000000000000"	Comment 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.	Reference TC 24.581 [88] clause 9.2.3.1 .1	Condition

5.5.11.1.2 Transmission Release

Table: 5.5.11.1.2-1 Transmission Release

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		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	
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'		

Derivation Path: TS 24.581 [88 Information Element	Value/remark	Comment	Reference	Condition
Transmission 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 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 .1	Condition

5.5.11.1.3 Queue Position Request

Table: 5.5.11.1.3-1 Queue Position Request

Derivation Path: TS 24.581 [88]				
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	The SSRC field carries	RFC 3550 [3],	
	message sender	the SSRC of the	Appendix 6	
		transmission participant	shows how to	
		requesting information	generate a	
		about its position in the	random 32-bit	
		transmission request	identifier	
		queue.		
User ID			TS 24.581 [88]	
			9.2.3.8	
User ID field ID	"00000110"			

Derivation Path: TS 24.581 [88] Table 9.2.11-1				
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>		
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

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"			
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	

Derivation Path: TS 24.581 [88] T Information Element	Value/remark	Comment	Reference	Condition
Source ID	16-bit binary value	Carries the identity of the user who transmitting the media.	110101010	Condition
User ID field ID	"00000110"			
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_ B			
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 E = Imminent peril call</transmission></transmission></transmission>	TS 24.581 [88] 9.2.3.11	
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	Any allowed value	A 16 bit bit-map	TS 24.581 [88] Table 9.2.3.11-2	

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]	
		length in octets of the <	9.2.3.19	
		Reception Priority>		
		value item and the		
		spare bits.		
Reception Priority value	any allowed value	The reception priority	TS 24.581 [88]	
		('0' to '255') where '0' is	9.2.3.19	
		the lowest reception		
		priority and '255' is the		
		highest reception		
		priority. If the Reception		
		Priority field is not		
		included in the		
		message the default		
		reception priority is		
		used as the Reception		
		Priority value. The		
		value of the default		
		reception priority is '0'.		
		The default reception		
		priority is sometimes		
		referred to as normal		
		reception priority.		
Track Info	Not present	The MCVideo call does	TS 24.581 [88]	
		not involve a non-	9.2.3.13	
		controlling MCVideo		
		function		

5.5.11.1.5 Transmission Cancel Request

Table: 5.5.11.1.5-1 Transmission Cancel Request

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.	TS 24.581 [88] 9.2.3.x	

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>		

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	3] Table 9.2.24-1			
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].	
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"			

Derivation Path: TS 24.581 [88]	Table 9.2.24-1			
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.	TS 24.581 [88] 9.2.3.x	

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

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	The SSRC of the		
	message sender	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].		
name	MCV1	Transmission Control		
		messages sent by the		
		transmission control		
		server and transmission		
Duration		control participant		
Duration				
Duration field ID	"00000001"	 		
Duration length	"10"	value is a binary value		
		and has the value '2'		
		indicating the total		
		length in octets of the		
	#0000000 40000000	<duration> value item</duration>		
Duration	"00000000 10000000"	128 sec (an arbitrary		
		value)		

Derivation Path: TS 24.581 [88] Table 9.2.5-1				
Information Element	Value/remark	Comment	Reference	Condition
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>			
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 Track Info	Not present Not present	The MCVideo call does not involve a non-controlling MCVideo function		
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	"00000010"	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	

5.5.11.2.2 Transmission Rejected

Table: 5.5.11.2.2-1 Transmission Rejected

Derivation Path: TS 24.581 [88] Information Element	Value/remark	Comment	Reference	Condition
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.		

	T	1 -	
Reject Cause	"255"	Cause #1 -	
		Transmission limit	
		reached	
		The <reject cause=""></reject>	
		value set to '1'	
		indicates that the	
		number of transmitters	
		have reached	
		maximum.	
		maximam.	
		Cause #2 - Internal	
		transmission control	
		server error	
		The «Poingt aguas»	
		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	
		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.	
		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.	
		O #5 D- :	
		Cause #5 - Receive	
		only	
		The Deises	
		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	
	1	control server cannot	

Derivation Path: TS 24.581 [88] Information Element	Value/remark	Comment	Reference	Condition
		grant the transmission request due to congestion.		
		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		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	
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] Ta	able 9.2.6-1			
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:</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
		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.	Reference TC 24.581 [88] clause 9.2.3.1.	Condition
		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		
		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	32-bit value	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] T Information Element		Comment	Reference	Condition
Granted Party's Identity length	Value/remark value is a binary value	Comment	TS 24.581 [88]	Condition
, , ,	and includes the value indicating the length in octets of the <user id=""> value item except padding</user>		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	Binary value	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: 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		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	
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		T -		T _
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</transmission></transmission></transmission>	TS 24.581 [88] 9.2.3.1.1	
		B = Broadcast group call C = System call D = Emergency call E = Imminent peril call		

Derivation Path: TS 24.581 [88] Ta	able 9.2.8-1			
Information Element	Value/remark	Comment	Reference	Condition
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'		
Transmission Indicator Transmission Indicator	"10" "10000000000000000"	value is a binary value and has the value '2' 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	TC 24.581 [88] clause 9.2.3.1.	
		server decides which combinations are possible and the priority		
SSRC of Granted	The SSRC of the	of the indications.	IETF RFC 355	
Transmission Participant	intended recipient of the message		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 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	32-bit value	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.	TS 24.581 [88] 9.2.3.7	
		The receiver is permitted to request transmission		

Derivation Path: TS 24.581 [88] T	able 9.2.9-1			
Information Element	Value/remark	Comment	Reference	Condition
User ID		The User ID field is used in off-network only. The User ID carries the MCVideo ID of the transmission participant sending the Transmission Arbitration Release message.	TS 24.581 [88] 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>		
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>		

Information Element	Value/remark	Comment	Reference	Condition
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=""> value is a 16 bit bit-map. When set to 1 these meanings apply:</transmission></transmission></transmission>	TS 24.581 [88] 9.2.3.1.1	Condition
		 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	Conditio
Transmission Indicator	"1000000000000000"	Contains additional	TC 24.581 [88]	Condition
าสกอกกองเบก เกนเบสเบเ	100000000000000000000000000000000000000			
		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.		
SRC of Granted	The SSRC of the	o. the maleations.	IETF RFC 355	
ansmission Participant	intended recipient of		0 [3]	

5.5.11.2.5 Transmission Revoked

Table: 5.5.11.2.5-1 Transmission Revoked

Derivation Path: TS 24.581 [88] Table 9.2.10-1				
Information Element	Value/remark	Comment	Reference	Condition
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	
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	

	T	1.2	
Reject Cause Value	"255"	Cause #1 -	<reject< th=""></reject<>
		Transmission limit	Cause> values
		reached	are listed in
			clause 9.2.6.2.
		The <reject cause=""></reject>	The Reject
		value set to '1'	Cause field is
		indicates that the	coded as
		number of transmitters	described in
		have reached	
			clause 9.2.3.4.
		maximum.	Defined in
		Course #2 Internal	Defined in
		Cause #2 - Internal	clause 9.2.6.2
		transmission control	for
		server error	Transmission
			Rejected
		The <reject cause=""></reject>	message and
		value set to '2' indicates	Defined in
		that the transmission	clause 9.2.10.
		control server cannot	2 for
		grant the transmission	Transmission
		request due to an	
		internal error.	Revoked
		internal error.	message
		Causa #2 Only and	
		Cause #3 - Only one	
		participant	
		The Deisster	
		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.	
		Course #4 Botmy often	
		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.	
		.5751.53.	
		Cause #5 - Receive	
		only	
		Of Hy	
		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	
	J	control server cannot	

Derivation Path: TS 24.581 [88] T		0	Defenses	0
Information Element	Value/remark	grant the transmission request due to congestion. Cause #255 - Other reason The <reject cause=""> value set to '255' indicates that the transmission control server does not grant the transmission control request due to the transmission control server local policy.</reject>	Reference	Condition
Reject Cause Phrase	"Other reason"	A text string encoded the text string in the SDES item CNAME.	IETF RFC 355 0 [3]	
Transmission Indicator field ID	"00001101"	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] 9.2.3.11	
			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	"1000000000000"	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	TC 24.581 [88] clause 9.2.3.1.	Conditio
		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.		

5.5.11.2.6 Queue Position Info

Table: 5.5.11.2.6-1 Queue Position Info

Derivation Path: TS 24.581 [88] T				
Information Element	Value/remark	Comment	Reference	Condition
Subtype	"00101"	Server → client	TS 24.581 [88]	
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission control server.	9.2.2.1-1 RFC 3550 [3], Appendix 6 shows how to generate a random 32-bit identifier	
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	
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	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].	
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	
Queue Info	Not present	Defines the queue position and granted transmission control priority in the queue.	TS 24.581 [88] 9.2.3.5	
Track Info	Not present	The MCVideo call does not involve a non-controlling MCVideo function	TS 24.581 [88] 9.2.3.13	
Transmission Control Indicator			TS 24.581 [88] 9.2.3.15 (wrong ref in TS 24.581)	

5.5.11.2.7 Media Transmission Notification

Table: 5.5.11.2.7-1 Media Transmission Notification

Derivation Path: TS 24.581 [88]	Table 9.2.13-1		Derivation Path: TS 24.581 [88] Table 9.2.13-1				
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				
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				
User ID field ID	"00000110"						
User ID length User ID	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding. px_MCVideo_ID_User_A</user>	If the length of the					
		 <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. 					
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				
Track Info	Not present	The MCVideo call does not involve a non-controlling MCVideo function	TS 24.581 [88] 9.2.3.13				

5.5.11.2.8 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	

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	
		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"		TS 24.581 [88]	
			Table 9.2.3.1-	
			1	
Result length	"2"	value is a binary value	TS 24.581 [88]	
		and has the value '2'	9.2.3.17	
		indicating the total		
		length in octets of the		
		<result> value item</result>		
		and the spare bits		
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		
Media ID	not present	The Media ID field is	TS 24.581 [88]	
		present only if media	9.2.3.x	
		multiplexing is used.	-	
		The Media ID field		
		identified a media flow		
		within a media		
		multiplex.		

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] 9.2.3.11	
		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 B = Broadcast group</transmission></transmission></transmission>		
		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	"1000000000000000"	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

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	

Information	th: TS 24.581 [88] Table 9.2.16-1	Commont	Deference	Condition
	value/remark	Comment	Reference	Condition
Element				
User ID		The User ID field carries the	TS 24.581 [88]	
		MCVideo ID of the user	9.2.3.8	
		transmitting the media.		
		Note: If the length of the <user< td=""><td></td><td></td></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 ID	"00000110"			
field ID				
User ID	a binary value that includes the			
length	value indicating the length in			
	octets of the <user id=""> value</user>			
	item except padding.			
User ID	px_MCVideo_ID_User_A	If the length of the <user id=""></user>		
		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.		
Media ID	Not present	The Media ID field is present only	TS 24.581 [88]	
		if media multiplexing is used. The	9.2.3	
		Media ID field identified a media		
		flow within a media multiplex.		

5.5.11.2.10 Transmission Cancel Response

Table 5.5.11.2.10-1 Transmission Cancel Response

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]	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

Derivation Path: TS 24.581 [88]	Table 9.2.23-1			
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]	Derivation Path: TS 24.581 [88] Table 9.2.28-1				
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>				

Derivation Path: TS 24.581 [88]				
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>		
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>			
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>			

Derivation Path: TS 24.581 [88] Table 9.2.28-1					
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>			
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

Derivation Path: TS 24.581 [88] Table 9.2.29-1					
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>			

Derivation Path: TS 24.581 [88] Table 9.2.29-1					
Information Element	Value/remark	Comment	Reference	Condition	
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

Information Element	Value/remark	Comment	Reference	Condition
Subtype	"01111"		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 off- network. 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		
			19.2.2.1-2		

Information Element	Value/remark	Comment	Reference	Condition
SSRC	The SSRC of the	The SSRC of the		
	message sender	Transmission Control		
	gr commen	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].		
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			
Cool 12 longar	includes the value			
	indicating the length in			
	octets of the <user id=""></user>			
	value item except			
User ID	padding.	If the class of the		
User ID	px_MCVideo_ID_User_	If the length of the		
	A	<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.		
Media ID	Not Present	The Media ID field is		
	113111000111	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] Table 9.2.26-1					
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 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>	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.x		

Derivation Path: TS 24.581 [88] T	Derivation Path: TS 24.581 [88] Table 9.2.26-1			
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:</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	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	
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] 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				
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		
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 function is the source '3' the non- controlling MCVideo function is the source		
		All other values are reserved for future use		
Message name	"00040000"	<u> </u>		
Message Name field ID Message Name Length	"00010000" "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				
Message Type field ID Message Type Length	"00001100" "10"	value is a binary value and has the value '2'		

Derivation Path: TS 24.581 [88]	Table 9.2.31-1			
Information Element	Value/remark	Comment	Reference	Condition
Message Type	"000" <the of<br="" subtype="">the received message></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				
value	px_MSRP_URI_A_ID			
Message-ID		16 1 1: : 1		
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		
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"		,	
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>"\$"</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

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	"1-"	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	"0/"			
range-end	"0"			
total length				
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 Information Element	Value/remark	Comment	Reference	Condition
Transaction Identifier	Talasi silari	Commone	Ttororonoo	- Containion
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	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	<any allowed="" value="">"-"</any>	2 31 2. 3 3/3		
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			1
Content-Type			TS 24.582 [89] , clause 6.4	
media-type	"multipart/mixed"	ODO GIONALLINIO		1
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>"+"</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		
----------	---	--	--	--

- 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.		

4-4-11	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.	SES 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				
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			
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			
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

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>"\$"</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>"\$"</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			<u> </u>	
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 < Encrypted Data > 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-	The CSK-ID is provided			
	ID	by the UE at CSK			
		distribution			
CipherData					
CipherValue	encrypted XML element	The encryption key is	TS 33.180 [94]		
	content	derived from the CSK	clause 9.3.4.2		
		according to			
		TS 33.180 [94] Annex			
		F.1.4 with			
		FC = 0x51			
		XPK-ID = CSK-ID			

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:extension>
        </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"/>
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    <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>
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    </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	-	-	-	-	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	0.2.0
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
2040.22	DANUTA			-		the RAN Plenary	10.00
2018-03 2018-06	RAN#79 RAN#80	P5.192410	0001	-	F	Editorial changes and promoted to v13.0.0 Addition and correction of GNSS information	13.0.0 13.1.0
2018-06	RAN#80	R5-182418 R5-182419	0001	 -	F	Editorial correction of typos and incorrect references	13.1.0
2018-06	RAN#80	R5-182430	0002	1-	F	Editorial Update of 36.579-2 for style H6	13.1.0
2018-06	RAN#80	R5-182431	0004	Ŀ	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	-	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	RAN#80	R5-183167	0006	1	F	Updates of TC 6.3.1	13.1.0
2018-06 2018-09	RAN#80 RAN#81	R5-183168 R5-185084	0007	1	F	Updates of TC 6.3.2 Update to TLS setup	13.1.0 13.2.0
2018-09	RAN#81	R5-185084 R5-185122	0009	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 session establishment CO	14.1.0
2018-12	RAN#82	R5-186879	0011	<u>l</u> -	F	Editorial update of the default SDP and Resource-list Messages	14.1.0
2018-12	RAN#82	R5-186880	0012	-	F	Update of default MCPTT media plane control messages and other information elements to reflect latest Rel-13 core specs	14.1.0
2018-12	RAN#82	R5-186881	0013	-	F	Update of XML schema for MCPTT location information to reflect latest Rel-13 core specs	14.1.0
2018-12	RAN#82	R5-187709	0014	1	F	Corrections to clause 5.5.9 of 36.579-1	14.1.0
2018-12	RAN#82	R5-187710	0015	1	F	Corrections to clause 5.5.7.1 of 36.579-1	14.1.0

	,					-	
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	14.1.0
2018-12	RAN#82	R5-187717	0022	1	F	Update of Generic Test 5.3.2 in 36.579-1	14.1.0
2019-03	RAN#83	R5-191210	0023	-	F	Correction of default contents in SIP INVITE from the UE	14.2.0
2019-03	RAN#83	R5-191902	0024	-	F	Update to MCPTT floor control default messages	14.2.0
2019-03	RAN#83	R5-192155	0025	-	F	Update 36.579-1 Section 4.2 and 4.3	14.2.0
2019-03	RAN#83	R5-192156	0026	-	F	Update 36.579-1 Delete clauses inside the present spec	14.2.0
2019-03	RAN#83	R5-192157	0027	<u> -</u>	F	Update 36.579-1 Blue text removal	14.2.0
2019-06	RAN#84	R5-194001	0028	-	F	Correction of default contents in the SIP INVITE from the UE	14.3.0
2019-06	RAN#84	R5-194665	0030	-	F	Typo for MCPTT in 36.579-1	14.3.0
2019-06	RAN#84	R5-195216	0029	1	F	Update of UE registration procedure for location info configuration	14.3.0
2019-06	RAN#84	R5-195217	0031	1	F	References and derivation path updates for SIP messages	14.3.0
2019-09	RAN#85	R5-196773	0045	-	F	Updates to conditions Table 5.5.1-1	14.4.0
2019-09	RAN#85	R5-196983	0046	-	F	Correction of SIP messages	14.4.0
2019-09	RAN#85	R5-197133	0044	1	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	-	F	Correction and addition of references or values and editorial	14.4.0
0010.00	D 4 1 1 1 0 5	DE 40700E	2011		_	comments	44.40
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
2040.42	RAN#86	DE 400040	0040	4	_	procedures	4450
2019-12		R5-199043	0049 0051	1	F	Correction to default HTTP messages Corrections to MCPTT UE registration procedures	14.5.0
2019-12	RAN#86	R5-199044 R5-199045		1	F	Additions of further references	14.5.0
2019-12 2019-12	RAN#86		0052	1	F		14.5.0
	RAN#86	R5-199046 R5-199047	0053 0054	1	F	Corrections related to MIKEY protocol Correction to default messages for MCPTT group management and	14.5.0
2019-12	RAN#86	R5-199047	0054		Г	configuration management	14.5.0
2010 12	RAN#86	R5-199048	0055	1	F	Correction of default SDP message and other information elements	14.5.0
2019-12			0056	1	F		14.5.0
2019-12	RAN#86 RAN#86	R5-199051 R5-199052	0058	1	F	SDP Default for MCVideo and MCData Adding MCVideo Transmission Control Messages	14.5.0
2019-12	RAN#86	R5-199052 R5-199053	0060	1	F	Updates TS 33.179 references to TS 33.180	14.5.0
2019-12	RAN#86	R5-199053	0048	2	F	Correction to default SIP messages	14.5.0
2020-03	RAN#87	R5-200264	0048	_	F	Corrections to default SIP message and other information elements	14.6.0
2020-03	RAN#87	R5-200265	0064	E	F	Addition of further references	14.6.0
2020-03	RAN#87	R5-200301	0065	E	F	Corrections to default HTTP message and other information	14.6.0
2020-03	IXAIN#01	K3-200301	0003	-	ı	elements	14.0.0
2020-03	RAN#87	R5-200385	0066	t	F	Corrections to default MCPTT configuration management messages	14.6.0
2020 00	10.00	110 200000	0000		!	and other information elements	14.0.0
2020-03	RAN#87	R5-201220	0062	1	F	Corrections to MCPTT UE registration procedures	14.6.0
		R5-202552	0069		F	Correcting core spec reference for APN requirements	14.7.0
2020-06	RAN#88	R5-202698	0073	1	F	SDP updates for MCVideo and MCData	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
						Authorization/Configuration and Key Generation	
2020-09	RAN#89	R5-204226	0082	-	F	Addition of XML schema for MCVideo location information	14.8.0
2020-09	RAN#89	R5-204229	0083	l-	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
				1		,	
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	1
2020-09	RAN#89	R5-204534	0079	1	F	Updates to MCX generic test procedures and default message	14.8.0
					<u> </u>	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
2020-12	RAN#90	R5-206084	0096		F	Condition updates for default MCS configuration management	14.9.0
			1			messages	ļ
2020-12	RAN#90	R5-206108	0097		F	Update of MCPTT Floor Control Messages for Rel-14	14.9.0
2020-12	RAN#90	R5-206445	0087	1	F	Correction to Generic Test Procedure for MCPTT pre-established	14.9.0
			L			session establishment CO	
	RAN#90	R5-206446	0088	1	F	Correction to MCPTT Common Procedures for CT/CO session	14.9.0
2020-12	10/11/11/00						
			0000	ļ.,	_	establishment	4465
2020-12 2020-12 2020-12	RAN#90 RAN#90	R5-206447 R5-206448	0089	1	F	establishment New MCPTT generic test procedures Update to Default Message Content	14.9.0 14.9.0

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2020-12	RAN#90	R5-206449	0091	1	F	Updates for Group Communications Key retrieval	14.9.0
2020-12	RAN#90	R5-206450	0093	1	F	Second group configuration retrieval process modification	14.9.0
2020-12	RAN#90	R5-206451	0095	1	F	Existing Generic Test Procedures Updates	14.9.0
2020-12	RAN#90	R5-206422	0098	1	F	Update of MCPTT Floor Control Messages for Rel-15	15.0.0
2020-12	RAN#90	R5-206423	0099	1	F	MCPTT Configuration Doc Update for Rel-15 Location	15.0.0
2021-03	RAN#91	R5-210205	0101	-	F	Correction to Generic Test Procedure for MCPTT CT group call	15.1.0
						establishment, manual commencement	
2021-03	RAN#91	R5-210207	0103	-	F	New MCPTT generic test procedures	15.1.0
2021-03	RAN#91	R5-210208	0104	-	F	Update to Default HTTP message - POST	15.1.0
2021-03	RAN#91	R5-210210	0106	-	F	Update to Default Message Content - INVITE	15.1.0
2021-03	RAN#91	R5-210211	0107	-	F	Update to Default Message Content - Pidf	15.1.0
2021-03	RAN#91	R5-210213	0109	-	F	Update to Default Message Content - SDP	15.1.0
2021-03	RAN#91	R5-210214	0110	-	F	Update to Default Message Content - SIP 200 (OK)	15.1.0
2021-03	RAN#91	R5-210215	0111	-	F	Update to Default Message Content - UPDATE	15.1.0
2021-03	RAN#91	R5-210216	0112	-	F	Update to Default Message Content AFFILIATION-COMMAND	15.1.0
2021-03	RAN#91	R5-210217	0113	-	F	Update to Default Message Content MIKEY-SAKKE I_MESSAGE	15.1.0
2021-03	RAN#91	R5-210218	0114	-	F	Update to Default Message Content SIP 180 (Ringing) and SIP 183	15.1.0
						(Session progress)	
2021-03	RAN#91	R5-210219	0115	-	F	Update to Default Message Content SIP MESSAGE	15.1.0
2021-03	RAN#91	R5-210220	0116	-	F	Update to Default Message Content SUBSCRIBE	15.1.0
2021-03	RAN#91	R5-210221	0117	-	F	Update to the MCS GKTP document	15.1.0
2021-03	RAN#91	R5-210319	0118	-	F	Update to references clause	15.1.0
2021-03	RAN#91	R5-210994	0120	-	F	Update to default MCPTT media plane control messages	15.1.0
2021-03	RAN#91	R5-211354	0121	1	F	Update of References in 36.579-1	15.1.0
2021-03	RAN#91	R5-211517	0100	1	F	Addition of a generic procedure for MCPTT radio bearer	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	15.1.0
						session establishment	
2021-03	RAN#91	R5-211519	0108	1	F	Update to Default Message Content - REFER and Resource-List	15.1.0
2021-03	RAN#91	R5-211520	0119	1	F	MCPTT Info Corrections	15.1.0

History

Document history						
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