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Mission Critical (MC) services over LTE; Part 1: Common test environment (3GPP TS 36.579-1 version 14.8.0 Release 14)





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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.
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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".
[68]	3GPP TS 23.303: "Proximity-based services (ProSe); Stage 2".
[69]	3GPP TS 23.003: "Numbering, addressing and identification".
[70]	3GPP TS 33.310: "Network Domain Security (NDS); Authentication Framework (AF)".
[71]	Void
[72]	IETF RFC 2617: "HTTP Authentication: Basic and Digest Access Authentication".
[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".
[77]	IETF RFC 6749: "The OAuth 2.0 Authorization Framework".
[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", <a href="http://openid.net/specs/openid-connect-core-1-0.html">http://openid.net/specs/openid-connect-core-1-0.html</a> .
[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: <a href="https://www.w3.org/TR/html401/">https://www.w3.org/TR/html401/</a> .
[106]	IETF RFC 4122: "A Universally Unique IDentifier (UUID) URN Namespace".
[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", <a href="https://www.w3.org/TR/xmlenc-core1/">https://www.w3.org/TR/xmlenc-core1/</a> .
[109]	IETF RFC 5322: "Internet Message Format".
[110]	3GPP TS 22.281: "Mission Critical Video over LTE".

## 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

#### **Symbols** 3.2

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

Implementation Conformance Statement ICS

In-Progress Emergency Group **IPEG 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

Multimedia Broadcast multicast service Single Frequency Network **MBSFN** 

**MCPTT** Mission Critical Push To Talk MCPTT group ID MCPTT group IDentity MCPTT Emergency Alert **MEA MEG** MCPTT Emergency Group **MEGC** MCPTT Emergency Group Call **MEPC** MCPTT Emergency Private Call **MEPP** MCPTT Emergency Private Priority

MCPTT Emergency State MES

Multipurpose Internet Mail Extensions **MIME** MIG MCPTT Imminent peril Group MIGC MCPTT Imminent peril Group Call **MONP** MCPTT Off-Network Protocol **MPEA** MCPTT Private Emergency Alert

NAT	Network Address Translation
QCI	QoS Class Identifier
RTP	Real-time Transport Protocol
SAI	Service Area Identifier
SDP	Session Description Protocol
SIP	Session Initiation Protocol
SS	System Simulator
SSRC	Synchronization SouRCe
TGI	Temporary MCPTT Group Identity
TMGI	Temporary Mobile Group Identity
TP	Transmission Point
URI	Uniform Resource Identifier

### 4 General

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

## 4.1 MCPTT Conformance testing test points overview

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

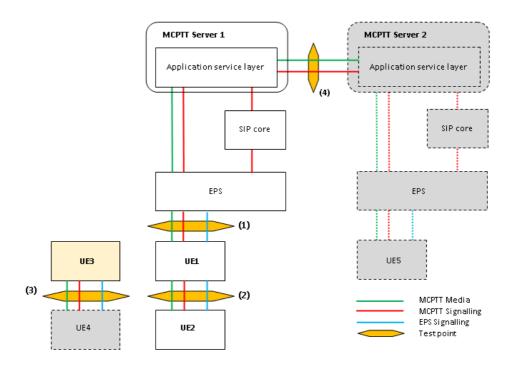


Figure 4.1.1: MCPTT Conformance testing test points model

NOTE 1: Which of the shown entities will be simulated and which will be real implementation depends on the test scenario. In the test scenarios in which they play a part, the entities presented with dashed borders and grey fill will be always simulated whereas, the entities with light yellow fill (UE3) will be Implementation Under Test (IUT). The entities with white fill will be either simulated or IUTs or real implementation (e.g. network) depending on the test scenario.

NOTE 2: While showing the different players, figure 4.1.1 should not be understood as showing test environment implementation.

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

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

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

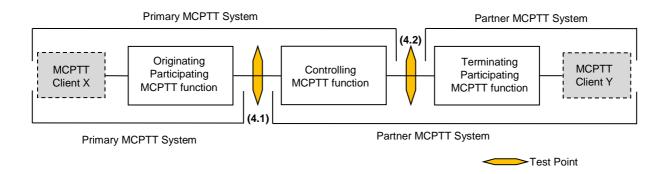


Figure 4.1.2: MCPTT Conformance testing Client-to-Client test points model

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

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

## 4.2 MCPTT Conformance testing test environment overview

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

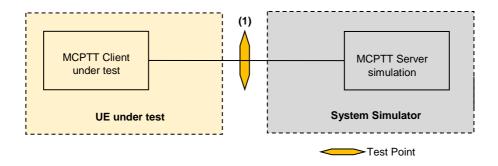


Figure 4.2.1: Testing the MCPTT Client (on-network)

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

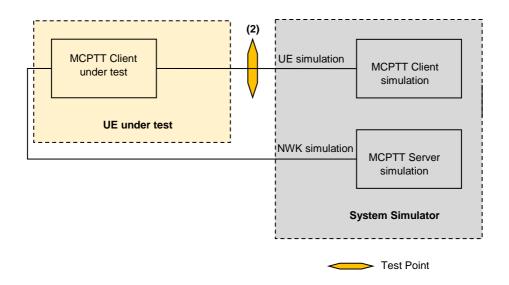


Figure 4.2.2: Testing the MCPTT Client (on-network) Relay side

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

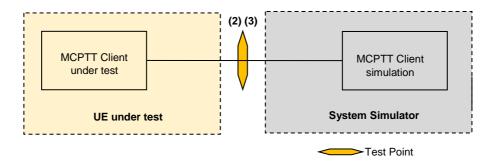


Figure 4.2.3: Testing the MCPTT Client (off-network)

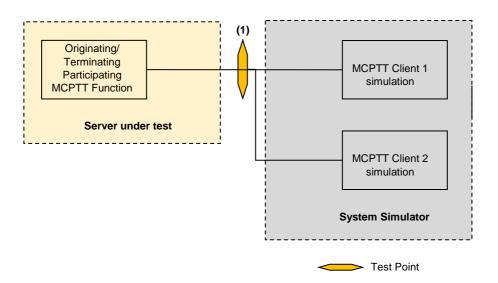


Figure 4.2.4: Testing the MCPTT Server (server-to-client)

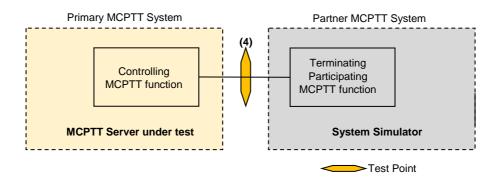


Figure 4.2.5: Testing the MCPTT Server (server-to-server), Controlling function

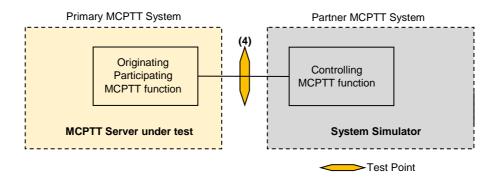


Figure 4.2.6: Testing the MCPTT Server (server-to-server), Originating function

## 4.3 MCPTT Conformance testing players and roles assumptions

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

For the purposes of MCPTT Client testing

#### 1 MCPTT Server:

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

#### 2 MCPTT Clients:

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

#### 3 MCPTT Users:

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

#### 4 MCPTT groups:

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

For the purposes of MCPTT Server testing

#### 1 MCPTT Server:

- Server A installed on the implementation under test.

#### 2 MCPTT Clients:

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

#### 2 MCPTT Users:

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

#### 1 MCPTT group:

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

#### 4.4 References to TS 33.179 and TS 33.180

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

### 4.5 MCVideo Conformance testing test points overview

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

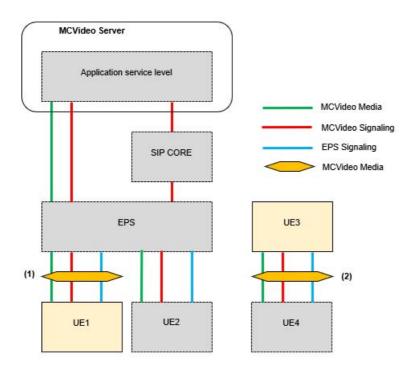


Figure 4.5.1: MCVideo Conformance testing test points model

NOTE 1: Which of the shown entities will be simulated and which will be real implementation depends on the test scenario. In the test scenarios in which they play a part, the entities presented with dashed borders and grey fill will be always simulated whereas, the entities with light yellow fill (UE 1 or UE3) will be Implementation Under Test (IUT).

NOTE 2: While showing the different players, figure 4.5.1 should not be understood as showing test environment implementation.

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

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

## 4.6 MCVideo Conformance testing test environment overview

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

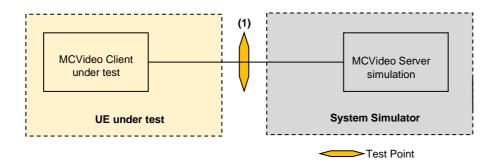


Figure 4.6.1: Testing the MCVideo Client (on-network)

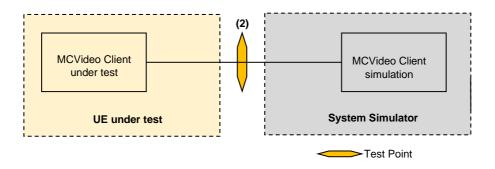


Figure 4.6.2: Testing the MCVideo Client (off-network)

## 4.7 MCVideo Conformance testing players and roles assumptions

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

For the purposes of MCVideo Client testing

#### 1 MCVideo Server:

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

#### 2 MCVideo Clients:

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

#### 3 MCVideo Users:

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

#### 4 MCVideo groups:

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

## 4.8 MCData Conformance testing test points overview

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

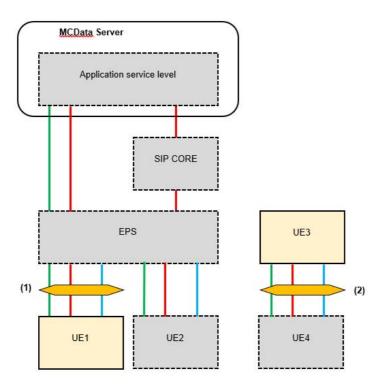


Figure 4.8.1: MCData Conformance testing test points model

NOTE 1: Which of the shown entities will be simulated and which will be real implementation depends on the test scenario. In the test scenarios in which they play a part, the entities presented with dashed borders and grey fill will be always simulated whereas, the entities with light yellow fill (UE1 or UE3) will be Implementation Under Test (IUT).

NOTE 2: While showing the different players, figure 4.8.1 should not be understood as showing test environment implementation.

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

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

## 4.9 MCData Conformance testing test environment overview

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

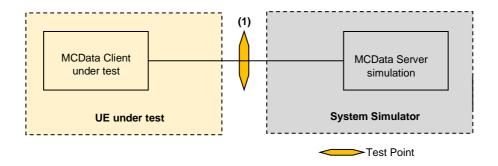


Figure 4.9.1: Testing the MCData Client (on-network)

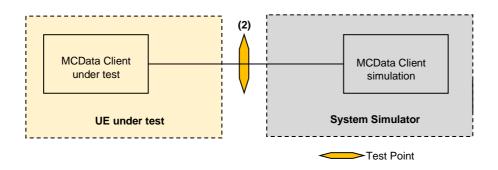


Figure 4.9.2: Testing the MCData Client (off-network)

## 4.10 MCData Conformance testing players and roles assumptions

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

For the purposes of MCData Client testing

#### 1 MCdata Server:

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

#### 2 MCData Clients:

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

#### 3 MCData Users:

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

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

#### 4 MCData groups:

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

### 5 Common Test Environment

#### 5.1 General

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

#### 5.2 Reference test conditions

#### 5.2.1 General

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

#### 5.2.2 On-network

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

#### 5.2.3 Off-network

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

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

## 5.3 Generic test procedures for UE MCS operation

#### 5.3.1 General

The purpose of the procedures specified in the following clauses is to facilitate test description by providing procedure sequences which can be referred from the relevant TCs specified e.g. in 3GPP TS 36.579-2 [2], 3GPP TS 36.579-3 [3], 3GPP TS 36.579-6 [84], 3GPP TS 36.579-7 [85].

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

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

#### 5.3.2.1 Initial conditions

System Simulator:

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

Implementation Under Test (IUT):

- UE (MCPTT client)
  - The MCPTT Client has been provisioned with the Initial UE Configuration Data as specified in clause 5.5.8.1 allowing for the location of the configuration management server for configuration of the MCPTT UE initial configuration management object (MO) and the default MCPTT user profile configuration management object (MO).
  - According to TS 33.180 [94] all HTTP connections are secured by TLS.

    The HTTP-1 interface authentication between the HTTP client in the MC UE and the HTTP server endpoint (HTTP proxy, IdM server or KMS) shall be performed by one-way authentication of the HTTP server endpoint based on server certificate as described in TS 33.180 [94] clause 6.1.1..
  - The UE User is provided with username/password for user authentication (px\_MCPTT\_User\_A\_username, px\_MCPTT\_User\_A\_password as provided in TS 36.579-5 [5], Table 9.2-1: MCPTT Client Common PIXIT)
  - The test USIM set as defined in clause 5.5.10 is inserted.
    - The MCPTT client is attached to EPS services and then the UE is Switched OFF (state 1) according to TS 36.508 [6].
  - The UE is provisioned with the names and values of the Transport Key (TrK) and the Integrity Key (InK), since the KMS shall encrypt the key material sent to the client with the TrK and sign the response with the TrK or the InK according to TS 33.180 [94].

#### 5.3.2.2 Definition of system information messages

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

5.3.2.3 Procedures

Table 5.3.2.3-1: MCPTT user authentication

St	Procedure	Message Sequence	
		U - S	Message
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"</x>		
	leaf 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 take place when one or the other is the		
	case.		
3a1	The UE (MCPTT client) sends an OpenID Connect	>	HTTP GET (Authorization)
	Authentication Request using HTTP GET.		
3b1	The UE (MCPTT client) sends an OpenID Connect	>	HTTP POST (Authorization)
	Authentication Request using HTTP POST.		LITTE COO (OI)
4	The SS sends a HTTP 200 (OK) including the HTML	<	HTTP 200 (OK)
	form requesting username and password.		
5	Make the UE user provide user credentials: username	-	-
	and password (px_MCPTT_User_A_username, px_MCPTT_User_A_password).		
	NOTE 2		
6	The UE (MCPTT client) sends an HTTP POST Request	>	HTTP POST
	message to the SS containing user name and		
	password.		
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		
	as specified in the   "/ <x>/OnNetwork/AppServerInfo/IDMSTokenEndpoint"</x>		
	leaf node, Table 5.5.8.1-1.		
9	The UE (MCPTT client) sends an HTTP POST Request	>	HTTP POST
1	message to the SS (OIDC Token Request message),		
	passing the authorization code obtained in step 7.		
10	The SS sends a HTTP 200 (OK) providing id_token,	<	HTTP 200 (OK)
	access_token and refresh token.		. ,
-	EXCEPTION: The messages in steps 11 to 14 are	-	-
	transmitted over a secure TLS tunnel that has been		
	established by the UE (MCPTT client) as specified by		
	3GPP TS 33.310 [70] to the HTTP Proxy as specified in		
	3GPP TS 33.180 [94] using the configured URL of the		
	HTTP Proxy as specified in the		
	"/ <x>/OnNetwork/AppServerInfo/HTTPproxy" leaf node,</x>		
	Table 5.5.8.1-1.		

St	Procedure	Message Sequence		
		U-S	Message	
11	The UE (MCPTT client) sends a HTTP POST message presenting the access token obtained in step 10 to the SS over HTTP for Key Management Initialisation.	>	HTTP POST	
	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.			
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	
14	The SS replies to the UE with identity specific key information.	<	HTTP 200 (OK)	
15- 32	Void			

NOTE 1: Void. NOTE 1A: Void.

NOTE 2: The UE is expected to prompt the MCPTT user for their username and password, or it may be stored on the UE. The provision of the username/password is expected to be done via a suitable implementation dependent MMI.

Table 5.3.2.3-1A: MCPTT Initial UE Configuration Request

St	Procedure	Message Sequence		
		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)	
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		
		U - S	Message	
-	EXCEPTION: In parallel to procedure of all steps below	-	-	
	the behaviour of table 5.3.2.3-2A and the behaviour of			
	table 5.3.2.3-2B occurs.			
-	EXCEPTION: Steps 1a1-1b2 describe behaviour that	-	-	
	depends on UE implementation; the "lower case letter"			
	identifies a step sequence that take 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	>	SIP REGISTER	
	request for service authorisation.			
1a2	The SS (MCPTT server) sends SIP 200 (OK).	<	SIP 200 (OK)	
	NOTE: The user is now authorized for MCPTT service.			
1a3	The UE (MCPTT client) sends a SIP PUBLISH request	>	SIP PUBLISH	
	for update of PoC-settings (NOTE 1).			
1a4	The SS (MCPTT server) sends SIP 200 (OK).	<	SIP 200 (OK)	
1b1	The UE (MCPTT client) sends a SIP PUBLISH request	>	SIP PUBLISH	
	for service authorisation and update of PoC-settings			
	(NOTE 1).			
1b2	The SS (MCPTT server) sends SIP 200 (OK).	<	SIP 200 (OK)	
	NOTE: The user is now authorized for MCPTT service.			

NOTE 1: The PoC-settings document contains the user profile index of the selected user profile.

⇒ 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	Message Sequence		
		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.	>	SIP SUBSCRIBE	
	NOTE: Step 1 is the start of the fourth stage which was 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)	
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	
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 User Profile Configuration Document.	>	HTTP GET	
8	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	
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
		U - S	Message
1	The UE (MCPTT client) sends a SIP SUBSCRIBE to the SS, containing the access token and a resource list mime body and a list of the Groups to be obtained. The base URI of each list entry is set to the GMS XCAP-ROOT-URI, and the MCPTT group ID identifies a group document.	>	SIP SUBSCRIBE
	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].		
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)
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
6 NOTE	The SS sends the HTTP 200 (OK) message including the Group Document 'MCPTT UE Configuration document'.  NOTE 1  1: This completes MCPTT service enabling on the UE.	<	HTTP 200 (OK)

#### 5.3.2.4 Specific message contents

#### Table 5.3.2.4-1: HTTP GET (Step 3a1, Table5.3.2.3-1)

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"	Editor's note: to be confirmed		
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" vtype="password"/><button type="submit">Login</button> </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

## 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

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

#### 5.3.3.3 Procedure

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

St	Procedure	Message Sequence		
		U - S	Message	
1	Make the UE (MCPTT User) request the creation of a	-	-	
	pre-established session			
-	EXCEPTION: The E-UTRA/EPC actions which are	-	-	
	related to the MCPTT call establishment are described			
	in clause 5.4.3 'Generic Test Procedure for MCPTT CO			
	communication in E-UTRA'. The test sequence below			
	shows only the MCPTT relevant messages exchanged.			
2-7	Void.	-	-	
8	UE (MCPTT Client) sends a SIP INVITE message in	>	SIP INVITE	
	order to create a pre-established session.			
8A	The SS sends SIP 100 Trying	<	SIP 100 Trying	
9	Void.	-	-	
10	The SS (MCPTT server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	
	message.			
10A	UE (MCPTT Client) responds with a SIP ACK message	^	SIP ACK	
11	Void	-	-	
12	The SS transmits an RRCConnectionRelease	<	RRC: RRCConnectionRelease	
	message.			

#### 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
Answer-Mode	not present			
Contact			RFC 3261 [22 RFC 3840 [33]	
feature-param list	not including "+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcptt"			
Accept	not present		RFC 3261 [22]	
Message-body	MIME body not including MCPTT-Info	not including any MIME body part with Content- Type being "application/vnd.3gpp. mcptt-info+xml"		

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

Information Element	Value/remark	Comment	Reference	Condition
Contact			11010101100	
addr-spec				
user-info and host	px_MCPTT_session_B _ID	The URI that identifies the pre-established session		
port	not present			
Resource-Share	·		24.379, clause 8.2.2 [9 ] 24.229, clause 7.2.13 [ 16]	
r-s-param	"media-sharing"			
origin	"session-initiator"			
timestamp	"timestamp" EQUAL 1*DIGIT	Indicates when the application server determined the resource sharing rules and is used to determine the most applicable resource sharing option		
rules				
new-sharing-key	"audio"			
directionality	"DL"			
rules				
new-sharing-key	"application"			
directionality	"DL"			

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

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

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

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

#### 5.3.4.1 Initial conditions

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

#### 5.3.4.2 Definition of system information messages

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

#### 5.3.4.3 Procedure

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

St	Procedure		Message Sequence	TP	Verdict
		U-S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that	-	-	-	-
	depends on the E-UTRA RRC state at the time				
	the present procedure is called.				
1a1	IF in RRC_IDLE state, the E-UTRA/EPC actions	-	-	-	-
	which are related to the MCPTT call				
	establishment described in clause 5.4.4 'Generic				
	Test Procedure for MCPTT CT communication in				
	E-UTRA' take place.				
2	The SS (MCPTT Server) sends a SIP INVITE	<	SIP INVITE	-	-
	requesting the establishment/modification of an				
	MCPTT call.				
-	EXCEPTION: Step 3a1 describes behaviour that	-	-	-	-
	depends on the UE implementation; the "lower				
	case letter" identifies a step sequence that take				
	place if the UE responds to a SIP INVITE with a				
0-4	SIP 100 (Trying)		OID 400 (To do a)		
3a1	The UE (MCPTT client) sends SIP 100 (Trying)	>	SIP 100 (Trying)	-	-
4	Check: Does the UE (MCPTT client) respond to	>	SIP 200 (OK)	-	P
	the SIP INVITE with SIP 200 (OK)?				
5	The SS (MCPTT server) sends a SIP ACK to	<	SIP ACK	-	-
	acknowledge the session				
	establishment/modification				

#### 5.3.4.4 Specific message contents

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

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

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

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

#### 5.3.5.1 Initial conditions

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

#### 5.3.5.2 Definition of system information messages

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

#### 5.3.5.3 Procedure

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

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
-	EXCEPTION: 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 group call.				
-	EXCEPTION: Step 3a1 describes behaviour that	-	-	-	-
	depends on the UE implementation; the "lower				
	case letter" identifies a step sequence that take				
	place if the UE responds to a SIP INVITE with a				
	SIP 100 (Trying)				
3a1	The UE (MCPTT client) sends SIP 100 (Trying).	>	SIP 100 (Trying)	-	-
4	The SS starts timer Timer_1 = 5 seconds.	-	-	-	-
-	EXCEPTION: Steps 5a1 to 5c1 describe	-	-	-	-
	behaviour that depends on the UE				
	implementation; the "lower case letter" identifies				
	a step sequence that may take place if the UE				
	responds reliably or unreliably to a SIP INVITE				
	with a SIP 183 (Session Progress)		010 400 (0 : 0		-
5a1	Check: Does the UE (MCPTT client) send SIP	>	SIP 183 (Session Progress)	-	Р
	183 (Session Progress) unreliably?				
5a2	The SS stops Timer_1.	-	-	-	-
5b1	Check: Does the UE (MCPTT client) send SIP	>	SIP 183 (Session Progress)	-	Р
<b>5</b> 50	183 (Session Progress) reliably?				
5b2	The SS stops Timer_1.	-	-	-	-
5b3	The SS (MCPTT Server) acknowledges the	<	PRACK	-	-
	receipt of SIP 183 (Session Progress)		OID 000 (OI()		
5b4	The UE (MCPTT Client) responds PRACK with	>	SIP 200 (OK)	-	-
- T-1	SIP 200 (OK)	-	_	-	Р
5c1	Check: Does Timer_1 expire?		-	-	1
6	Make UE (MCPTT User) accept the call	-	- CID 200 (OK)	-	- D
7	Check: Does the UE (MCPTT client) respond to	>	SIP 200 (OK)	-	Р
	the SIP INVITE with SIP 200 (OK)?		CID ACK		
8	The SS (MCPTT server) sends a SIP ACK to	<	SIP ACK	-	-
	acknowledge the session establishment				

#### 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

#### 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

#### 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

## 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

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

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.		0.5		
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				
2-1	SIP 100 (Trying)		CID 400 (Trains)	<del>-  </del> -	
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
141	180 (Ringing) unreliably?		Cir 100 (runging)		'
4b1	Check: Does the UE (MCPTT client) send a SIP	>	SIP 180 (Ringing)	-	Р
	180 (Ringing) reliably?		(		
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)		, ,		
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				

#### 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

#### 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

#### 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

# 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 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/modification 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 200 (OK)	<	SIP 200 (OK)	-	-
5	Check: Does the UE (MCPTT Client) send a SIP ACK to acknowledge the session establishment/modification?	>	SIP ACK	-	P

#### 5.3.7.4 Specific message contents

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

#### Table 5.3.7.4-1: SIP 200 (OK) (step 3, Table 5.3.7.3-1)

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

## 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

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

#### 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	-	P

#### 5.3.8.4 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 5.3.8.4-1: 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

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

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

#### 5.4.1 General

The purpose of the procedures specified in the following clauses is to facilitate test description by providing procedure sequences which can be referred from the relevant TCs specified e.g. in 3GPP TS 36.579-2 [2], 3GPP TS 36.579-3 [3], 3GPP TS 36.579-6 [84], 3GPP TS 36.579-7 [85].

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

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

#### 5.4.1A UE APN/PDN support assumptions

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

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

- 1. MCPTT (QCI=69 for signalling bearer, QCI=65 for voice)
- NOTE 1: It should be noted that the core specs impose a requirement that the QCI value 8 or better shall be used for the EPS bearer that transports HTTP-1 reference point messaging. Using a single APN and having for the EPS bearer QCI=69 will satisfy this.

NOTE 2: Void.

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

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

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

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

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

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

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

To serve the above scenarios the following parameters are defined in TS 36.579-5 [5]:

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

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

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

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

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

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

### 5.4.2 Generic Test Procedure for MCPTT UE registration

#### 5.4.2.1 Initial conditions

System Simulator:

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

IUT:

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

#### 5.4.2.2 Definition of system information messages

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

5.4.2.3 Procedure

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

St	Procedure		Message Sequence
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 HAT CHANK THOM RECT CHOCK
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.	<b></b>	RRC: RRCConnectionSetup
21	The UE transmits an RRCConnectionSetupComplete	>	RRC: RRCConnectionSetupComplete
	message to confirm the successful completion of the		NAS: SERVICE REQUEST
	connection establishment and to initiate the session		
	management procedure by including the SERVICE		
	REQUEST message.		
22	The SS transmits a SecurityModeCommand message	<	RRC: SecurityModeCommand
00	to activate AS security.		DDO: 0
23	The UE transmits a SecurityModeComplete message	>	RRC: SecurityModeComplete
24	and establishes the initial security configuration.	-	PDC: PDCConnectionPopenfiguration
24	The SS configures a new data radio bearer, associated with the default EPS bearer context.	<	RRC: RRCConnectionReconfiguration
	The RRCConnectionReconfiguration message is using		
	condition SRB2-DRB(N, 0) with N being the number of		
	PDN connectivities established during initial registration		
	(steps 0 – 17).		
	The DRBs associated with the respective default EPS		
	bearer context obtained during the attach procedure are		
	established		
25	The UE transmits an	>	RRC:
	RRCConnectionReconfigurationComplete message to		RRCConnectionReconfigurationComplet
	confirm the establishment of the new radio bearer,		е
	associated with the default EPS bearer context.		
26	The EUTRA/EPS signalling for establishment of an	-	-
	additional PDN connectivity according to table 5.4.2.3-		
	1A takes place		
27	The SS transmits an RRCConnectionRelease	<	RRC: RRCConnectionRelease
	message.		

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

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

St	Procedure		Message Sequence
		U - S	Message
1	The UE transmits a PDN CONNECTIVITY REQUEST	>	RRC: ULInformationTransfer
	message to request an additional PDN.		NAS: PDN CONNECTIVITY REQUEST
2	The SS configures a new data radio bearer, associated	<	RRC: RRCConnectionReconfiguration
	with the additional default EPS bearer context.		NAS:
	RRCConnectionReconfiguration message contains the		ACTIVATE DEFAULT EPS BEARER
	ACTIVATE DEFAULT EPS BEARER CONTEXT		CONTEXT REQUEST
	REQUEST message.		
3	The UE transmits an	>	RRC:
	RRCConnectionReconfigurationComplete message to		RRCConnectionReconfigurationComplet
	confirm the establishment of additional default bearer.		е
-	EXCEPTION: In parallel to the event described in step	-	-
	4 below, if initiated by the UE the generic procedure for		
	IP address allocation in the U-plane specified in		
	TS 36.508 clause 4.5A.1 takes place performing IP		
	address allocation in the U-plane.		
-	EXCEPTION: IF ADD_IMS THEN in parallel to the	-	-
	event described in step 4 below the generic procedure		
	for IMS signalling in the U-plane specified in TS 36.508		
	clause 4.5A.3 takes place if requested by the UE		
-	EXCEPTION: IF ADD_MCX THEN in parallel to the	-	-
	event described in step 4 below the SIP registration for		
	MCPTT as specified in table 5.4.2.3-2 takes place		DD0 /// (; T (
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	ı	-
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 in step	-	-
	8 below, the events described in table 5.4.3.3-2 take		
	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: SIP signalling for MCPTT CO communication

St	Procedure		Message Sequence			
		U-S	Message			
1	The UE (MCPTT client) sends an initial SIP	>	SIP INVITE			
	INVITE request requesting the establishment					
	of an MCPTT call.					
2	The SS (MCPTT server) sends SIP	<	SIP 100 (Trying)			
	100(Trying).					
3	The SS (MCPTT server) sends SIP 200 (OK).	<	SIP 200 (OK)			
4	The UE (MCPTT client) sends a SIP ACK in	>	SIP ACK			
	response to the SIP 200 (OK)					
NOTE	NOTE: The SIP sequence described in the present table is based on MCPTT CO call establishment and is for					
	descriptive purposes only. When a TC refers	to the ge	eneric procedure described in the present clause, the			
	SIP sequence may be replaced as appropria	ite.	·			

#### 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.

All specific SIP signalling message contents shall be specified in the TC which refers to the present procedure.

#### 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 appropriate paging block, and including the UE identity in one entry of the IE <i>pagingRecordLists</i> .	<	RRC: Paging (PCCH)	
2	The UE transmits an RRCConnectionRequest message with 'establishmentCause' set to 'mt-Access'.	>	RRCConnectionRequest	
3	SS transmit an RRCConnectionSetup message.	<	RRC: RRCConnectionSetup	
4	The UE transmits an RRCConnectionSetupComplete message to confirm the successful completion of the connection establishment and to initiate the session management procedure by including the SERVICE REQUEST message.	>	RRC: RRCConnectionSetupComplete NAS: SERVICE REQUEST	
5	The SS transmits a SecurityModeCommand message to activate AS security.	<	RRC: SecurityModeCommand	
6	The UE transmits a SecurityModeComplete message and establishes the initial security configuration.	>	RRC: SecurityModeComplete	

St	Procedure		Message Sequence
		U - S	Message
7	The SS configures a new data radio bearer, associated 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).	<	RRC: RRCConnectionReconfiguration
-	EXCEPTION: In parallel to the events described in steps 11-15 below, the event described in step 1, table 5.4.4.3-2 takes place.	-	-
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 65/69) 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	The event described in step 2, table 5.4.4.3-2 takes place.	-	-

#### Table 5.4.4.3-2: SIP signalling for MCPTT CT communication

St	Procedure		Message Sequence
		U - S	Message
1	The SS (MCPTT Server) sends an initial SIP	<	SIP INVITE
	INVITE request requesting the establishment		
	of an MCPTT call.		
-	EXCEPTION: Step 1Aa1 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 message with a SIP 100 (Trying)		
	message.		
1A	The UE (MCPTT client) may optionally send	>	SIP 100 (Trying)
a1	SIP 100 (Trying) message.		
2	The UE (MCPTT client) sends SIP 200 (OK).	>	SIP 200 (OK)
3	The SS (MCPTT Server) responds to SIP 200	<	SIP ACK
	(OK) with a SIP ACK.		
NOT	The SID sequence described in the present	tahla is h	ased on MCPTT CT call establishment and is for

NOTE: The SIP sequence described in the present table is based on MCPTT CT call establishment and is for descriptive purposes only. When a TC refers to the generic procedure described in the present clause, the SIP sequence may be replaced as appropriate.

#### 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.

All specific SIP signalling message contents shall be specified in the TC which refers to the present procedure.

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

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

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

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

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

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

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

#### 5.4.5.1 Initial conditions

System Simulator:

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

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

#### IUT:

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

#### UE state:

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

#### 5.4.5.2 Definition of system information messages

N/a (out of E-UTRA coverage)

#### 5.4.5.3 Procedure

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

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

#### 5.4.5.4 Specific message contents

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

Derivation path: 36.508 [6], Table 4.7F.3-6.  Information Element	Value/remark	Comment	Condition
IP Address Config	'0011'B	address allocation not supported	
Link Local IPv6 Address	If the UE indicated '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 <sub>D</sub> ID	The MSB of KD ID of the new KD		
K <sub>D</sub> Freshness	Not included		
GPI	Not included		
User Info {			
Type of User Info	IMSI		
Odd/even indication	Reflecting the number of digits in the IMSI		
Identity digits	A value different to the IMSI of the UE		
}			

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

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

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

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

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

#### 5.4.6.1 Initial conditions

System Simulator:

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

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

#### IUT:

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

#### UE state:

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

#### 5.4.6.2 Definition of system information messages

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

#### 5.4.6.3 Procedure

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

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

#### 5.4.6.4 Specific message contents

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

Derivation path: 36.508 [6], Table 4.7F.3-5.			
Information Element	Value/remark	Comment	Condition
User Info {			
Type of User Info	IMSI		
Odd/even indication	Reflecting the number of digits in the IMSI		
Identity digits	A value different to the IMSI of the UE		
}			
IP Address Config	'0011'B	address allocation not supported	
Maximum Inactivity Period	'10 0000 0000'B	512 sec, randomly chosen to allow sufficient time for a TC which uses this procedure to be completed without need to repeat the keepalive procedure	
Nonce 1			
UE Security Capabilities	01111111 01111111	All but null algorithms supported	
MSB of K <sub>D-sess</sub> ID	the 8 most significant bits of the KD-sess ID		
K <sub>D</sub> ID	Not present		
Signature	the ECCSI signature calculated with the User Info and Nonce_1 as specified in 3GPP TS 33.303 [67]		
Link Local IPv6 Address	a link-local IPv6 address formed locally		

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

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

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

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

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

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

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

#### 5.4.7.1 Initial conditions

System Simulator:

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

#### IUT:

- UE (MCPTT client)

ProSe related configuration

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

#### **UE** state

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

#### 5.4.7.2 Definition of system information messages

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

#### 5.4.7.3 Procedure

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

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

#### 5.4.7.4 Specific message contents

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

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

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

#### 5.4.8.1 Initial conditions

System Simulator:

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

#### IUT:

- UE (MCPTT client)

ProSe related configuration

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

#### UE state

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

#### 5.4.8.2 Definition of system information messages

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

#### 5.4.8.3 Procedure

Table 5.4.8.3-1: ProSe direct communication one-to-one out of E-UTRA coverage signalling for MCPTT communication - release by the UE

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

#### 5.4.8.4 Specific message contents

#### Table 5.4.8.4-1: DIRECT COMMUNICATION RELEASE (step 1, Table 5.4.8.3-1)

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

## 5.4.9 Generic Test Procedure for MCPTT communication in E-UTRA / Change of cells

#### 5.4.9.1 Initial conditions

System Simulator:

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

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

#### IUT:

- UE (MCPTT client)
  - The UE has performed the Generic Test Procedure for MCPTT UE registration as specified in clause 5.4.2 and is in E-UTRA Registered, Idle Mode state on Cell 1 with the MCPTT Client being active. During the attach a default EPS bearer context #3 (QCI 69) according to table 6.6.1-1, TS 36.508 [6] is established for MCPTT and SIP signalling. The UE is allowed to operate on both PLMN1 and PLMN2.
  - NOTE 1: The assumptions for the PDN support of a MCPTT capable UE, including the default EPS bearer context QCI requirements in regard to the different PDN are described in 5.4.1A.

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

#### 5.4.9.2 Definition of system information messages

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

#### 5.4.9.3 Procedure

Table 5.4.9.3-1 illustrates the downlink power levels and other changing parameters to be applied for the cells at various time instants of the test execution. Row marked "T0" denotes the initial conditions after preamble, while columns marked "T1" ... "Tn" are to be applied subsequently. The exact instants on which these values shall be applied are described elsewhere in the present clause.

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

	Parameter	Unit	Cell 1	Cell 2	Cell 4
T0	Cell-specific RS	dBm/15k	-79	"Off"	"Off"
	EPRE	Hz			
T1	Cell-specific RS	dBm/15k	"Off"	-79	"Off"
	EPRE	Hz			
T2	Cell-specific RS	dBm/15k	"Off"	"Off"	-79
	EPRE	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	LIEs which are capable of Announcing for group member discover	v may start s	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

3
t
t

St	Procedure	Message Sequence		
		U - S	Message	
NOTE	1: UEs which are not capable of Monitoring for group member discovery may start Discoverer procedure automatically.			
NOTE	2: The UE may need to send more than one MCPTT protocol data unit in sequence with no response expected between them from the SS-UE1.			
NOTE	<ol> <li>Which MCPTT protocol data units are included in the sidelink communication is defined in the test case using the present generic procedure.</li> </ol>			
NOTE	4: The SS-UE1 may need to send more than one MCPTT protocol data unit in sequence with no response expected between them from the UE.			

#### 5.4.11.4 Specific message contents

#### Table 5.4.11.4-1: PC5\_DISCOVERY (step 3a1 Table 5.4.11.3-1)

Derivation path: 36.508 [6], Table 4.7F.1-5A.

#### Table 5.4.11.4-2: PC5\_DISCOVERY (step 3b2 Table 5.4.11.3-1)

Derivation path: 36.508 [6], Table 4.7F.1-5B.

#### Table 5.4.11.4-3: PC5\_DISCOVERY (step 3b3 Table 5.4.11.3-1)

Derivation path: 36.508 [6], Table 4.7F.1-5C.

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

#### 5.4.12.1 Initial conditions

System Simulator:

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

#### IUT:

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

#### 5.4.12.2 Definition of system information messages

The E-UTRA default system information messages as defined in TS 36.508 [6] are used. System information combination 15 as defined in TS 36.508[6] clause 4.4.3.1 is used in the E-UTRA cell.

#### 5.4.12.3 Procedure

Table 5.4.12.3-1: MCPTT communication over MBMS

St	Procedure	Message Sequence		
		U - S	Message	
1	SS transmits MBSFNAreaConfiguration message	<	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.  NOTE: Which MCPTT protocol data units are sent and	<	MBMS Packet	
	at which time is defined in the test case using the present generic procedure.			

#### 5.4.12.4 Specific message contents

None.

### 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.		
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 [16 Information Element	J, clause A.2.1.4.2, A.2.2.4.2  Value/remark	Comment	Reference	Condition
	value/remark	Comment		Condition
Request-Line	"ACK"		RFC 3261 [22]	
Method Request-URI	same URI as the SS			
Request-ORI	has sent earlier in the			
	Contact header of a			
	response within the same dialog			
SIP-Version	"SIP/2.0"			
Via	SIP/2.0		DEC 2264 [22]	
	"CID/2 0/LIDD"		RFC 3261 [22]	LIDD
sent-protocol	"SIP/2.0/UDP"			UDP
	"SIP/2.0/TCP"			TCP
sent-by	Same value as in			
<del> </del>	INVITE message			
via-branch	Value starting with			
B. 4	'z9hG4bK'		DEC 0004 (00)	
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		550 200 1001	
From			RFC 3261 [22]	
addr-spec	same value as in the	Local URI of the dialog		
	INVITE message	(from the UE's point of		
		view)		
tag	same value as in the	Local tag of the dialog		
	INVITE	ID (from the UE's point		
_		of view)	DEC 0004 (00)	
То			RFC 3261 [22]	
addr-spec	same value as in the	Remote URI of the		
	INVITE	dialog (from the UE's		
		point of view)		
tag	same tag as in the To-	Remote tag of the		
	header of the response	dialog ID (from the UE's		
	which has established	point of view)		
0.11.15	the dialog		DEC 0004 (00)	
Call-ID	<del></del>		RFC 3261 [22]	
callid	same value as in			
0.000	INVITE message		DE0 0004 500	
Cseq	<del></del>		RFC 3261 [22]	
value	same value as in			
4 1	INVITE message			
method	"ACK"		DE0 000 / 1000	
Max-Forwards		ļ	RFC 3261 [22]	
value	any allowed value	Non-zero value		
Content-Length	if present		RFC 3261 [22]	
value	"0"	No message body		
		included	ĺ	

### 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	l me meneg		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	0 0201 [22]	

5.5.2.2 SIP BYE

5.5.2.2.1 SIP BYE from the UE

Table 5.5.2.2.1-1: SIP BYE from the UE

Information Element	], clause A.2.1.4.3, A.2.2.4.3 Value/remark	Comment	Reference	Condition
Request-Line	- alagi ciilai k	30	RFC 3261 [22]	22
Method	"BYE"		141 0 0201 [22]	
Request-URI	same URI as the SS	Contact URI of the		
request orti	has sent earlier in the	recipient of the BYE		
	Contact header of a	Toolpiont of the B1E		
	message within the			
	same dialog			
SIP-Version	"SIP/2.0"			
Via	0.1.72.0		RFC 3261 [22]	
sent-protocol	"SIP/2.0/UDP"		14. 0 0201 [22]	UDP
com protocor	"SIP/2.0/TCP"			TCP
sent-by	same value as in			MO_CALL
Selft by	INVITE message			WO_O/ILL
sent-by	IIIVITE message			MT_CALL
host	IP address or FQDN	Either the UE's IP		WIT_O/ LL
11031	ii address of i QDIV	address or its home		
		domain name		
port	protected server port of	as assigned during		
port	the UE	registration		
via-branch	Value starting with	regionanon		
via-brancii	'z9hG4bK'			
Route	231104010		RFC 3261 [22]	
route-param list	URIs of the Record-		111 0 0201 [22]	MO_CALL
route-param nst	Route header sent to			IVIO_CALL
	the UE in the response			
	which has established			
	the dialog, in reverse order			
				NAT OALL
	URIs of the Record-			MT_CALL
	Route header sent to			
F	the UE in the INVITE		DEC 0004 [00]	
From	0	I IIIDI (d. E.I	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		
T_	dialog	of view)	DEC 0004 [00]	
To	0 1 IDL - f th - 00	Damata UDI at the	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		
Call-ID	dialog	point of view)	DEC 2004 (20)	
	name value as to		RFC 3261 [22]	
callid	same value as in			
0000	INVITE message		DEC 0004 (00)	
CSeq	value of OC-s		RFC 3261 [22]	
value	value of CSeq sent by			
	the endpoint within its			
	previous request in the			
	same dialog but			
4. 1	increased by one			
method	"BYE"			
Require			RFC 3261 [22]	
			RFC 3329 [53]	
option-tag	"sec-agree"			
Proxy-Require			RFC 3261 [22]	
			RFC 3329 [53]	
option-tag	"sec-agree"			
Security-Verify			RFC 3329 [53]	
sec-mechanism	same value as Security			
	-Server header sent by			
	SS during registration	i e	•	

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		<b>550</b> 05 5 1 5 5	
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 Leaved		hops	DEC 222: 222	
Content-Length	law with a five		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

Information Element	rivation Path: TS 24.229 [16 Value/remark	J, clause A.z.1.4.7, A.z.z.4 Comment	Reference	Condition
Request-Line	value/remark	Comment	RFC 3261 [22]	Condition
Request-Line			RFC 5261 [22]	
Method	"INVITE"		10 0 0001 [04]	
Request-URI	tsc_MCPTT_PublicServ	The public service		
request orti	iceld_A	identity identifying the		
	10014_71	participating MCPTT		
		function serving the		
		MCPTT user		
	px_MCVideo_PublicSer	The public service		MCVIDEO
	viceId_A	identity identifying the		
		participating MCVideo		
		function serving the		
		MCVideo user		
	px_MCData_PublicServ	The public service		MCDATA
	iceld_A	identity identifying the		
		participating MCData		
		function serving the		
		MCData user		
Request-URI	same URI as the SS	Contact URI of the		re_INVITE
	has sent earlier in the	recipient of the BYE		
	Contact header of a			
	message within the			
CID Varsion	same dialog "SIP/2.0"			
SIP-Version	SIP/2.0		DEC 2264 [22]	
Via			RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"	UE accesses the server	KFC 3361 [33]	UDP
Sent-protocol	31F/2.0/0DF	via UDP		ODF
	"SIP/2.0/TCP"	UE accesses the server		TCP
	31F/2.0/1CF	via TCP		TOP
sent-by		VIA 101		
host	IP address or FQDN	Either the UE's IP		
11031	ii dddioso oi i gait	address or its home		
		domain name		
port	protected server port of	as assigned during		
•	the UE	registration		
via-branch	Value starting with			
	'z9hG4bK'			
Route			RFC 3261 [22]	
addr-spec[1]	SIP URI			
user-info and host	P-CSCF address of the	P-CSCF address as		
	SS	assigned to the UE via		
		NAS signalling or P-		
		CSCF discovery		
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"	same value as in the		
		Service-Route header		
		field of the 200 OK		
		response to		
port	not present	REGISTER		
port uri-parameters	not present "Ir"			
Route	II II		RFC 3261 [22]	re_INVITE
route-param list	URIs of the Record-		111 0 3201 [22]	MO_CALL
Toute-param not	Route header sent to			IVIO_OALL
	the UE in the response			
	which has established			
	the dialog, in reverse			
	order			
	URIs of the Record-			MT_CALL
		İ	Ī	O, \LL
	Route header sent to			

	rivation Path: TS 24.229 [16			
Information Element	Value/remark	Comment	Reference	Condition
From			RFC 3261 [22]	
addr-spec				
user-info and host	px_MCPTT_Client_A_I			
	D			
	px_MCVideo_Client_A			MCVIDEO
	_ID			
	px_MCData_Client_A_I			MCDATA
	D			
port	any value if present			
tag	any value		550 2004 500	
From			RFC 3261 [22]	re_INVITE
addr-spec	Same URI of the UE as	Local URI of the dialog		
	used earlier in the	(from the UE's point of		
	dialog	view)		
tag	Same tag of the UE as	Local tag of the dialog		
	used earlier in the	ID (from the UE's point		
То	dialog	of view)	RFC 3261 [22]	
10			RFC 3261 [22] RFC 5031 [54]	
addr-spec			NEC 3031 [34]	
addr-spec user-info and host	Samo LIPL on Paguast			
user-inio and nost	Same URI as Request- URI			
port	not present			
tag	not present			
To	not present		RFC 3261 [22]	re_INVITE
addr-spec	Same URI of the SS as	Remote URI of the	10 0 0 0 0 1 [22]	IC_IIIVIIL
addi-spec	used earlier in the	dialog (from the UE's		
	dialogURI	point of view)		
tag	Same tag of the SS as	Remote tag of the		
ag	used earlier in the	dialog ID (from the UE's		
	dialog	point of view)		
Call-ID	Similar y		RFC 3261 [22]	
callid	any allowed value		• • • • • • • • • • • • • • • • • •	
callid	same value as in			re-INVITE
	INVITE creating the			
	dialog			
CSeq	-		RFC 3261 [22]	
value	any allowed value			
value	value of CSeq sent by			re_INVITE
	the endpoint within its			
	previous request in the			
	same dialog but			
	increased by one			
method	"INVITE"			
Supported			RFC 3261 [22]	
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"		DE0 000: 155	
Proxy-Require			RFC 3261 [22]	
antion to a	"000 00"5 5"		RFC 3329 [53]	
option-tag	"sec-agree"		DEC 2000 [50]	
Security-Verify			RFC 3329 [53]	
	anno volus es Ossa ''			
sec-mechanism	same value as Security			
	-Server header sent by			
Contact	SS during registration		DEC 2064 [00	
Contact			RFC 3261 [22 RFC 3840 [33]	
		1	IXI U 3040 [33]	J

Derivation Path: TS 24.229 [16], clause A.2.1.4.7, A.2.2.4.7						
Information Element	Value/remark	Comment	Reference	Condition		
addr-spec	SIP URI					
user-info and host	IP address or FQDN					
	(px_MCPTT_Client_A_I					
	D)			MO) (IDEO		
	IP address or FQDN			MCVIDEO		
	(px_MCVideo_Client_A					
	_ID) IP address or FQDN			MCDATA		
	(px_MCData_Client_A_			MCDATA		
	ID)					
port	protected server port of	as assigned during				
Port	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.				
	"+g.3gpp.mcvideo"	This media feature tag		MCVIDEO		
	+g.5gpp.mcvide0	when used in a SIP		INICVIDEO		
		request or a SIP				
		response indicates that				
		the function sending				
		the SIP message				
		supports Mission				
		Critical Video				
		(MCVideo)				
		communication.		<b>_</b>		
	"+g.3gpp.mcdata.sds"	This media feature tag		MCDATA		
		when used in a SIP				
		request or a SIP				
		response indicates that the function sending				
		the SIP message				
		supports mission				
		critical data (MCData)				
		service.communication.		<u>1                                    </u>		
feature-param	"+g.3gpp.icsi-	This URN indicates that				
	ref=urn:urn-7:3gpp-	the device has the				
	service.ims.icsi.mcptt"	capabilities to support				
		the mission critical				
		push to talk (MCPTT)				
	"La 2ann iosi	service. This URN indicates that		MOVIDEO		
	"+g.3gpp.icsi-	the device has the		MCVIDEO		
	ref=urn:urn-7:3gpp- service.ims.icsi.mcvide	capabilities to support				
	0"	the Mission Critical				
	Ĭ	Video (MCVideo)				
		communication.				
	"+g.3gpp.icsi-	This URN indicates that		MCDATA		
	ref=urn:urn-7:3gpp-	the device has the				
	service.ims.icsi.mcdata.	capabilities to support				
	sds"	the mission critical data				
		(MCData) service.				
feature-param	"audio"	This feature tag		MCPTT		
		indicates that the		OR		
		device supports audio		MCVideo		
		as a streaming media				
		type.				

Derivation Path: TS 24.229 [16], clause A.2.1.4.7, A.2.2.4.7					
Information Element	Value/remark	Comment	Reference	Condition	
feature-param	"video"	This feature tag indicates that the device supports video as a streaming media		MCVIDEO	
	lle di	type.		1405474	
feature-param	"text"	This feature tag indicates that the device supports text as a streaming media type.		MCDATA	
Max-Forwards		typo.	RFC 3261 [22]		
value	any allowed value	Non-zero value	111 0 0201 [22]		
P-Access-Network-Info	any anowea varae	Tron zoro valuo	RFC 7315 [52]		
access-net-specs	Access network technology and, if applicable, the cell ID	AUTO			
Accept			RFC 3261 [22]		
media-range[1] media-range[2]	"application/sdp"  "application/vnd.3gpp. mcptt-info+xml"				
	application/vnd.3gpp.m cvideo-info+xml "application/vnd.3gpp.			MCVIDEO MCDATA	
	mcdata-info+xml"				
P-Preferred-Service			RFC 6050 [31]		
Service-ID	"urn:urn-7:3gpp- service.ims.icsi.mcptt"			MOVIDEO	
	"urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO	
	"urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			MCDATA	
P-Preferred-Identity			RFC 3325 [32]		
PPreferredID-value	same URI as in From- header				
Accept-Contact			RFC 3841 [29]		
ac-value[1]					
feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcptt"				
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO	
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			MCDATA	
req-param	"require"				
explicit-param ac-value[2]	"explicit"				
feature-param	"+g.3gpp.mcptt" "+g.3gpp.mcvideo" "+g.3gpp.mcdata.sds"			MCVIDEO MCDATA	
req-param	"require"			IVIODATA	
explicit-param	"explicit"				
Answer-Mode	0.000		RFC 5373 [34]		
answer-mode-value	"Auto"		1 0 0070 [0-7]		
answer-mode-value	"Manual"			MANUAL	
Resource-Priority			RFC 4412 [40] RFC 7134 [57] RFC 8101 [45]	EMERGEN CY-CALL or	
				IMMPERIL -CALL	

	erivation Path: TS 24.229 [16			0 11-1
Information Element r-value	Value/remark	Comment	Reference	Condition EMERGEN
r-value				CY-CALL
namespace	value of the <resource- priority-namespace&gt; element contained in the <emergency- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration</onnetwork></emergency- </resource- 	As configured in Table 5.5.8.4-1		OT OTHER
,	documents			
r-priority	value of the <resource- priority-priority&gt; element contained in the <emergency- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration document</onnetwork></emergency- </resource- 	As configured in Table 5.5.8.4-1		
r-value				IMMPERIL
				-CALL
namespace	value of the <resource- priority-namespace&gt; element contained in the <imminent-peril- resource-priority&gt; element contained in the <onnetwork> element of the MCX service configuration documents</onnetwork></imminent-peril- </resource- 	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 Content-Length	"multipart/mixed"  present in case of TCP and when there is a message body (otherwise optional)		RFC 3261 [22]	
value	any value	length of message-		
Message-body		body	RFC 3261 [22]	
MIME body part		SDP message	141 0 0201 [22]	
MIME-part-headers				
Content-Type	"application/sdp"		RFC 4566 [27]	
MIME-part-body	SDP Message as described in Table 5.5.3.1.1-1 SDP Message as described in Table 5.5.3.1.1-2			MCVIDEO
	SDP Message as described in Table 5.5.3.1.1-3			MCDATA

		6], clause A.2.1.4.7, A.2.2.4		Co
Information Element	Value/remark	Comment MCPTT	Reference	Condition
MIME body part		Info/MCVideo/MCData		
MIME-part-headers		IIIO/IVIO V IUEO/IVIODALA		
Content-Type	"application/vnd.3gpp.			
.,,,,	mcptt-info+xml"			
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml"			
	"application/vnd.3gpp.			MCDATA
	mcdata-info+xml"	<u> </u>		
Content-ID	any value	Unique URL identifying	TS 24.379 [9]	
		the MCPTT/MCVideo/MCD	clause 6.6.3.1	
		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		TO 04 004 505	140) (1550
	MCVideo-Info as described in Table		TS 24.281 [86] clause F.1	MCVIDEO
	5.5.3.2.1-2		Ulause F. I	
	MCData-Info as		TS 24.282 [87]	MCDATA
	described in Table		clause D.1	
	5.5.3.2.1-3			
MIME body part		Resource list	RFC 5366 [35]	PRIVATE-
				CALL OR
				MCD_1to1
MIME-part-headers	Hamatia dia 1			
Content-Type	"application/resource- lists+xml"			
Content-ID	any value	Unique URL identifying	TS 24.379 [9]	
JOHIGHT ID	arry value	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			MOVIDEO
	As described in Table 5.5.3.3.1-2			MCVIDEO
	As described in Table			MCDATA
	5.5.3.3.1-3			WODATA
MIME body part	3.0.0.0	Location info		EMERGEN
				CY-ALERT
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		
0 1 110		true.	TO 04 672 72	
Content-ID	any value	Unique URL identifying	TS 24.379 [9]	
		the Location-info XML MIME body; used as	clause 6.6.3.1	
		reference in the		
		signature MIME body		
MIME-part-body	Location-info as	3.ga.a.o mm2 body	TS 24.379 [9]	
r	described in Table		clause F.3	
	5.5.3.4.1-1		l	İ

Derivation Path: TS 24.229 [16], clause A.2.1.4.7, A.2.2.4.7					
Information Element	Value/remark	Comment	Reference	Condition	
	Location-info as described in Table		TS 24.281 [86] clause F.3	MCVIDEO	
MIME body part	5.5.3.4.1-2	MIKEY message		MCD 1to1	
MIME-part-headers		mint21 incodage		WOD_TOT	
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 etablishment with manual commencement mode
MCD_1to1	A one-to-one MCData call
re_INVITE	INVITE within a dialog
For further conditions see table 5.5.1-1	

### 5.5.2.5.2 SIP INVITE from the SS

#### Table 5.5.2.5.2-1: SIP INVITE from the SS

Derivation Path: TS 24.229 [16],	clause A.2.1.4.7, A.2.2.4.7			
Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22] RFC 5031 [54]	
Method	"INVITE"			
Request-URI	SIP URI of the UE's contact address as provided in the Contact-header of the REGISTER message			
Request-URI	same URI as the UE has sent earlier in the Contact header of a response within the same dialog	Contact URI of the UE ("callee")		re_INVITE
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22] RFC 3581 [55]	
sent-protocol[1]	"SIP/2.0/TCP"			
sent-by[1]		Address of the P-CSCF that communicates with the called party		
host	P-CSCF address of the SS	P-CSCF address as assigned to the UE via NAS signalling or P- CSCF discovery		
port	protected server port of the SS	as assigned during registration		
via-branch[1]	Value assigned by the SS starting with 'z9hG4bK'			
sent-protocol[2]	"SIP/2.0/UDP"			
sent-by[2]		Address of the other endpoint (the caller)		

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
host	Host name of the SIP			
	URI being used in the From header			
port	Same port number as in Contact-header	Caller's port number		
via-branch[2]	Value assigned by the SS starting with 'z9hG4bK'			
Record-Route	20110-1011	Record-Route	RFC 3261 [22]	
Notice Notice		corresponding to the Via header	111 0 0201 [22]	
addr-spec[1]	SIP URI	SIP URI corresponding to first entry of Via header		
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	"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-parameters	"Ir"			
addr-spec[4]	SIP URI			
user-info and host	"pcscf2.3gpp.org"			
port	not present			
uri-parameters	"Ir"			
Record-Route	same as in the 180, 183 or 200 response sent to the UE during MO call establishment in reverse order		RFC 3261 [22]	re_INVITE AND MO_CALL
From			RFC 3261 [22]	
addr-spec				
user-info and host	px_MCPTT_Client_B_ URI	SIP URI of the calling UE Editor's note: to be checked whether PIXIT is needed		
	px_MCVideo_Client_B URI	SIP URI of the calling UE		MCVIDEO
	px_MCData_Client_B_I D	SIP URI of the calling UE		MCDATA
port	not present			
tag	Value assigned by the SS			
From			RFC 3261 [22]	re_INVITE
addr-spec	Same URI of the SS as used earlier in the dialog	Remote URI of the dialog (from the UE's point of view)		
tag	Same tag of the SS as used earlier in the dialog	Remote tag of the dialog (from the UE's point of view)		
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec				
user-info and host	px_MCPTT_Client_A_I D	Public user ID (IMPU) as stored in the UICC		

Derivation Path: TS 24.229 [16]	, clause A.2.1.4.7. A.2.2.4.7			
Information Element	Value/remark	Comment	Reference	Condition
	px_MCVideo_Client_A	Public user ID (IMPU) as stored in the UICC		MCVIDEO
	px_MCData_Client_A_I	Public user ID (IMPU)		MCDATA
	D	as stored in the UICC		
port	not present			
tag 	not present		DE0 0004 [00]	IND (ITE
To	On the LIE of	Land IIDI at the adialan	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		
0-11.15	dialog	view)	DE0 0004 [00]	
Call-ID	Makes and heath a		RFC 3261 [22]	
callid	Value assigned by the SS			
Call-ID			RFC 3261 [22]	re_INVITE
callid	same value as in INVITE creating the dialog			
CSeq	<u> </u>		RFC 3261 [22]	
value	Value assigned by the SS			
value	value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one			re_INVITE
method	"INVITE"			
Supported			RFC 3261 [22]	1
option-tag	"100rel"	This option tag indicates that the UA can send or receive reliable provisional responses.		
option-tag	"timer"			
option-tag	"tdialog"			
option-tag	"norefersub"			
P-Called-Party-ID			RFC 7315 [52]	
called-pty-id-spec	px_MCPTT_Client_A_I D	same user ID as in To- header		
	px_MCVideo_Client_A ID			MCVIDEO
	px_MCData_Client_A_I			MCDATA
Session-Expires			RFC 4028 [30]	
generic-param	"1800"	The recommended initial value is 1800 in RFC 4028 [30].	14. 6 1626 [66]	
P-Early-Media			RFC 5009 [60]	
em-parm	"inactive"			
Require			RFC 3261 [22] RFC 3312 [56] RFC 3329 [53]	
option-tag	"sec-agree"			
Proxy-Require			RFC 3261 [22] RFC 3329 [53]	
option-tag	"sec-agree"			
P-Asserted-Identity			RFC 3325 [32]	
addr-spec user-info and host	same URI as in From-			
	header			
port Contact	not present		RFC 3261 [22]	
			RFC 3840 [33]	

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
addr-spec	SIP URI	Comment	Reference	Condition
user-info and host	px_MCPTT_Client_B_I D	Editor's note: to be checked whether PIXIT is needed		
	px_MCVideo_Client_B _ID			MCVIDEO
	px_MCData_Client_B_I D			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
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

Derivation Path: TS 24.229 [16], Information Element	Value/remark	Comment	Reference	Condition
feature-param	"text"	This feature tag	Veletelice	MCDATA
leature-param	lexi	indicates that the		WICDATA
		device supports text as		
		a streaming media		
		type.		
feature-param	"isfocus"			
Max-Forwards	1001		RFC 3261 [22]	
value	"68"	The recommended initial value is 70 in		
		RFC 3261 [22].		
		Assuming 2 hops as		
		according to the Via		
		header this results in a		
		value of 68 in the		
		message sent to the		
A 4		UE	DE0 0004 (00)	
Accept media-range[1]	"application/sdp "		RFC 3261 [22]	
media-range[2]	"application/vnd.3gpp.			
media-range[2]	mcptt-info+xml"			
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml"			
	"application/vnd.3gpp.			MCDATA
	mcdata-info+xml"			
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			INCVIDEO
	0"			
	"urn:urn-7:3gpp-			MCDATA
	service.ims.icsi.mcdata.			
	sds"		550 0005 (00)	
P-Preferred-Identity PPreferredID-value	same URI as in From-		RFC 3325 [32]	
PPreferrediD-value	header			
Accept-Contact	ricadei		RFC 3841 [29]	
ac-value[1]			, ,	
feature-param	"+g.3gpp.icsi-			
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			140) ((0.50)
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp- service.ims.icsi.mcvide			
	0"			
	"+g.3gpp.icsi-			MCDATA
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcdata.			
	sds"			
req-param explicit-param	"require" "explicit"			
ac-value[2]	explicit			
feature-param	"+g.3gpp.mcptt"			
	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA
req-param	"require"			
explicit-param	"explicit"		DE0 5050 10 11	
Answer-Mode answer-mode-value	"Auto"		RFC 5373 [34]	
answer-mode-value answer-mode-value	"Auto" "Manual"			MANUAL
Resource-Priority	iviaitudi		RFC 4412 [40]	EMERGEN
			RFC 7134 [57]	CY-CALL
			RFC 8101 [45]	or
				IMMPERIL
				-CALL

Derivation Path: TS 24.229 [16], o	clause A.2.1.4.7, A.2.2.4.7			
Information Element	Value/remark	Comment	Reference	Condition
r-value				EMERGEN CY-CALL
namespace	value of the <resource-< td=""><td>As configured in Table</td><td></td><td>CT-CALL</td></resource-<>	As configured in Table		CT-CALL
патезрасе	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 5.5.8.4-1</td><td></td><td></td></resource-<>	As configured in Table 5.5.8.4-1		
	priority-priority> element contained in	0.0.6.4-1		
	the <emergency-< td=""><td></td><td></td><td></td></emergency-<>			
	resource-priority>			
	element contained in			
	the <onnetwork></onnetwork>			
	element of the MCX			
	service configuration document			
r-value				IMMPERIL
Namagaa	value of the construction	As soution we die Teld		-CALL
Namespace	value of the <resource- priority-namespace&gt;</resource- 	As configured in Table 5.5.8.4-1		
	element contained in	3.3.0.4-1		
	the <imminent-peril-< td=""><td></td><td></td><td></td></imminent-peril-<>			
	resource-priority>			
	element contained in			
	the <onnetwork> element of the MCX</onnetwork>			
	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- resource-priority&gt;</imminent-peril- 			
	element contained in			
	the <onnetwork></onnetwork>			
	element of the MCX			
	service configuration			
Content-Type	document		RFC 5621 [58]	
media-type	"multipart/mixed"		111 0 0021 [00]	
Content-Length			RFC 3261 [22]	
Value	length of message-			
Message-body	body		RFC 3261 [22]	
MIME body part		SDP message		
MIME-part-headers				
MIME-Content-Type	"application/sdp"		DE0 :	
MIME-part-body	SDP Message as		RFC 4566 [27]	
	described in Table 5.5.3.1.2-1			
	SDP Message as		RFC 4566 [27]	MCVIDEO
	described in Table			
	5.5.3.1.2-2			
	SDP Message as		RFC 4566 [27]	MCDATA
	described in Table 5.5.3.1.2-3			
MIME body part	J.J.J. 1.Z-J	MCPTT/MCVideo/MCD		
		ata Info		
MIME-part-headers				

Derivation Path: TS 24.229 [16] Information Element	, clause A.2.1.4.7, A.2.2.4.7 Value/remark	Comment	Reference	Condition
MIME-Content-Type	"application/vnd.3gpp.	Comment	Reference	Condition
WINVIE-Content-Type	mcptt-info+xml"			
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml"			
	"application/vnd.3gpp.			MCDATA
Content-ID	mcdata-info+xml"	Unique UDI identificion	TC 04 070 [0]	
Content-1D	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the MCPTT/MCVideo/MCD	TS 24.379 [9] clause 6.6.3.1	
	by the GC	ata Info XML MIME body; used as reference in the		
NAINAE is a set le a slei	MODIT	signature MIME body		
MIME-part-body	MCPTT-Info as described in Table 5.5.3.2.2-1			
	MCVideo-Info as			MCVIDEO
	described in Table 5.5.3.2.2-2			
	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			
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	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Resource-lists as	signature MIME body		
wiiwiz-part-body	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 -CALL
MIME-part-headers				
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	Signature Willvic Douy	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	

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 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 etablishment 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],				0 1141
Information Element Request-Line	Value/remark	Comment	Reference RFC 3261 [22]	Condition
Nequest-Line			RFC 5261 [22]	
Method	"MESSAGE"		• • • • • • • • • • • • • • • • • •	
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"			
Via			RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"			UDP
	"SIP/2.0/TCP"			TCP
sent-by				
host	IP address or FQDN	Either the UE's IP address or its home domain name		
port	protected server port of the UE	as assigned during registration		
via-branch	Value starting with 'z9hG4bK'			
From			RFC 3261 [22]	
addr-spec user-info and host	tsc_MCPTT_PublicSer viceId_Apx_MCPTT_CI ient_A_ID	The URI of the UE		
	px_MCVideo_Client_A	The URI of the UE		MCVIDEO
	px_MCData_Client_A_I D	The URI of the UE		MCDATA
port	any value if present			
tag To	any allowed value		RFC 3261 [22] RFC 5031 [54]	
addr-spec				
user-info and host		The URI of the SS		
	px_MCVideo_PublicSer viceId_A	The URI of the SS		MCVIDEO
	px_MCData_PublicSer viceId_A	The URI of the SS		MCDATA
port	not present			
tag	not present		DEC 2004 [00]	
Call-ID callid	any allowed value		RFC 3261 [22]	
Cseq	any anowed value		RFC 3261 [22]	
value	any allowed value		111 0 0201 [22]	
method	"MESSAGE"			
Max-Forwards	·		RFC 3261 [22]	
value	any allowed value	Non-zero value		
P-Access-Network-Info			RFC 7315 [52]	

	T -	T	T	ı
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-			MCVIDEO
	service.ims.icsi.mcvide			
	о"			
	"urn:urn-7:3gpp-			MCDATA
	service.ims.icsi.mcdata.			
	sds"			
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"		• •	
Content-Length	present in case of TCP		RFC 3261 [22]	
	and when there is a		0 020 . [22]	
	message body			
	(otherwise optional)			
value	any value	length of message-		
value	arry value	body		
Message-body		Douy	RFC 3261 [22]	
MIME body part		MCPTT/MCVideo/MCD	111 0 0201 [22]	
Willvie body part		ata Info		
MIME part bandara		ata iiiio		
MIME-part-headers MIME-Content-Type	"application/vnd.3gpp.			
Milvie-Content-Type				
	mcptt-info+xml"			MOVUDEO
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml"			1405.474
	"application/vnd.3gpp.			MCDATA
	mcdata-info+xml"			
Content-ID	any value	Unique URL identifying	TS 24.379 [9]	
		the	clause 6.6.3.1	
		MCPTT/MCVideo/MCD		
		ata Info XML MIME		
		body; used as		
		reference in the		
		signature MIME body		
MIME-part-body	MCPTT-Info as		TS 24.379 [9]	
	described in Table		clause F.1	
	5.5.3.2.1-1			
	MCVideo-Info as		TS 24.281 [86]	MCVIDEO
	described in Table		clause F.1	
	5.5.3.2.1-2			
	MCData-Info as			MCDATA
	described in Table			
	5.5.3.2.1-3			
MIME body part		Affiliation-Command		MCPTT
				OR
				MCVideo
MIME-part-headers				
MIME-Content-Type	"application/vnd.3gpp.			
	mcptt-affiliation-			
	command+xml"		<u> </u>	
	"application/vnd.3gpp.			
	mcvideo-affiliation-			
	command+xml"			
Content-ID	any value	Unique URL identifying	TS 24.379 [9]	
	,	the affiliation-command	clause 6.6.3.1	
		XML MIME body; used		
		as reference in the		
		signature MIME body		
MIME-part-body	MODDT Affiliation	<u> </u>	TS 24.379 [9]	
	I MCPP I-ATTILIATION-		1024.019191	
•	MCPPT-Affiliation- Command as described			
, ,	Command as described in Table 5.5.3.7-1		clause F.4	

1	MOV/:-I Affili-ti	T	TO 04 004 [00]	I
	MCVideo-Affiliation- Command as described in Table 5.5.3.7-2		TS 24.281 [86] clause F.4	
MIME body part	III Table 5.5.3.7-2	Resource lists	RFC 5366 [35]	PRIVATE- CALL OR
NAINAE mont boodone				MCD_1to1
MIME-part-headers	Hanniagtion/reserves			
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			RFC 3261 [22]	
			RFC 5031 [54]	
Method	"MESSAGE"			
Request-URI	Public user id	px_MCX_SIP_PublicUs		
	associated to the MC	erld_A_1 (in general)		
	service id			
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
	1017 (0.0 707)		RFC 3581 [55]	
sent-protocol[1]	"SIP/2.0/TCP"			
sent-by[1]		Address of the P-CSCF		
		that communicates with		
		the called party		
host	P-CSCF address of the	P-CSCF address as		
	SS	assigned to the UE via		
		NAS signalling or P-		
nort	protected comics post of	CSCF discovery		
port	protected server port of	as assigned during		
via-branch[1]	the SS Value assigned by the	registration		
via-branch[1]	SS starting with			
	'z9hG4bK'			
cont protocol[2]	"SIP/2.0/UDP"			
sent-protocol[2] sent-by[2]	31F/2.0/0DF			
host	"scscf.3gpp.org"			
	Value assigned by the	Caller's port number		
port	SS saligned by the	Caller's port number		
via-branch[2]	Value assigned by the			
via branon[2]	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			
[0]	SS starting with			
	'z9hG4bK'			
From			RFC 3261 [22]	
addr-spec				
user-info and host	tsc_MCPTT_PublicSer			
	viceld A			
	px_MCVideo_PublicSer			MCVIDEO
	viceId_A			
	px_MCData_PublicSer			MCDATA
	viceId_A			
port	not present			
tag	Value assigned by the			
	SS			
То			RFC 3261 [22]	
			RFC 5031 [54]	
addr-spec				
user-info and host	same URI as used as			
	Request URI		1	

Derivation Path: TS 24.229 [16],	clause A.2.1.4.7a, A.2.2.4.7	'a		
Information Element	Value/remark	Comment	Reference	Condition
port	not present			
tag	not present			
Call-ID			RFC 3261 [22]	
callid	Value assigned by the SS			
Cseq			RFC 3261 [22]	
value	Value assigned by the SS			
method	"MESSAGE"			
Max-Forwards			RFC 3261 [22]	
value	"67"	The recommended initial value is 70 in RFC 3261. Assuming 3 hops as according to the Via header this results in a value of 67 in the message sent to the UE		

Derivation Path: TS 24.229 [16],			Doforon	Condition
Information Element P-Asserted-Service	Value/remark	Comment	Reference	Condition
			RFC 6050 [31]	MCDATA
Service-ID	"urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			
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	"explicit"			
ac-value[2] feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcdata.			
req-param	"require"			
explicit-param	"explicit"			
P-Asserted-Identity			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
0 / //0	"application/vnd.3gpp. mcdata-info+xml"	1151 11 1151	TO 04 070 F01	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	J.g. sala. o miniz 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

	value/remark		Doforon	Condition
Information Element MIME-part-headers	value/remark	Comment	Reference	Condition
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	MCPPT-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				
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
MIME-part-headers				table

Information Element	Value/remark	Comment	Reference	Conditio
MIME-Content-Type	"application/vnd.3gpp. mcptt-location- info+xml"			
	"application/vnd.3gpp. mcvideo-location- info+xml"			MCVIDE
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	MCVIDE
MIME body part		SDS SIGNALLING PAYLOAD		MCDATA
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcdata-signalling"			
MIME-part-body	As described in Table 5.5.3.8.2-1		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 5.5.3.9-2		TS 24.282 [87]	
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-2		TS 24.379 [9]	

## 5.5.2.8 SIP NOTIFY

This message is sent by the SS.

**Table 5.5.2.8-1: SIP NOTIFY** 

Derivation Path: TS 24.229 [16]		C	Deference	Condition
Information Element	Value/remark	Comment	Reference	Condition
Request-Line	W 10 = 1 = 1 (II		RFC 3261 [22]	
Method	"NOTIFY"			
Request-URI	same URI as the UE			
	has provided earlier in			
	the Contact header of			
	the SUBSCRIBE			
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
sent-protocol[1]	"SIP/2.0/TCP"			
sent-by[1]				
host	P-CSCF address of the	P-CSCF address as		
	SS	assigned to the UE via		
		NAS signalling or P-		
		CSCF discovery		
port	protected server port of			
	the SS			
via-branch[1]	Value assigned by the			
	SS starting with			
	'z9hG4bK'			
sent-protocol[2]	"SIP/2.0/UDP"			
sent-by[2]				
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]				
host	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		D=0	
То	ļ.,	1 1151 40 01	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		
	in From tag of the	(from the UE's point of		
0.11.10	SUBSCRIBE message	view)	DE0 000 : 100	
Call-ID			RFC 3261 [22]	
callid	same as value received			
	in SUBSCRIBE			
0	message		DE0 0004 500	
Cseq	1		RFC 3261 [22]	
value	value of CSeq sent by			
	the SS within its			
	previous request in the			
	same dialog but			
	increased by one			
method	"NOTIFY"		DE0 222 : 222	
Contact			RFC 3261 [22]	
addr-spec				

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
user-info and host	"sip:" &		110.0101100	CONFIG
user into and nost	tsc_MCX_CMS_Hostna me			0014110
	"sip:" &			GROUPC
	tsc_MCX_GMS_Hostn ame			ONFIG
port	not present			
Event			RFC 6665 [39]	
			RFC 3842 [61]	
event-type	"presence"			PRESENC E-EVENT
	"xcap-diff"			CONFIG. GROUPC ONFIG
Max-Forwards			RFC 3261 [22]	
value	"67"	The recommended initial value is 70 in RFC 3261. Assuming 3 hops as according to the Via header this results in a value of 67 in the message sent to the UE		
Subscription-State			RFC 6665 [39]	
substate-value	"active"			
expires	"7200"			
Content-Type			RFC 3261 [22] RFC 3842 [61]	
media-type	"multipart/mixed"			
	"application/xcap- diff+xml"			CONFIG. GROUPC ONFIG
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
Message-body			RFC 3261 [22]	
xcap-diff document	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

# 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	value/lellialk	Comment	I/GIGIGIICG	Condition
Method	"OPTIONS"			
Request-Disposition	px_MCPTT_Client_A_I			
	D px_MCVideo_Client_A			MCVIDEO
	_ID			INICAIDEO
	px_MCData_Client_A_I			MCDATA
SIP-Version	"SIP/2.0"			
Via	GII 72.0		RFC 3261 [22]	
			RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"			
sent-by	any allowed value	IP address or FQDN and protected server port of the UE		
via-branch	any allowed value	Value starting with 'z9hG4bK'		
From		23110-1511	RFC 3261 [22]	
addr-spec	px_MCPTT_Client_A_I D			
	px_MCVideo_Client_A _ID			MCVIDEO
	px_MCData_Client_A_I D			MCDATA
tag	"1"			
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec	tsc_MCPTT_PublicSer viceId_A			
	px_MCVideo_PublicSer viceId_A			MCVIDEO
	px_MCData_PublicSer viceId_A			MCDATA
Call-ID			RFC 3261 [22]	
Callid	same value as in the INVITE			
CSeq	INVIIL		RFC 3261 [22]	
value	value of CSeq sent by		141 0 0201 [22]	
	the SS within its previous request in the same dialog but increased by one			
Method	"INFO"			
Contact			RFC 3261 [22 RFC 3840 [33]	
addr-spec	SIP URI			
user-info and host	IP address or FQDN (px_MCPTT_Client_A_ID)			
	IP address or FQDN (px_MCVideo_Client_A ID)			MCVIDEO
	IP address or FQDN (px_MCData_Client_A_ ID)			MCDATA
feature-param	"+g.3gpp.mcptt"	This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Push To Talk (MCPTT) communication.		

when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Video (MCVideo) (MCVide					
when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Video (MCVideo) communication.  **g.3gpp.mcdata.sds**  This media feature tag when used in a SIP response indicates that the function sending the SIP message supports Mission Critical Data (MCData) communication.  This media feature tag when used in a SIP response indicates that the function sending the SIP message supports Mission Critical Data (MCData) communication.  This URN indicates that the device has the capabilities to support the mission critical push to talk (MCPTT) service.  "*g.3gpp.icsi-ref-um:um-7:3gpp-service.ims.icsi.mcvide of the mission critical video (MCVideo) service.  "*g.3gpp.icsi-ref-um:um-7:3gpp-service.ims.icsi.mcvide of the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This lumin dicates that the device has the capabilities to support the mission critical data (MCData) service.  This feature tag indicates that the device supports audio as a streaming media type.  feature-param  "video"  This feature tag indicates that the device supports video as a streaming media type.  feature-param  "text"  This feature tag indicates that the device supports video as a streaming media type.		"+g.3gpp.mcvideo"	This media feature tag		MCVIDEO
request or a SIP response indicates that the function sending the SIP message supports Mission Critical Video (MCVideo) communication.  *+g.3gpp.mcdata.sds*  This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Data (MCData) communication.  Feature-param  *+g.3gpp.icsi-refl-um:um-7:3gpp-service.ims.icsi.mcptt*  *+g.3gpp.icsi-refl-um:um-7:3gpp-service.ims.icsi.mcvide or "+g.3gpp.icsi-refl-um:um-7:3gpp-service.ims.icsi.mcvide or "+g.3gpp.icsi-refl-um:um-7:3gpp-service.ims.icsi.mcvide or "his URN indicates that the device has the capabilities to support the mission critical push to talk (MCPTT) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical data (MCData) service.  This feature tag indicates that the device bas the capabilities to support the mission critical data (MCData) service.  This feature tag indicates that the device supports audio as a streaming media type.  feature-param  *video*  This feature tag indicates that the device supports video as a streaming media type.  feature-param  *text*  This feature tag indicates that the device supports video as a streaming media type.  feature-param  *text*  This feature tag indicates that the device supports video as a streaming media type.					
response indicates that the function sending the SIP message supports Mission Critical Video (MCVideo) communication.  "+g.3gpp.mcdata.sds" This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Data (MCData) communication.  feature-param "+g.3gpp.icsi-ref=urm.urm-7:3gpp-service.ims.icsi.mcptt" service. This URN indicates that the device has the capabilities to support the mission critical push to talk (MCPTT) service.  "+g.3gpp.icsi-ref=urm.urm-7:3gpp-service.ims.icsi.mcvide o" This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  "+g.3gpp.icsi-ref=urm.urm-7:3gpp-service.ims.icsi.mcvide o" This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  "+g.3gpp.icsi-ref=urm.urm-7:3gpp-service.ims.icsi.mcdata.sds" This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This IRN indicates that the device has the capabilities to support the mission critical video (MCData) service.  Feature-param "audio" This feature tag indicates that the device supports audio as a streaming media type.  Feature-param "video" This feature tag indicates that the device supports video as a streaming media type.  Feature-param "text" This feature tag indicates that the device supports video as a streaming media type.					
the function sending the SIP message supports Mission Critical Video (MCVideo) communication.  "+g.3gpp.mcdata.sds" This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Data (MCData) communication.  feature-param "+g.3gpp.icsi-ref=um: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=um:urn-7:3gpp-service.ims.icsi.mcvide o" "+g.3gpp.icsi-ref=um:urn-7:3gpp-service.ims.icsi.mcdata. sds" This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  "+g.3gpp.icsi-ref=um:urn-7:3gpp-service.ims.icsi.mcdata. sds" This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  "+g.3gpp.icsi-ref=um:urn-7:3gpp-service.ims.icsi.mcdata. sds" This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This feature tag indicates that the device supports video as a streaming media type.  feature-param "video" This feature tag indicates that the device supports video as a streaming media type.  feature-param "text" This feature tag indicates that the device supports video as a streaming media type.					
the SIP message supports Mission Critical Video (MCVideo) (CMCVideo) (MCVideo) (MCDI (MCDI (MCVideo) (MCDI (MC					
supports Mission Critical Video (MCVideo) (MCVideo) communication. This media feature tag when used in a SIP response indicates that the function sending the SIP message supports Mission Critical Data (MCData) communication.  This URN indicates that the device has the capabilities to support the mission critical push to talk (MCPTT) service.  "+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o" "+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o" "+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 video (MCVideo) service.  "+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 video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  "+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 video (MCVideo) service.  "+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. (MCData) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  "+g.3gpp.icsi- ref=urn:urn-7:3gpp- service. "+g.3gpp.icsi- ref=urn:urn-7:3gpp- service. "-g.3gpp.icsi- ref=urn:urn-7:					
Critical Video (MCVideo) (MCVideo) (Communication. This media feature tag when used in a SIP response indicates that the function sending the SIP message supports Mission Critical Data (MCData) communication. This URN indicates that the device has the capabilities to support the mission critical push to talk (MCPTT) service. "+g.3gpp.icsi-ref=urn.urn-7:3gpp-service.ims.icsi.mcvide o" "+g.3gpp.icsi-ref=urn.urn-7:3gpp-service.ims.icsi.mcvide o" "+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. "+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 video (MCVideo) service. This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service. This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service. This URN indicates that the device has the capabilities to support the mission critical video (MCData) service. This Geature tag indicates that the device supports audio as a streaming media type.  feature-param "video" This feature tag indicates that the device supports video as a streaming media type.  feature-param "text" This feature tag indicates that the device supports video as a streaming media type.					
(MCVideo) communication.     "+g.3gpp.mcdata.sds"   This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Data (MCData) communication.     feature-param					
"+g.3gpp.mcdata.sds"   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 Data (MCData) communication.    feature-param					
"+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.  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"  "+g.3gpp.icsi-ref=urn:urn-7:3gpp-service.ims.icsi.mcvide o"  "+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 push to talk (MCPTT) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.  This feature tag indicates that the device supports video as a streaming media type.  This feature tag indicates that the device supports text as device supports text as					
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		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

Information Element	clause A.2.1.4.10, A2.2.4.10		Dofores	Condition
Status-Line	Value/remark	Comment	Reference	Condition
Method	"PRACK"		RFC 3261 [22]	
Request-URI	same URI as the SS			
Nequest-ON	has sent earlier in the			
	Contact header of a			
	response within the			
	same dialog			
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
sent-protocol	"SIP/2.0/UDP"			UDP
	"SIP/2.0/TCP"			TCP
sent-by	same value as in 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	O G G G G G G G G G G G G G G G G G G G		RFC 3261 [22]	
addr-spec	same value as in the	Local URI of the dialog	0 0201 [22]	
addi opec	INVITE message	(from the UE's point of		
		view)		
tag	same value as in the	Local tag of the dialog		
	INVITE	ID (from the UE's point		
		of view)		
То			RFC 3261 [22]	
addr-spec	same value as in the	Remote URI of the		
	INVITE	dialog (from the UE's		
	<u> </u>	point of view)		
tag	same tag as in the To-	Remote tag of the		
	header of the response which has established	dialog ID (from the UE's point of view)		
	the dialog	point of view)		
Call-ID	the dialog		RFC 3261 [22]	
callid	same value as in		THE O SECT [EE]	
dama	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	
RAck			RFC 3261 [22]	
response-num	same value as in RSeq			
	header of the reliable			
anna num	response			
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	Valadiromank	Commone	RFC 3261 [22]	Condition
•			RFC 5031 [54]	
Method	"PUBLISH"			
Request-URI	tsc_MCPTT_PublicSer viceId_A	The public service identity identifying the originating participating MCPTT function serving the MCPTT user		
	px_MCVideo_PublicSer viceId_A	The public service identity identifying the originating participating MCVideo function serving the MCVideo user		MCVIDEO
	px_MCData_PublicSer viceId_A	The public service identity identifying the originating participating MCData function serving the MCData user		MCDATA
SIP-Version	"SIP/2.0"			
Route	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	"lr"			
addr-spec[2]	SIP URI			
user-info and host	"scscf.3gpp.org"			
port	not present			
uri-parameters <b>Via</b>	"lr"		RFC 3261 [22]	
sent-protocol	"SIP/2.0/UDP" "SIP/2.0/TCP"		RFC 3581 [55]	UDP TCP
sent-by				-
user-info and host	IP address or FQDN	Either the UE's IP address or its home domain name		
port	protected server port of the UE	as assigned during registration		
via-branch	Value starting with 'z9hG4bK'			
From			RFC 3261 [22]	
addr-spec user-info and host	Default public user id (px_MCX_SIP_PublicU serId_A_1)			
port	any value of present			
tag	any value			
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec				
user-info and host	same URI as used as Request URI			
port	not present		ļ	
tag Expires	not present		RFC 3261 [22] RFC 3903 [43]	
delta-seconds	"4294967295"		1(1 0 0000 [40]	
Cseq			RFC 3261 [22]	
-				

Derivation Path: TS 24.229 [16]	clause A.2.1.4.10A, A.2.2.4.	10A		
Information Element	Value/remark	Comment	Reference	Condition
value	any allowed value	1		
method	"PUBLISH"			
Call-ID			RFC 3261 [22]	
callid	any allowed value		0 0201 [22]	
Max-Forwards	arry anowed value		RFC 3261 [22]	
value	any allowed value		10 0 0201 [22]	
P-Access-Network-Info	arry allowed value		RFC 7315 [52]	
			RFC 7313 [52] RFC 7913 [51]	
access-net-spec	Access network technology and, if			
	applicable, the cell ID			
Event			RFC 3903 [43]	
event-type	"presence"			PRESENC E-EVENT
	"poc-settings"			CONFIG OR POC- SETTINGS -EVENT
P-Preferred-Service			RFC 6050 [31]	
Service-ID	"urn:urn-7:3gpp-		TS 24.379 [9]	
COLVIDO ID	service.ims.icsi.mcptt"		clause 7.2.1A	
	"urn:urn-7:3gpp-		TS 24.281 [86]	MCVIDEO
	service.ims.icsi.mcvide o"		clause 7.2.1A	WO VIDEO
	"urn:urn-7:3gpp- service.ims.icsi.mcdata		TS 24.282 [87] clause 7.2.1A	MCDATA
Accept			RFC 3261 [22]	PRESENC E-EVENT
media-range	"application/pidf+xml"			
port	not present			
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"			
Content-Length	present in case of TCP and when there is a message body (otherwise optional)length of message-body		RFC 3261 [22]	
value	any value			
Message-body	1 ′		RFC 3261 [22]	
MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-headers				
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	Signature minus body	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

Information Element	Value/remark	Comment	Reference	Condition
	MCData-Info as described in Table 5.5.3.2.1-3		TS 24.282 [87] clause D.1	MCDATA
MIME body part		PIDF		PRESENCE-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	MCVIDE
	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 within a dialog.

**Table 5.5.2.12-1: SIP REFER** 

Information Element Request-Line  Method Request-URI  SIP-Version Via	"REFER"  px_MCPTT_session_B _ID  px_MCVideo_session_	Comment	Reference RFC 3261 [22] RFC 5031 [54]	Condition
Method Request-URI SIP-Version	px_MCPTT_session_B _ID			
Request-URI SIP-Version	px_MCPTT_session_B _ID			
SIP-Version	_ID			1
	_	•		
	px_MCVideo_session_			
				MCVIDEO
	B_ID			
	px_MCData_session_B			MCDATA
	_ID			
Via	"SIP/2.0"		252 2524 5523	
			RFC 3261 [22]	
a ant musta cal	"CID/2 0/LIDD"		RFC 3581 [55]	LIDD
sent-protocol	"SIP/2.0/UDP" "SIP/2.0/TCP"			UDP TCP
cont by	SIP/2.0/TCP			TCP
sent-by host	IP address or FQDN	Either the UE's IP		
nost	IP address of FQDN	address or its home		
		domain name		
port	protected server port of	aomain name		
port	the UE			
via-branch	Value starting with			
	'z9hG4bK'			
Route			RFC 3261 [22]	
addr-spec[1]	SIP URI		• •	
user-info and host	P-CSCF address of the	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"		DE0 0004 [00]	
From	0 1151 (4 115	1 1151 (4 5 1	RFC 3261 [22]	
addr-spec	Same URI of the UE as	Local URI of the dialog (from the UE's point of		
	used earlier in the dialog	view)		
tag	Same tag of the UE as	Local tag of the dialog		
tag	used earlier in the	ID (from the UE's point		
	dialog	of view)		
То	aidiog	or view)	RFC 3261 [22]	
			RFC 5031 [54]	
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			
	INVITE creating the			
00	diaog		DEC 2004 (202	
CSeq	value of OO = 1.1		RFC 3261 [22]	
value	value of CSeq sent by			
	the UE within its previous request in the			
	same dialog but			
	increased by one			
method	"REFER"			
P-Preferred-Identity	1121211		RFC 3325 [32]	
PPreferredID-value	px_MCPTT_ID_User_A	The public user identity	0 0020 [02]	
ISIGII GAID VAIGO	px_MCVideo_ID_User_	The public user identity		MCVIDEO
		l pas acor identity	I	,

Information Element	clause A.2.1.4.11, A.2.2.4.11  Value/remark	Comment	Reference	Condition
	px_MCData_ID_User_	The public user identity		MCDATA
	A			
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	px_MCPTT_session_B	The session identity of		
	_ID	the pre-established		
		session		
	px_MCVideo_session_	The session identity of		MCVIDEO
	B_ID	the pre-established		
	1400 : 0	session		MODATA
	px_MCData_session_B	The session identity of		MCDATA
	_ID	the pre-established		
Poquiro		session	DEC 2264 [20]	
Require			RFC 3261 [22] RFC 3312 [56]	
			RFC 3312 [56]	
option-tag	"sec-agree"		1150 3328 [33]	
option-tag	"multiple-refer"			
Proxy-Require	multiple-relei		RFC 3261 [22]	
Floxy-Require			RFC 3201 [22]	
option-tag	"sec-agree"		10 0029 [00]	
Contact	3ec-agree		RFC 3261 [22	
Contact			RFC 3840 [33]	
addr-spec	SIP URI		2 00 10 [00]	
user-info and host	IP address or FQDN			
acci illo ana neci	(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_ ID)			
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)		
	"+g.3gpp.mcvideo"	communication. This media feature tag		MCVIDEO
	ту.оурр.пючиео	when used in a SIP		INICAIDEO
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports Mission		
		Critical Video		
		(MCVideo)		
	1	communication.	1	

Derivation Path: TS 24.229 [16]	clause A.2.1.4.11, A.2.2.4.11			
Information Element	Value/remark	Comment	Reference	Condition
	"+g.3gpp.mcdata.sds"	This media feature tag		MCDATA
		when used in a SIP		
		request or a SIP		
		response indicates that the function sending		
		the SIP message		
		supports Mission		
		Critical Data (MCData)		
		communication.		
feature-param	"+g.3gpp.icsi-	This URN indicates that		
·	ref=urn:urn-7:3gpp-	the device has the		
	service.ims.icsi.mcptt"	capabilities to support		
		the mission critical		
		push to talk (MCPTT)		
		service.		140) ((DE0
	"+g.3gpp.icsi-	This URN indicates that		MCVIDEO
	ref=urn:urn-7:3gpp- service.ims.icsi.mcvide	the device has the		
	o"	capabilities to support the mission critical		
		video (MCVideo)		
		service.		
	"+g.3gpp.icsi-	This URN indicates that		MCDATA
	ref=urn:urn-7:3gpp-	the device has the		
	service.ims.icsi.mcdata.	capabilities to support		
	sds"	the mission critical data		
		(MCData) service.		
feature-param	"audio"	This feature tag		MCPTT
		indicates that the		OR
		device supports audio		MCVIDEO
		as a streaming media		
feature-param	"video"	type. This feature tag		MCVIDEO
leature-param	Video	indicates that the		WICVIDEO
		device supports video		
		as a streaming media		
		type.		
feature-param	"text"	This feature tag		MCDATA
		indicates that the		
		device supports text as		
		a streaming media		
Defer To		type.	DEC 2545 [20]	
Refer-To addr-spec	a Content-ID ("cid")		RFC 3515 [38]	
auur-spec	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			
10	5366		DE0	
Max-Forwards		Nian and	RFC 3261 [22]	
Value	any allowed value	Non-zero value	DEC 7045 [50]	
P-Access-Network-Info	Access notices		RFC 7315 [52]	
access-net-specs	Access network technology and, if			
	applicable, the cell ID			
P-Preferred-Service	applicable, the cell in		RFC 6050 [31]	
Service-ID	"urn:urn-7:3gpp-		5555 [61]	
	service.ims.icsi.mcptt"			
	"urn:urn-7:3gpp-			MCVIDEO
	service.ims.icsi.mcvide			
	о"			
	"urn:urn-7:3gpp-			MCDATA
	service.ims.icsi.mcdata			
	"	1		

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Accept-Contact	Value, on an	Common	RFC 3841 [29]	
ac-value[1]			14. 0 0011 [20]	
feature-param	"+g.3gpp.icsi-			
round parami	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcvide			
	о"			
	"+g.3gpp.icsi-			MCDATA
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcdata.			
	sds"			
req-param	"require"			
explicit-param	"explicit"			
ac-value[2]				
feature-param	"+g.3gpp.mcptt"			
2	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA
req-param	"require"			
explicit-param	"explicit"			
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"		0 0021 [00]	
Content-Length	present in case of TCP		RFC 3261 [22]	
Contont Longin	and when there is a		141 0 0201 [22]	
	message body			
	(otherwise optional)			
Value	any value	length of message-		
value	any value	body		
Message-body			RFC 3261 [22]	
MIME body part		SDP message	0 0201 [22]	
MIME-part-headers				
Content-Type	"application/sdp"		RFC 4566 [27]	
MIME-part-body	SDP Message as		14. 0 1000 [27]	
wiiwiz pair body	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			
MIME body part		MCPTT/MCVideo/MCD		
<b>,</b> ,		ata Info		
MIME-part-headers				
Content-Type	"application/vnd.3gpp.			
Content Type	mcptt-info+xml"			
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml"			
	"application/vnd.3gpp.			MCDATA
	mcdata-info+xml"			
Content-ID			TO 04 070 [0]	
	any value	Unique URL identifying	15 24.379  9	
Contont 12	any value	Unique URL identifying the	TS 24.379 [9] clause 6.6.3.1	
COMOIN ID	any value			
CONONCID	any value	the		
CONONCID	any value	the MCPTT/MCVideo/MCD		
Comon is	any value	the MCPTT/MCVideo/MCD ata Info XML MIME		
Comon 15	any value	the MCPTT/MCVideo/MCD ata Info XML MIME body; used as		
MIME-part-body	any value  MCPTT-Info as	the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the		
		the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the	clause 6.6.3.1	
	MCPTT-Info as	the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the	clause 6.6.3.1	
	MCPTT-Info as described in Table	the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the	clause 6.6.3.1	MCVIDEO
	MCPTT-Info as described in Table 5.5.3.2.1-1	the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the	TS 24.379 [9] clause F.1	MCVIDEO

Derivation Path: TS 24.229 [16]				
Information Element	Value/remark	Comment	Reference	Condition
	MCData-Info as described in Table 5.5.3.2.1-3		TS 24.282 [87] clause D.1	MCDATA
MIME body part		Resource list	RFC 5366 [35]	PRIVATE- CALL
MIME-part-headers				
Content-Type	"application/resource- lists+xml"			
Content-ID	any value	Unique URL identifying the Resource-lists XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Resource-lists as described in Table 5.5.3.3.1-1			
	Resource-lists as described in Table 5.5.3.3.1-2			MCVIDEO
	Resource-lists as described in Table 5.5.3.3.1-3			MCDATA
MIME body part		Location info		MCPTT OR MCVIDEO
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]	

# 5.5.2.13 SIP REGISTER

This message is sent by the UE.

Table 5.5.2.13-1: SIP REGISTER

Derivation Path: TS 24.229 [16] of Information Element	Value/remark		Doforonce	Condition
	value/remark	Comment	Reference	Condition
Request-Line	"DECICTED"		RFC 3261 [22]	
Method	"REGISTER"	5 " " 115		
Request-URI	SIP URI of the home	Depending on the UE		
	domain name	configuration the UE		
	(px_MCX_SIP_HomeD	may know the home		
	omain_A) if available at	domain name of the		
	the UE or derived from	SIP core (e.g. when		
	the IMSI otherwise	there is an ISIM) or the		
		UE needs to derive it		
		from the IMSI as		
		according to		
		23.003 [69] clause 13.2		
		(e.g. when there is a		
		USIM only)		
SIP-Version	"SIP/2.0"		DEC 2224 (222)	
Route	Not present		RFC 3261 [22]	
Via			RFC 3261 [22]	
			RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"	UE uses UDP for		UDP
	#01D/0.6/7707	registration		T05
	"SIP/2.0/TCP	UE uses TCP for		TCP
		registration		
sent-by	ID - dda 500M			
host	IP address or FQDN			OID DES
port	any value if present			SIP_REGI
				STER_INI
				TIAL
	any value if present			TCP
	protected server port of			UDP
	the UE when using			
	UDP			
via-branch	Value starting with			
From	'z9hG4bK'		DEC 2264 [22]	
From			RFC 3261 [22]	
addr-spec	a a mana a valua a a in the a			
user-info and host	same value as in the initial REGISTER			
	Default public user id	Depending on the UE		SIP_REGI
	(px_MCX_SIP_PublicU	configuration the UE		STER_INI
	serId_A_1) if available	may know the default		TIAL
	at the UE or derived	public user id (e.g.		
	from the IMSI otherwise	when there is an ISIM)		
		or the UE needs to		
		derive it from the IMSI		
		as according to		
		23.003 [69]		
		clause 13.4B (e.g.		
		when there is a USIM		
	1	only)		
port	not present			
tag	any value			
То	+			
addr-spec	same value as in From- header			
tag	Not present			
Contact	1.0. p. 000 in		RFC 3261 [22]	
addr-spec	SIP URI			
user-info and host	IP address or FQDN			
port	any value if present			SIP_REGI
Port	any value ii present			STER_INI
				TIAL
	protected server port of			
	the UE			

	Г	T =	T	
	"+g.3gpp.mcvideo"	This media feature tag		MCVIDEO
		when used in a SIP		
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports Mission		
		Critical Video		
		(MCVideo)		
		communication.		
	"+g.3gpp.mcdata.sds"	This media feature tag		MCDATA
	+g.sgpp.mcdata.sus			MCDATA
		when used in a SIP		
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports Mission		
		Critical Data (MCData)		
		communication.		
feature-param	"+g.3gpp.icsi-			
•	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-	This URN indicates that		MCVIDEO
	ref=urn:urn-7:3gpp-	the device has the		
	service.ims.icsi.mcvide	capabilities to support		
	o"	the mission critical		
	O O			
		video (MCVideo)		
		service.		
	"+g.3gpp.icsi-	This URN indicates that		MCDATA
	ref=urn:urn-7:3gpp-	the device has the		
	service.ims.icsi.mcdata.	capabilities to support		
	sds"	the mission critical data		
		(MCData) service.		
feature-param	"audio"			MCPTT
·				OR
				MCVIDEO
feature-param	"video"	This feature tag		MCVIDEO
,		indicates that the		
		device supports video		
		as a streaming media		
		type.		
footure param	"text"	This feature tag		MCDATA
feature-param	text	indicates that the		WICDATA
		device supports text as		
		a streaming media		
	"	type.		
feature-param	"expires=600000" if			
	present			
Expires	Present if no expires		RFC 3261 [22]	
	parameter in Contact		RFC 3903 [43]	
	header	<u> </u>		
	"			
value	"600000"			
	"600000"		RFC 3261 [22]	
value Require	"600000"			
Require			RFC 3261 [22] RFC 3329 [53]	
Require option-tag	"600000" "sec-agree"		RFC 3329 [53]	
Require			RFC 3329 [53] RFC 3261 [22]	
option-tag Proxy-Require	"sec-agree"		RFC 3329 [53]	
option-tag Proxy-Require option-tag			RFC 3329 [53] RFC 3261 [22] RFC 3329 [53]	
option-tag Proxy-Require	"sec-agree"		RFC 3329 [53]  RFC 3261 [22]  RFC 3329 [53]  RFC 3261 [22]	
option-tag Proxy-Require option-tag	"sec-agree"		RFC 3329 [53]  RFC 3261 [22] RFC 3329 [53]  RFC 3261 [22] RFC 6442 [62]	
option-tag Proxy-Require  option-tag Supported	"sec-agree"  "sec-agree"		RFC 3329 [53]  RFC 3261 [22]  RFC 3329 [53]  RFC 3261 [22]	
option-tag Proxy-Require  option-tag Supported  option-tag	"sec-agree"  "sec-agree"  "path"		RFC 3329 [53]  RFC 3261 [22] RFC 3329 [53]  RFC 3261 [22] RFC 6442 [62]	
option-tag Proxy-Require  option-tag Supported  option-tag option-tag option-tag	"sec-agree"  "sec-agree"		RFC 3329 [53]  RFC 3261 [22] RFC 3329 [53]  RFC 3261 [22] RFC 6442 [62] RFC 4488 [36]	
option-tag Proxy-Require  option-tag Supported  option-tag option-tag option-tag Cseq	"sec-agree"  "sec-agree"  "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			
	"DECLOTED"			
method	"REGISTER"			
Call-ID			RFC 3261 [22]	
callid	any value			
Security-Client			RFC 7315 [52]	
mechanism-name	"ipsec-3gpp"		[]	
algorithm	"hmac-sha-1-96"			
protocol	"esp" (if present)			
mode	"trans" (if present)			
encrypt-algorithm	"des-ede3-cbc" or "aes- cbc"			
spi-c	SPI number of the			
	inbound SA at the			
	protected client port			
spi-s	SPI number of the			
	inbound SA at the			
	protected server port			
port-c	protected client port			
port-s	protected server port			
			DEC 2220 [52]	CID DECI
Security-Verify	Not present		RFC 3329 [53]	SIP_REGI
				STER_INI
<u> </u>				TIAL
Security-Verify			RFC 3329 [53]	
sec-mechanism	same value as Security			
occ modiamom	Server header sent by			
	SS			015 5501
Authorization			RFC	SIP_REGI
			2617 [72],	STER_INI
			RFC 3310 [96]	TIAL
username	Private user id	Depending on the UE		
doomano	(px_MCX_SIP_Private	configuration the UE		
	UserId_A) if available	may know the private		
	at the UE or derived	public user id (e.g.		
	from the IMSI otherwise	when there is an ISIM)		
		or the UE needs to		
		derive it from the IMSI		
		as according to		
		23.003 [69] clause 13.3		
		(e.g. when there is a		
		USIM only)		
realm	same home domain			
	name as used in			
	Request-URI			
nonce	""	Empty string		
	same SIP-URI as used	Linky sung		
digest-uri				
	as Request-URI			
opaque	any value if present			
qop	any value if present			
cnonce	any value if present			
nc	any value if present			
algorithm	any value if present	Frank of '		
response	""	Empty string		
Authorization			RFC	
			2617 [72],	
			RFC 3310 [96]	
username	same value as for		[]	
additiatile	condition			
	SIP_REGISTER_INITI			
	AL			
realm	same value as received			
	in the realm directive in			
	the WWW Authenticate			
	header sent by SS			

			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"		<b>TO</b> 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

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Request-Line	Value/Terrial K	Comment	RFC 3261 [22]	Condition
rtoquost Emo			RFC 5031 [54]	
Method	"SUBSCRIBE"			
Request-URI	tsc_MCPTT_PublicSer viceId_A	The public service identity identifying the		
		originating participating MCPTT function serving the MCPTT		
	my MCV/idea DublicCom	user		MCV/IDEO
	px_MCVideo_PublicSer viceId A	The public service identity identifying the		MCVIDEO
	Vicola_/(	originating participating		
		MCVideo function		
		serving the MCVideo user		
	px_MCData_PublicSer	The public service		MCDATA
	viceId_A	identity identifying the originating participating		
		MCData function		
		serving the MCData		
	"sip:" &	SIP URI of the CMS's	TS 24.484 [14]	CONFIG
	tsc_MCX_CMS_Hostna	domain name: public	clause 6.3.13.	
	me	service identity (PSI) for performing	2.2	
		subscription proxy		
		function of the CMS		
	tsc_MCX_GMSURI	public service identity	TS 24.481 [11]	GROUPC
		(PSI) for performing	clause 6.3.13.	ONFIG
		subscription proxy function of the GMS as	2.1	
		configured in the		
		<gms-uri> element of</gms-uri>		
		the initial UE		
SIP-Version	"SIP/2.0"	configuration		
Route	OII 72.0		RFC 3261 [22]	
addr-spec[1]	SIP URI		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
user-info and host	P-CSCF address of the	P-CSCF address as		
	SS	assigned to the UE via NAS signalling or P- CSCF discovery		
port	protected server port of	as assigned during		
	the SS	registration		
uri-parameters	"Ir"			
addr-spec[2] user-info and host	SIP URI "scscf.3gpp.org"			
port	not present			
uri-parameters	"Ir"			
Via			RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"			UDP
	"SIP/2.0/TCP"			TCP
sent-by	ID II SOS:	Eta a DELLE		
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				

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
user-info and host	Default public user id (px_MCX_SIP_PublicU	Common	1101010110	Containen
	serId_A_1)			
port	not present			
tag	any value			
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec				
user-info and host	same URI as used as Request URI			
port	not present			
tag	not present			
Contact			RFC 3261 [22]	
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"	This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Video (MCVideo) communication.		MCVIDEO
	"+g.3gpp.mcdata.sds"	This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Data (MCData) communication.		MCDATA
feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcptt"			
	"+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

Derivation Path: TS 24.229 [16]				
Information Element	Value/remark	Comment	Reference	Condition
Expires			RFC 3261 [22] RFC 3903 [43]	
value	any value			
Require			RFC 3261 [22] RFC 3329 [53]	
option-tag	"sec-agree"		• •	
Proxy-Require			RFC 3261 [22] RFC 3329 [53]	
option-tag	"sec-agree"			
Cseq			RFC 3261 [22]	
value	any allowed value			
method	"SUBSCRIBE"			
Call-ID			RFC 3261 [22]	
callid	any allowed value			
Max-Forwards			RFC 3261 [22]	
value	any allowed value	Non-zero value	550	
P-Access-Network-Info			RFC 7315 [52] RFC 7913 [51]	
access-net-spec	Access network	Access network		
	technology and, if	technology and, if		
Event	applicable, the cell ID	applicable, the cell ID	DEC 6665 [20]	
	"presence"		RFC 6665 [39]	
event-type	"xcap-diff"			CONFIG
	хсар-шп			GROUPC ONFIG
	"poc-settings"			MCDATA
Accept			RFC 3261 [22]	
media-range	"application/pidf+xml"			
	"application/xcap- diff+xml"			CONFIG, GROUPC ONFIG
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
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"		[]	
Content-Length	present in case of TCP and when there is a message body (otherwise optional)		RFC 3261 [22]	
value	any value	length of message- body		
Message-body			RFC 3261 [22]	
MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-info+xml"			140) ((2-2)
	"application/vnd.3gpp. mcvideo-info+xml"			MCVIDEO MCDATA
	"application/vnd.3gpp. mcdata-info+xml"			IVICDATA

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Content-ID	any value	Unique URL identifying	TS 24.379 [9]	
		the	clause 6.6.3.1	
		MCPTT/MCVideo/MCD		
		ata Info XML MIME		
		body; used as		
		reference in the		
		signature MIME body		
MIME-part-body	MCPTT-Info as		TS 24.379 [9]	
	described in Table		clause F.1	
	5.5.3.2.1-1			
	MCVideo-Info as		TS 24.281 [86]	MCVIDEO
	described in Table		clause F.1	
	5.5.3.2.1-2			
	MCData-Info as		TS 24.282 [87]	MCDATA
	described in Table		clause D.1	
	5.5.3.2.1-3			
MIME body part		SIMPLE-FILTER		PRESENC
> r				E-EVENT
MIME-part-headers				
Content-Type	"application/simple-			
7 F -	filter+xml"			
MIME-part-body	SIMPLE-FILTER as		TS 24.379 [9]	
	described in Table		clause 9.3.2	
	5.5.3.6-1			
	SIMPLE-FILTER as		TS 24.281 [86]	MCVIDEO
	described in Table		clause 8.3.2	····OVIDEO
	5.5.3.6-2		514450 0.0.2	
	SIMPLE-FILTER as		TS 24.282 [87]	MCDATA
	described in Table		clause 8.4.2	I WODATA
	5.5.3.6-3		51443C 0.7.2	
MIME body part	0.0.0.0	Resource-lists		CONFIG,
mivic body part		1.0000100 11013		GROUPC
				ONFIG
MIME-part-headers				5
Content-Type	"application/resource-			
30	lists+xml"			
Content-ID	Unique id in format of a	Unique URL identifying	TS 24.379 [9]	
JOHOIR ID	Message-ID assigned	the Resource-lists XML	clause 6.6.3.1	
	by the SS	MIME body; used as	JIQU3C 0.0.3. I	
	by the GG	reference in the		
		signature MIME body		
MIME-part-body	Resource-lists as	Signature Milvie body		
wiiwi⊏-part-body				
	described in Table			
	5.5.3.3.1-1			MOVUDEO
	Resource-lists as			MCVIDEO
	described in Table			
	5.5.3.3.1-2			MODATA
	Resource-lists as			MCDATA
	described in Table			
NAINAE I. I.	5.5.3.3.1-3	MALIZEV	DE0 2222 12 12	00112:0
MIME body part		MIKEY	RFC 3830 [24]	CONFIG,
				GROUPC
N41145				ONFIG
MIME-part-headers				
Content-Type	"application/mikey"			
MIME-part-body	MIKEY message as	MIKEY message,	TS 33.180 [94]	
	described in Table	containing the CSK		
	5.5.9.1-1			
MIME body part		Signature		
	1	· · · · · · · · · · · · · · · · · · ·		
MIME-part-headers				
	"application/vnd.3gpp.		TS 24.379 [9]	

Derivation Path: TS 24.229 [16] cl	ause A.2.1.4.13, A.2.2.4.13	3		
Information Element	Value/remark	Comment	Reference	Condition
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-1		TS 24.379 [9]	

# 5.5.2.15 SIP UPDATE

## 5.5.2.15.1 SIP UPDATE from the UE

Table 5.5.2.15.1-1: SIP UPDATE from the UE

Information Element	A.2.1.4.14, A.2.2.4.14 Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22]	
			RFC 5031 [54]	
Method	"UPDATE"			
Request-URI	The same URI value as			
	the recipient of			
	UPDATE has earlier			
	sent in its Contact			
	header within the same			
OID V	dialog			
SIP-Version	'SIP/2.0"		DE0 0004 [00]	
Via			RFC 3261 [22]	
	#01D/0.0/# IDD#		RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"			TOD
a and have	"SIP/2.0/TCP"			TCP
sent-by	same value as in			MO_CALL
aget by	INVITE message			MT_CALL
sent-by	IP address or FQDN	Either the UE's IP		WII_CALL
host	IP address of FQDIN	address or its home		
		domain name		
port	protected server port of	as assigned during		
port	the UE	registration		
via-branch	Value starting with	rogiotiation		
na branon	'z9hG4bK'			
Route	20110 1011		RFC 3261 [22]	
route-param list	URIs of the Record-		141 0 0201 [22]	MO_CALL
routo paraminot	Route header sent to			1110_0/122
	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)		
То			RFC 3261 [22]	
	10 1151 111 55	B	RFC 5031 [54]	
addr-spec	Same URI of the SS as	Remote URI of the		
	used earlier in the	dialog (from the UE's		
4	dialog	point of view)		
tag	Same tag of the SS as	Remote tag of the		
	used earlier in the	dialog ID (from the UE's		
Call-ID	dialog	point of view)	RFC 3261 [22]	
Call-ID callid	Same value as used in		110 3201 [22]	
Calliu	the INVITE initiating the			
	dialog			
Contact	dialog		RFC 3261 [22]	
addr-spec	same as in the INVITE		0 0201 [22]	MO_CALL
addi opoo	creating the dialog			WIO_OALL
addr-spec	same as in the			MT_CALL
220. opoo	response for the			0/\LL
	INVITE creating the			
	dialog			
feature-param	"+g.3gpp.mcptt"			
	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA

		1		
feature-param	"+g.3gpp.icsi-ref=			
	urn:urn- 7:3gpp-			
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcvide			
	O"			
	"+g.3gpp.icsi-			MCDATA
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcdata.			
facture pages	sds" "isfocus"			
feature-param feature-param	"audio"			MCPTT
leature-param	audio			OR
				MCVIDEO
feature-param	"video"			MCVIDEO
feature-param	"text"			MCDATA
CSeq	toxt		RFC 3261 [22]	WODITI
value	value of CSeq sent by		11. 0 0201 [22]	
	the UE within its			
	previous request in the			
	same dialog but			
	increased by one			
method	"UPDATE"			
Require	OFBATE		RFC 3261 [22]	
rtoquiio			RFC 3329 [53]	
option-tag	"sec-agree"		141 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			
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			
Content-Type	applicable, the cell ID		RFC 5621 [58]	
media-type	"application/sdp"		10 0021 [00]	
Content-Length	present in case of TCP		RFC 3261 [22]	
Content-Length	and when there is a		111 0 3201 [22]	
	message body			1
	(otherwise optional)			
value	any value	length of message-		
	1	body		
Message-body			RFC 3261 [22]	
SDP Message	As described in Table			
	5.5.3.1.1-1			
	As described in Table			MCVIDEO
	5.5.3.1.1-2			
	As described in Table			MCDATA
	5.5.3.1.1-3			

5.5.2.15.2 SIP UPDATE from the SS

Table 5.5.2.15.2-1: SIP UPDATE from the SS

Derivation Path: TS 24.229 [16] Information Element	A.2.1.4.14, A.2.2.4.14 Value/remark	Comment	Reference	Condition
Request-Line	value/remark	Comment	RFC 3261 [22] RFC 5031 [54]	Condition
Method	"UPDATE"		1(1 0 3031 [34]	
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			RFC 3261 [22]	
addr-spec	same as in the response for the INVITE creating the dialog			MO_CALL
addr-spec	same as in the INVITE creating the dialog			MT_CALL
feature-param	"+g.3gpp.mcptt" "+g.3gpp.mcvideo" "+g.3gpp.mcdata.sds"			MCVIDEO MCDATA
feature-param	"+g.3gpp.icsi-ref= urn:urn- 7:3gpp- service.ims.icsi.mcptt"			
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			MCDATA
feature-param	"isfocus"			1400==
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
CSeq			RFC 3261 [22]	
value	value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one			
method	"UPDATE"			
Max-Forwards			RFC 3261 [22]	
value	"68"	The recommended initial value is 70 in RFC 3261 [22]. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UE.		
Content-Type			RFC 5621 [58]	
media-type	"application/sdp"			
Content-Length	length of message- body		RFC 3261 [22]	
value	length of message- body			
Message-body			RFC 3261 [22]	
SDP Message	As described in Table 5.5.3.1.1-2 As described in Table 5.5.3.1.2-2 As described in Table 5.5.3.1.2-3			MCVIDEO MCDATA

5.5.2.16 SIP 1xx

5.5.2.16.1 SIP 100 (Trying)

This message is sent by the UE or the SS.

Table 5.5.2.16.1-1: SIP 100 (Trying)

Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"100"			
Reason-Phrase	"Trying"			
Via				
via-parm	same value as received in INVITE message			
From	<u> </u>			
addr-spec	same value as received in INVITE message			
tag	same value as received in INVITE message			
То	<u> </u>			
addr-spec	same value as received in INVITE message			
Call-ID	, and the second			
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	value/lelllalk	Comment	I/GIGIGIICG	Condition
SIP-Version	"SIP/2.0"			
Status-Code	"180"			
Reason-Phrase	"Ringing"			
Record-Route	Ringing		RFC 3261 [22]	
rec-route	same as received in		KFC 3201 [22]	
rec-route	INVITE message			
Via	same as received in		RFC 3261 [22]	
Via	INVITE message		RFC 3261 [22]	
Poguiro	INVITE message		KFC 3361 [33]	100rel
Require	"400rol"			Tourei
option-tag	"100rel"			
From				
addr-spec	same value as received			
4	in INVITE message			
tag	same value as received			
	in INVITE message			
То	<u> </u>			
addr-spec	same value as received			
	in INVITE message			
tag	same value as received			
	in the INVITE message			
	or any value if missing			
	in the INVITE message.			
Contact				
addr-spec	SIP URI			
user-info and host	IP address or FQDN			
	(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_			
	ID)			
port	protected server port of	as assigned during		
	UE	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			
	о"			
	"+g.3gpp.icsi-			MCDATA
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcdata.			
	sds"			
feature-param	"audio"			MCPTT
				OR
	1			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				

Derivation Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
callid	same value as received in INVITE message			
CSeq				
value	same value as received in INVITE message			
Content-Length	if present			
value	"0"	No message body included		

Condition	Explanation
100rel	Reponse sent reliable according to RFC 3262 [97]

# 5.5.2.16.2.2 SIP 180 (Ringing) from the SS

## Table 5.5.2.16.2.2-1: SIP 180 (Ringing) from the SS

Derivation Path: RFC 3261 [22 Information Element	Value/remark	Comment	Reference	Condition
	value/remark	Comment	Reference	Condition
Status-Line	#OID (0.0#			
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	3			
addr-spec				
user-info and host	px_MCPTT_Client_B_I D	Callee contact Uri		
	px_MCVideo_Client_B _ID	Callee contact Uri		MCVIDEO
	px_MCData_Client_B_I D	Callee contact Uri		MCDATA
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"			

Information Element	Value/remark	Comment	Reference	Condition
	"+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			RFC 3262 [97]	100rel
response-num	previous RSeq number sent in the same direction incremented by one; arbitrarily selected if there is no previous RSeq number			
Call-ID				
callid	same value as received in INVITE message			
CSeq				
value	same value as received in INVITE message			
Content-Length				
value	"0"	No message body included		

Condition	Explanation
100rel	Reponse sent reliable according to RFC 3262 [97]

5.5.2.16.3 SIP 183 (Session Progress)

5.5.2.16.3.1 SIP 183 (Session Progress) from the UE

Table 5.5.2.16.3.1-1: SIP 183 (Session Progress) from the UE

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Status-Line			110.0.3.100	
SIP-Version	"SIP/2.0"			
Status-Code	"183"			
Reason-Phrase	"Session progress"			
Record-Route			RFC 3261 [22]	
rec-route	same as received in INVITE message			
Via	same as received in INVITE message		RFC 3261 [22] RFC 3581 [55]	
Require	9			100rel
option-tag	"100rel"			
From				
addr-spec	same value as received in INVITE message			
tag	same value as received in INVITE message			
То				
addr-spec	same value as received in INVITE message			
tag	same value as received in the INVITE message or any value if missing in the INVITE message.			
Contact	iii uie iivvii E iiiessage.			
addr-spec	SIP URI			
user-info and host	IP address or FQDN			
user-inio and nost	(px_MCPTT_Client_A_I D)			
	IP address or FQDN (px_MCVideo_Client_A _ID)			MCVIDEO
	IP address or FQDN (px_MCData_Client_A_ ID)			MCDATA
port	protected server port of UE	as assigned during registration		
feature-param	"+g.3gpp.mcptt"			
	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA
feature-param	"+g.3gpp.icsi-ref= urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			140) (1550
	"+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"			
Supported				
option-tag	"norefersub"			
Rseq				100rel
response-num	previous RSeq number sent in the same direction incremented by one			
Call-ID	by one		+	

Derivation Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
callid	same value as received in INVITE message			
CSeq				
value	same value as received in INVITE message			
P-Answer-State	if present			
value	"unconfirmed"			
P-Asserted-Identity			RFC 3325 [32]	
addr-spec				
user-info and host	px_MCPTT_ID_User_A			
	px_MCVideo_ID_User_ A			MCVIDEO
	px_MCData_ID_User_ A			MCDATA
port	not present			
Content-Length	if present		RFC 3261 [22]	
value	"0"	No message body included		

Condition	Explanation
100rel	Reponse sent reliable according to RFC 3262 [97]

5.5.2.16.3.2 SIP 183 (Session Progress) from the SS

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	Value/Telliark	Comment	Kelelelice	Condition
SIP-Version	"SIP/2.0"			
Status-Code	"183"			
Reason-Phrase Record-Route	"Session progress" same as spefied for the		DEC 2264 [22]	
Record-Route	SIP 200 (OK) from the		RFC 3261 [22]	
	SS in table			
	5.5.2.17.1.2-1 with			
	condition INVITE-RSP			
Via	same as received in the		RFC 3261 [22]	
Via	INVITE message		RFC 3201 [22]	
Require	INVITE message		KFC 3301 [33]	100rel
option-tag	"100rel"			100161
From	Toolei			
	same value as in the			
addr-spec				
1	request			
tag	same value as in the			
T-	request		1	
To			1	
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	px_MCPTT_Client_B_I D	Callee contact Uri		
	px_MCVideo_Client_B _ID	Callee contact Uri		MCVIDEO
	px_MCData_Client_B_I D	Callee contact Uri		MCDATA
port	not present			
feature-param	"+g.3gpp.mcptt"			
•	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA
feature-param	"+g.3gpp.icsi-ref=			
round parami	urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcvide			
	о"			
	"+g.3gpp.icsi-			MCDATA
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcdata.			
	sds"			
feature-param	"audio"			MCPTT
				OR
				MCVIDEO
feature-param	"video"	This feature tag		MCVIDEO
I		indicates that the		
		device supports video		
		as a streaming media		
		type.		
feature-param	"text"	This feature tag		MCDATA
		indicates that the		
		device supports text as		
		a streaming media		
		type.		
facture param	"isfocus"	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1	
leature-param	,	1	ļ	
feature-param Supported				
Supported option-tag	"norefersub"			

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	Reponse 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

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Status-Line	- arasir silidir.	30		23
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	request		RFC 3261 [22]	INVITE- RSP
rec-route	same as received in the request			1101
From	104000			
addr-spec	Same value as			
aaa.	received in the request			
tag	same value as received in the request			
То	III tilo request			
addr-spec	same value as received in the request			
tag	same value as received			
.ag	in the request or any value if missing in the			
	request.			
Contact				INVITE- RSP
user-info and host	IP address or FQDN (px_MCPTT_Client_A_			
	ÜRI)  IP address or FQDN			MCVIDEO
	(px_MCVideo_Client_A _ID)			
	IP address or FQDN (px_MCData_Client_A_ ID)			MCDATA
port	protected server port of UE	as assigned during registration		
feature-param	"+g.3gpp.mcptt"	rogiotiation	+	
Todala Param	"+g.3gpp.mcvideo"		+	MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA
feature-param	"+g.3gpp.icsi-ref= urn:urn- 7:3gpp-			WODATA
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp- service.ims.icsi.mcvide			
	0"			MCDATA
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata.			IVICDATA
	sds"			
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"			1.01

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Session-Expires				INVITE- RSP
delta-seconds	"3600"			INOI
refresher	"uas"			
Supported				INVITE- RSP
option-tag	"tdialog"			
option-tag	"norefersub"			
option-tag	"explicitsub"			
option-tag	"nosub"		D=0 /	
Content-Type			RFC 5621 [58]	INVITE- RSP
value	"multipart/mixed"			
Content-Length	present in case of TCP and when there is a message body (otherwise optional)		RFC 3261 [22]	
value	any value	length of message- body		
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	TS 24.379 [9] clause 6.6.3.1	
		reference in the signature MIME body		
MIME-part-body	MCPTT-Info as described in Table 5.5.3.2.1-1	,	TS 24.379 [9] clause F.1	
	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]	

Derivation Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
MIME-part-body	Signatures for XML MIME bodies as		TS 24.379 [9]	
	described in Table 5.5.13.1-1			

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	value/remark	Comment	Reference	Condition
SIP-Version	"SIP/2.0"			
Status-Code	"200"			
Reason-Phrase	"OK"			
Via	same as received in the		RFC 3261 [22]	
	request		RFC 3581 [55]	
Record-Route	1		RFC 3261 [22]	INVITE-
	OID LIDI			RSP
addr-spec[1]	SIP URI			
user-info and host port	pcscf.other.com			
uri-parameters	not present "Ir"			
addr-spec[2]	SIP URI			
user-info and host	scscf.other.com			
port	not present			
uri-parameters	"Ir"			
addr-spec[3]	SIP URI			
user-info and host	orig@scscf.3gpp.org			
port	not present			
uri-parameters	"lr"			
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			
uri-parameters	"Ir"			
Record-Route			RFC 3261 [22]	SUBSCRI BE-RSP
addr-spec[1]	SIP URI			
user-info and host	P-CSCF address of the SS	P-CSCF address as assigned to the UE via NAS signalling or P- CSCF discovery (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			
То	request			
addr-spec	same value as in the			
addi opoo	request			
tag	same value as in the			
-	request or To-tag			
	assigned by the SS if			
	missing in the request		DE0 222 : 222	0115055
Expires			RFC 3261 [22] RFC 3903 [43]	SUBSCRI BE-RSP, PUBLISH- RSP
value	same value as in the request			
Contact				REGISTE R-RSP
addr-spec	same value as received in the REGISTER			
feature-param	"+g.3gpp.mcptt"			
- Later & Parisin	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA
expires	"600000"			

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Contact		•	11010101100	SUBSCRI
				BE-RSP
addr-spec				
user-info and host	tsc_MCPTT_PublicSer			
	viceld_A			110) (15.50
	px_MCVideo_PublicSer			MCVIDEO
	viceId_A px_MCData_PublicSer			MCDATA
	viceId_A			WICDATA
	"sip:" &			CONFIG
	tsc_MCX_CMS_Hostna			
	"sip:" &			GROUPC
	tsc_MCX_GMS_Hostn ame			ONFIG
port	not present			
Contact	1100   110			INVITE-
				RSP
addr-spec				
user-info and host	px_MCPTT_Client_B_I			
	D			MOVUBER
	px_MCVideo_Client_B _ID			MCVIDEO
	px_MCData_Client_B_I			MCDATA
	D			
port feature param	not present "audio"			MCPTT
feature-param	audio			OR
				MCVIDEO
feature-param	"video"			MCVIDEO
feature-param	"text"			MCDATA
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
generic-param	"3600"			
refresher	"uac"			
Supported				INVITE- RSP
option-tag	"tdialog"			
option-tag	"norefersub"			
option-tag	"explicitsub"			<b></b>
option-tag	"nosub"		DEC 2004 [00]	DECICE
P-Associated-URI			RFC 3261 [22]	REGISTE R-RSP
addr-spec[1]	SIP URI			1. 1.01
host	px_MCX_SIP_PublicUs erld_A_1			
port	not present			
Service-Route			RFC 3261 [22]	REGISTE R-RSP
addr-spec[1]	SIP URI			7. 1.01
host	scscf.3gpp.org			
port	not present			
uri-parameters	"Ir"			
SIP-ETag			RFC 3903 [43]	PUBLISH- RSP

Information Element	Value/remark	Comment	Reference	Condition
entity-tag	unique value arbitrarily selected by the SS			
Content-Type			RFC 5621 [58]	INVITE- RSP
media-type	"multipart/mixed"			
Content-Length			RFC 3261 [22]	
value	length of message- body			
Message-body			RFC 3261 [22]	INVITE- RSP
MIME body part		SDP message		
MIME-part-header				
Content-Type	"application/sdp"		RFC 4566 [27]	
MIME-part-body	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
MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-header				
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 inTable 5.5.3.2.2-1		TS 24.379 [9] clause F.1	
	MCVideo-Info as described inTable 5.5.3.2.2-2		TS 24.281 [86] clause F.1	MCVIDEO
	MCData-Info as described inTable 5.5.3.2.2-3		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 5.5.13.1-2		TS 24.379 [9]	

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

## 5.5.2.17.2 SIP 202 (Accepted)

Table 5.5.2.17.2-1: SIP 202 (Accepted)

Information Element	Value/remark	Comment	Reference	Condition
Status-Line			RFC 3261 [22]	
SIP-Version	"SIP/2.0"			
Status-Code	"202"			
Reason-Phrase	"Accepted"			
Via	same value as received in request		RFC 3261 [22]	
From			RFC 3261 [22]	
addr-spec	same value as received in request			
tag	same value as received in request			
То			RFC 3261 [22]	
addr-spec	same value as received in request			
tag	same value as in the request or To-tag assigned by the SS if missing in the request			
Call-ID	3		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&gt;</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	"O"	No message body		
		included - end of SIP		
		message		

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

#### 5.5.2.19.4 SIP 480 (Temporarily unavailable)

This message is sent by the UE.

Table 5.5.2.19.4-1: SIP 480 (Temporarily unavailable)

Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"480"			
Reason-Phrase	"Temporarily Unavailable"			
Via	same as received in request message		RFC 3261 [22] RFC 3581 [55]	
From				
addr-spec	same value as received in INVITE message			
tag	same value as received in request message			
То				
addr-spec	same value as received in request message			
tag	same value as received in the INVITE or any value if missing in the INVITE.			
Warning				
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)

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

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

## 5.5.2.19.6 SIP 488 (Not Acceptable Here)

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

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

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

5.5.2.19.7 SIP 401 (Unauthorized)

Table 5.5.2.19.7-1: SIP 401 (Unauthorized)

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Status-Line			RFC 3261 [22]	
SIP-Version	"SIP/2.0"			
Status-Code	"401"			
Reason-Phrase Via	"Unauthorized" Same value as		RFC 3261 [22]	
via	received in the		RFC 3261 [22]	
	REGISTER message			
То	REGISTER message		RFC 3261 [22]	
addr-spec	Same value as		1(1 0 0201 [22]	
addi opoo	received in the			
	REGISTER message			
tag	To-tag assigned by the			
S .	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			
NAME OF THE PARTY	REGISTER message			
WWW-Authenticate			RFC 2617 [72]	
	1407/ 5		RFC 3310 [96]	
Realm	px_MCX_DomainName			
1 24	_Organization_A			
algorithm	"AKAv1-MD5" "auth"			
qop-value				
nonce	Base 64 encoding of RAND and AUTN			
opaguo	arbitrary value (to be			
opaque	returned by the UE in			
	subsequent			
	REGISTER)			
Security-Server	I (LOIOTEIK)		RFC 3329 [50]	
mechanism-name	"ipsec-3gpp"		141 0 0020 [00]	
algorithm[1]	px_lpSecAlgorithm			
algorium [1]	(hmac-md5-96 or			
	hmac-sha-1-96)			
spi-c[1]	SPI number of the			
	inbound SA at the			
	protected client port			
spi-s[1]	SPI number of the			
	inbound SA at the			
	protected server port			
port-c[1]	protected client port of			
	SS			
port-s[1]	protected server port of			
E	SS			
Encrypt-algorithm[1]	des-ede3-cbc or aes-			
[4]	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)			
eni-c[2]	SPI number of the			
spi-c[2]	inbound SA at the			
	protected client port			
eni-e[2]	SPI number of the			<del>                                     </del>
spi-s[2]	inbound SA at the			
	protected server port			
port-c[2]	protected client port of			
Port 0[2]	SS			
			1	i

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

5.5.3.1.1 SDP Message from the UE

- MCPTT

Table 5.5.3.1.1-1: SDP Message from the UE for MCPTT

Derivation Path: RFC 4566 [27]	Volue/remerk	Comment	Doforance	Condition
Information Element	Value/remark	Comment	Reference	Condition
Session description:		Car		
Protocol Version	"0"	v= line		
Origin	MODELLE	o= line		
username	px_MCPTT_ID_User_A	Username of client		
sess-id	any allowed value	A numeric string such that the tuple of		
		<username>, <sess-< td=""><td></td><td></td></sess-<></username>		
		id>, <nettype>,</nettype>		
		<addrtype>, and</addrtype>		
		<unicast-address></unicast-address>		
		forms a globally unique		
		identifier for the session		
sess-version	any allowed value			
nettype	"IN"			
Addrtype	"IP4" or "IP6"			
	depending on IP			
	address			
unicast-address	px_MCPTT_IP_ConnectionAddressAll			
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		
	in all media	Included if the media		
		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 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			DE0 :22=	
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/AVP"			
fmt	any allowed value(s)	Indicating RTP payload		
		type numbers		
media title	"speech"	i= line		
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"	İ.		i .

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
connection-address	px_MCPTT_IP_Connec tionAddressAudio			
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"99"			
encoding name	"AMR-WB"		550 (005 (50)	
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	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	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 media description	any allowed value	maximum packet time m= line		
		media = application  SDP media-level section for a media-floor control entity		
media	"application"			
port	any allowed value	The port for the media- floor control entity		
proto	"udp"			
fmt	"MCPTT"			
Connection Data		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" or "IP6" depending on IP address"			
connection-address	px_MCPTT_IP_ConnectionAddressApp			
media attribute	15	a= line attribute = fmtp		
fmtp				
format	"MCPTT"			
format specific parameters mc_queueing	optional	Parameter has no value	TS 24.380 [10] cl. 12.1.2.3	
mc_priority	not present or any allowed value	Any integer value in the range of 1255	TS 24.380 [10] cl. 12.1.2.3	

Derivation Path: RFC 4566 [27]					
Information Element	Value/remark	Comment	Reference	Condition	
mc_granted	present	Parameter has no	TS 24.380 [10]		
-		value	cl. 12.1.2.3		
mc_implicit_request	present	Parameter has no	TS 24.380 [10]		
		value	cl. 12.1.2.3		
media attribute		a= line		PRIVATE-	
		attribute = key-mgmt		CALL	
key-mgmt			TS 24.379 [9]		
			clause 6.2.1		
mikey	MIKEY-SAKKE		RFC 4567 [44]		
	I_MESSAGE as				
	specified in Table				
	5.5.9.1-2A				

## 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:	Valaditoman	Comment	Reference	Condition
Protocol Version	"0"	v= line		
Origin		o= line		
username	px_ MCVideo	Username of client		
acomanio	_User_A_ID			
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	0000011.		
nettype	"IN"			
Addrtype	"IP4" or "IP6"			
Additype	depending on IP address"			
unicast-address	px_MCVideo_IP_Conn ectionAddressAll			
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 Included if the media 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 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"			

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
stop-time	"0"			
Media descriptions				
media description		m= line media = audio	RFC 4867 [59]	
media	"audio"			
port	any allowed value	The transport port to which the media stream is sent		
proto	"RTP/AVP"			
fmt	any allowed value(s)	Indicating RTP payload type numbers		
media title	"speech"	i= line		
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	px_MCVideo_IP_Conn ectionAddressAudio			
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	"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	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 description		m= line media = video  SDP media-level section for a media- transmission control entity		
media	"video"	Orthog		
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"	System.		
Connection Data	IVIC VIGEO	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" or "IP6" depending on IP address"			
connection-address	px_MCVideo_IP_Conn ectionAddressApp			
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type				
encoding name clock rate	"H.264"		RFC 4867 [59] clause 8.3	
encoding parameter	"" if present	Channel number	0.00000.0	
media attribute		a= line attribute = fmtp		
fmtp			3GPP TS 24.581 [88] clause 12, clause 14	
format	"MCVideo"			
format specific parameters				
mc_queueing	optional	Parameter has no value.  Shall include the "mc_queueing" fmtp attribute in SDP offers when queueing of Transmission request is supported.	3GPP TS 24.581 [88] clause 12, clause 14	

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
mc_priority	not present	Any integer value in the	3GPP	Condition
mc_phonty	or	range of 1255	TS 24.581 [88]	
	any allowed value	Tango or Tileoo	clause 12,	
	any anowed value	Shall include the	clause 14	
		"mc_priority" fmtp	oladoo 11	
		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> p	or	range of 0255	TS 24.581 [88]	
	any allowed value		clause 12,	
		Shall include the	clause 14	
		"mc_reception_priority"	0.0000	
		fmtp attribute when a		
		reception priority		
		different than the		
		default reception priority is required.		
mo grantad	nrocon <sup>4</sup>		2CDD	
mc_granted	present	Parameter has no	3GPP	
		value	TS 24.581 [88]	
		Shall include the	clause 12, clause 14	
		"mc_granted" fmtp	clause 14	
		attribute in the SDP		
		offer of an initial SIP		
		INVITE request when it		
		is acceptable for the		
		MCVideo client to		
		receive a granted		
		indication in the SIP		
		200 (OK) response to		
		an initial INVITE		
		request.		
mc_implicit_request	present	Parameter has no	3GPP	
		value	TS 24.581 [88]	
			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		
modio docerintica		option.		
media description		m= line		
		media = application		
		ODD di- t		
		SDP media-level		
		L COCTION FOR A MODIO	1	i
		section for a media- floor control entity		

Derivation Path: RFC 4566 [27]				
Information Element	Value/remark	Comment	Reference	Condition
media	"application"		3GPP	
			TS 24.581 [88] clause 12	
port	any allowed value	The port for the media-	Clause 12	
Port	any anowed value	floor control entity		
proto	"udp"	User Datagram		
		Protocol. With UDP,		
		computer applications		
		can send messages to other hosts on		
		an Internet Protocol		
		(IP) network. Time-		
		sensitive applications		
		often use UDP because dropping packets is		
		preferable to waiting for		
		packets delayed due		
		to retransmission,		
		which may not be an		
		option in a real-time system.		
		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" "IP4" or "IP6"			
Addrtype	depending on IP			
	address"			
connection-address	px_ MCVideo			
	_IP_ConnectionAddres			
media attribute	sApp	a= line		
media attribute		attribute = fmtp		
fmtp		dillibuto – imip	3GPP	
·			TS 24.581 [88]	
			clause 12,	
format	" MCVideo "		clause 14	
format format specific parameters	IVIO VIUEU			
mc_queueing	optional	Parameter has no	3GPP	
		value.	TS 24.581 [88]	
		Shall include the	clause 12,	
		"mc_queueing" fmtp	clause 14	
		attribute in SDP offers		
		when queueing of		
		Transmission request is		
mc_priority	not present	supported.  Any integer value in the	3GPP	
ino_priority	or	range of 1255	TS 24.581 [88]	
	any allowed value		clause 12,	
		Shall include the	clause 14	
		"mc_priority" fmtp attribute when a		
		transmission priority		
		different than the		
		default priority is		
		required.		

Derivation Path: RFC 4566 [27]				
Information Element	Value/remark	Comment	Reference	Condition
mc_reception_priority	not present or any allowed value	Any integer value in the range of 0255  Shall include the "mc_reception_priority" fmtp attribute when a reception priority different than the default reception priority is required.	3GPP TS 24.581 [88] clause 12, clause 14	
mc_granted	present	Parameter has no value Shall include the "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.	3GPP TS 24.581 [88] clause 12, clause 14	
mc_implicit_request	present	Parameter has no value Shall include the "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.	3GPP TS 24.581 [88] clause 12, clause 14	
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]	

- 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:	Value/Terrial K	Comment	Reference	Condition
Protocol Version	"0"	v= line		
Origin		o= line		
username	px_MCDATA_ID_User	Username of client		
sess-id	any allowed value	A numeric string such that the tuple of <username>, <sess-id>, <nettype>, <addrtype>, and <unicast-address> forms a globally unique identifier for the session.</unicast-address></addrtype></nettype></sess-id></username>		
sess-version	any allowed value			
nettype	"IN"			
Addrtype	"IP4" or "IP6"			
71.	depending on IP address"			
unicast-address	px_MCDATA_IP_Conn ectionAddressAll			
Session Name	at least one UTF-8- encoded character, or if no name is given, a single empty space	s= line		
Session Information	any allowed value	i= <session description=""> The "i=" field is intended to provide a free-form human- readable description of the session or the purpose of a media stream. It is not suitable for parsing by automata.</session>		
Connection Data	not required if included in all media	c= line Included if the media plane control channel uses a different IP address than other media described in the SDP		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address"			
connection-address	IP address of the UE			
Bandwidth		b= line		
bwtype	"AS:"	bwtype:bandwidth		
bandwidth	any allowed value		TS 26.114 [64] Table K.6	
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Media descriptions				
media description		m= line media = message	RFC 4867 [59] TS 24.282 [31]	
media	"message"		- 1-1	
port	any allowed value	The transport port to which the media stream is sent		
proto fmt	"TCP/MSRP "			
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"	described in the ODI		
Addrtype	"IP4" or "IP6" depending on IP address"			
connection-address	px_MCDATA_IP_Conn ectionAddressAudio			
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. An example: msrp://mcdata.example .com:7654/abcde1; tcp	TS 24.282 [31]	
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 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 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
Session description:	+ alue/leiflair	Comment	I/CIGIGIICG	Johnstoff
Protocol Version	"0"	v= line		
Origin	0	o= line		
username	px_MCPTT_ID_User_B	Username of client		
doomano		sending message		
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"	Session.		
nettype	"IN"			
Addrtype	"IP4" or "IP6"	This depends on the		
ridditypo	depending on IP	unicast address of the		
	address"	UE		
unicast-address	IP address of the SS			
Session Name	at least one UTF-8-	s= line		
	encoded character, or if			
	no name is given, a			
Dan duri diti-	single empty space	h Car		
Bandwidth	"AS:"	b= line		
bwtype	"38"	bwtype:bandwidth	TC 00 444 [04]	
bandwidth	"38"	kilobits per second; Maximum AMR-WB at	TS 26.114 [64] Table K.6	
		23.85 kbps but limit to	Table N.o	
		12.65 kbps plus		
		overhead		
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Media descriptions				
media description		m= line	RFC 4867 [59]	
madia	"audio"	media = audio		
media Port		The transport port to	RFC 6335 [63]	
Port	port number assigned by the SS (even	which the media stream	clause 6	
	integer)	is sent	oladoc o	
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"	This depends on the		
	depending on IP	connection address		
	address"  IP address of the SS			
connection-address media attribute	ir address of the 55	a= line		
media attribute		attribute = rtpmap		
rtpmap	"rtpmap"	attributo – ripinap		
payload type	"99"			
	"AMR-WB"			
encoding name	16000		RFC 4867 [59]	
encoding name clock rate	10000	i		
clock rate			clause 8.3	
clock rate encoding parameter	"1"	Channel number	clause 8.3	
clock rate		a= line	clause 8.3	
clock rate encoding parameter			clause 8.3	

Information Element	Value/remark	Comment	Reference	Condition
format specific parameters		Parameters of WB- AMR codec		
mode-change-capability	"2"	To be able to interoperate fully with	RFC 4867 [59] clause 8.2	
		gateways to circuit switched networks		
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 description		m= line media = application  SDP media-level		
		section for a media- floor control entity		
media	"application"	1.301 Solition Office		
Port	port number assigned by the SS being different than the port number of the audio channel (RTP) and its associated control channel (RTCP)"	The port for the media- floor control entity		
proto	"udp"			
fmt	"MCPTT"			
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	"MCPTT"			
format specific parameters		<u> </u>	TO 04 655 1155	
mc_queueing	Present	Parameter has no value	TS 24.380 [10] cl. 12.1.2.3	
mc_priority	"5"	Any integer value in the range of 1255	TS 24.380 [10] cl. 12.1.2.3	
mc_granted	Present	Parameter has no value	TS 24.380 [10] cl. 12.1.2.3	
mc_implicit_request	Present	Parameter has no value	TS 24.380 [10] cl. 12.1.2.3	
media attribute		a= line attribute = key-mgmt		PRIVATE CALL
key-mgmt			TS 24.379 [9] clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2		RFC 4567 [44]	

### 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		o= line		
username	px_MCVideo_ID_User_	Username of client		
	B	sending message		
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"	Session.		
nettype	"IN"			
Addrtype	"IP4" or "IP6"	This depends on the		
Additype	depending on IP	unicast address of the		
	address	UE		
unicast-address	IP address of the SS	<u>-</u>		
Session Name	"-"	s= line		
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				
media description		m= line	RFC 4867 [59]	
		media = audio		
media	"audio"	T	DE0 0005 [00]	
Port	port number assigned	The transport port to	RFC 6335 [63]	
	by the SS (even	which the media stream	clause 6	
proto	integer) "RTP/AVP"	is sent		
proto fmt	"99"	RTP/AVP payload type		
IIII	99	for AMR-WB is		
		dynamic		
media title	"speech"	i= line		
Connection Data		c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6"	This depends on the		
	depending on IP	connection address		
	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	l l	a= line	1	
media attribute		attribute = fmtp		

Perivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
fmtp				
format	"99"			
format specific parameters		Parameters of WB-		
1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	"2"	AMR codec	DEO 4007 [50]	
mode-change-capability	"2"	To be able to	RFC 4867 [59]	
		interoperate fully with gateways to circuit	clause 8.2	
		switched networks		
max-red	"0"	No redundancy will be	RFC 4867 [59]	
max-red		used	clause 8.2	
media attribute		a= line	ciause o.z	
		attribute =ptime		
ptime	"20"	packet time		
media attribute		a= line		
		attribute =maxptime		
maxptime	"240"	maximum packet time		
media description		m= line		
•		media = video		
		000		
		SDP media-level		
		section for a media-		
		transmission control		
media	"video"	entity		
Port	port number of the	The port for the media-		
Poit	audio stream	transmission control		
	incremented by 2	entity		
	(resulting in even	entity		
	integer)			
proto	"udp"	User Datagram		
proto	ишр	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"	<u> </u>		
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" or "IP6"			
	depending on IP			
	address			
connection-address	IP address of the SS			
media attribute		a= line		
rtnman	"rtnman"	attribute = rtpmap		
rtpmap	"rtpmap"			
payload type				
encoding name	"H.264"		550 (665 (56)	
clock rate			RFC 4867 [59]	

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
encoding parameter	"" if present	Channel number	Reference	Condition
media attribute	ii procent	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	3GPP	
		value.	TS 24.581 [88] clause 12,	
		Shall include the	clause 12,	
		"mc_queueing" fmtp	Clause 14	
		attribute in SDP offers		
		when queueing of		
		Transmission request is supported.		
mc_priority	not present	Any integer value in the	3GPP	
о_роу	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		
,	<u> </u>	required.	0000	
mc_reception_priority	not present or	Any integer value in the range of 0255	3GPP TS 24.581 [88]	
	any allowed value	range of o233	clause 12,	
	,	Shall include the	clause 14	
		"mc_reception_priority"		
		fmtp attribute when a		
		reception priority different than the		
		default reception		
		priority is required.		
mc_granted	present	Parameter has no	3GPP	
		value	TS 24.581 [88]	
		Shall include the	clause 12, clause 14	
		"mc_granted" fmtp	Jacob 14	
		attribute in the SDP		
		offer of an initial SIP		
		INVITE request when it is acceptable for the		
		MCVideo client to		
		receive a granted		
		indication in the SIP		
		200 (OK) response to		
		an initial INVITE		
	1	request.	<u> </u>	<u> </u>

Derivation Path: RFC 4566 [27]				
Information Element	Value/remark	Comment	Reference	Condition
mc_implicit_request	present	Parameter has no	3GPP	
		value	TS 24.581 [88]	
		Object to the state of	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		
madia describéles		option.		
media description		m= line		
		media = application		
		SDP media-level		
		section for a media-		
		floor control entity		
media	"application"	1.001 OUTHOU OTHER		
Port	port number assigned	The port for the media-		
. 510	by the SS being	floor control entity		
	different than the port	,		
	number of the audio			
	and video channels			
	(RTP) and their			
	associated control			
	channels (RTCP)"			
proto	"udp"			
fmt	"MCVideo"			
Connection Data		c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6"	This depends on the		
	depending on IP	connection address		
	address			
connection-address	IP address of the SS	P.		
media attribute		a= line		
forto		attribute = fmtp		
fmtp	"MACV/:doo"			
format	"MCVideo"			
format specific parameters	Dragger	Deremeter her	2000	
mc_queueing	Present	Parameter has no	3GPP	
		value	TS 24.581 [88]	
			clause 12,	
mc_priority	"5"	Any integer value in the	clause 14 3GPP	
тто_рнопцу	3	range of 1255	TS 24.581 [88]	
		range of 1200	clause 12,	
			clause 12,	
mc_granted	Present	Parameter has no	3GPP	
mo_granted	1 1000111	value	TS 24.581 [88]	
		Taluo	clause 12,	
			clause 14	
	1	1		

Derivation Path: RFC 4566 [27]				
Information Element	Value/remark	Comment	Reference	Condition
mc_implicit_request	Present	Parameter has no value	3GPP TS 24.581 [88] clause 12, clause 14	
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]	

- 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/Teillai N	Johnnent	I/CIGIGIICE	Condition
Protocol Version	"0"	v= line		
Origin	U	o= line		
username	px_MCDATA_ID_User	Username of client		
usemame	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			
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			5-0 :	
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 "	.5 5511		
fmt	"*"			
media title	"message"	i= line		

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

5.5.3.1.3 SDP Message from the UE - Off-network

- MCPTT

Table 5.5.3.1.3-1: SDP Message from the UE - Off-network for MCPTT

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
Session description:	value/leillaik	Comment	ivetet etile	Condition
Protocol Version	"0"	v= line		
	0	o= line		
Origin	11_11	o= line		
username	_	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		
		session.		
sess-version	any allowed value			
nettype	"IN"			
addrtype	"IP4"	"IP4" or "IP6"		
unicast-address	px_MCPTT_IP_ConnectionAddressAll			
Session Name	"_"	s= line		
Connection Data		c= line		
nettype	"IN"			
addrtype	"IP4"	"IP4" or "IP6"		
connection-address	px_MCPTT_IP_Connec	Set to the multicast IP		
	tionAddressAll	address of the MCPTT		
		group		
Bandwidth		b= line		
bwtype	"AS:"	bwtype:bandwidth		
bandwidth	any allowed value			
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Media descriptions				
media description		m= line		
<u></u>		media = audio		
media	"audio"			
port	any allowed value	Set to a port number for		
		MCPTT speech of the		
		MCPTT group		
proto	"RTP/AVP"			
fmt	any allowed value(s)	Indicating RTP payload type numbers		
media title	"speech"	i= line		
media attribute		a= line		
		attribute = rtpmap		
rtpmap	"rtpmap"	1 -7		
payload type	"99"			
encoding name	"AMR-WB"			
clock rate	16000			
encoding parameter	"1" if present	Channel number		
media attribute	,	a= line		
		attribute = fmtp		
fmtp	"fmtp"	1		
format	the value given in fmt in			
	the audio media description			
format specific parameters	Gescription	Parameters of WB-		
manda at 1999	II OII	AMR codec		
mode-change-capability	"2"	To be able to		
		interoperate fully with		
		gateways to circuit		
		switched networks		+
max-red	"0"	No redundancy will be		

Information Element	Value/remark	Comment	Reference	Condition
media attribute		a= line		
		attribute =ptime		
ptime	any allowed value	packet time		
media attribute		a= line		
		attribute =maxptime		
maxptime	any allowed value	maximum packet time		
media description	-	m= line		
•		media = application		
media	"application"			
port	any allowed value	Set to a port number for		
•		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		
_6		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	

Derivation Path: RFC 4566 [27]	\/ala/ms	Comment	Deference	Conditte
Information Element mc_priority	Value/remark	Comment  Any integer value in the	Reference 3GPP	Condition
mc_priority	not present or	range of 1255	TS 24.581 [88]	
	any allowed value	1411g0 01 1200	clause 12,	
	any anomou value	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	Ob all in about a 4h a	clause 12, clause 14	
		Shall include the	clause 14	
		"mc_reception_priority"		
		fmtp attribute when a reception priority		
		different than the		
		default reception		
		priority is required.		
mc_granted	present	Parameter has no	3GPP	
	F. 555	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_mphon_roquost	procent	value	TS 24.581 [88]	
		1 4.4.0	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		
	1	level.	Ī	l .

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	1(1 0 4307 [44]	
	specified in Table	needed for		
	6.1.1.1.3.3-3	setting up the security		
	0.1.1.1.0.0 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	Set to the multicast IP	I/EIEIEIICE	Condition
connection-address	ectionAddressAll	address of the		
	Collotti (dal'eco) (ii	MCVideo group		
Bandwidth		b= line		
bwtype	"AS:"	bwtype:bandwidth		
bandwidth	any allowed value	5wtypo.banawiati1		
Time description	any anowed value			
Timing		t= line		
start-time	"0"	t- iiile		
stop-time	"0"			
Media descriptions	0			
media description		m= line		
media description		media = audio		
media	"audio"			
port	"49152"	Set to a port number for		
F	10.10=	MCVideo speech of the		
		MCVideo group		
proto	"RTP/AVP"			
fmt	"99"	Indicating RTP payload		
		type numbers		
media title	"speech"	i= line		
media attribute	56000.	a= line		
		attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"99"			
encoding name	"AMR-WB"			
clock rate	16000			
encoding parameter	"1" if present	Channel number		
media attribute	i ii present	a= line		
media attribute		attribute = fmtp		
fmtp	"fmtp"	,		
format	"99"			
format specific parameters		Parameters of WB-		
		AMR codec		
mode-change-capability	"2"	To be able to		
gg.	-	interoperate fully with		
		gateways to circuit		
		switched networks		
max-red	"0"	No redundancy will be		
		used		
media attribute		a= line		
-		attribute =ptime		
ptime	"20"	packet time		
media attribute		a= line		
		attribute =maxptime		
maxptime	"240"	maximum packet time		
media description		m= line		
•		media = video		
		SDP media-level		
		section for a media-		
		transmission control		
		entity		
media	"video"			
port	any allowed value	The port for the media-		
•		transmission control		
		entity		

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
proto	"udp"	User Datagram Protocol. With UDP,	11010101	231141101
		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 Connection Data	"MCVideo"	a line		
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		
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	3GPP	
. •		value.	TS 24.581 [88]	
		Chall include the	clause 12,	
		Shall include the "mc_queueing" fmtp	clause 14	
		attribute in SDP offers		
		when queueing of		
		Transmission request is		
		supported.		

ivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Conditio
mc_priority	not present	Any integer value in the	3GPP	
_, ,	or	range of 1255	TS 24.581 [88]	
	any allowed value		clause 12,	
		Shall include the	clause 14	
		"mc_priority" fmtp		
		attribute when a		
		transmission priority		
		different than the		
		default priority is		
		required.		
mc_reception_priority	not present	Any integer value in the	3GPP	
_ ' _, ,	or	range of 0255	TS 24.581 [88]	
	any allowed value		clause 12,	
	, , , , , , , , , , , , , , , , , , , ,	Shall include the	clause 14	
		"mc_reception_priority"		
		fmtp attribute when a		
		reception priority		
		different than the		
		different than the default reception		
		•		
was avantad		priority is required.	2000	
mc_granted	present	Parameter has no	3GPP	
		value	TS 24.581 [88]	
		Shall include the	clause 12,	
			clause 14	
		"mc_granted" fmtp		
		attribute in the SDP		
		offer of an initial SIP		
		INVITE request when it		
		is acceptable for the		
		MCVideo client to		
		receive a granted		
		indication in the SIP		
		200 (OK) response to		
		an initial INVITE		
		request.		
mc_implicit_request	present	Parameter has no	3GPP	
		value	TS 24.581 [88]	
			clause 12,	
		Shall include the	clause 14	
		"mc_implicit_request"		
		fmtp attribute when a		
		SIP request shall be		
		interpreted as an		
		implicit Transmission		
		request. If not explicitly		
		stated in procedures in		
		the present document		
		or in procedures in		
		3GPP TS 24.281 [2]		
		that the		
		"mc_implicit_request"		
		fmtp attribute shall be		
		included, the decision		
		to include the		
		"mc_implicit_request"		
		fmtp attribute or not, is		
		an implementation		
		option.		
edia attribute				PRIVATE
edia attribute		option. a= line		PRIVATE CALL
		option. a= line attribute = key-mgmt	TS 24.281 [86]	
edia attribute ey-mgmt		option.  a= line attribute = key-mgmt Key Management	TS 24.281 [86] clause 6.2.1	
		option. a= line attribute = key-mgmt	TS 24.281 [86] clause 6.2.1	

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
				Condition
mikey	MIKEY-SAKKE I_MESSAGE as	MIKEY carries the security parameters	RFC 4567 [44]	
		needed for		
	specified in Table 6.1.1.1.3.3-3			
	0.1.1.1.3.3-3	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		
modia description		media = application		
media	"application"	песка – аррисакоп		
port	"49153"	Set to a port number for		
port	40100	media-floor control		
		entity of the MCVideo		
		group		
proto	"udp"	g.oup		
fmt	"MCVideo"			
media attribute		a= line		
		attribute = fmtp		
fmtp		·		
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		
		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

- MCPTT

Table 5.5.3.2.1-1: MCPTT-Info from the UE

Derivation Path: TS 24.379 [9] of Information Element	Value/remark	Commont	Reference	Condition
mcpttinfo	value/remark	Comment	Keierence	Condition
mcptt-Params mcptt-access-token	not propert			
тсри-ассеss-токеп	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			
session-type	"prearranged"			GROUP- CALL
	"private"			PRIVATE- CALL
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 AND INVITE_R EFER
	encrypted (NOTE 2) <mcptt-request-uri> with mcpttURI set to px_MCPTT_Client_B_I D</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 or encrypted (NOTE 2) <mcptt-called-party-id> with mcpttURI set to px_MCPTT_ID_User_B</mcptt-called-party-id>			
	not present			CONFIG, GROUPC ONFIG, POC- SETTINGS -EVENT
mcptt-calling-group-id	not present			
required	not present			
emergency-ind	not present or encrypted (NOTE 2) <emergency-ind> with mcpttBoolean set to "false"</emergency-ind>			
	Encrypted (NOTE 2) <emergency-ind> with mcpttBoolean set to "true"</emergency-ind>			EMERGEN CY-CALL AND INVITE_R EFER

Derivation Path: TS 24.379 [9] cla				
Information Element	Value/remark	Comment	Reference	Condition
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			
mc-org" floor-state	not present			
associated-group-id	not present  px_MCPTT_Group_A_I D if mcptt-request-uri contains a temporary group identity; otherwise, not present	if the <mcptt-request- uri=""> 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
	not present			PRIVATE- CALL
originated-by	not present			O, (LL
MKFC-GKTPs	not present			
mcptt-client-id	not present encrypted (NOTE 2) <mcptt-client-id> with mcpttString set to px_MCPTT_Client_A_I D  encrypted (NOTE 2)</mcptt-client-id>	The URI of the MCPTT Client  in general mcptt-client-	RFC	(PRIVATE-CALL OR GROUP-CALL OR EMERGEN CY-CALL OR EMERGEN CY-ALL OR EMERGEN CY-ALERT) AND INVITE_R EFER CONFIG,
	<pre><mcptypted (note="" 2)="" <mcptt-client-id=""> with mcpttString set to valid UUID URN (NOTE 1) if present</mcptypted></pre>	id is not mandatory (e.g. for SIP SUBSCRIBE)	4122 [106] TS 24.379 [9] clause 4.10	GROUPC ONFIG

Derivation Path: TS 24.379 [9] clause F.1.2				
Information Element	Value/remark	Comment	Reference	Condition
	encrypted (NOTE 2) <mcptt-client-id> with mcpttString set to valid UUID URN (NOTE 1)</mcptt-client-id>	mcptt-client-id is mandatory in the SIP REGISTER or SIP PUBLISH for service authorisation according to TS 24.379 [9] clauses 7.2.1 and 7.2.2	RFC 4122 [106] TS 24.379 [9] clause 4.10	CONFIG AND REGISTE R_PUBLIS H
	encrypted (NOTE 2) <mcptt-client-id> with mcpttString set to valid UUID URN (NOTE 1)</mcptt-client-id>	mcptt-client-id is mandatory in SIP PUBLISH for MCPTT service settings only, according to TS 24.379 [9] clause 7.2.3	RFC 4122 [106] TS 24.379 [9] clause 4.10	POC- SETTINGS -EVENT
alert-ind-rcvd	not present			
anyExt	not present or any allowed value		TS 24.379 [9], clause F.1.3	

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

- at the first time being sent by the UE to be a valid UUID URN with a format like "urn:uuid:XXXXXXXYYYY-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

Information Element	Value/remark	Comment	Reference	Condition
type attribute	"Encrypted"			
EncryptedData	EncryptedData as described in Table 5.5.13.2-1 containing encrypted element content of the mcptt parameter			

#### MCVideo

Table 5.5.3.2.1-2: MCVideo-Info from the UE

Derivation Path: TS 24.281 [86] Clause F.1.2				
Information Element	Value/remark	Comment	Reference	Condition
mcvideoinfo				
mcvideo-Params				
mcvideo-access-token	not present			

		<del>,</del>	_	
session-type	"eyJhbGciOiJSUzI1NiJ9 .eyJtY3B0dF9pZCl6ImF saWNIQG9yZy5jb20iLC JleHAiOjE0NTM1MDYx MjEsInNjb3BIIjpbIm9wZ W5pZCIsIjNncHA6bWN wdHQ6cHR0X3NIcnZlci JdLCJjbGIlbnRfaWQiOi JtY3B0dF9jbGIlbnQifQ. XYIqai4YKSZCKRNMLi pGC_5nV4BE79IJpvjex WjlqqcqiEx6AmHHIR00 mhcxeCESrXei9krom9e 8Goxr_hgF3szvgbwl8J RbFuv97XgepDLjEq4jL 3Cbu41Q9b0WdXAdFm eEbiB8wo_xggiGwv6ID R1b3TgAAsdjkRxSK4ct IKPaOJSRmM7MKMcK hlug3BEkSC9- aXBTSIv5fAGN- ShDbPvHycBpjzKWXBv MIR5PaCg- 9fwjELXZXdRwz8C6Jb RM8aqzhdt4CVhQ3- Arip-S9CKd0tu- qhHfF2rvJDRIg8ZBiihd PH8mJs-qpTFep_1- kON3mL0_g54xVmIMw N0XQA" "prearranged"	The access token is opaque to the MCVideo client	TS 33.180 [94], clause B.4 RFC 6749 [77]	GROUP- CALL
	"private"			PRIVATE-
	r			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"			3
	"true"			IMMPERIL- CALL
broadcast-ind	not present			
mc-org"	not present			
transmission-state	not present			

associated-group-id	px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity; otherwise, not present	if the <mcvideo- request-uri=""> element contains a group identity then this element can include an MCVideo group ID associated with the group identity in the <mcvideo-request-uri> element. E.g. if the <mcvideo-request-uri> element contains a temporary group identity (TGI), then the <associated-group-id> element can contain the constituent MCVideo group ID</associated-group-id></mcvideo-request-uri></mcvideo-request-uri></mcvideo->	TS 24.281 [86 ] clause F.1.3	GROUP- CALL
	not present			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
	"eyJhbGciOiJSUzI1NiJ9 .eyJzdWliOilxMjM0NTY 3ODkwliwiYXVkljoibWN wdHRfY2xpZW50liwiaX NzljoiSWRNUy5zZXJ2Z XluY29tOjkwMzEiLCJp YXQiOjE0NTM0OTgxN TgsImV4cCl6MTQ1Mz Q5ODQ1OCwibWNwd HRfaWQiOiJhbGljZUBv cmcuY29tln0.Dpn7Ahl MaqMEgg12NYUUfJGS FJMPG8M2li9FLtPotDI HvwU2emBws8z5JLw8 1SXQnoLqZ8ZF8tlhZ1 W7uuMbufF4Wsr7PAad Zixz3CnV2wxFV9qR_V A1- 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			
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

#### - MCPTT

Table 5.5.3.2.2-1: MCPTT-Info from the SS

Derivation Path: TS 24.379 [9] of Information Element	Value/remark	Comment	Reference	Condition
mcpttinfo				
mcptt-Params				
mcptt-access-token	not present			
session-type	not present			
,,	"prearranged"			GROUP- CALL
	"private"			PRIVATE- 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 D	The URI of the group		GROUP- CALL
required	not present			
emergency-ind	not present			
	"true"			EMERGE CY-CALL
alert-ind	not present			
	"true"			EMERGE CY-ALER
imminentperil-ind	not present			
	"true"			IMMPERII -CALL
broadcast-ind	not present			
mc-org"	not present			
floor-state	not present			
associated-group-id	not present			
originated-by	not present			
MKFC-GKTPs	not present			
mcptt-client-id	not present			
alert-ind-rcvd	not present			
anyExt	not present		TS 24.379 [9], clause F.1.3	

#### - MCVideo

Table 5.5.3.2.2-2: MCVideo-Info from the SS

Derivation Path: TS 24.281 [86] C	lause F.1.2			
Information Element	Value/remark	Comment	Reference	Condition
mcvideoinfo				
mcvideo-Params				
mcvideo-access-token	not present			

Derivation Path: TS 24.281 [86] Information Element	Value/remark	Comment	Reference	Condition
illiorniation Element	"eyJhbGciOiJSUzI1NiJ	The access token is		CONFIG
			TS 33.180 [94]	CONFIG
	9.eyJtY3B0dF9pZCl6l	opaque to the MCVideo	clause B.4	
	mFsaWNIQG9yZy5jb20	client	RFC 6749 [77]	
	iLCJIeHAiOjE0NTM1M			
	DYxMjEsInNjb3Blljpbl			
	m9wZW5pZCIsIjNncHA			
	6bWNwdHQ6cHR0X3N			
	IcnZlciJdLCJjbGllbnRfa			
	WQiOiJtY3B0dF9jbGllb			
	nQifQ.XYIqai4YKSZCK			
	RNMLipGC_5nV4BE79			
	IJpvjexWjlqqcqiEx6Am			
	HHIRo0mhcxeCESrXei			
	9krom9e8Goxr_hgF3sz			
	vgbwl8JRbFuv97Xgep			
	DLjEq4jL3Cbu41Q9b0			
	WdXAdFmeEbiB8wo_x			
	ggiGwv6IDR1b3TgAAs			
	djkRxSK4ctlKPaOJSR			
	mM7MKMcKhlug3BEk			
	SC9-aXBTSIv5fAGN-			
	ShDbPvHycBpjzKWXB			
	vMIR5PaCg-			
	9fwjELXZXdRwz8C6Jb			
	RM8agzhdt4CVhQ3-			
	Arip-S9CKd0tu-			
	qhHfF2rvJDRlg8ZBiihd			
	PH8mJs-qpTFep_1-			
	kON3mL0_g54xVmlMw			
	N0XQA"			
session-type	"prearranged"			GROUP-
				CALL
	"private"			PRIVATE-
				CALL
mcvideo-request-uri	px_MCVideo_Group_A	The URI of the group		GROUP-
•	_ID			CALL
	px_MCVideo_Client_B	The URI of the invited		PRIVATE-
	ID	MCVideo Client		CALL
mcvideo-calling-user-id	not present or			07.122
movidoo daliing door id	px_MCVideo_ID_User_			
	`^			
	A			
mcvideo-called-party-id	not present or			
	px_MCVideo_ID_User_			
	В			
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			3. 3/122
alore ma	then="false"			
	"true"			EMERGEN
	liue			
				CY-ALERT
imminentperil-ind	not present or if present			
	then="false"			
	"true"			IMMPERIL
				-CALL
broadcast-ind	not present			
broadcast-ind mc-org" floor-state	not present not present			

Derivation Path: TS 24.281 [86] C	Clause F.1.2			
Information Element	Value/remark	Comment	Reference	Condition
associated-group-id	px_MCVideo_Group_A _ID if mcvideo-request- uri contains a temporary group identity; otherwise, not present	if the <mcvideo- request-uri=""> element contains a group identity then this element can include an MCVideo group ID associated with the group identity in the <mcvideo-request-uri> element. E.g. if the <mcvideo-request-uri> element contains a temporary group identity (TGI), then the <associated-group-id> element can contain the constituent MCVideo group ID</associated-group-id></mcvideo-request-uri></mcvideo-request-uri></mcvideo->	TS 24.281 [86] clause F.1.3	GROUP- CALL
	not present			PRIVATE- CALL
originated-by	not present			
MKFC-GKTPs	not present			
mcvideo-client-id	px_MCVideo_Client_A _ID	The URI of the MCVideo Client		PRIVATE- CALL GROUP- CALL EMERGEN CY-CALL IMMPERIL -CALL EMERGEN CY-VALE
	"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			
anyExt	not present or any allowed value		TS 24.281 [86] clause F.1.3	

### MCData

Table 5.5.3.2.2-3: MCData-Info from the SS

Derivation Path: TS 24.282 [87], Clause D.1							
Information Element	Value/remark	Comment	Reference	Condition			
mcdata-info							
mcdata-Params							
mcdata-access-token	not present						
request-type	"one-to-one-sds"			MCD_1to1			
request-type	"group-sds"			MCD_grp			
mcdata-request-uri	px_MCData_Group_A			MCD_grp			
mcdata-calling-user-id	px_MCData_ID_User_ 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

- MCPTT

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

Derivation Path: RFC 5366 [35]				
Information Element	Value/remark	Comment	Reference	Condition
resource-lists				PRIVATE-
				CALL
				GROUP-
				CALL
				EMERGEN
				CY-CALL
				IMMPERIL
				-CALL
				EMERGEN CY-ALERT
list[1]				OT-ALLINT
name attribute	Not present			
display-name	Not present			
entry[1]	NOTE 5			
uri attribute	px_MCPTT_ID_User_B	The MCPTT ID of the		
		invited user		
display-name	Not present		TO 04 404 5441	0011510
resource-lists	encrypted (NOTE 4)		TS 24.481 [11]	CONFIG
			TS 24.484 [14]	OR GROUPC
				ONFIG
list[1]	encrypted (NOTE 4)			ONTIG
name attribute	"uri: mcptt-	Editor's note: to be		CONFIG
	op.gov:resource-lists"	removed		
display-name	Not present			
entry[1]	NOTE 5		TS 24.484 [14]	CONFIG
uri attribute	AUID1 & "/users/" &	UE Configuration		
	XUID & "/" & MCSUEID	document		
	& "/"	(NOTE 1a, 2, 3)		
	"AUID1 & "/users/" &	Editor's note: It is not		
	XUID & "/"	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/" &	UE User Profile		
	XUID & "/"	document		
diaplass page -	Not manage 4	(NOTE 1b, 2)		
display-name entry[3]	Not present NOTE 5		TS 24.484 [14]	CONFIG
display-name	Not present		10 24.404 [14]	COINTIG
entry[1]	NOTE 5		TS 24.484 [14]	GROUPC
Situy[1]	INOTE		10 27.404 [14]	ONFIG
uri attribute	AUID3 &	UE Service		
	"/global/service-	Configuration		
	config.xml"	document		
		(NOTE 1c)		
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

Editor's note: Attribute URI Encryption on the entry's uri attributes may need to be considered too (FFS)

NOTE 5: When a resource-lists document contains more than one entry, the entries may be in any order

## MCVideo

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

Derivation Path: RFC 5366 [35]		Comment	Deference	Conditio-
Information Element	Value/remark	Comment	Reference	Condition
resource-lists				PRIVATE-
				CALL
				GROUP-
				CALL
				EMERGEN
				CY-CALL
				IMMPERIL
				-CALL
				EMERGEN CY-ALERT
list[1]				CI-ALENT
name attribute	Not present			
display-name	Not present			
entry[1]	NOTE 5			
uri attribute	px_MCVideo_ID_User_	The MCVideo ID of the		
	В	invited user		
display-name	Not present			
resource-lists	encrypted (NOTE 4)		TS 24.481 [11]	CONFIG
			TS 24.484 [14]	OR
				GROUPC
				ONFIG
list[1]	encrypted (NOTE 4)	E Production of the second		CONTIN
name attribute	"uri: mcvideo-	Editor's note: to be		CONFIG
dianlay nama	op.gov:resource-lists"	removed		
display-name entry[1]	Not present NOTE 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		
		whether both options		
		are allowed or only one		
		of both; if the UE is		
		allowed not to include		
		the MCSUEID, it is not		
		clear where the MC		
		server gets it from		
display-name	Not present		TO 04 404 [44]	CONFIC
entry[2]	NOTE 5	LIC Hoor Drofile	TS 24.484 [14]	CONFIG
uri attribute	AUID2 & "/users/" & XUID & "/"	UE User Profile document		
	AUID & /	(NOTE 1b, 2)		
display-name	Not present	(NOTE 10, Z)		
entry[3]	NOTE 5		TS 24.484 [14]	CONFIG
uri attribute	AUID3 &	UE Service	. 5 2 10 1 [14]	33.11
an attribute	"/global/service-	Configuration		
	config.xml"	document		
	35	(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			
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				
<ul> <li>element content encryption of the root element <resource-lists> as described in Table 5.5.13.2-1</resource-lists></li> <li>element content encryption of (each) <li>list&gt; element as described in Table 5.5.13.2-1</li> <li>Editor's note: Attribute URI Encryption on the entry's uri attributes may need to be considered too (FFS)</li> </li></ul>				
NOTE 5: When a resource-lists	document contains more that	an one entry, the entries m	ay be in any order	r

#### - MCData

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

Derivation Path: RFC 5366 [35] / RFC 4826 [83]				
Information Element	Value/remark	Comment	Reference	Condition
resource-lists	Editor's note: XML element content encryption to be added			
list				
entry	px_MCData_ID_User_ B	The MCData ID of the target MCData user		

## 5.5.3.3.2 Resource-lists from the SS

### - MCPTT

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

Derivation Path: RFC 5366 [35] /	RFC 4826 [83]			
Information Element	Value/remark	Comment	Reference	Condition
resource-lists	Editor's note: XML element content encryption to be added			
name attribute	Not present			
display-name	Not present			
list				
entry[1]				
uri attribute	px_MCPTT_ID_User_A	The MCPTT ID of the invited user		
display-name	Not present			

#### MCVideo

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

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)

- MCPTT

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			23
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] cla	use F.3		Derivation Path: TS 24.379 [9] clause F.3				
Information Element	Value/remark	Comment	Reference	Condition			
	"PrivateCallEmergency"	Editor's note:		PRIVATE-			
		tEmergencyEventType		CALL and			
		is not part of location-		EMERGEN			
		info; it needs to be		CY-CALL			
		clarify whether or how it					
		shall be included					
	"InitiateEmergencyAlert	Editor's note:		IMMPERIL			
	"	tEmergencyEventType		-CALL			
		is not part of location-					
		info; it needs to be					
		clarify whether or how it					
		shall be included					

- MCVideo

Table 5.5.3.4.1-2: Location-info (Report from the UE) for MCVideo

Derivation Path: TS 24.281 [86] clause F.3					
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</triggerid>			
		with a trigger that has			
		fired. Only present if a			
		trigger is the cause of			
		the Location-info			
		Report.			
CurrentLocation		A mandatory element			
<del></del>		that contains the			
		location information			
CurrentServingEcgi	optional	This is optional			
0 0	·	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			
0 10 11 1		the SS		-	
CurrentCoordinate	optional	This is optional			
		depending on the			
		configuration sent by the SS			
ReportID	not propert	Attribute is used to			
Reportio	not present	return the value in the			
		<requestid> attribute</requestid>			
		in the <request></request>			
		element. Only present			
		in response to a			
		Location-Info Request.			
ReportType	"Emergency"	Required			
	,	The <reporttype></reporttype>			
		attribute has two values			
		"Emergency" and		1	
		"NonEmergency" used		1	
		to inform whether the		1	
		client is sending the			
		report in an emergency			
	10000	situation or not.		000::=	
EmergencyEventType	"GroupCallEmergency"			GROUP-	
				CALL and	
				EMERGEN	
	"Croup Collimns in and De-			CPOUR	
	"GroupCallImminentPer il"			GROUP-	
	"			CALL and IMMPERIL	
				-CALL	
	"PrivateCallEmargange"			PRIVATE-	
	"PrivateCallEmergency"			CALL and	
				EMERGEN	
				CY-CALL	
	"InitiateEmergencyAlert			IMMPERIL	
	minate Emergency Aiett	1		-CALL	

5.5.3.4.2 Location-info (Configuration sent by the SS)

- MCPTT

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

Information Element Iocation-info Configuration ConfigScope	Value/remark	Comment	Reference	Condition
Configuration				
Соптідъсоре	" C II "	The MODIT OF 1		
	"Full"	The MCPTT Client		
		shall replace any previous configuration.		
		previous configuration.		
NonEmergencyLocationInformat ion				
ServingEcgi	present	An optional element		
		specifying that the		
		serving E-UTRAN Cell		
		Global Identity (ECGI) needs to be reported		
NeighbouringEcgi	present	An optional element		
NeighbouringLegi	present	that can occur multiple		
		times, specifying that		
		neighbouring ECGIs		
		need to be reported		
MbmsSald	present	An optional element		
		specifying that the		
		serving MBMS Service		
		Area Id needs to be		
NAIs a fin A vin a	nua a a a t	reported;		
MbsfnArea	present	An optional element specifying that the		
		MBSFN area Id needs		
		to be reported;		
GeographicalCoordinate	present	An optional element		
ŭ 1		specifying that the		
		geographical		
		coordinate specified in		
		clause 6.1 in 3GPP		
		TS 23.032 [65] needs		
minimumIntervalLength	"10"	to be reported  A mandatory element		
minimumitervalLength	10	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		
10.9.1000.11.9.09.	F. 500/11	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		
WIDSHII/ NGA	prodont	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] clause F.3				
Information Element	Value/remark	Comment	Reference	Condition	
location-info					
Configuration	WE	The MOVIEL - Oliver			
ConfigScope	"Full"	The MCVideo Client shall replace any			
		previous configuration.			
		providuo ooriiligaration.			
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			
	process.	that can occur multiple			
		times, specifying that			
		neighbouring ECGIs			
Missassocial		need to be reported			
MbmsSald	present	An optional element specifying that the			
		serving MBMS Service			
		Area Id needs to be			
		reported;			
MbsfnArea	present	An optional element			
		specifying that the			
		MBSFN area Id needs			
GeographicalCoordinate	present	to be reported; An optional element			
GeographicalCoordinate	present	specifying that the			
		geographical			
		coordinate specified in			
		clause 6.1 in 3GPP			
		TS 23.032 [65] needs			
minimumIntervalLength	"10"	to be reported A mandatory element			
TillillillatilittervalLerigati	10	specifying the minimum			
		time the MCVIdeo			
		client needs to wait			
		between sending_			
		location reports. The			
		value is given in seconds			
Emergencyl continuintermetics"		Seconds			
EmergencyLocationInformation" ServingEcgi	present	An optional element			
209_09.	F: 000	specifying that the			
		serving E-UTRAN Cell			
		Global Identity (ECGI)			
Noighbouring Tag:	procent	needs to be reported			
NeighbouringEcgi	present	An optional element that can occur multiple			
		times, specifying that			
		neighbouring ECGIs			
		need to be reported			
MbmsSald	present	An optional element			
		specifying that the			
		serving MBMS Service Area Id needs to be			
		reported;			
MbsfnArea	present	An optional element			
		specifying that the			
		MBSFN area ld 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

## - MCPTT

Table 5.5.3.5-1: PIDF for MCPTT

Derivation Path: TS 24.379 [9]			D (	0 1141
Information Element	Value/remark	Comment	Reference	Condition
presence				
entity attribute	px_MCPTT_Client_A_I D			
tuple				
id attribute	px_MCPTT_Client_A_I D			
status				
affiliation				
group	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	any allowed value when sent by the UE or same value as sent in SIP PUBLISH otherwise	set to an identifier of a SIP PUBLISH request		

## - MCVideo

Table 5.5.3.5-2: PIDF for MCVideo

Derivation Path: TS 24.281 [86]	clause 8.3.1			
Information Element	Value/remark	Comment	Reference	Condition
presence entity	px_MCVideo_Client_A _ID			
tuple id	px_MCVideo_Client_A _ID			
status				
affiliation				
group	px_MCVideo_Group_A _ID			
client	not present			
status				
affiliating				
affiliated	not present			
deaffiliating	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		

## - MCData

Table 5.5.3.5-3: PIDF for MCData

Derivation Path: TS 24.282 [87] Information Element	Value/remark	Comment	Reference	Condition
presence entity	px_MCDATA_Client_A _ID	Common	rtororomos	Containen
tuple id	px_MCDATA_Client_A _ID			
status				
affiliation				
group	px_MCDATA_Group_A _ID			
client	not present			
status				
affiliating				
affiliated	not present			
deaffiliating	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		

# 5.5.3.6 SIMPLE-FILTER

## - MCPTT

Table 5.5.3.6-1: SIMPLE-FILTER for MCPTT

Information Element	Value/remark	Comment	Reference	Condition
filter-set			RFC 4661 [48]	
ns-bindings		TS 24.379 [9] clause 9.3.2.2 requires two separate ns- binding elements	RFC 4661 [48]	
ns-binding urn			RFC 4661 [48]	
prefix	пи	Editor's note: according to RFC 4661 the prefix is required nevertheless TS 24.379 says 'does not contain a "prefix" attribute'		
urn	"urn:ietf:params:xml:ns:			
ns-binding urn			RFC 4661 [48]	
prefix	"mcpttPI10"			
urn	"urn:3gpp:ns:mcpttPres Info:1.0"			
filter[1]			RFC 4661 [48]	
filter id	Any value	The value of the 'id' attribute has to be unique within the <filter-set> element</filter-set>		
uri attribute	Not present	According to TS 24.379		
domain attribute	Not present	According to TS 24.379		
remove attribute	Not present	'false' per default		
enabled attribute	Not present	'true' per default		
what			RFC 4661 [48]	
include	"//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]	
trigger	Not present			

## - MCVideo

Table 5.5.3.6-2: SIMPLE-FILTER for MCVideo

Derivation Path: TS 24.281 [86] Information Element	Value/remark	Comment	Reference	Condition
filter-set	px_MCVideo_Client_A	Comment	RFC 4661 [48]	Condition
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

Derivation Path: TS 24.282 [87] Information Element	Value/remark	Comment	Reference	Condition
filter-set	px_MCData_Client_A_I D	Comment	RFC 4661 [48]	Containon
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				
de-affiliate	not present			
group	px_MCPTT_Group_A_I D	MCPTT group name		

## 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					
de-affiliate	not present				
group	px_MCVideo_Group_A _ID	MCVideo group name			

#### MCData

Table 5.5.3.7-3: MCData-AFFILIATION-COMMAND for MCData

Derivation Path: TS 24.282 [87] Information Element	Value/remark	Comment	Reference	Condition
command-list				
affiliate				
de-affiliate	not present			
group	px_MCData_Group_A_ ID	MCData group name		

# 5.5.3.8 SDS Signaling Payload

# 5.5.3.8.1 SDS Signaling Payload from the UE

Table 5.5.3.8.1-1: SDS Signaling Payload from the UE

Derivation Path: TS 24.282 [87] clause 15.1.2					
Information Element	Value/remark	Comment	Reference	Condition	
SDS signalling payload	"01000001"	SDS Signalling Payload	TS 24.282 [87]		
message identity			clause 15.2.2		
Date and time	The current date and	The Date and time	TS 24.282 [87]		
	time	value is an unsigned	clause 15.2.8		
		integer containing UTC			
		time of the time when a			
		message was sent, in			
		seconds since midnight			
		UTC of January 1,			
		1970 (not counting leap			
	<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 Payload	As described in Table 5.5.3.10-1	MCData Protected Payload Message	TS 33.180 [94]	MCD_1to1	
Payload			TS 24.282 [87] clause 15.2.13	MCD_grp	
Payload content type	"0000001"	TEXT			
Payload data	any allowed value	The data payload Example: "abcdEFGH"			

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

Table 5.5.3.9-2: MCData Data Payload from the SS

Derivation Path: TS 24.282 [87] clause 15.1.4					
Information Element	Value/remark	Comment	Reference	Condition	
Data payload message identity	"01000011"	Data payload	TS 24.282 [87]		
			clause 15.2.2		
Number of payloads	"1"	1 payload	TS 24.282 [87]		
·			clause 15.2.12		
Security parameters and	As described in Table	MCData Protected	TS 33.180 [94]	MCD_1to1	
Payload	5.5.3.10-2	Payload Message			
Payload			TS 24.282 [87]	MCD_grp	
			clause 15.2.13		
Payload content type	"00000001"	TEXT			
Payload data	"Test"	The data payload			

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

# 5.5.3.10 MCData Protected Payload Message

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

Derivation Path: TS 33.180 [94]				_
Information Element	Value/remark	Comment	Reference	Condition
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	Any allowed value	Example: "abcdEFGH"		

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

Derivation Path: TS 33.180 [94]	] clause 8.5.4			
Information Element	Value/remark	Comment	Reference	Condition
Message Type	"01000011"	Message type – Data Payload		
Date and Time	The current date and time	Date and Time of creation of protected payload message		
Payload ID	"1"	The identifier for the payload.		
Payload sequence number	"1"	The sequence number of the protected payload.		
Algorithm	"DP_AES_128_GCM"	Protection of payloads shall support the following algorithms (cipher suites): DP_AES_128_GCM and DP_AES_256_GCM		
IV	"11011100 10111001 00001000 01010001 01010000 10110011 11001111 00100001 11100010 11110111 11011111 01011011 01010100 00101100 00100101 10100010"	Initialisation vector (or nonce) for message. Length depends on the algorithm and key used. 128 bits or 256 bits depending on the algorithm.		
DPPK-ID	PCK-ID	Key identifier 128 bits or 256 bits depending on the algorithm For one-to-one communications, DPPK-ID shall be the PCK-ID. For group communications, the DPPK ID shall be the GMK-ID		
Payload		Protected Payload (Ciphertext)		
Payload content type	"0000001"	TEXT		
Payload contents	"abcdEFGH"			

# 5.5.3.11 PoC Settings

Table 5.5.3.11-1: PoC Settings

Derivation Path: TS 33.180 [94]	clause 8.5.4			
Information Element	Value/remark	Comment	Reference	Condition
poc-settings				
entity [1]				
id	any value	unique identifier of the EPA (Event Publication Agent) Editor's note: to be clarified whether there are requirements for the id	RFC 4354 [103]	
am-settings			RFC 4354 [103]	
answer-mode	"automatic" or "manual"			
	"manual"			MANUAL
	"automatic"			AUTOMAT IC
selected-user-profile-index			TS 24.379 [9] clause 7.4.1	
user-profile-index	same value the user- profile-index in the user profile in Table 5.5.8.3- 1			

Condition	Explanation	
MANUAL	Manual answer mode	
AUTOMATIC	Automatic answer mode	

# 5.5.3.12 Xcap-diff documents

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

Information Element	Value/remark	Comment	Reference	Condition
xcap-diff	encrypted (NOTE 5)			
xcap-root attribute	tsc_MCX_CMSXCAPR ootURI	same URI as <cms- XCAP-root-URI&gt; element of the initial UE configuration</cms- 		
document[1]				
sel	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. NOTE 1b: AUID2 = "org.3gpp. AUID2 = "org.3gpp. AUID2 = "org.3gpp. NOTE 1c: 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 MCVideo condition MCVideo condition MCVideo condition MCVideo condition MCVideo condition MCVideo condition MCVideo condition MCVideo condition MCData dee IMEI according to 23.003	ding document	

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

Derivation Path: RFC 5854 [107] clause 4						
Information Element	Value/remark	Comment	Reference	Condition		
xcap-diff	encrypted (NOTE 1)					
xcap-root	tsc_MCX_GMSXCAPR ootURI	same URI as <gms- XCAP-root-URI&gt; element of the initial UE configuration</gms- 				
document[1]						
sel	"org.openmobileallianc e.groups/global/byGrou pID/" & px_MCPTT_Group_A_I D					
new-etag	arbitrary value		•			
previous-etag	same as new-etag					

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

## 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]	Solidition
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]	
			clause 15.2.11	
Application ID	Not present		TS 24.282 [87]	
			clause 15.2.7	
FD disposition request type	"0001"	FILE DOWNLOAD	TS 24.282 [87]	
		COMPLETED UPDATE	clause 15.2.4	
Mandatory download	Not present	Not present indicates a	TS 24.282 [87]	
		Non-Mandatory download	clause 15.2.16	
Payload			TS 24.282 [87]	
<u> </u>			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 00001000000100000 001000000	The Conversation ID contains a number uniquely identifying the conversation. The value is a universally unique identifier.	TS 24.282 [87] clause 15.2.9	
Message ID	"0000001000000100 000001000000100000 001000000	The Message ID contains a number uniquely identifying a message. The value is a universally unique identifier	TS 24.282 [87] clause 15.2.10	
InReplyTo message ID	Not present		TS 24.282 [87] clause 15.2.11	
Application ID	Not present		TS 24.282 [87] clause 15.2.7	
FD disposition request type	"0001"	FILE DOWNLOAD COMPLETED UPDATE	TS 24.282 [87] clause 15.2.4	
Mandatory download	Not present	Not present indicates a Non-Mandatory download	TS 24.282 [87] clause 15.2.16	
Payload			TS 24.282 [87] clause 15.2.13	
Length of Payload contents	Length of the payload contents			
Payload content type	"00000100"	FILEURL		
Payload contents	px_MCDATA_FD_FILE _LOC			
Metadata	Not present		TS 24.282 [87] clause 15.2.17	
file-selector	"file-selector:name:" <name file="" of="">":size:"<size file="" of="">":type:"<type file="" of="">":type:"<tspe file="" of="">":hash:sha-1:58:23:1F:E8:65:3B:BC:F3:71:36:2F:86:D4:71:91:3E:E4:B1:DF:2F"</tspe></type></size></name>	a concatenation of filename, filesize, filetype and hash. The filesize value is an integer as defined RFC 4566 [27]		
file-date	"file- date:creation:" <dquot E date-time the file was created DQUOTE&gt;</dquot 			
file-availability	"file-availability:" <date-time></date-time>	date-time is set to a date and time that the file is available until and is defined in RFC 5322 [109]		

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

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

Derivation Path: TS 24.282 [87],	Гable 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		
Message ID	Any allowed value	unique identifier. The Message ID	TC 24 202 [07]	
iviessage ID	Arry allowed value	contains a number	TS 24.282 [87] clause 15.2.10	
		uniquely identifying a	clause 15.2.10	
		message. The value is		
		a universally unique		
		identifier		
InReplyTo message ID	Not present		TS 24.282 [87]	
go			clause 15.2.11	
Application ID	Not present		TS 24.282 [87]	
	•		clause 15.2.7	
FD disposition request type	"0001"	FILE DOWNLOAD	TS 24.282 [87]	
		COMPLETED UPDATE	clause 15.2.4	
Mandatory download	"0001"	MANDATORY	TS 24.282 [87]	
		DOWNLOAD	clause 15.2.16	
Payload	Not present		TS 24.282 [87]	
			clause 15.2.13	
Metadata	Not present		TS 24.282 [87]	
			clause 15.2.17	

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

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

Derivation Path: TS 24.282 [87],	Table 15.1.3.1-1			
Information Element	Value/remark	Comment	Reference	Condition
FD signalling payload message	"0000010"	FD SIGNALLING	TS 24.282 [87]	
identity		PAYLOAD	clause 15.2.2	
Date and time	The current date and	The Date and time	TS 24.282 [87]	
	time	value is an unsigned	clause 15.2.8	
		integer containing UTC		
		time of the time when a		
		message was sent, in		
		seconds since midnight		
		UTC of January 1,		
		1970 (not counting leap		
		seconds).		
Conversation ID	"0000001000000100	The Conversation ID	TS 24.282 [87]	
	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		
	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	
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	

# 5.5.4 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
	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
	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	Valuoriomaik	Commone	Reference	Condition
Method	"GET"			
Request-URI	<u> </u>			
uri	tsc_MCX_IdMS_auth_ UriPath	points to the Authorisation endpoint of the IdM Server	TS 33.180 [94]	AUTH
	px_MCX_InitialConfigS erver_UriPath	points to initial UE Configuration document	TS 24.484 [14]	UEINITIAL CONFIG
	"/" & tsc_MCX_CMSXCAPR ootURI & "/" & AUID1 & "/users/" & XUID & "/" & MCSUEID & "/mcptt- ue-configuration.xml"	points to UE Configuration document (NOTE 1a, 2, 3)	TS 24.484 [14]	UECONFI G
	"/" & tsc_MCX_CMSXCAPR ootURI & "/" & AUID2 & "/users/" & XUID & "/mcptt-user-profile-" & profile-index & ".xml"	points to UE User Profile document (NOTE 1b, 2, 4)	TS 24.484 [14]	UEUSERP ROF
	"/" & tsc_MCX_CMSXCAPR ootURI & "/" & AUID3 & "/global/service- config.xml"	points to UE Service Configuration document (NOTE 1c, 2)	TS 24.484 [14]	UESERVC ONFIG
	"/" & tsc_MCX_GMSXCAPR ootURI & "/" & "org.openmobileallianc e.groups/global/byGrou pID/" & px_MCPTT_Group_A_I D	points to group configuration document	TS 24.481 [11]	GROUPC ONFIG
query	As described in Table 5.5.4.10.1-1		TS 33.180 [94]	AUTH
HTTP-Version	"HTTP/1.1"			
Cache-Control			RFC 2616 [26]	
cache-directive	"no-cache"			
Authorization			RFC 2617 [72]	UECONFI G UEUSERP ROF UESERVC ONFIG GROUPC ONFIG
authentication-scheme	"Bearer"		RFC 6750 [104]	
b64token	Access token as assigned to the UE by Token Response		RFC 6750 [104]	
Authorization	not present			
Content-Type				AUTH
media-type	"application/x-www- form-urlencoded"			
Content-Type	Not present			
Message-body	Not present			

NOTE 1a: AUID1	= "org.3gpp.mcptt.ue-config" for Condition MCPTT
AUID1	0 011 1 0
AUID1	= "org.3gpp.mcdata.ue-config" for Condition MCData
NOTE 1b: AUID2	= "org.3gpp.mcptt.user-profile" for Condition MCPTT
AUID2	= "org.3gpp.mcvideo.user-profile" for Condition MCVideo
AUID2	orgregiph model and or promo for containing models
NOTE 1c: AUID3	= "org.3gpp.mcptt.service-config" for Condition MCPTT
AUID3	3 3- Fr
AUID3	
NOTE 2: XUID	= "sip:" & px_MCPTT_ID_User_A for Condition MCPTT
XUID	= "sip:" & px_MCVideo_ID_User_A for Condition MCVideo
XUID	= "sip:" & px_MCData_ID_User_A for Condition MCData
NOTE 3: MCSU	EID = Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8)
NOTE 4: profile-	index 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]		_		1
Information Element	Value/remark	Comment	Reference	Condition
Status-Line	"DOOT"			
Method Request-URI	"POST"			
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_ldMS_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 0042 (20)	KNACHUT
Authorization	"Bearer"		RFC 2617 [72]	KMSINIT, KMSKEY
authentication-scheme			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	if present	present in case of KMS request security Editor's note: it is not clear in which case a UE shall apply KMS request security		KMSINIT, KMSKEY
media-type	"application/xml"	Editor's note: there is no media-type specific for "urn:3gpp:ns:mcsecKM SInterface:1.0"  > "application/xml" to be confirmed		
Message-body				AUTH
Authentication Request	As described in Table 5.5.4.10.1-1			
Message-body			HTML 4.01 Specification [105]	USERAUT H
user	px_MCX_User_A_user name			
password	px_MCX_User_A_pass word			
Message-body				TOKEN
Token request	As described in Table 5.5.4.10.3-1			
Message-body	If present			KMSINIT, KMSKEY

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** 

Request-line     PUT"       Method     "PUT"	Derivation Path: RFC 2616 [26] Information Element	Value/remark	Comment	Reference	Condition
Point to the group   TS 24.481 [11]   GROUPT Grouptor   IgDoc_URI   Content-Type   media-type   application/vnd.oma.po   c.groups+xml   message-body   group   xmins:ri   "umietrparamsxmi.ns: resource-lists xml   namespace identifier   common-policy xmins:ri   "umietrparamsxmi.ns: common-policy xmins:ri   "umietrparamsxmi.ns: common-policy xmins:ri   TS 24.481 [11]   rommon-policy xmins:ri   TS 24.481 [1	Request-line				
Content-Type         igDoc_URI         configuration document         ONFIG           media-type         application/wnd.oma.po c.groups+xml         application/wnd.oma.po c.groups+xml         Image: proper composition of the composi					
Content-Type	Request-URI			TS 24.481 [11]	GROUPC ONFIG
Message-body   group   media-type   application/wnd.oma.po	Content-Type				
Message-body					
	Message-body				
xmlns:rl					
common-policy"   namespace identifier   TS 24.481 [11]   namespace identifier   TS 2				TS 24.481 [11]	
mon-policy"   namespace identifier   extensions xml   risions"   namespace identifier   extensions xml   risions"   rum:3gpp:ns:mcpttGrou   plnfo:1.0"   namespace identifier   ramespace identifier   rate in the MCPTT goup   rate in this group   rate in t	xmlns:cp				
nsions"   namespace identifier   namespace identifier   wirn:3gpp:ns:mcpttGrou   plnfo:1.0"   namespace identifier   TS 24.481 [11]   namespace identifier   TS 24.481 [11]   namespace identifier   namespa	xmlns:ocp	mon-policy"			
Description   Display-name   Displ	xmlns:oxe	nsions"	namespace identifier		
Description   Description				TS 24.481 [11]	
display-name px_MCPTT_Group_B_ group display name TS 24.481 [11] name    Iist	list-service				
list entry  uri  px_MCPTT_Client_A_I participate in this group  display-name  px_MCPTT_User_A_Pr ofile_Name  User display name  px_MCPTT_User_A_Pr ofile_Name  User display name  TS 24.481 [11]  entry  uri  px_MCPTT_Client_B_I participate in this group  TS 24.481 [11]  entry  uri  px_MCPTT_Client_B_I participate in this group  px_MCPTT_User_B_Pr ofile_Name  User ID allowed to participate in this group  TS 24.481 [11]  participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  Maximum number of User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  User ID allowed to participate in this group  TS 24.481 [11]  Allow users to invite members to this group  TS 24.481 [11]  Allow users to invite members to this group  TS 24.481 [11]  Allow group join  TS 24.481 [11]  Entry  User ID allowed to participate in this group  TS 24.481 [11]  Allow emergency call TS 24.481 [11]	uri	D			
entry  uri  px_MCPTT_Client_A_I D  participate in this group  px_MCPTT_User_A_Pr ofile_Name  px_MCPTT_User_A_Pr ofile_Name  User lisplay name  TS 24.481 [11]  user-priority  I  uri  px_MCPTT_Client_B_I D  mx_MCPTT_Client_B_I D  px_MCPTT_User_B_Pr ofile_Name  User lisplay name  TS 24.481 [11]  entry  uri  px_MCPTT_User_B_Pr ofile_Name  User display name  User display name  TS 24.481 [11]  participate in this group  TS 24.481 [11]  user-priority  I  uri  px_MCPTT_User_B_Pr ofile_Name  User priority  User lisplay name  TS 24.481 [11]  participate in this group  TS 24.481 [11]  participate in this group  I  user-priority  User lisplay name  TS 24.481 [11]  participate in this group  TS 24.481 [11]  Invite-members  "true"  Allow users to invite members to this group  max-participant-count  "3"  Maximum number of users to this group  TS 24.481 [11]  mactions  allow-initiate-conf  "true"  All conference calls  TS 24.481 [11]  imminent-peril-call  "true"  Allow emergency call  "true"  Allow emergency call  "true"  Allow emergency call  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  Allow emergency call  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  Allow emergency call  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  Allow emergency call  TS 24.481 [11]  TS 24.48	display-name		group display name	TS 24.481 [11]	
Uri	list				
display-name px_MCPTT_User_A_Pr ofile_Name TS 24.481 [11]  user-priority 1 User display name TS 24.481 [11]  entry 1 px_MCPTT_Client_B_I D User ID allowed to participate in this group participate in t	entry				
User priority   1	uri	D	participate in this group		
Party	display-name		, ,	TS 24.481 [11]	
uri px_MCPTT_Client_B_I D User ID allowed to participate in this group  max-mcptt_User_B_Pr ofile_Name  px_MCPTT_User_B_Pr ofile_Name  User display name  TS 24.481 [11]  muser-priority  px_MCPTT_Client_C_I User priority  px_MCPTT_Client_C_I User ID allowed to participate in this group  px_MCPTT_User_C_Pr ofile_Name  px_MCPTT_User_C_Pr ofile_Name  px_MCPTT_User_C_Pr ofile_Name  px_MCPTT_User_C_Pr ofile_Name  TS 24.481 [11]  muser-priority  Invite-members  "true"  Allow users to invite members to this group  max-participant-count  "3"  Maximum number of users in the group  max-participant-count  "3"  Maximum number of users in the group  max-participant-count  "TS 24.481 [11]  max-participant-count  "TS 24.481 [11]  max-participant-count  "True"  Allow group join  TS 24.481 [11]  miminent-peril-call  "true"  Allow emergency call  TS 24.481 [11]  miminent-peril-call  "true"  Allow imminent peril  TS 24.481 [11]  call  max-participate in this group  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  miminent-peril-call  "true"  Allow emergency call  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]	user-priority	1	User priority	TS 24.481 [11]	
display-name	entry				
user-priority 2 User priority TS 24.481 [11]  entry  uri px_MCPTT_Client_C_I D participate in this group  display-name px_MCPTT_User_C_Pr ofile_Name		D	participate in this group		
entry  uri	display-name		. ,		
uri px_MCPTT_Client_C_I D sarticipate in this group px_MCPTT_User_C_Pr ofile_Name px_MCPTT_User_C_Pr ofile_Name Is 24.481 [11]		2	User priority	TS 24.481 [11]	
display-name px_MCPTT_User_C_Pr ofile_Name TS 24.481 [11]  user-priority 3 User priority TS 24.481 [11]  invite-members "true" Allow users to invite members to this group Maximum number of users in the group TS 24.481 [11]  ruleset rule id "a7c" TS 24.481 [11]  actions allow-initiate-conf "true" All conference calls TS 24.481 [11]  imminent-peril-call "true" Allow group join TS 24.481 [11]  emergency-call "true" Allow emergency call TS 24.481 [11]  emergency-alert "true" Allow imminent peril call emergency-alert "true" All emergency alert TS 24.481 [11]  supported-services service-enabler "urn:urn-7:3gpp-service.ims.icsi.mcptt" TS 24.481 [11]	entry				
ofile_Name  user-priority  invite-members  "true"  Allow users to invite members to this group  max-participant-count  "3"  Maximum number of users in the group  ruleset  rule id  actions  allow-initiate-conf join-handling emergency-call imminent-peril-call  emergency-alert  "true"  Allow group join  Allow emergency alert  TS 24.481 [11]		D	participate in this group		
invite-members "true" Allow users to invite members to this group  max-participant-count "3" Maximum number of 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 call emergency-alert "true" All emergency alert TS 24.481 [11] supported-services service-enabler "urn:urn-7:3gpp-service.ims.icsi.mcptt" TS 24.481 [11]		ofile_Name	, ,		
members to this group  max-participant-count  "3"  Maximum number of users in the group  ruleset  rule id  actions  allow-initiate-conf "true"  join-handling "true"  emergency-call "true"  imminent-peril-call "true"  emergency-alert "true"  supported-services  service-enabler  members to this group  Maximum number of users in the group  TS 24.481 [11]  TS 24.481 [11]  All conference calls  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]  TS 24.481 [11]					
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] emergency-alert "true" Allow imminent peril TS 24.481 [11] emergency-alert "true" All emergency alert TS 24.481 [11] supported-services service-enabler "urn:urn-7:3gpp- service.ims.icsi.mcptt" TS 24.481 [11]			members to this group		
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]  emergency-alert "true" All emergency alert TS 24.481 [11]  supported-services  service-enabler "urn:urn-7:3gpp- service.ims.icsi.mcptt" TS 24.481 [11]		"3"		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]  emergency-alert "true" All emergency alert TS 24.481 [11]  supported-services  service-enabler "urn:urn-7:3gpp- service.ims.icsi.mcptt" TS 24.481 [11]					
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 call emergency-alert "true" All emergency alert TS 24.481 [11] supported-services service-enabler "urn:urn-7:3gpp- service.ims.icsi.mcptt" TS 24.481 [11]		"a7c"		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 call emergency-alert "true" All emergency alert TS 24.481 [11] supported-services service-enabler "urn:urn-7:3gpp-service.ims.icsi.mcptt" TS 24.481 [11]					
emergency-call "true" Allow emergency call TS 24.481 [11] imminent-peril-call "true" Allow imminent peril call  emergency-alert "true" All emergency alert TS 24.481 [11]  supported-services service-enabler "urn:urn-7:3gpp-service.ims.icsi.mcptt" TS 24.481 [11]					
imminent-peril-call "true" Allow imminent peril call  emergency-alert "true" All emergency alert TS 24.481 [11]  supported-services  service-enabler "urn:urn-7:3gpp-service.ims.icsi.mcptt" TS 24.481 [11]					
emergency-alert "true" All emergency alert TS 24.481 [11]  supported-services service-enabler "urn:urn-7:3gpp- service.ims.icsi.mcptt" TS 24.481 [11]			Allow imminent peril		
service-enabler "urn:urn-7:3gpp- TS 24.481 [11] service.ims.icsi.mcptt"		"true"		TS 24.481 [11]	
				TS 24.481 [11]	
	and the second s		Nava anava ania ii	TO 04 404 5443	

## 5.5.4.5 DELETE

Table 5.5.4.5-1: HTTP DELETE

Derivation Path: RFC 2616 [26]				
Information Element	Value/remark	Comment	Reference	Condition
Request-line				
Method	"DELETE"			
Request-URI	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- service"	list-service xml namespace identifier	TS 24.481 [11]	
xmlns:rl	"urn:ietf:params:xml:ns: resource-lists"	resource-lists xml namespace identifier	TS 24.481 [11]	
xmlns:cp	"urn:ietf:params:xml:ns: common-policy"	common-policy xml namespace identifier	TS 24.481 [11]	
xmlns:ocp	"urn:oma:xml:xdm:com mon-policy"	common-policy xml namespace identifier	TS 24.481 [11]	
xmlns:oxe	"urn:oma:xml:xdm:exte nsions"	extensions xml namespace identifier	TS 24.481 [11]	
xmlns:rmcpttgi	"urn:3gpp:ns:mcpttGrou pInfo:1.0"	MCPTT group info namespace identifier	TS 24.481 [11]	
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	Commont	Poforonoo	Condition
Status-Line	value/remark	Comment	Reference	Condition
HTTP-Version	"HTTP/1.1"			
Status-Code	"200"			
Reason-Phrase	"OK"			
Cache-Control			RFC 2616 [26]	
cache-directive	"no-store"			
Pragma			RFC 2616 [26]	
pragma-directive	"no-cache"			
Content-Length value	length of message-			
value	body			
Content-Type	body			
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 committee	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				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	3.5.5			UECONFI G
mcptt-UE-configuration	As described in Table 5.5.8.2-1	UE Configuration document returned		
Message-body	0.0.0.2-1	addunient returned		UEUSERP ROF

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

## 5.5.4.7 HTTP 201 (Created)

Table 5.5.4.7-1: HTTP 201 (Created)

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

## 5.5.4.8 HTTP 302 (Found)

Table 5.5.4.8-1: HTTP 302 (Found)

Derivation Path: RFC 2616 [26]	Derivation Path: RFC 2616 [26]					
Information Element	Value/remark	Comment	Reference	Condition		
Status-Line						
HTTP-Version	"HTTP/1.1"					
Status-Code	"302"					
Reason-Phrase	"Found"					
Location				AUTH		
Location-URI						
uri	px_MCX_OAuth_Redir ectURI_A	Identifier of the MCPTT client making the API request	TS 33.180 [94]			
query	As described in Table 5.5.4.10.2-1					

## 5.5.4.9 HTTP 409 (Conflict)

Table 5.5.4.9-1: HTTP 409 (Conflict)

Derivation Path: RFC 2616 [26]				
Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
HTTP-Version	"HTTP/1.1"			
Status-Code	"409"			
Reason-Phrase	"URI constraint violated"	Conflict reason	TS 24.484 [14]	

## 5.5.4.10 HTTP Message Bodies

## 5.5.4.10.1 Authentication Request

Table 5.5.4.10.1-1: Authentication Request

Derivation Path: TS 33.180 [ Information Element	94], clause B.4.2.2 Value/remark	Comment	Reference	Condition
response-type	"code"	For native MCPTT clients the value shall be set to "code"	OpenID Connect 1.0 [95]	Condition
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

Derivation Path: TS 33.180 [94], 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 authentication again	RFC 6749 [77]
id_token		The MCPTT client may validate the user with the ID token and configure itself for the user	RFC 6749 [77] TS 33.180 [94]
{			
{		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	
}		Payload Data	DEC 7510 [404]
"mcptt_id"	px_MCPTT_ID_User_A	Payload Data  URI of the MCPTT client User this is a globally unique identifier within the MCPTT service that represents the MCPTT user	RFC 7519 [101] TS 24.380 TS 24.483
"sub"	"1234567890"	Arbitrarily selected string: case-sensitive string containing a StringOrURI value which identifies the principal that is the subject of the JWT, and is optional	RFC 7519 [101]
"aud"	client_id as received in token request	Audience: identifies the recipients that the JWT is intended for and is optional	RFC 7519 [101]

"iss"	px_MCPTT_IdM_Server_ URI	Issuer: case-sensitive string containing a StringOrURI value which identifies the principal that issued the JWT and is optional	RFC 7519 [101]
"exp"	Current system time + 7199 seconds; the system time is the number of seconds since 00:00:00 UTC on 1 January 1970	Number containing a NumericData value identifies the expiration time on or after which the JWT MUST NOT be accepted for processing	RFC 7519 [101] TS 33.180 [94]
"iat"	Current system time Epoch time: number of seconds since 00:00:00 UTC on 1 January 1970	Numeric value which identifies the time at which the JWT was issued and is optional	RFC 7519 [101] TS 33.180 [94]
Signature	HASH (base64UrlEncode(heade r) + "." + base64UrlEncode(payloa d))	Created by the hash algorithm corresponding to the algorithm provided in the header	RFC 7515 [102]
}			
token-type	"Bearer"	The token type for access	RFC 6749 [77]
expires-in	"7199"	Token expiry time	RFC 6749 [77]

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

5.5.4.10.5 Void

5.5.4.10.6 KMS Certificate

Table 5.5.4.10.6-1: KMS Certificate

Derivation Path: TS 33.180 [94],				_
Information Element	Value/remark	Comment	Reference	Condition
SignedKmsResponse		1.00		
ld	"kmsResponse"	arbitrarily selected id		
		which the Signature's		
V m al lui	too MCV KMC Hootes	Reference URI refers to The URI of the KMS		
KmsUri	tsc_MCX_KMS_Hostna			
	me	which issued the key		
UserUri	tsc_MCX_MC_ID_User	set The MC ID with which		
Oseron	_A	the user has used for		
	Editor's note: to be	authentication		
	clarified whether the	adirioritiodilori		
	MC ID can be used in			
	this context or whether			
	there are restrictions			
	how to set the UserUri			
Time	Current system time of	Time stamp of KMS		
	the SS	message		
ClientReqUrl	tsc_MCX_KMS_Client	URL of the client		
	ReqUrl_init	making the key request		
KmsMessage				
KmsInit				
Version	"1.0.0"			ļ
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		
Centon	ISC_IVICX_KIVIS_CEITOII	Certificate (this object)		
KmsUri	tsc_MCX_KMS_Hostna	The URI of the KMS		
Killson	me	which issued the		
		Certificate		
Issuer	Not present	(Optional) String		
		describing the issuing		
		entity		
ValidFrom	Not present	(Optional) Date from		
		which the Certificate		
		may be used		
ValidTo	Not present	(Optional) Date at		
		which the Certificate		
		expires		ļ
Revoked	false	(Optional) A Boolean		
		value defining whether		
		a Certificate has been		
HearlDEarmat	"2"	revoked Shall contain the value		
UserIDFormat	2	Shall contain the value   121		
UserKeyPeriod	"2592000"	The number of seconds		-
Userneyrellou	2092000	that each user key		
		issued by this KMS		
		should be used		
		(2592000 seconds are		
		30 days)		
UserKeyOffset	CurrentTimestamp	UserKeyOffset so that		
-3	MODULO	KeyPeriod starts at		
	UserKeyPeriod	current system time;		
		CurrentTimestamp is		
		the current system time		
		in seconds since 0h on		
		1 <sup>st</sup> Jan 1900		

		1	1
PubEncKey	SAKKE Public Key Z_T	The SAKKE Public	RFC 6508 [99]
	derived from master	Key, "Z_T". This is an	
	secret z_T according to	OCTET STRING	
	RFC 6508	encoding of an elliptic	
		curve point	
PubAuthKey	ECCSI Public Key	The ECCSI Public Key,	RFC 6507 [98]
	KPAK derived from	"KPAK". This is an	
	private key KSAK	OCTET STRING	
	according to RFC 6507	encoding of an elliptic	
	according to the coor	curve point	
ParameterSet	Not present	(Optional) The choice	
T dramotor cot	140t procent	of parameter set used	
		for SAKKE and ECCSI	
KmsDomainList	Not present	(Optional) List of	
KIIISDOIIIdiIILISI	Not present	domains associated	
O'll ( -		with the certificate	
SignedInfo		) (A #   O:   /	
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	<u> </u>	
3	object (referred to by		
	the URI)		
SignatureValue	Hash signing the	The signing key is	
2.5.14.410 74.40	SignedInfo	derived from the InK	
	3.9.1343	(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		(hv_inicv_iiiv_in)	
	haraott KID		
KeyName	base64 encoded InK-ID		
	(px_MCX_InK_ID)		

5.5.4.10.7 Void

5.5.4.10.8 KMS Key Set

Table 5.5.4.10.8-1: KMS Key Set

Derivation Path: TS 33.180 [94] Information Element	Value/remark	Comment	Reference	Condition
Signed KmsResponse				22
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		
	ReqUrl_keyprov	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	The URI of the KMS		
	me	which issued the key		
		set		
CertUri	Not present	(Optional) The URI of		
		the Certificate which		
		may be used to validate		
Issuer	Not present	the key set (Optional) String		
issuei	Not present	describing the issuing		
		entity		
UserUri	px_MCPTT_ID_User_A	The user's MCPTT ID		
3001311	px_MCVideo_ID_User_	The user's MCVideo ID		MCVIDEO
	A	The deer of the video 12		
	px_MCData_ID_User_	The user's MCData ID		MCDATA
	A			
UserID	UID generated	UID corresponding to	TS 33.180 [94]	
	according to annex	the key set		
	F.2.1 of TS 33.180 [94]			
	with MCPTT-Id as			
	identifier			
	Editor's note: to be			
	clarified how to convert			
	the UID into charstring (e.g. hexstring			
	representation or			
	base64 encoding)			
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 <sup>st</sup> 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]	
occionggr.cycon		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 aminta 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				
UserPubTokenPVT		The ECCSI public validation token, "PVT". This is an OCTET STRING encoding of an elliptic curve point; the PVT is generated using the UID as contained in the UserID of the KSM message	RFC 6507 [98]	
EncryptionAlgorithm	"AES256"	Encryption algorithm to use		
KeyInfo				
KeyName	base64 encoded TrK- ID (px_MCX_TrK_ID)			
CipherData		<u> </u>		
CipherValue	Encrypted PVT	The encryption key is derived from the TrK (px_MCX_TrK) according to TS 33.180 [94] Annex F.1.4 with FC = 0x51 XPK-ID = TrK-ID (px_MCX_TrK_ID)		
Signature				
SignedInfo				
CanonicalizationAlgorithm	"xml-c14n"	XML Signature processing		
SignatureAlgorithm	"HMAC-SHA-256"	Hashing algorithm to be applied to sign the SignedInfo with the key given in the KeyInfo		
Reference				
URI	"#kmsResponse"	referring to the data object for which the hash is generatet (KMS response element in this case)		
DigestAlgorithm	"SHA-256"	Hashing algorithm to be applied to sign the data object		
DigestValue	Hash signing the data object (referred to by the URI)			
SignatureValue	Hash signing the SignedInfo	The signing key is derived from the InK (px_MCX_InK) according to TS 33.180 [94] Annex F.1.4 with FC = 0x52 XPK-ID = InK-ID (px_MCX_InK_ID)		
KeyInfo				
KeyName	base64 encoded InK-ID (px_MCX_InK_ID)			

## 5.5.4.10.9 Signed KMS Request

Table 5.5.4.10.9-1: Signed KMS Request

Derivation Path: TS 33.180 [94],			D-/	0- 20
Information Element	Value/remark	Comment	Reference	Condition
SignedKmsRequest				
KmsRequest				
Id attribute	any value	value as used as		
		reference in the		
Version attribute	"1.1.0"	signature		
UserUri	px_MCPTT_ID_User_A	The user's MCPTT ID		
Userun	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 me	The URI of the KMS to 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 in the request URI of the HTTP request	The resource URI to which the HTTP POST request is sent		
KrrList	not present			
ClientError	not present			
Signature				
SignedInfo				
CanonicalizationAlgorithm	"http://www.w3.org/TR/ 2001/REC-xml-c14n- 20010315"	XML Signature processing		
SignatureAlgorithm	"http://www.w3.org/200 1/04/xmldsig- more#hmac-sha256"	Hashing algorithm to be applied to sign the SignedInfo with the key given in the KeyInfo		
Reference				
URI	URI referring to the Id of the request	same value as the Id attribute of the request with leading "#"		
DigestAlgorithm	"http://www.w3.org/200 1/04/xmlenc#sha256"	Hashing algorithm applied to sign the data object		
DigestValue	Hash signing the data object (referred to by the URI)			
SignatureValue	Hash signing the SignedInfo; shall be validated by the SS	The signing key is derived from the InK (px_MCX_InK) according to TS 33.180 [94] Annex F.1.4 with FC = 0x52 XPK-ID = InK-ID (px_MCX_InK_ID)		
KeyInfo				
KeyName	base64 encoded InK-ID (px_MCX_InK_ID)			

# 5.5.5 Default MCPTT call control Off-network messages and other information elements

#### 5.5.5.1 GROUP CALL PROBE

Table 5.5.5.1-1: GROUP CALL PROBE

Derivation Path: TS 24.379 [9] Table 15.1.2.1-1			
Information Element	Value/remark	Comment	Condition
MCPTT group ID	px_MCPTT_Group_A_ID		

### 5.5.5.2 GROUP CALL ANNOUNCEMENT

#### 5.5.5.2.1 GROUP CALL ANNOUNCEMENT from the UE

#### Table 5.5.5.2.1-1: GROUP CALL ANNOUNCEMENT from the UE

Derivation Path: TS 24.379 [9] Table 15.1.3.1-1					
Information Element	Value/remark	Comment	Condition		
Call identifier	a random number uniformly distributed between (0, 65535) generated at the beginning of a call establishment				
Call type	"00000001"	Basic Group Call			
Refresh interval	10000	The Refresh interval contains a number denoting the minimum time interval (milliseconds) between two successive periodic announcements. NOTE: In release 13.7 of TS 24.379 [9], the refresh interval of the call is fixed to 10 seconds.			
Call start time	The Call start time value is an unsigned integer containing UTC time of the time when a call was started, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).				
Last call type change time	The Last call type change time value is an unsigned integer containing UTC time of the time when a call priority was changed, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).				
MCPTT group ID	px_MCPTT_Group_A_ID				
SDP	As described in Table 5.5.3.1.3-1				
Originating MCPTT user ID	px_MCPTT_ID_User_A	pre-set MCPTT user ID			
Last user to change call type	The ID of the last user to change contents				
Confirm mode indication	Present				
Probe response	Not Present				

#### GROUP CALL ANNOUNCEMENT from the SS 5.5.5.2.2

Table 5.5.5.2.2-1: GROUP CALL ANNOUNCEMENT from the SS

Derivation Path: TS 24.379 [9] Table 15.1.3.1-1			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65535) generated at the beginning of a call establishment		
Call type	"00000001"	Basic Group Call	
Refresh interval	10000	The Refresh interval contains a number denoting the minimum time interval (milliseconds) between two successive periodic announcements. NOTE: In release 13.7 of TS 24.379 [9], the refresh interval of the call is fixed to 10 seconds.	
Call start time	The Call start time value is an unsigned integer containing UTC time of the time when a call was started, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
Last call type change time	The Last call type change time value is an unsigned integer containing UTC time of the time when a call priority was changed, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
MCPTT group ID	px_MCPTT_Group_A_ID		
SDP	As described in Table 5.5.3.1.4-1		
Originating MCPTT user ID	px_MCPTT_ID_User_B	pre-set MCPTT user ID	
Last user to change call type	The ID of the last user to change contents		
Confirm mode indication	Present		
Probe response	Not Present		

### 5.5.5.3 GROUP CALL ACCEPT

### 5.5.5.3.1 GROUP CALL ACCEPT from the UE

Table 5.5.5.3.1-1: GROUP CALL ACCEPT from the UE

Derivation Path: TS 24.379 [9] Table 15.1.4.1-1			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Call type	"0000001"	Basic Group Call	
MCPTT group ID	px_MCPTT_Group_A_ID		
Sending MCPTT user ID	px_MCPTT_ID_User_A		

#### 5.5.5.3.2 GROUP CALL ACCEPT from the SS

Table 5.5.5.3.2-1: GROUP CALL ACCEPT from the SS

Derivation Path: TS 24.379 [9] Table 15.1.4.1-1			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Call type	"0000001"	Basic Group Call	
MCPTT group ID	px_MCPTT_Group_A_ID		
Sending MCPTT user ID	px_MCPTT_ID_User_B		

### 5.5.5.4 GROUP CALL EMERGENCY END

#### 5.5.5.4.1 GROUP CALL EMERGENCY END from the UE

Table 5.5.5.4.1-1: GROUP CALL EMERGENCY END from the UE

Derivation Path: TS 24.379 [9] Table 15.1.15.1-1			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Last call type change time	The Last call type change time value is an unsigned integer containing UTC time of the time when a call priority was changed, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
Last user to change call type	The ID of the last user to change contents		
MCPTT group ID	px_MCPTT_Group_A_ID		
Originating MCPTT user ID	px_MCPTT_ID_User_A		

#### 5.5.5.4.2 GROUP CALL EMERGENCY END from the SS

#### Table 5.5.5.4.2-1: GROUP CALL EMERGENCY END from the SS

Derivation Path: TS 24.379 [9] Table 15.1.15.1-	1		
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Last call type change time	The Last call type change time value is an unsigned integer containing UTC time of the time when a call priority was changed, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
Last user to change call type	The ID of the last user to change contents		
MCPTT group ID	px_MCPTT_Group_A_ID		
Originating MCPTT user ID	px_MCPTT_ID_User_B		

#### 5.5.5.5 GROUP CALL IMMINENT PERIL END

#### 5.5.5.5.1 GROUP CALL IMMINENT PERIL END from the UE

Table 5.5.5.5.1-1: GROUP CALL IMMINENT PERIL END from the UE

Derivation Path: TS 24.379 [9] Table 15.1.14.1-1			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Last call type change time	The Last call type change time value is an unsigned integer containing UTC time of the time when a call priority was changed, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
Last user to change call type	The ID of the last user to change contents		
MCPTT group ID	px_MCPTT_Group_A_ID		
Originating MCPTT user ID	px_MCPTT_ID_User_A	_	

#### 5.5.5.5.2 GROUP CALL IMMINENT PERIL END from the SS

#### Table 5.5.5.5.2-1: GROUP CALL IMMINENT PERIL END from the SS

Derivation Path: TS 24.379 [9] Table 15.1.14.1-	1		
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Last call type change time	The Last call type change time value is an unsigned integer containing UTC time of the time when a call priority was changed, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
Last user to change call type	The ID of the last user to change contents		
MCPTT group ID	px_MCPTT_Group_A_ID		
Originating MCPTT user ID	px_MCPTT_ID_User_B		

#### 5.5.5.6 GROUP CALL BROADCAST

#### 5.5.5.6.1 GROUP CALL BROADCAST from the UE

Table 5.5.5.6.1-1: GROUP CALL BROADCAST from the UE

Derivation Path: TS 24.379 [9] Table 15.1.20.1-1			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Call type	"00000010"	Broadcast Group Call	
Originating MCPTT user ID	px_MCPTT_ID_User_A		
MCPTT group ID	px_MCPTT_Group_A_ID		
SDP	As described in Table 5.5.3.1.3-1		

#### 5.5.5.6.2 GROUP CALL BROADCAST from the SS

#### Table 5.5.5.6.2-1: GROUP CALL BROADCAST from the SS

Derivation Path: TS 24.379 [9] Table 15.1.20.1-1			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Call type	"00000010"	Broadcast Group Call	
Originating MCPTT user ID	px_MCPTT_ID_User_B		
MCPTT group ID	px_MCPTT_Group_A_ID		
SDP	As described in Table 5.5.3.1.4-1		

## 5.5.5.7 GROUP CALL BROADCAST END

#### 5.5.5.7.1 GROUP CALL BROADCAST END from the UE

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

Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCPTT group ID	px_MCPTT_Group_A_ID		
SDP	As described in Table 5.5.3.1.3-1		

#### 5.5.5.7.2 GROUP CALL BROADCAST END from the SS

#### Table 5.5.5.7.2-1: GROUP CALL BROADCAST END from the SS

Derivation Path: TS 24.379 [9] Table 15.1.21.1-	1		
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCPTT group ID	px_MCPTT_Group_A_ID		
SDP	As described in Table 5.5.3.1.4-1		

#### 5.5.5.8 PRIVATE CALL SETUP REQUEST

### 5.5.5.8.1 PRIVATE CALL SETUP REQUEST from the UE

Table 5.5.5.8.1-1: PRIVATE CALL SETUP REQUEST from the UE

Derivation Path: 24.379 [9], Table 15.1.5.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Commencement mode	"00000000"	Automatic Commencement Mode	
Call type	"00000101"	Private Call	
MCPTT user ID of the caller	px_MCPTT_ID_User_A		
MCPTT user ID of the callee	px_MCPTT_ID_User_B		
SDP offer	As described in Table 5.5.3.1.3-1		
User location	Not Present		

#### 5.5.5.8.2 PRIVATE CALL SETUP REQUEST from the SS

#### Table 5.5.5.8.2-1: PRIVATE CALL SETUP REQUEST from the SS

Derivation Path: 24.379 [9], Table 15.1.5.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Commencement mode	"00000000"	Automatic Commencement Mode	
Call type	"00000101"	Private Call	
MCPTT user ID of the caller	px_MCPTT_ID_User_B		
MCPTT user ID of the callee	px_MCPTT_ID_User_A		
SDP offer	As described in Table 5.5.3.1.4-1		
User location	Not Present		

### 5.5.5.9 PRIVATE CALL RINGING

#### Table 5.5.5.9-1: PRIVATE CALL RINGING

Derivation Path: 24.379 [9], Table 15.1.6.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the caller	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the callee	Same as the one in PRIVATE CALL SETUP REQUEST		

#### 5.5.5.10 PRIVATE CALL ACCEPT

#### Table 5.5.5.10-1: PRIVATE CALL ACCEPT

Derivation Path: 24.379 [9], Table 15.1.7.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the caller	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the callee	Same as the one in PRIVATE CALL SETUP REQUEST		
SDP answer	Same as the one in PRIVATE CALL SETUP REQUEST		

### 5.5.5.11 PRIVATE CALL REJECT

## 5.5.5.11.1 PRIVATE CALL REJECT from the UE

#### Table 5.5.5.11.1-1: PRIVATE CALL REJECT from the UE

Derivation Path: 24.379 [9], Table 15.1.8.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	Same as the one in PRIVATE CALL SETUP REQUEST		
Reason	Any allowed value		
MCPTT user ID of the caller	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the callee	Same as the one in PRIVATE CALL SETUP REQUEST		
SDP answer	As described in Table 5.5.3.1.3-1		

### 5.5.5.11.2 PRIVATE CALL REJECT from the SS

#### Table 5.5.5.11.2-1: PRIVATE CALL REJECT from the SS

Derivation Path: 24.379 [9], Table 15.1.8.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	Same as the one in PRIVATE CALL SETUP REQUEST		
Reason	"0000000"	Reason = REJECT	
MCPTT user ID of the caller	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the callee	Same as the one in PRIVATE CALL SETUP REQUEST		
SDP answer	As described in Table 5.5.3.1.4-1		

### 5.5.5.12 PRIVATE CALL RELEASE

#### Table 5.5.5.12-1: PRIVATE CALL RELEASE

Derivation Path: 24.379 [9], Table 15.1.9.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the caller	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the callee	Same as the one in PRIVATE CALL SETUP REQUEST		

#### 5.5.5.13 PRIVATE CALL RELEASE ACK

#### Table 5.5.5.13-1: PRIVATE CALL RELEASE ACK

Derivation Path: 24.379 [9], Table 15.1.10.1-1.			
Information Element	Value/remark	Comment	Condition
Call identifier	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the caller	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the callee	Same as the one in PRIVATE CALL SETUP REQUEST		

#### 5.5.5.14 PRIVATE CALL ACCEPT ACK

#### Table 5.5.5.14-1: PRIVATE CALL ACCEPT ACK

Derivation Path: 24.379 [9], Table 15.1.11.1-1.  Information Element	Value/remark	Comment	Condition
Call identifier	Same as the one in PRIVATE CALL SETUP REQUEST	Commone	Condition
MCPTT user ID of the caller	Same as the one in PRIVATE CALL SETUP REQUEST		
MCPTT user ID of the callee	Same as the one in PRIVATE CALL SETUP REQUEST		

#### 5.5.5.15 PRIVATE CALL EMERGENCY CANCEL

#### 5.5.5.15.1 PRIVATE CALL EMERGENCY CANCEL from the UE

#### Table 5.5.5.15.1-1: PRIVATE CALL EMERGENCY CANCEL from the UE

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.

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	Valualramark	Commont	Condition
SSRC Information Element	Value/remark The SSRC of the	The SSRC of the	Condition
SSRC	message sender	floor participant	
	message sender	sending the	
		message.	
		Notation in	
		accordance with	
		clause 5.5.6.1.	
Floor priority	Not present or Any	If present, a value	
,,	allowed 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-
User ID			NETWORK OFF-
0361 ID			NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT User	
		ID of the floor	
		participant	
		requesting the floor.	
Track Info	Not present	The MCPTT call	
		does not involve a	
		non-controlling	
		MCPTT function	
Floor Indicator			
Floor Indicator	Any allowed value		

## 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
SSRC	The SSRC of the	The SSRC of the	Condition
SSINO	message sender	floor control	
	message sender	server for on-	
		network and floor	
		arbitrator for off-	
		network.	
		Notation in	
		accordance with	
		clause 5.5.6.1.	
		Coded as	
		specified in IETF	
	MODT	RFC 3550 [76].	
Duration Duration	MCPT		
Duration	"00000000 10000000"	128 sec (an	
Duration	00000000 10000000	arbitrary value)	
SSRC of granted floor participant	The SSRC of the	Notation in	
control of grantou noor participant	intended recipient of the	accordance with	
	message	clause 5.5.6.1.	
	mooago	Coded as	
		specified in IETF	
		RFC 3550 [76].	
Floor priority	Not present	If the Floor Priority	
1 loor priority	Not present	field is not	
		included in the	
		message the	
		default priority	
		(='0') is used as	
		the Floor Priority	
		value	
User ID	Not present	Value	ON-
0001.12	Trot process		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	OFF-
		queued MCPTT	NETWORK
		clients in the	
		MCPTT call	
SSRC of queued floor participant	Not present		
Queued User ID	Not present		
Queue Info	Not present	The MODET "	
Track Info	Not present	The MCPTT call	
		does not involve a	
		non-controlling	
		MCPTT function	
Floor Indicator	<u> </u>		
Floor Indicator	Any allowed value		

# 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
			Condition
SSRC	The SSRC of the	The SSRC of the	
	message sender	floor control	
		server for on-	
		network and floor	
		arbitrator for off-	
		network.	
		Notation in	
		accordance with	
		clause 5.5.6.1.	
		Coded as	
		specified in IETF	
	MODE	RFC 3550 [76].	
name	MCPT		
Reject Cause	"1"	0	
Reject Cause	"1"	Cause #1 -	
		Another MCPTT	
		client has	
D : (D)	IIA (I MODIT II (	permission	
Reject Phrase	"Another MCPTT client	An additional text	
	has permission"	string explaining	
		the reason for	
		rejecting the floor	
		request.	
User ID	Not present		ON-
User ID			NETWORK OFF-
USEI ID			NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT User	NETWORK
USEI ID	px_iviCP11_iD_0sei_A	ID of the floor	
		participant being	
		denied floor	
Track Info	Not present	request. The MCPTT call	
HACK HIIO	Not present	does not involve a	
		non-controlling MCPTT function	
Floor Indicator		IVIOF I I IUIICUOII	
Floor Indicator	Any allowed value		
i iooi iiiaioatoi	i / iiiy allowed valde	1	1

## 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
SSRC	The SSRC of the message sender	The SSRC of the floor participant sending the message. Notation in accordance with clause 5.5.6.1. Coded as specified in IETF RFC 3550 [76]	
name	MCPT		
User ID	Not present		ON- NETWORK
User ID			OFF- NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT User ID of the floor participant releasing the floor.	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	Any allowed value		

## 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
SSRC	The SSRC of the message sender	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	MCPT		
Message Sequence Number			
Message Sequence Number	The value sent in the previous Floor Idle message, if any, increased with 1	Any value between '0' and '65535' When the '65535' value is reached, the <message number="" sequence=""> value starts from '0' again</message>	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	Any allowed value		

## 5.5.6.7 Floor Taken

Table 5.5.6.7-1: Floor Taken

Derivation Path: 24.380 [10], Table 8.2.9-1.  Information Element	Value/remark	Comment	Condition
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].	Solution
name	MCPT	RFC 3000 [76].	
User ID	Not present		ON- NETWORK
User ID			OFF- NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT user ID of the floor participant sending the Floor Taken message	
Granted Party's Identity		_	
Granted Party's Identity	px_MCPTT_ID_User_B	The MCPTT User ID of the floor participant being granted the floor.	
Permission to Request the Floor		9	
Permission to Request the Floor	"1"	The receiver is permitted to request floor	
Message Sequence Number			
Message Sequence Number	The value sent in the previous Floor Taken message, if any, increased with 1	Any value between '0' and '65535' When the '65535' value is reached, the <message number="" sequence=""> value starts from '0' again</message>	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	Any allowed value		
SSRC of granted floor participant	SS-UE1 (MCPTT Client) SSRC	The SSRC of the granted floor participant.	

## 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
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	"4"	Cause#4 - Media Burst pre-empted	
Reject Phrase	"Media Burst pre- empted"	a text string encoded the text string in the SDES item CNAME as specified in IETF RFC 3550 [76], clause 6.5.1.	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	Any allowed value		

# 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
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
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		011
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	Any allowed value		

## 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
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		
Source			
Source	"2"	The controlling MCPTT function is the source	
Message Type			
Message Type	"10100"	Floor Ack message for Floor Release message which requested acknowledgment	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	

## 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
SSRC	The SSRC of the	The SSRC of the	
	message sender	floor control	
		server for on-	
		network and floor	
		arbitrator for off-	
		network.	
		Notation in	
		accordance with	
		clause 5.5.6.1.	
		Coded as	
		specified in IETF RFC 3550 [76].	
name	MCPC	141 0 0000 [7 0].	
MCPTT Session Identity field			
Session Type	"00000011"	prearranged	
MCPTT Session Identity	px_MCPTT_session_B_I	SIP URI, which	
	D	identifies the	
		MCPTT session	
		between the	
		MCPTT client and	
		the controlling	
MODEL On an Identity field	Not Descript	MCPTT function	DDI) (ATE
MCPTT Group Identity field	Not Present		PRIVATE- CALL
MCPTT Group Identity field			GROUP-
mer i i ereap raemity nera			CALL
MCPTT Group Identity	px_MCPTT_Group_A_ID	a URI, which	
		identifies the	
		MCPTT group	
Media Streams			
Media Stream field	"1"	8 bit parameter	
		giving the number	
		of the" m=audio"	
		m-line negotiated	
		in the pre-	
		established	
Control Channal	"2"	session	
Control Channel	·Z·	8 bit parameter	
		giving the number	
		of the "m=application"	
		m-line negotiated	
		in the pre-	
		established	
		session	
Warning Text field	Not Present	2300.0	
Answer State field			
Answer State	"1"	confirmed	
Inviting MCPTT User Identity field			
Inviting MCPTT User Identity	px_MCPTT_ID_User_A	URI, which	
		identifies the	
		inviting MCPTT	
DOK I MESSAGE STATE	Not Drosset	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
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	MCPC		
MCPTT Session Identity field			
Session Type	"0000011"	prearranged	
MCPTT Session Identity	px_MCPTT_session_B_I D		

# 5.5.6.14 Acknowledgement

Table 5.5.6.14-1: Acknowledgement

Derivation Path: 24.380 [10], Table 8.3.6-1.			
Information Element	Value/remark	Comment	Condition
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	MCPC		
Reason Code			
Reason Code	"0"	Accepted	

5.5.6.15 Map Group To Bearer

Table 5.5.6.15-1: xxx

Derivation Path: 24.380 [10], Table 8.4.4-1.			
Information Element	Value/remark	Comment	Condition
SSRC	The SSRC of the	The SSRC of the	
	message sender	floor control	
		server for on-	
		network and floor	
		arbitrator for off-	
		network.	
		Notation in	
		accordance with	
		clause 5.5.6.1.	
		Coded as	
		specified in IETF	
		RFC 3550 [76].	
name	MCMC	111 0 0000 [70].	
MCPTT Group ID	px_MCPTT_Group_A_ID	The group ID of	
	. – – . – . –	the call	
TMGI			
MBMS Service ID	"0F0F0F"	The selected	
		value is randomly	
		chosen - a 6 digit	
		hexadecimal	
		number between	
		000000 and	
		FFFFFF (see	
		TS 23.003 [69]	
		clause 15.2.	
		The coding of the	
		MBMS Service ID	
		is the	
		responsibility of	
		each	
		administration	
MCC	The same value as for	Mobile Country	
	PLMN1 specified in	Code	
MNC	Table 5.5.8.1-x The same value as for	Mobile Network	
1411.40	PLMN1 specified in	Code	
	Table 5.5.8.1-x	Code	
MBMS Subchannel			
Audio m-line Number	"1"	The number of the	
		"m=audio" m-line	
		in the SIP	
		MESSAGE	
		request	
		announcing the	
		MBMS bearer	
Floor m-line Number	"2"	The number of the	
		"m=application"	
		m-line in the SIP	
		MESSAGE	
		request	
		announcing the	
		MBMS bearer.	
		The <floor m-line<="" td=""><td></td></floor>	
		Number> value is	
		set to "0" when	
		the same	
		subchannel is	
		used for media	
		and for floor	
		control.	
IP version	"0"	'0' = IP version 4	
		'1' = IP version 6	
		All other values	
		are reserved for	
		a	

Derivation Path: 24.380 [10], Table 8.4.4-1.			
Information Element	Value/remark	Comment	Condition
Floor control Port Number	"9"	The port to be used if the <floor m-line="" number=""> 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: xxx

Derivation Path: 24.380 [10], Table 8.4.5-1.			
Information Element	Value/remark	Comment	Condition
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		
MCPTT Group ID	px_MCPTT_Group_A_ID	The group ID of the call	

# 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 th 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	Dofores	Condition
Information Element	Value/remark	Comment	Reference	Condition
list-service[1]	MODET O	Group 1	TO 04 400 110	
uri attribute	px_MCPTT_Group_A_I D	Value is a "uri" attribute specified in OMA OMA-TS-XDM_Group-V1_1	TS 24.483 [13] clause 6.2.7	
display-name	px_MCPTT_Group_A_ Name	Value is a <display- name&gt; element specified in OMA OMA- TS-XDM_Group-V1_1</display- 	TS 24.483 [13] clause 6.2.8	
list				
entry[1]		group member 1		
uri attribute	px_MCPTT_ID_User_A	Indicates an MCPTT user identity (MCPTT ID) which is a globally unique identifier within the MCPTT service that represents the MCPTT user	TS 24.483 [13] clause 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"3"	Indicates the user priority of the MCPTT group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_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"			

Derivation Path: TS 24.481 [11] cl Information Element	Value/remark	Comment	Reference	Condition
cp:allow-MCPTT-	"true"	Indicates whether an	TS 24.483 [13]	
emergency-call		MCPTT emergency	clause 6.2.19	
		group call is permitted		
		on the MCPTT group		
cp:allow-imminent-peril-call	"true"	Indicates whether an	TS 24.483 [13]	
		MCPTT imminent peril	clause 6.2.20	
		group call is permitted		
NODIT	H4 II	on the MCPTT group	TO 04 400 [40]	
cp:allow-MCPTT-	"true"	Indicates whether an	TS 24.483 [13]	
emergency-alert		MCPTT emergency	clause 6.2.21	
		alert is possible on the MCPTT group		
anian natwork allow	"true"	Indicates that the		
cp:on-network-allow- getting-affiliation-list	liue			
getting-aniilation-iist		identity is allowed to get the list of MCPTT		
		users affiliated to the		
		MCPTT group in on-		
		network MCPTT		
		procedures		
cp:on-network-allow-	"true"	indicates that the		
cp:on-network-allow- conference-state	liue	identity is allowed to		
COMETERIOE-STATE		subscribe to the		
		conference event		
		package of an MCPTT		
		group session of the		
		MCPTT group in on-		
		network MCPTT		
		procedures		
mcpttgi:owner	px_MCPTT_Group_A_	Group's owner (Mission	TS 24.483 [13]	
mcpttgi.owner	Owner_Organization	Critical Organisation).	clause 6.2.15	
mcpttgi:preferred-voice-	Owner_Organization	Chilcal Organisation).	ciause 0.2.13	
encodings				
mcpttgi:encoding-				
mcpttgi:name[1]	px_MCPTT_Group_A_	Preferred voice codec	RFC 4566 [27]	
moptigi.name[1]	preferred_VCodec	is a RTP payload.	TS 26.171 [66]	
	preferred_v oodee	MCPTT clients shall	TS 24.483 [13]	
		support the AMR-WB	clause 6.2.16	
		codec.	014430 0.2.10	
mcpttgi:level-within-group-	"0"	Indicates the level	TS 24.483 [13]	
hierarchy		within a group	clause 6.2.17	
,		hierarchy (only		
		applicable for group-		
		broadcast group).		
mcpttgi:level-within-user-	"0"	Indicates the level	TS 24.483 [13]	
hierarchy		within user hierarchy	clause 6.2.18	
-		(only applicable for		
		user-broadcast group).		
mcpttgi:protect-media	"true"	Indicates whether	TS 24.483 [13]	
		confidentiality and	clause 6.2.22	
		integrity of media is		
		required on the MCPTT		
		group		
mcpttgi:protect-floor-control-	"true"	Indicates whether	TS 24.483 [13]	
	1	confidentiality and	clause 6.2.23	
signalling				
signalling		integrity of floor control		
signalling		integrity of floor control signalling is required on		
signalling		signalling is required on		
	px_Group_A_ProSeLav		TS 23.303 [68]	
mcpttgi:off-network-ProSe-	px_Group_A_ProSeLay er2GroupID	signalling is required on the MCPTT group Indicates the Prose	TS 23.303 [68] TS 24.483 [13]	
mcpttgi:off-network-ProSe-	px_Group_A_ProSeLay er2GroupID	signalling is required on the MCPTT group	TS 24.483 [13]	
mcpttgi:off-network-ProSe- layer-2-group-id	er2GroupID	signalling is required on the MCPTT group Indicates the Prose layer-2 group ID	TS 24.483 [13] clause 6.2.27	
mcpttgi:off-network-ProSe- layer-2-group-id mcpttgi:off-network-IP-		signalling is required on the MCPTT group Indicates the Prose layer-2 group ID	TS 24.483 [13] clause 6.2.27 TS 23.303 [68]	
mcpttgi:off-network-ProSe- layer-2-group-id mcpttgi:off-network-IP-	er2GroupID	signalling is required on the MCPTT group Indicates the Prose layer-2 group ID Indicates the ProSe group IP multicast	TS 24.483 [13] clause 6.2.27 TS 23.303 [68] TS 24.483 [13]	
layer-2-group-id	er2GroupID	signalling is required on the MCPTT group Indicates the Prose layer-2 group ID  Indicates the ProSe group IP multicast address;the IP version	TS 24.483 [13] clause 6.2.27 TS 23.303 [68]	
mcpttgi:off-network-ProSe- layer-2-group-id mcpttgi:off-network-IP-	er2GroupID	signalling is required on the MCPTT group Indicates the Prose layer-2 group ID Indicates the ProSe group IP multicast	TS 24.483 [13] clause 6.2.27 TS 23.303 [68] TS 24.483 [13]	

Derivation Path: TS 24.481 [11] cl				
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- network relay provides	clause 6.2.29	
		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		
	"DT4014401450"	TS 24.483 [13]	TO 04 400 1401	
mcpttgi:off-network-in- progress-imminent-peril-state-	"PT18H12M15S"	Indicates the timeout value for the	TS 24.483 [13] clause 6.2.32	
cancellation-timeout		cancellation of an in	ciause 0.2.32	
		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		
mcpttgi:off-network-	"PT1M"	seconds Indicates the max	TS 24.483 [13]	
maximum-duration	F I IIVI	duration of group calls.	clause 6.2.34	
		"PT1M" corresponds to	0.0000 0.2.0	
		1 minute		
mcpttgi:off-network-queue-	"true"	Indicates if queuing is	TS 24.483 [13]	
usage mcpttgi:off-network-ProSe-	"1"	enabled or not Indicates the default	clause 6.2.34A TS 24.483 [13]	
signalling-PPPP	I	ProSe Per-Packet	clause 6.2.36	
		Priority (PPPP) value	0.0000 0.2.00	
mcpttgi:off-network-ProSe-	"1"	Indicates the default	TS 24.483 [13]	
media-PPPP		ProSe Per-Packet	clause 6.2.37	
monttainoff naturally Des Ca	"8"	Priority (PPPP) value	TC 04 400 (40)	
mcpttgi:off-network-ProSe- emergency-call-signalling-	Ø	Indicates the default ProSe Per-Packet	TS 24.483 [13] clause 6.2.38	
PPPP		Priority (PPPP) value	01au36 0.2.30	
mcpttgi:off-network-ProSe-	"8"	Indicates the default	TS 24.483 [13]	
emergency-call-media-PPPP		ProSe Per-Packet	clause 6.2.39	
mantinia ff mat	"7"	Priority (PPPP) value	TO 04 400 (46)	
mcpttgi:off-network-ProSe- imminent-peril-call-signalling-	" <i>f</i> "	Indicates the default ProSe Per-Packet	TS 24.483 [13] clause 6.2.40	
PPPP		Priority (PPPP) value	∪ause 0.∠.40	
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		
list-service[2]	ny MCDTT Craws D	Group 2	TC 24 400 [40]	
uri attribute	px_MCPTT_Group_D_I D	Value is a "uri" attribute specified in OMA OMA-	TS 24.483 [13] clause 6.2.7	
		TS-XDM_Group-V1_1	ciause U.Z.I	
display-name	px_MCPTT_Group_D_	Value is a <display-< th=""><th>TS 24.483 [13]</th><th></th></display-<>	TS 24.483 [13]	
	Name	name> element	clause 6.2.8	
		specified in OMA OMA-		
lint		TS-XDM_Group-V1_1		
list entry[1]		group momber 1		
entry[1]	L	group member 1		

Derivation Path: TS 24.481 [11] cl	Value/remark	Comment	Reference	Condition
				Condition
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	TS 24.483 [13] clause 6.2.11	
diaplay nama	Not propert	user		
display-name	Not present	La dia atau tha a cana	TO 04 400 [40]	
mcpttgi:user-priority		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	
cp:ruleset				
cp:rule				
cp:id attribute	"rule2"			
cp:actions				
cp:on-network-allow- getting-member-list	"true"	Indicates that the identity is allowed to get the MCS group member list of the MCS group in on-network procedures		
cp:allow-initiate-conference	"true"			
cp:join-handling	"true"			
cp:allow-MCPTT- emergency-call	"false"	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	"false"	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	"false"	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		

Derivation Path: TS 24.481 [11] cl				
Information Element	Value/remark	Comment	Reference	Condition
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_D_ Owner_Organization	Group's owner (Mission Critical Organisation).	TS 24.483 [13] clause 6.2.15	
mcpttgi:preferred-voice- encodings				
mcpttgi:encoding-list				
mcpttgi:name[1]	px_MCPTT_Group_D_ 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	px_Group_D_ProSeLa yer2GroupID	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'O	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:off-network-in- progress-emergency-state- cancellation-timeout	"PT18H12M15S"	Indicates the timeout value for the 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]	TS 24.483 [13] clause 6.2.31	

Derivation Path: TS 24.481 [11] cl	ause 7.2.2			
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:off-network-in- progress-imminent-peril-state- cancellation-timeout	"PT18H12M15S"	Indicates the timeout value for the cancellation of an in progress imminent peril	TS 24.483 [13] clause 6.2.32	
		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- timer	"PT5S"	Indicates the group call hang timer. "PT5S" corresponds to 5 seconds	TS 24.483 [13] clause 6.2.33	
mcpttgi:off-network- maximum-duration	"PT1M"	Indicates the max duration of group calls. "PT1M" corresponds to 1 minute	TS 24.483 [13] clause 6.2.34	
mcpttgi:off-network-queue- usage	"true"	Indicates if queuing is enabled or not	TS 24.483 [13] clause 6.2.34A	
mcpttgi:off-network-ProSe- signalling-PPPP	"1"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 24.483 [13] clause 6.2.36	
mcpttgi:off-network-ProSe- media-PPPP	"1"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 24.483 [13] clause 6.2.37	
mcpttgi:off-network-ProSe- emergency-call-signalling- PPPP	"8"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 24.483 [13] clause 6.2.38	
mcpttgi:off-network-ProSe- emergency-call-media-PPPP	"8"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 24.483 [13] clause 6.2.39	
mcpttgi:off-network-ProSe- imminent-peril-call-signalling- PPPP	"7"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 24.483 [13] clause 6.2.40	
mcpttgi:off-network-ProSe- imminent-peril-call-media- PPPP	"7"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 24.483 [13] clause 6.2.41	

## 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]	value/reiliaik	Group 1	Reference	Condition
	ny MCVideo Croup A	Value is a "uri" attribute	TC 04 400 [40]	
uri attribute	px_MCVideo_Group_A _ID	specified in OMA OMA- TS-XDM_Group-V1_1	TS 24.483 [13] clause 6.2.7	
display-name	px_MCVideo_Group_A _Name	Value is a <display- name&gt; element specified in OMA OMA-</display- 	TS 24.483 [13] clause 6.2.8	
list		TS-XDM_Group-V1_1		
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_	Participant type of the	TS 24.483 [13]	
whose vide a respectation of	ParticipantType	MCVideo group	clause 6.2.13	
rl:mcvideo-mcvideo-id uri attribute	px_MCVideo_ID_User_ A			
entry[2]		Group member 2		
uri attribute	px_MCVideo_ID_User_ B	Indicates an MCVideo user identity (MCVideo ID) which is a globally unique identifier within the MCVideo service that represents the MCVideo user	TS 24.483 [13] clause 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"2"	Indicates the user priority of the MCVideo group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCVideo_User_B_ ParticipantType	Participant type of the MCVideo group	TS 24.483 [13] clause 6.2.13	
rl:mcvideo-mcvideo-id uri attribute	px_MCVideo_ID_User_			
	В			
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	
display-name	Not present			
mcpttgi:user-priority	"1"	Indicates the user priority of the MCVideo group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCVideo_User_C_ ParticipantType	Participant type of the MCVideo group	TS 24.483 [13] clause 6.2.13	
rl:mcvideo-mcvideo-id	1 71 -	U 1		
uri attribute	px_MCVideo_ID_User_ C			
cp:ruleset				
cp:rule				
cp:id attribute	"rule1"			
cp:actions				

Derivation Path: TS 24.481 [11] cl	ause 7.2.2			
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:on-network-allow- getting-member-list	"true"	Indicates that the identity is allowed to get the MCS group member list of the MCS group in on-network procedures.		
mcpttgi:mcvideo-allow- emergency-call	"true"	Indicates that the identity is allowed to request an MCVideo-emergency call on the MCVideo group.		
mcpttgi:mcvideo-allow- emergency-alert	"true"	Indicates that the identity is allowed to request an MCVideo-emergency alert on the MCVideo group.		
mcpttgi:mcvideo-allow- imminent-peril-call	"true"	Indicates that the identity is allowed to request an MCVideo imminent peril call on the MCVideo group.		
mcpttgi:mcvideo-on- network-allow-conference-state	"true"	Indicates that the identity is allowed to subscribe to the conference event package of an MCVideo group session of the MCVideo group in on-network MCVideo procedures.		
mcpttgi:mcvideo-on- network-allow-getting-affiliation- list	"true"	Indicates that the identity is allowed to get the list of MCVideo users affiliated to the MCVideo group in onnetwork MCVideo procedures.		
oxe:supported-services				
oxe:service		0.1.1		
oxe:enabler	"urn:urn-7:3gpp- service.ims.icsi.mcvide o"	String defining an enabler		
oxe:group-media				
oxe:mcvideo-video-media	A 5 0 1	Indicates # D	TO 00 000 '00'	
mcpttgi:off-network-ProSe- layer-2-group-id	px_Group_A_ProSeLay er2GroupID	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]	
mcpttgi:level-within-group- hierarchy	_Owner_Organization "0"	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group- broadcast group).	Clause 6.2.15 TS 24.483 [13] clause 6.2.17	

Derivation Path: TS 24.481 [11] c	Value/remark	Comment	Reference	Condition
mcpttgi:level-within-user-	"0"	Indicates the level	TS 24.483 [13]	
hierarchy		within user hierarchy	clause 6.2.18	
•		(only applicable for		
		user-broadcast group).		
mcpttgi:mcvideo-on-	"true"			
network-invite-members				
mcpttgi:mcvideo-on-	"1800"	Indicates the max	TS 24.483 [13]	
network-maximum-duration		duration of MCVideo	clause 6.2.56	
		group calls.		
mcpttgi:mcvideo-urgent-real-	"true"	Indicates that urgent		
time-video-mode		real-time video mode is		
		allowed for the		
monttel movides non unest		MCVideo group.		
mcpttgi:mcvideo-non-urgent- real-time-video-mode	"true"	indicates that non		
real-time-video-mode		urgent real-time video mode is allowed for the		
mcpttgi:mcvideo-non-real-	"true"	MCVideo group. indicates that non real-		
time-video-mode	true	time video mode is		
unic video-inode		allowed for the		
		MCVideo group.		
mcpttgi:mcvideo-active-real-	"non-urgent-real-time"	Indicates the the active		
time-video-mode	Tion argoni real time	real time video mode of		
		the current group		
		session		
mcpttgi:mcvideo-maximum-	"1"	Indicates the allowed		
simultaneous-mcvideo-		maximum number of		
transmitting-group-members		simultaneous		
		transmitting MCVideo		
		Group Members.		
mcpttgi:mcvideo-on-	"1"	Indicates the minimum		
network-minimum-number-to-		number of affiliated		
start		group members		
		acknowledging before		
		start of video		
		transmission specified in 3GPP TS 23.281 [24]		
		in on-network MCVideo		
		procedures.		
mcpttgi: mcvideo-on-	"1"	Indicates the priority		
network-group-priority	'	level of the group in on-		
g. oap priority		network MCVideo		
		procedures. Higher		
		value indicates higher		
		priority. Absence of the		
		<mcvideo-on-network-< td=""><td></td><td></td></mcvideo-on-network-<>		
		group-priority> element		
		of the <list-service></list-service>		
		element of the		
		MCVideo group		
		document indicates the		
		lowest possible priority.		
mcpttgi:mcvideo-off-	"self"	This leaf node indicates	TS 24.483 [13]	
network-arbitration-approach		the arbitration approach	clause 6.2.47	
		used for off-network		
		video tranmissions on		
menttai-movidoo-eff	"1"	the group.	TC 24 402 [42]	
mcpttgi:mcvideo-off- network-maximum-	'	indicates maximum number of	TS 24.483 [13] clause 6.2.48	
simultaneous-transmissions		simultaneous	Uaust 0.∠.40	
31111111111111111111111111111111111111		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	

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.	<b></b>	
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-	<b>'</b>	ProSe Per-Packet	clause 6.2.55	
peril-call-media-PPPP		Priority (PPPP) value	0.2.33	
point dan interior in it is		(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] cla				0 ""
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:participant-type	px_MCVideo_User_A_ ParticipantType	Participant type of the MCVideo group	TS 24.483 [13] clause 6.2.13	
rl:mcvideo-mcvideo-id	1 71			
uri attribute	px_MCVideo_ID_User_ A			
entry[2]	, ,	Group member 2		
uri attribute	px_MCVideo_ID_User_ B	Indicates an MCVideo user identity (MCVideo ID) which is a globally unique identifier within the MCVideo service that represents the MCVideo user	TS 24.483 [13] clause 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"2"	Indicates the user priority of the MCVideo group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCVideo_User_B_ ParticipantType	Participant type of the MCVideo group	TS 24.483 [13] clause 6.2.13	
rl:mcvideo-mcvideo-id		5		
uri attribute	px_MCVideo_ID_User_ B			
cp:ruleset	_			
cp:rule cp:rule				
cp:id attribute	"rule2"			
cp:actions	Tulez			
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		
mcpttgi:mcvideo-allow- emergency-call	"false"	Indicates that the identity is not allowed to request an MCVideoemergency call on the MCVideo group.		
mcpttgi:mcvideo-allow- emergency-alert	"false"	Indicates that the identity is not allowed to request an MCVideo-emergency alert on the MCVideo group.		
mcpttgi:mcvideo-allow- imminent-peril-call	"false"	Indicates that the identity is not allowed to request an MCVideo imminent peril call on the MCVideo group.		
mcpttgi:mcvideo-on- network-allow-conference-state	"false"	Indicates that the identity is not allowed to subscribe to the conference event package of an MCVideo group session of the MCVideo group in on-network MCVideo procedures.		
mcpttgi:mcvideo-on- network-allow-getting-affiliation- list  oxe:supported-services	"false"	Indicates that the identity is not allowed to get the list of MCVideo users affiliated to the MCVideo group in onnetwork MCVideo procedures.		

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-	px_Group_D_ProSeLa	Indicates the Prose	TS 23.303 [68]	
layer-2-group-id	yer2GroupID	layer-2 group ID	TS 24.483 [13] clause 6.2.27	
mcpttgi:off-network-IP-	"0.0.0.0"	Indicates the ProSe	TS 23.303 [68]	
multicast-address	0.0.0.0	group IP multicast address;the IP version is implicitly given by the notation of the IP address	TS 24.483 [13] clause 6.2.28	
mcpttgi:off-network-ProSe-	"123456"	Indicates the	TS 23.303 [68]	
relay-service-code		connectivity service that the ProSe UE-to- network relay provides to public safety applications	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	Ů	within a group hierarchy (only applicable for group- broadcast group).	clause 6.2.17	
mcpttgi:level-within-user- hierarchy	"0"	Indicates the level within user hierarchy	TS 24.483 [13] clause 6.2.18	
		(only applicable for user-broadcast group).		
mcpttgi:mcvideo-on-	"true"	greap).		
network-invite-members				
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-	"true"	Indicates that urgent		
time-video-mode	nue	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] o	Value/remark	Comment	Reference	Condition
mcpttgi:mcvideo-on-	"1"	Indicates the minimum	Reference	Condition
network-minimum-number-to-	'	number of affiliated		
start		group members		
otar t		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-		
<b>.</b>		network MCVideo		
		procedures. Higher		
		value indicates higher		
		priority. Absence of the		
		<mcvideo-on-network-< td=""><td></td><td></td></mcvideo-on-network-<>		
		group-priority> element		
		of the <list-service></list-service>		
		element of the		
		MCVideo group		
		document indicates the		
		lowest possible priority.		
mcpttgi:mcvideo-off-	"self"	This leaf node indicates	TS 24.483 [13]	
network-arbitration-approach		the arbitration approach	clause 6.2.47	
		used for off-network		
		video tranmissions on		
	"1"	the group.	TO 04 400 [40]	
mcpttgi:mcvideo-off-	"1"	indicates maximum	TS 24.483 [13]	
network-maximum-		number of	clause 6.2.48	
simultaneous-transmissions		simultaneous transmissions for off-		
		network MCVideo		
		procedures.		
mcpttgi:mcvideo-off-	"1"	Indicates the default	TS 24.483 [13]	
network-ProSe-signalling-	'	ProSe Per-Packet	clause 6.2.50	
PPPP		Priority (PPPP) value	ciause 0.2.50	
mcpttgi:mcvideo-off-	"8"	Indicates the default	TS 24.483 [13]	
network-ProSe-emergency-		ProSe Per-Packet	clause 6.2.52	
call-signalling-PPPP		Priority (PPPP) value	0.0000 0.2.02	
		(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	
manttalana - dala - 20	llo!!	Priority (PPPP) value	TO 04 400 5405	
mcpttgi:mcvideo-off-	"8"		TS 24.483 [13]	
network-ProSe-emergency-			clause 6.2.53	
call-media-PPPP	"7"	Indicates the state of	TC 04 400 [40]	
mcpttgi:mcvideo-off-	<i>I</i> "	Indicates the default	TS 24.483 [13]	
notwork Droca imminant	1	ProSe Per-Packet Priority (PPPP) value	clause 6.2.55	
network-ProSe-imminent-			i .	
network-ProSe-imminent- peril-call-media-PPPP				
		(as specified in		
		(as specified in 3GPP TS 23.303 [6])		
		(as specified in		

Derivation Path: TS 24.481 [11] clause 7.2.2							
Information Element	Value/remark	Comment	Reference	Condition			
mcpttgi:mcvideo-off-	"60	Indicates the maximum					
network-maximum-duration		duration of group calls					
mcpttgi:mcvideo-off-	"65535"	Indicates the timeout					
network-in-progress-		value for the					
emergency-state-cancellation-		cancellation of an in					
timeout		progress emergency in					
		off-network MCVideo					
		procedures					
mcpttgi:mcvideo-off-	"65535"	Indicates the timeout					
network-in-progress-		value for the					
imminent-peril-state-		cancellation of an in					
cancellation-timeout		progress imminent-peril					
		group call in off-					
		network MCVideo					
		procedures					

## 5.5.7.3 MCDATA Group Configuration

The structure of a group configuration document is specified in TS 24.481 [11] clause 7.

Single MCDATA group configuration parameters are defined in TS 24.483 [13] clause 6.3.

**Table 5.5.7.3-1: MCDATA Group Configuration Defaults** 

Information Element	Value/remark	Comment	Reference	Condition
list-service[1]		Group 1		
uri attribute	px_MCDATA_Group_A _ID	Value is a "uri" attribute specified in OMA OMA-TS-XDM_Group-V1_1	TS 24.483 [13] clause 6.2.7	
display-name	px_MCData _Group_A_Name	Value is a <display- name&gt; element specified in OMA OMA- TS-XDM_Group-V1_1</display- 	TS 24.483 [13] clause 6.2.8	
list				
entry[1]		group member 1		
uri attribute	px_MCData_ID_User_ A	Indicates an MCData user identity (MCData ID) which is a globally unique identifier within the MCData service that represents the MCData user	TS 24.483 [13] clause 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"3"	Indicates the user priority of the MCData group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCData _User_A_ParticipantTy pe	Participant type of the MCData group	TS 24.483 [13] clause 6.2.13	
rl:mcdata-mcdata-id				
uri attribute	px_MCData_ID_User_ A			
entry[2]		Group member 2		
uri attribute	px_MCData_ID_User_ B	Indicates an MCData user identity (MCData ID) which is a globally unique identifier within the MCData service that represents the MCData user	TS 24.483 [13] clause 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"2"	Indicates the user priority of the MCData group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCData _User_B_ParticipantTy pe	Participant type of the MCData group	TS 24.483 [13] clause 6.2.13	
rl:mcdata-mcdata-id	<u> </u>			
uri attribute	px_MCData_ID_User_ B		TS 24.483 [13] clause 6.2.11	
entry[3]		Group member 3		
uri attribute	px_MCData_ID_User_ C	Indicates an MCData user identity (MCData ID) which is a globally unique identifier within the MCData service that represents the MCData user	TS 24.483 [13] clause 6.2.11	
display-name	Not present		<b>TO 0 / 10 = 1 : 1</b>	<u> </u>
mcpttgi:user-priority	"1"	Indicates the user priority of the MCData group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCData _User_C_ParticipantTy _pe	Participant type of the MCData group	TS 24.483 [13] clause 6.2.13	
rl:mcdata-mcdata-id				
uri attribute	px_MCData_ID_User_ C		TS 24.483 [13] clause 6.2.11	
cp:ruleset				

Derivation Path: TS 24.481 [11] c Information Element	Value/remark	Comment	Reference	Condition
cp:id attribute	"rule1"			
cp:actions	1333			
mcpttgi:on-network-allow-	"true"	Indicates that the		
getting-member-list		identity is allowed to		
		get the MCS group		
		member list of the MCS		
		group in on-network		
		procedures.		
mcpttgi:mcdata-on-	"true"	Indicates that the		
network-allow-getting-affiliation-		identity is allowed to		
list		get the list of MCData		
		users affiliated to the		
		MCData group in on-		
		network MCData		
	"true"	procedures Indicates that the		
mcpttgi:mcdata-allow-	true	identity is allowed to		
transmit-data-in-this-group		transmit data in this		
oxe:supported-services		group		
oxe:supported-services	+			
oxe:enabler	"urn:urn-7:3gpp-	String defining an		
UNG.GHADIGI	service.ims.icsi.mcdata.	enabler		
	sds"	GIIGDIGI		
mcpttgi:off-network-ProSe-	px_Group_A_ProSeLay	Indicates the Prose	TS 23.303 [68]	
layer-2-group-id	er2GroupID	layer-2 group ID	TS 24.483 [13]	
iajoi 2 gioup iu	012010up12	l layer 2 group 12	clause 6.2.27	
mcpttgi:off-network-IP-	"0.0.0.0"	Indicates the ProSe	TS 23.303 [68]	
multicast-address		group IP multicast	TS 24.483 [13]	
		address;the IP version	clause 6.2.28	
		is implicitly given by the		
		notation of the IP		
		address		
mcpttgi:off-network-ProSe-	"123456"	Indicates the	TS 23.303 [68]	
relay-service-code		connectivity service	TS 24.483 [13]	
		that the ProSe UE-to-	clause 6.2.29	
		network relay provides		
		to public safety		
		applications		
mcpttgi:owner	px_MCData_Group_A_	Group's owner (Mission	TS 24.483 [13]	
	Owner_Organization	Critical Organisation).	clause 6.2.15	
mcpttgi:level-within-group-	"0"	Indicates the level	TS 24.483 [13]	
hierarchy		within a group	clause 6.2.17	
		hierarchy (only		
		applicable for group-		
monttaide et within	"0"	broadcast group).	TO 04 400 (40)	
mcpttgi:level-within-user-	"0"	Indicates the level	TS 24.483 [13]	
hierarchy		within user hierarchy	clause 6.2.18	
		(only applicable for		
mcpttgi:mcpttgi:mcdata-on-	"1"	user-broadcast group). Indicates the priority		
network-group-priority	'	level of the group in on-		
network-group-priority		network MCData		
		procedures. Higher		
		value indicates higher		
		priority		
mcpttgi:mcdata-on-network-	"10000"	Indicates the maximum		
max-data-size-for-SDS	1.0000	size of data (in bytes)		
		that the originating		
		MCData client is		
		allowed to send to the MCData server for on- network SDS communications		

Derivation Path: TS 24.481 [11] o		C	Deference	Condition
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:mcdata-on-network-	"10000"	Indicates the maximum		
max-data-size-for-FD		size of data (in bytes)		
		that the originating		
		MCData client is		
		allowed to send to the		
		MCData server for on-		
		network FD		
	100001	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		
manufathan state of		HTTP		
mcpttgi:mcdata-off-network-	"1"	Indicates the ProSe		
ProSe-signalling-PPPP		Per-Packet Priority		
		value to be used when		
		transmitting IP packets		
		carrying signalling for a		
		call on the MCData		
		group in off-network		
	"1"	MCData procedures		
mcpttgi:mcdata-off-network- ProSe-media-PPPP	"1"	Indicates the ProSe		
Prose-media-PPPP		Per-Packet Priority		
		value to be used when		
		transmitting IP packets		
		carrying media for a call on the MCData		
		group in off-network		
list convice[2]		MCData procedures		
list-service[2] uri attribute	THE MCDATA Crown D	Group 2 Value is a "uri" attribute	TC 04 400 [40]	
uri attribute	px_MCDATA_Group_D		TS 24.483 [13] clause 6.2.7	
	_ID	specified in OMA OMA-	ciause 6.2.7	
diamin, name	MOD-t-	TS-XDM_Group-V1_1	TO 04 400 [40]	
display-name	px_MCData	Value is a <display-< td=""><td>TS 24.483 [13]</td><td></td></display-<>	TS 24.483 [13]	
	_Group_D_Name	name> element	clause 6.2.8	
		specified in OMA OMA- TS-XDM_Group-V1_1		
liet	+	13-VDINI_GLOUD-A I_1		
list entry[1]		group member 4		
entry[1] uri attribute	ny MCDate ID Has :	group member 1 Indicates an MCData	TC 04 400 [40]	
un สแทยน <del>เ</del> ย	px_MCData_ID_User_		TS 24.483 [13] clause 6.2.11	
	A	user identity (MCData	ciause 6.2.11	
		ID) which is a globally unique identifier within		
		the MCData service		
		that represents the MCData user		
dieplay nama	Not procept	IVICDAIA USEI		
display-name	Not present	Indicator the user	TC 04 400 [40]	
mcpttgi:user-priority	٥	Indicates the user	TS 24.483 [13]	
		priority of the MCData	clause 6.2.12	
monttainartisinart tura	ny MCData	group member	TC 04 400 [40]	
mcpttgi:participant-type	px_MCData	Participant type of the	TS 24.483 [13]	
	_User_A_ParticipantTy	MCData group	clause 6.2.13	
whose selection and all the selections are selected as the selection and the selection and the selection and the selection are selected as the selection and the selection are selected as the selection and the selection are selected as the selected are selected as the selected are selected are selected as the selected are selected as the selected are selected as the selected are selected as the selected are selected as the selected are selected as the selected are selected as the selected are selected as the selected are selected as the selected are selected are selected are selected are selec	pe			
rl:mcdata-mcdata-id	I MOD : ID !!			
uri attribute	px_MCData_ID_User_			
	A	I		
entry[2]		Group member 2		

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	Condition
display-name	Not present		TO 04 400 1401	
mcpttgi:user-priority	"2"	Indicates the user priority of the MCData group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCData _User_B_ParticipantTy pe	Participant type of the MCData group	TS 24.483 [13] clause 6.2.13	
rl:mcdata-mcdata-id				
uri attribute	px_MCData_ID_User_ B		TS 24.483 [13] clause 6.2.11	
cp:ruleset				
cp:rule				
cp:id attribute	"rule2"			
cp:actions	He H	1 P ( 0 + 0		
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	px_Group_D_ProSeLa yer2GroupID	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	TS 24.483 [13] clause 6.2.15	
mcpttgi:level-within-group-	"0"	Critical Organisation). Indicates the level	TS 24.483 [13]	
hierarchy		within a group hierarchy (only applicable for group- broadcast group).	clause 6.2.17	

Derivation Path: TS 24.481 [11] c Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:level-within-user-	"O"	Indicates the level	TS 24.483 [13]	20
hierarchy		within user hierarchy	clause 6.2.18	
,		(only applicable for		
		user-broadcast group).		
mcpttgi:mcdata-on-network-	"1"	Indicates the priority		
group-priority		level of the group in on-		
		network MCData		
		procedures. Higher		
		value indicates higher		
		priority		
mcpttgi:mcdata-on-network-	"10000"	Indicates the maximum		
max-data-size-for-SDS		size of data (in bytes)		
		that the originating		
		MCData client is		
		allowed to send to the		
		MCData server for on-		
		network SDS		
		communications		
mcpttgi:mcdata-on-network-	"10000"	Indicates the maximum		
max-data-size-for-FD		size of data (in bytes)		
		that the originating		
		MCData client is		
		allowed to send to the		
		MCData server for on-		
		network FD		
		communications		
mcpttgi:mcdata-on-network-	"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		
	"1"	HTTP		
mcpttgi:mcdata-off-network-	"T"	Indicates the ProSe		
ProSe-signalling-PPPP		Per-Packet Priority		
		value to be used when		
		transmitting IP packets		
		carrying signalling for a call on the MCData		
		group in off-network		
mcpttgi:mcdata-off-network-	"1"	MCData procedures Indicates the ProSe		
ProSe-media-PPPP	1	Per-Packet Priority		
1 1006-Illeula-i FFF		value to be used when		
		transmitting IP packets		
		carrying media for a		
		call on the MCData		
		group in off-network		
		MCData procedures		
	Į.	Modala procedures	Į	L

# 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 management service	TS 24.483 [13] clause 8.2.27	
VPLM[1]		PDN connection for the MC identity	Glause 0.2.21	

Derivation Path: TS 24.484 [13], o		C	Deference	Condition
Information Element	Value/remark	Comment	Reference	Condition
PLMN attribute	PLMN2	VPLMN configuration for another PLMN		
		which can be used by		
		the UE to access		
		MCPTT service		
		MCF11 Service		
		NOTE: PLMN2 shall be		
		a different PLMN to		
		PLMN1 of a Cell to		
		which the UE will move		
		during testing when		
		specified in a test case.		
service				
MCPTT-to-con-ref	px_MCPTT_ALL_APN	configuration parameter	TS 24.483 [13]	
		for establishment of the	clause 8.2.33	
		PDN connection for the	0.0000 0.2.00	
		MCPTT service		
MC-common-core-to-con-	px_MCPTT_ALL_APN	configuration parameter	TS 24.483 [13]	
ref	px_wei   1 _ xee_ x   1	for establishment of the	clause 8.2.36	
101		PDN connection for the	014400 0.2.00	
		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		
		management service		
App-Server-Info				
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_ldMS_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]	
	_IPAddress & "]:" &	HTTP TCP connection	clause 8.2.41B	
	px_MCX_HTTP_Proxy			
	_Port			
	•			•

Derivation Path: TS 24.484 [13], of				
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	
Luca	too MOV KMO Hooks	identity information	TO 00 000 [00]	
kms	tsc_MCX_KMS_Hostna	Indicates the key	TS 23.003 [69]	
	me	management server	TS 24.483 [13]	
the transplantate and the el		identity information	clause 8.2.44	
tls-tunnel-auth-method		la dia atau anda athan	TO 04 400 [40]	
mutual-authentication	"false"	Indicates whether	TS 24.483 [13]	
		mutual authentication is	clause 8.2.44B	
		used for the TLS tunnel authentication		
		false=one-way authentication based		
		on the server certificate		
x509	Not present	is used the X.509 certificate for	TS 24.483 [13]	
x509	Not present	mutual authentication	clause 8.2.44C	
		for the TLS tunnel	Clause 6.2.44C	
		authentication		
key	Not present	pre-shared key for	TS 24.483 [13]	
Key	Not present	mutual authentication	clause 8.2.44D	
		for the TLS tunnel	Clause 6.2.44D	
		authentication		
GMS-URI	tsc_MCX_GMSURI	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	ciause o.z.s	
		service identity for		
		performing subscription		
		proxy function of the		
		GMS		
group-creation-XUI	px_MCPTT_GroupCrea	Indicates the group	TS 23.003 [69]	
group oreaner re-	tionXUI	creation XUI	TS 24.483 [13]	
		information for creation	clause 8.2.9A	
		of groups	0.0000 0.2.07	
GMS-XCAP-root-URI	tsc_MCX_GMSXCAPR	Indicates the group	TS 23.003 [69]	
	ootURI	management server	TS 24.483 [13]	
		XCAP Root URI	clause 8.2.9B	
		information		
CMS-XCAP-root-URI	tsc_MCX_CMSXCAPR	Indicates the	TS 23.003 [69]	
_	ootURI	configuration	TS 24.483 [13]	
		management server	clause 8.2.9C	
		XCAP Root URI		
		information		
integrity-protection-enabled	"true"	Indicates whether	TS 24.483 [13]	·
		integrity protection is	clause 8.2.44E	
		enabled		
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	
		0-65535 ms		
TFG2	"2000"	Indicates the timer for	TS 24.379 [9]	
1		call announcement;	TS 24.483 [13]	
		can announcement,	10 27.700 [10]	

erivation Path: TS 24.484 [13] Information Element	Value/remark	Comment	Reference	Condition
TFG3	"40"	Indicates the timer for	TS 24.379 [9]	Containor
		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 user; Values: 0-60 s	TS 24.483 [13] clause 8.2.50	
TFG5	"2"	Indicates the timer for	TS 24.379 [9]	
11 65	2	not present incoming	TS 24.483 [13]	
		call announcements;	clause 8.2.51	
		Values: 0-255 s		
TFG11	"3000"	Indicates the timer for	TS 24.379 [9]	
		MCPTT emergency	TS 24.483 [13]	
		end retransmission;	clause 8.2.52	
TEO 40	100001	Values: 0-65535 ms	TO 04 070 fol	
TFG12	"3000"	Indicates the timer for	TS 24.379 [9]	
		MCPTT imminent peril	TS 24.483 [13]	
		end retransmission; Values: 0-65535 ms	clause 8.2.53	
TFG13	"1"	Indicates the timer for	TS 24.379 [9]	
11 0 10	'	implicit priority	TS 24.483 [13]	
		downgrade; Values: 0-	clause 8.2.54	
		255 s		
TFG14	"1"	Indicates the MCPTT	TS 24.379 [9]	
		timer for implicit priority	TS 24.483 [13]	
		downgrade (imminent	clause 8.2.54A	
		peril); Values: 0-255 s		
TFP1	"2000"	Indicates the timer for	TS 24.379 [9]	
		private call request	TS 24.483 [13]	
		retransmission; Values: 0-65535 ms	clause 8.2.55	
TFP2	"50"	Indicates the timer for	TS 24.379 [9]	
1112	30	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] clause 8.2.58	
		retransmission; Values: 0-65535 ms	Uaust 0.∠.30	
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]	
		MCPTT emergency	TS 24.483 [13]	
		private call cancel	clause 8.2.60	
		retransmission; Values:		
TED7	101	0-65535 ms	TO 04 670 for	
TFP7	"6"	Indicates the timer for	TS 24.379 [9]	
		waiting for any message with same	TS 24.483 [13] clause 8.2.61	
		call identifier; Values:	0.2.01	
		0-255 s		
TFB1	"300"	Indicates the timer for	TS 24.379 [9]	
		max duration; Values:	TS 24.483 [13]	
		0-600 s	clause 8.2.62	
TFB2	"10"	Indicates the timer for	TS 24.379 [9]	
		max duration; Values:	TS 24.483 [13]	
		0-10 s	clause 8.2.63	
TFB3	"20"	Indicates the timer for	TS 24.379 [9]	
		waiting for the MCPTT	TS 24.483 [13]	
		user; Values: 0-60 s	clause 8.2.64	

Derivation Path: TS 24.484 [13] Information Element	Value/remark	Comment	Reference	Condition
T201	"1000"	Indicates the timer for	TS 24.380 [10]	- Comunicin
		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	
T205	"1"	Indicates the timer for	TS 24.380 [10]	
1205	'	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]	
1200		inactivity; Values: 0-255	10 2 1.000 [10]	
		s		
T233	"10"	Indicates the timer for	TS 24.380 [10]	
		pending user action;	TS 24.483 [13]	
		Values: 0-255 s	clause 8.2.70	
TFE1	"30"	Indicates the timer for	TS 24.379 [9]	
		MCPTT emergency	TS 24.483 [13]	
		alert; Values: 0-65535 s	clause 8.2.71	
TFE2	"10"	Indicates the timer for	TS 24.379 [9]	
		MCPTT emergency	TS 24.483 [13]	
		alert re-transmission; Values: 0-10 s	clause 8.2.72	
Counters		values. 0-10 s		
CFP1	"3"	Indicates the counter	TS 24.379 [9]	
0111		for private call request	TS 24.483 [13]	
		retransmission	clause 8.2.74	
CFP3	"5"	Indicates the counter	TS 24.379 [9]	
		for private call release	TS 24.483 [13]	
		retransmission	clause 8.2.75	
CFP4	"2"	Indicates the counter	TS 24.379 [9]	
		for private call accept	TS 24.483 [13]	
		retransmission	clause 8.2.76	
CFP6	"2"	Indicates the counter	TS 24.379 [9]	
		for private call accept	TS 24.483 [13]	
CFP11	"2"	retransmission	clause 8.2.77	
CFFII	<u> </u>	Indicates the counter for MCPTT group call	TS 24.379 [9] TS 24.483 [13]	
		emergency end	clause 8.2.78	
		retransmission	0.2.70	
CFP12	"2"	Indicates the counter	TS 24.379 [9]	
		for MCPTT imminent	TS 24.483 [13]	
		peril call emergency	clause 8.2.79	
		end retransmission		
C201	"3"	Indicates the counter	TS 24.379 [9]	
		for floor request	TS 24.483 [13]	
0001			clause 8.2.80	
C204	"2"	Indicates the counter	TS 24.379 [9]	
		for floor queue position	TS 24.483 [13]	
C205	"4"	request	clause 8.2.81	
C205	4	Indicates the counter	TS 24.379 [9]	
		for floor granted	TS 24.483 [13] clause 8.2.82	
		request	Uduse 0.2.02	

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** 

Derivation Path: TS 24.484 [14] (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	"O"			
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_Al ias	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		3		
PrivateCallList				
PrivateCallURI[1]				
index attribute	"0"			
uri-entry	px_MCPTT_ID_User_B	MCPTT user(s) who can be called in a MCPTT private call	TS 24.483 [13] clause 5.2.17	
display-name	"User B Name"	a human readable name for this User	TS 24.483 [13] clause 5.2.18	
PrivateCallURI[2]				
index attribute	"1"			
uri-entry	px_MCPTT_ID_User_C	MCPTT user(s) who can be called in a MCPTT private call	TS 24.483 [13] clause 5.2.17	
display-name	"User C Name"	a human readable name for this User	TS 24.483 [13] clause 5.2.18	
PrivateCallProSeUser[1]				
index attribute	"0"			
DiscoveryGroupID	"1234"	Discovery group ID in the ProSe discovery procedures	TS 23.303 [68] TS 24.483 [13] clause 5.2.19	
User-Info-ID	"5555"	Prose user Info ID in the ProSe discovery procedures	TS 23.303 [68] TS 24.483 [13] clause 5.2.19A	
PrivateCallProSeUser[2]				
index attribute DiscoveryGroupID	"1" "1234"	Discovery group ID in the ProSe discovery	TS 23.303 [68] TS 24.483 [13]	
User-Info-ID	"6666"	Procedures 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 vo. y 3.00p.12	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

Derivation Path: TS 24.484 [14] of Information Element	Value/remark	Comment	Reference	Condition
uri-entry	px_MCPTT_Group_A_I	Indicates the MCPTT	TS 24.483 [13]	Condition
un-entry	px_wcF11_Gloup_A_1	group used upon	clause 5.2.43B	
		certain criteria on	Clause 3.2.43D	
		initiation of an MCPTT		
P. I	MORTT	emergency alert.	TO 04 400 [40]	
display-name	px_MCPTT_Group_A_	Optional; name of	TS 24.483 [13]	
	Name	emergency alert group	clause 5.2.43D	
Priority	"10"	Indicates the priority of	TS 24.483 [13]	
		the MCPTT group calls, 0-255	clause 5.2.43F	
OffNetwork		0-233		
index attribute	"0"			
MCPTTGroupInfo				
entry[1]				
index attribute	"0"			
uri-entry	px_MCPTT_Group_A_I	Indicates an off-	TS 24.483 [13]	
dif-entry	D	network MCPTT group	clause 5.2.53	
	D		clause 5.2.53	
		for use by an MCPTT		
diamin	THE MODITE OF A	user	TO 04 400 (40)	
display-name	px_MCPTT_Group_A_	The display name	TS 24.483 [13]	
	Name	corresponding to off-	clause 5.2.53A	
		network group id		
User-Info-ID	"5555"	ProSe user info ID	TS 23.303 [68]	
			TS 24.483 [13]	
			clause 5.2.58	
OnNetwork				
index attribute	"0"			
MCPTTGroupInfo				
entry[1]		Group 1 the MCPTT		
Chay[1]		user is allowed to		
		affiliate to		
index attribute	"0"			
uri-entry	px_MCPTT_Group_A_I	The MCPTT group ID	TS 24.483 [13]	
an entry		for the on-network	clause 5.2.48B	
		MCPTT group that the	4	
		MCPTT user is allowed	•	
		to affiliate to.		
diaplay nama	px_MCPTT_Group_A_	The display name for	TS 24.483 [13]	
display-name	Name		clause 5.2.48B	
	Name	the group		
a material COI		Crown O the MCDTT	5	
entry[2]		Group 2 the MCPTT		
		user is allowed to		
	11411	affiliate to		
index attribute	"1"			
uri-entry	px_MCPTT_Group_D_I	The MCPTT group ID	TS 24.483 [13]	
	D	for the on-network	clause 5.2.48B	
		MCPTT group that the	4	
		MCPTT user is allowed		
		to affiliate to.		
display-name	px_MCPTT_Group_D_	The display name for	TS 24.483 [13]	·
• •	Name	the group	clause 5.2.48B	
			5	
MaxAffiliationsN2	20			
	20			
MaxSimultaneousTransmissions				
N7				
ImplicitAffiliations		Group 1 the MCPTT		
p		user is implicitly		
		affiliated to		
entry	+	annatod to		
index attribute	"0"	1		
	•	indicates a MODIT	TO 04 400 [40]	
uri-entry	px_MCPTT_Group_A_I	indicates a MCPTT	TS 24.483 [13]	
	D	group ID to which the	clause 5.2.48C	
		MCPTT user is	4	
	i .	implicitly affiliated to	ĺ	1

Derivation Path: TS 24.484 [14] Information Element	Value/remark	Comment	Reference	Condition
display-name	px_MCPTT_Group_A_ Name	display name for implicitly affiliated	TS 24.483 [13] clause 5.2.48C	
Driveto Emergenov Alert		group	5	
PrivateEmergencyAlert entry				
entry-info attribute	"UsePreConfigured"	Indicates the criteria to determine when initiation of an MCPTT emergency private call uses the MCPTT	TS 24.483 [13] clause 5.2.48 O	
		private recipient ID.		
index attribute	"0"			
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_Al 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-	"true"	Indicates the	TS 24.483 [13]	
commencement		authorisation to make a MCPTT private call with automatic commencement	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	

Derivation Path: TS 24.484 [14] cla Information Element	Value/remark	Comment	Reference	Condition
allow-private-call-floor-	"true"	Indicates authorisation	TS 24.483 [13]	
control-protection		to protect confidentiality	clause 5.2.25	
·		and integrity of floor		
		control signalling for		
		MCPTT private calls.		
allow-emergency-private-	"true"	Indicates the	TS 24.483 [13]	
call		authorisation to make	clause 5.2.27	
		an MCPTT emergency		
		private call.		
allow-cancel-private-	"true"	Indicates the	TS 24.483 [13]	
emergency-call		authorisation to cancel	clause 5.2.28	
g,		emergency priority in		
		an MCPTT emergency		
		private call by an		
		authorised MCPTT		
		user		
allow-emergency-group-call	"true"	Indicates the	TS 24.483 [13]	
anow ciriergency-group-call	ado	authorisation to make	clause 5.2.33	
		an MCPTT emergency	JIAUSE J.Z.SS	
		group call functionality		
		enabled for MCPTT		
allow concel group	"true"	Indicates the	TS 24.483 [13]	
allow-cancel-group-	iiue		clause 5.2.35	
emergency		authorisation to cancel	clause 5.2.35	
		an in progress MCPTT		
		emergency call		
		associated with a		
	n. n	group.	TO 04 400 1401	
allow-imminent-peril-call	"true"	Indicates the	TS 24.483 [13]	
		authorisation to make	clause 5.2.37	
		an Imminent Peril		
		group call		
allow-cancel-imminent-peril	"true"	Indicates the	TS 24.483 [13]	
		authorisation for in-	clause 5.2.38	
		progress MCPTT		
		imminent peril		
		cancelation		
allow-activate-emergency-	"true"	Indicates the	TS 24.483 [13]	
alert		authorisation to activate	clause 5.2.41	
		an MCPTT emergency		
		alert		
allow-cancel-emergency-	"true"	Indicates the	TS 24.483 [13]	
alert		authorisation to cancel	clause 5.2.42	
		an MCPTT emergency		
		alert		
allow-create-group-	"true"	Indicates the	TS 24.483 [13]	
broadcast-group		authorisation to create	clause 5.2.46	
- ·		a group-broadcast		
		group.		
allow-create-user-	"true"	Indicates the	TS 24.483 [13]	
broadcast-group		authorisation to create	clause 5.2.48	
- ·		a user-broadcast group		
allow-offnetwork	"true"	Indicates the	TS 24.483 [13]	
anow omnowork		authorisation for off-	clause 5.2.50	
		network services		
allow-listen-both-overriding-	"false"	Indicates whether the	TS 24.483 [13]	
and-overridden		MCPTT user is allowed	clause 5.2.54	
		to listen both overriding		
		and override		
allow-transmit-during-	"false"	Indicates whether the	TS 24.483 [13]	
override	14100	MCPTT user is allowed	clause 5.2.55	
Overnou		to transmit in case of	51443C 0.2.00	
			l	i e
		override (overriding		

Derivation Path: TS 24.484 [14] o	Value/remark	Comment	Reference	Condition
allow-off-network-group-	"true"	Indicates the	TS 24.483 [13]	Condition
call-change-to-emergency	liue	authorisation for a	clause 5.2.56	
call-change-to-emergency		participant to change	clause 5.2.50	
		an off-network group		
		call in-progress to an		
		off-network MCPTT		
		emergency group call		
allow-imminent-peril-	"true"	Indicates the	TS 24.483 [13]	
change	lide	authorisation for a	clause 5.2.57	
change		participant to change	Clause 5.2.57	
		an off-network group		
		call in-progress to an		
		off-network MCPTT		
		imminent peril group		
allow regroup	"true"	call Indicates whether the	TS 24.483 [13]	
allow-regroup	irue	MCPTT user is	clause 5.2.48D	
			clause 5.2.46D	
		authorised to perform		
		dynamic regrouping		
		operations	TO 04 400 [40]	
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-		
		network operation		

# 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		organization		
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		Editor's note: values to be confirmed		
private-cancel-timeout	"PT30M"	30 minutes		
group-time-limit	"PT20M"	20 minutes		
private-call		Editor's note: values to be confirmed		
hang-time	"PT30S"	30 seconds		
max-duration-with-floor- control	"PT30S"	30 seconds		
max-duration-without-floor- control	"PT20M"	20 minutes		
num-levels-priority-hierarchy	10	Editor's note: value to be confirmed		
transmit-time		Editor's note: values to be confirmed		
time-limit	"PT30S"	30 seconds		
time-warning	"PT20M"	20 minutes		
hang-time-warning	"PT20M"	20 minutes Editor's note: value to be confirmed		
floor-control-queue		Editor's note: values to be confirmed		
depth	5			
max-user-request-time	"PT20M"	20 minutes		
fc-timers-counters		Editor's note: values to be confirmed		
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	

Derivation Path: TS 24.484 [14], c Information Element	Value/remark	Comment	Reference	Condition
T20-floor-granted	"PT1S"	Default value	TS 24.380 [10]	
cco. g.a.mea		Value in seconds	clause 11	
T55-connect	"PT2S"	Default value	TS 24.380 [10]	
		Value in seconds	clause 11	
T56-disconnect	"PT2S"	Default value	TS 24.380 [10]	
		Value in seconds	clause 11	
C7-floor-idle	10	Default value	TS 24.380 [10]	
G		2 ordan rando	clause 11	
C17-unmap-group-to-bearer	3	Default value	TS 24.380 [10]	
orr annual group to source		201441114141	clause 11	
C20-floor-granted	3	Default value	TS 24.380 [10]	
o_ooo. g.aoa		201441114141	clause 11	
C55-connect	3	Default value	TS 24.380 [10]	
000 001111001		Dorault Value	clause 11	
C56-disconnect	3	Default value	TS 24.380 [10]	
Coo disconnect	3	Beladit value	clause 11	
signalling-protection		Editor's note: values to	ciaase i i	
signalling-protection		be confirmed		
confidentiality-protection	true	De COMMINIEU		
integrity-protection		+		
	true	Editor's note: values to		
protection-between-mcptt-				
servers	Am	be confirmed		
allow-signalling-protection	true			
allow-floor-control-protection	true	F IV. 1		
emergency-resource-priority		Editor's note: values to		
		be confirmed	5500101	
resource-priority-namespace	"mcpttp"		RFC 8101	
resource-priority-priority	"8"		RFC 8101	
imminent-peril-resource-		Editor's note: values to		
priority		be confirmed		
resource-priority-namespace	"mcpttp"		RFC 8101	
resource-priority-priority	"5"		RFC 8101	
normal-resource-priority		Editor's note: values to		
		be confirmed		
resource-priority-namespace	"mcpttp"		RFC 8101	
resource-priority-priority	"1"		RFC 8101	
off-network				
emergency-call				
private-cancel-timeout	"PT5S"	5 seconds;	TS 24.483 [13]	
,		Indicates timeout value	clause 7.2.14	
		for the cancellation of		
		an in progress		
		emergency for an		
		MCPTT private call.		
		Values: : 0-65535 s		
group-time-limit	"PT5S"	5 seconds;	TS 24.483 [13]	
J		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]	
nang-time		Indicates hang timer for	clause 7.2.13	
		private calls (with floor		
		control). Values: 0-		
		65535 s		
max-duration-with-floor-	"PT60S"	60 seconds;	TS 24.483 [13]	
control	. 1000	Indicates max private	clause 7.2.12	
55.1001		call (with floor control)	514400 1.2.12	
		duration. Values: 0-		
		I MITATION VALUE II-		

Derivation Path: TS 24.484 [14],				
Information Element	Value/remark	Comment	Reference	Condition
num-levels-priority-hierarchy	"4"	Indicates the number of levels of hierarchy for floor control override in off-network. Values: 4- 256	TS 24.483 [13] clause 7.2.17	
transmit-time				
time-limit	"PT60S"	60 seconds; Indicates transmit time limit from a single request to transmit in a group or private call. Values: 0-65535 s	TS 24.483 [13] clause 7.2.18	
time-warning	"PT50S"	50 seconds; Indicates configuration of warning time before time limit of transmission is reached (off-network). Values: 0-255 s	TS 24.483 [13] clause 7.2.19	
hang-time-warning	"PT4S"	4 seconds; Indicates configuration of warning time before hang time is reached (off-network). Values: Values: 0-255 s	TS 24.483 [13] clause 7.2.20	
default-prose-per-packet- priority				
mcptt-private-call-signalling	"1"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 23.303 [68] TS 24.483 [13] clause 7.2.22	
mcptt-private-call-media	"1"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 23.303 [68] TS 24.483 [13] clause 7.2.23	
mcptt-emergency-private- call-signalling	"8"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 23.303 [68] TS 24.483 [13] clause 7.2.24	
mcptt-emergency-private- call-media	"8"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 23.303 [68] TS 24.483 [13] clause 7.2.25	
allow-log-metadata	"true"	Indicates whether an MCPTT emergency group call is permitted on the MCPTT group	TS 24.483 [13] clause 7.2.26	

# 5.5.8.5 MCVideo Initial UE Configuration

Table 5.5.8.5-1: MCVideo Initial UE Configuration Defaults

Derivation Path: TS 24.484 [14], o	Value/remark	Commont	Poforonoo	Condition
Information Element mcptt-UE-initial-configuration	value/remark	Comment	Reference	Condition
domain attribute	px_MCX_DomainName _Organization_A	Mandatory attribute: domain name of the mission critical organization		
Default-user-profile		organization		
User-ID attribute	px_MCVideo_ID_User_ A	Default User Identity	TS 24.483 [13] clause 8.2.6	
user-profile-index attribute	"0"	Values 0-255. Indicates selected user profile	TS 24.483 [13] clause 8.2.7	
on-network				
Timers				
T100	"2"	Values 0-255 sec	TS 24.581 [88] TS 24.483 [13] clause 8.2.11	
T101	"2"	Values 0-255 sec	TS 24.581 [88] TS 24.483 [13] clause 8.2.12	
T103	"5"	Values 0-255 sec	TS 24.581 [88] TS 24.483 [13] clause 8.2.13	
T104	"2"	Values 0-255 sec	TS 24.581 [88] TS 24.483 [13] clause 8.2.14	
T132	"3"	Values 0-255 sec	TS 24.581 [88] TS 24.483 [13] clause 8.2.15	
HPLMN				
PLMN attribute	PLMN1	the PLMN on which the UE is allowed for MCVideo services.	TS 23.003 [69] TS 24.483 [13] clause 8.2.16	
		Public Land Mobile Network is uniquely identified by its PLMN identifier; consists of Mobile Country Code (MCC) and Mobile Network Code (MNC) and are defined by the operator.		
		NOTE: PLMN1 shall be the PLMN of the Cell on which the UE is camped during testing.		
service		MCVideo related services on a per HPLMN basis		
MCPTT-to-con-ref	px_MCVideo_ALL_AP N	configuration parameter for establishment of the PDN connection for the MCVideo service	TS 24.483 [13] clause 8.2.21	
MC-common-core-to-con- ref	px_MCVideo_ALL_AP N	configuration parameter for establishment of the PDN connection for the MC common core service	TS 24.483 [13] clause 8.2.24	
MC-ID-to-con-ref	px_MCVideo_ALL_AP N	configuration parameter for establishment of the PDN connection for the MC identity management service	TS 24.483 [13] clause 8.2.27	

Derivation Path: TS 24.484 [14], o				
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		
		We video service		
		NOTE: PLMN2 shall be		
		a different PLMN to		
		PLMN1 of a Cell to		
		which the UE will move		
		during testing when		
service		specified in a test case.		
MCPTT-to-con-ref	px_MCVideo_ALL_AP	configuration	TS 24.483 [13]	
	N	parameter for	clause 8.2.33	
		establishment of the	0.0.00	
		PDN connection for the		
		MCVideo service		
MC-common-core-to-con-	px_MCVideo_ALL_AP	configuration	TS 24.483 [13]	
ref	N	parameter for	clause 8.2.36	
		establishment of the PDN connection for the		
		MC common core		
		service		
MC-ID-to-con-ref	px_MCVideo_ALL_AP	configuration	TS 24.483 [13]	
	N = = =	parameter for	clause 8.2.39	
		establishment of the		
		PDN connection for the		
		MC identity		
Ann Comen Info		management service		
App-Server-Info idms-auth-endpoint	"https://" &	Identity management	TS 23.003 [69]	IPv4
Idino dalii chapoint	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	Identity as a second	TO 00 000 [00]	ID: C
	"https://[" &	Identity management	TS 23.003 [69]	IPv6
	px_MCX_IdMS_auth_I PAddress & "]:" &	server authorisation endpoint identity	TS 24.483 [13] clause 8.2.41	
	px_MCX_ldMS_auth_P	information	JIGGG 0.2.41	
	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_			
http-provy	UriPath "https://" &	IP address and port	TS 23.003 [69]	IPv4
http-proxy	px_MCX_HTTP_Proxy	used by the UE for the	TS 24.483 [13]	11. 4.4
	_IPAddress & ":" &	HTTP TCP connection	clause 8.2.41B	
	px_MCX_HTTP_Proxy		Clause 0.2.41D	
	_Port			
•	•	•	•	

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

Derivation Path: TS 24.484 [14]	clause 7.2 Value/remark	Comment	Poforonoo	Condition
TFG2	"2000"	Indicates the timer for	<b>Reference</b> TS 24.281 [86]	Condition
11-92	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	
TFG5	"2"	0-60 s Indicates the timer for	TC 04 004 [00]	
IFG5	2	not present incoming	TS 24.281 [86] TS 24.483 [13]	
		call announcements;	clause 8.2.51	
		Values: 0-255 s	0.2.01	
TFG11	"3000"	Indicates the timer for	TS 24.281 [86]	
		MCVideo emergency	TS 24.483 [13]	
		end retransmission;	clause 8.2.52	
		Values: 0-65535 ms		
TFG12	"3000"	Indicates the timer for	TS 24.281 [86]	
		MCVideo imminent	TS 24.483 [13]	
		peril end	clause 8.2.53	
		retransmission; Values:		
TFG13	"1"	0-65535 ms Indicates the timer for	TS 24.281 [86]	
11613	1	implicit priority	TS 24.261 [66]	
		downgrade; Values: 0-	clause 8.2.54	
		255 s	Clause 0.2.54	
TFG14	"1"	Indicates the MCVideo	TS 24.281 [86]	
		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 24.281 [86]	
		private call request	TS 24.483 [13]	
		retransmission; Values:	clause 8.2.55	
TEDO	"50"	0-65535 ms	TC 04 004 [00]	
TFP2	50	Indicates the timer for waiting for call	TS 24.281 [86] TS 24.483 [13]	
		response message;	clause 8.2.56	
		Values: 0-60 s	0.2.00	
TFP3	"2000"	Indicates the timer for	TS 24.281 [86]	
		private call release	TS 24.483 [13]	
		retransmission; Values:	clause 8.2.57	
		0-65535 ms		
TFP4	"5000"	Indicates the timer for	TS 24.281 [86]	
		private call release	TS 24.483 [13]	
		retransmission; Values:	clause 8.2.58	
TFP5	"30"	0-65535 ms Indicates the timer for	TS 24.281 [86]	
IFFU	30	call release; Values: 0-	TS 24.281 [86]	
		600 s	clause 8.2.59	
TFP6	"3000"	Indicates the timer for	TS 24.281 [86]	
		MCVideo emergency	TS 24.483 [13]	
		private call cancel	clause 8.2.60	
		retransmission; Values:		
		0-65535 ms		
TFP7	"6"	Indicates the timer for	TS 24.281 [86]	
		waiting for any	TS 24.483 [13]	
		message with same	clause 8.2.61	
		call identifier; Values:		
TFB1	"300"	0-255 s Indicates the timer for	TS 24.281 [86]	
	300	max duration; Values:	TS 24.483 [13]	
		0-600 s	clause 8.2.62	
	1	1 3 555 5	5.0000 0.2.02	·

Perivation Path: TS 24.484 [14] Information Element	Value/remark	Comment	Reference	Condition
TFB2	"10"	Indicates the timer for	TS 24.281 [86]	Janaidi
<b>52</b>		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]	
<del></del>		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]	
<b>U</b>		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	"A"	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 <del>4</del>	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		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

# 5.5.8.6 MCVideo UE Configuration

The structure of a UE configuration document is specified in TS 24.484 [14] clause 9.2. Single MCVideo group configuration parameters are defined in TS 24.483 [13] clause 12.2.

Table 5.5.8.6-1: MCVideo UE Configuration Defaults

Derivation Path: TS 24.484 [14] of Information Element	Value/remark	Comment	Reference	Condition
mcvideo-UE-configuration				
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, cl	Value/remark	Comment	Reference	Condition
mcptt-user-profile	Taiao/Toiliain	- Commont	1101010100	Condition
XUI-URI attribute	px_MCVideo_User_XU I_URI			
user-profile-index attribute	"0"			
Status	"true"	MCVideo user profile is enabled		
ProfileName	px_MCVideo_User_A_ Profile_Name	Profile name for the MCVideo user	TS 24.483 [13] clause 13.2.3;	
Common				
index attribute	"0"	Index for the particular MCVideo user profile		
MCVideoUserID		Indicates an MCVideo user identity (MCVideo ID) which is a globally unique identifier within the MCVideo service that represents the MCVideo user	TS 24.483 [13] clause 13.2.7	
index attribute	"0"			
uri-entry	px_MCVideo_ID_User_ A	MCVideo user identity (MCVideo ID) which is a globally unique identifier within the MCVideo service that represents the MCVideo user		
UserAlias	px_MCVideo_User_A_ Alias	Alphanumeric aliases of MCVideo user	TS 24.483 [13] clause 13.2.11	
ParticipantType	px_MCVideo_User_A_ ParticipantType	The functional category of the participant (e.g., first responder, second responder, dispatch, dispatch supervisor), typically defined by the MCVideo administrators.	TS 24.483 [13] clause 13.2.15	
MissionCriticalOrganization	px_MCVideo_User_A_ Organization	Indicates the organization an MCVideo user belongs to	TS 24.483 [13] clause 13.2.16	
NotifyList				
index attribute	"0"			
uri-entry	px_MCVideo_ID_User_ B			
CatList				
catentry	"1"		TS 24.483 [13] clause 13.2.38	
ReceptionPriority	"1"			
OnNetwork				
index	"1"			
MCVideo Group ID	nv MO\/:daa O ^			
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

Information Element	ause 9.3  Value/remark	Comment	Reference	Condition
	"https://[" & px_MCX_IdMS_token_I PAddress & "]:" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv6
RelativePresentationPriority	"7"		TS 24.483 [13] clause 13.2.51	
MaxAffiliationsNc2	"10"		TS 24.483 [13] clause 13.2.67	
MaxTimeSingleTransmit	"600"	Value in seconds	TS 24.483 [13] clause 13.2.87	
OffNetwork				
index	"1"			
MCVideoGroupInfo				
MCVideo-Group-ID	px_MCVideo_Group_A _ID			
GMS-App-Serv-Id	tsc_MCX_GMS_Hostn ame			
IdMS-Token-Endpoint	"https://" & px_MCX_IdMS_token_I PAddress & ":" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv4
	"https://[" & px_MCX_IdMS_token_I PAddress & "]:" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv6
RelativePresentationPriority	"7"		TS 24.483 [13] clause 13.2.51	
User-Info-Id	px_MCVideo_ID_User_ A		TS 24.483 [13] clause 13.2.10	
cp:ruleset			_	
cp:rule				
cp:id attribute	"rule1"			
cp:actions				
allow-create-delete-user- alias	"true"			
allow-create-group- proadcast- group	"true"			
allow-create-user- proadcast-group	"true"			
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 allow-request-affiliated-	"true"			
groups allow-request-to-affiliate- other-users	"true"			
allow-recommend-to- affiliate-other-users	"true"			
allow-regroup	"true"			
allow-presence-status	"true"		+	<b> </b>

Derivation Path: TS 24.24.484, clause 9.3  Information Element Value/remark Comment Reference Condition					
		Comment	Reference	Condition	
allow-request-presence	"true"				
allow-activate-emergency-	"true"				
alert	114				
allow-cancel-emergency-	"true"				
alert					
allow-cancel-emergency-	"true"				
alert-any-user allow-enable-disable-user	"true"				
allow-enable-disable-UE	"true"				
allow-off-network-manual-	"true"				
switch					
allow-unlimited-video-	"true"				
streams	llan coll				
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"	<u> </u>			
call-change-to-emergency					
allow-create-delete-user-	"true"				
alias					

# 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], o	Value/remark	Comment	Reference	Condition
service configuration	raido, oma k	- Common	11010101100	Contantion
domain attribute	px_MCX_DomainName _Organization_A	Mandatory attribute: domain name of the mission critical		
0		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] clause 8.2.13	
T104	"2"	Values 0-255 sec	TS 24.380 [10] TS 24.483 [13]	
T132	"3"	Values 0-255 sec	Clause 8.2.14 TS 24.380 [10] TS 24.483 [13]	
TDU1	"120"	Value in ms	clause 8.2.15 TS 24.282 [91] clause F.2.3	
TDU2	"60"	Value in seconds	TS 24.282 [91] clause F.2.3	
HPLMN				
PLMN attribute	PLMN1	the PLMN on which the UE is allowed for MCData services.	TS 23.003 [69] TS 24.483 [13] clause 8.2.16	
		Public Land Mobile Network is uniquely identified by its PLMN identifier; consists of Mobile Country Code (MCC) and Mobile Network Code (MNC) and are defined by the operator.		
		NOTE: PLMN1 shall be the PLMN of the Cell on which the UE is camped during testing.		
service		MCData related services on a per HPLMN basis		
MCPTT-to-con-ref	px_MCData_ALL_APN	configuration parameter for establishment of the PDN connection for the MCData service	TS 24.483 [13] clause 8.2.21	
MC-common-core-to-con- ref	px_MCData_ALL_APN	configuration parameter for establishment of the PDN connection for the MC common core service	TS 24.483 [13] clause 8.2.24	

Derivation Path: TS 24.484 [14], (		0	Deference	00
Information Element	Value/remark	Comment	Reference	Condition
MC-ID-to-con-ref	px_MCData_ALL_APN	configuration parameter for establishment of the PDN connection for the MC identity management service	TS 24.483 [13] clause 8.2.27	
VPLM[1]				
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 MCPTT-to-con-ref	px MCData ALL APN	aonfiguration	TC 04 400 (40)	
		configuration parameter for establishment of the PDN connection for the MCData service	TS 24.483 [13] clause 8.2.33	
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 8.2.36	
MC-ID-to-con-ref	px_MCData_ALL_APN	configuration parameter for establishment of the PDN connection for the MC identity management service	TS 24.483 [13] clause 8.2.39	
App-Server-Info				
idms-auth-endpoint	"https://" & px_MCX_IdMS_auth_I PAddress & ":" & px_MCX_IdMS_auth_P ort & tsc_MCX_IdMS_auth_ UriPath	Identity management server authorisation endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41	IPv4
	"https://[" & px_MCX_IdMS_auth_I PAddress & "]:" & px_MCX_IdMS_auth_P ort & tsc_MCX_IdMS_auth_ UriPath	Identity management server authorisation endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41	IPv6
idms-token-endpoint	"https://" & px_MCX_IdMS_token_I PAddress & ":" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv4
	"https://[" & px_MCX_IdMS_token_I PAddress & "]:" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv6

http-proxy	Derivation Path: TS 24.484 [14],				
px_MCX_HTTP_Proxy_Port   Paddress & 1"-8   px_MCX_HTTP_Proxy_Port	Information Element	Value/remark	Comment	Reference	Condition
DX_MCX_HTTP_Proxy   Port   Proxy   P	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	
mme me management server cleasuse 8.2.42  cms tsc_MCX_CMS_Hostna me me management server configuration management server clearity information for the key management server clearity information management server clearity information for the TLS tunnel authentication for the TLS		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
Memory	gms		management server	TS 24.483 [13]	
tls-tunnel-auth-method mutual-authentication "false" Indicates whether untual authentication is used for the TLS tunnel authentication false-one-way authentication false-one-way authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication for the TLS tunnel authentication 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 proxy function of the GMS TS 23.003 [69] TS 24.483 [13] clause 8.2.94 [13] clause 8.2.94 [13] clause 8.2.94 [13] clause 8.2.96 [14] [15] [15] [15] [15] [15] [15] [15] [15	cms		configuration management server	TS 24.483 [13]	
mutual-authentication "false" Indicates whether mutual authentication is used for the TLS tunnel authentication falses—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 are selected and the proper management service identity for performing subscription proxy function of the GMS are selected from XUI information for creation of groups are selected from XUI authentication for creation of groups are selected from XUI authentication for the GMS are selected from XUI authentication for the GMS are selected from XUI authentication for the GMS are selected from XUI authentication for the GMS are selected from XUI authentication for the GMS are selected from XUI authentication for the GMS are selected from XUI authentication for the GMS are selected from XUI authentication for the GMS are selected from XUI authentication for the GMS are selected from XUI authentication for the GMS are selected from XUI authentication for the GMS are selected from XUI authentication for the GMS are selected from XUI authentication for the GMS are selected from XUI authentication for the GMS are selected from XUI authentication for the GMS are selected from XUI authentication for the GMS are selected from XUI authentication for the GMS are selected from XUI authentication for 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  Not present  Not present  Not present  Not present  Not present  Not present  Not present  Not present  Not present  Not present  Not present  Not present  Not present  Not present  Not present  Not present  Pre-shared key for mutual authentication for the TLS tunnel authentication for the TLS tunnel authentication  Responsible to the transport of transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of the transport of transport of the transport of the transport of the transport of the transport of transpo				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 The group management service URI information which contains the public service identity for performing subscription proxy function of the GMS    GMS-VCAP	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	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_S23.003 [69]  px_S24.483 [13]  clause 8.2.9B  px_S23.003 [69]  px_S24.483 [13]  px_S23.003 [69]  px_S24.483 [13]  px_S23.003 [69]  px_S24.483 [13]  px_S23.003 [69]  px_S24.483 [13]  px_S23.003 [69]  px_S24.483 [13]  px_S23.003 [69]  px_S24.483 [13]  px_S23.003 [69]  px_S24.483 [13]  px_S23.003 [69]  px_S24.483 [13]  px_S23.003 [69]  px_S24.483 [13]  px_S23.003 [69]  px_S23.003 [69]  px_S24.483 [13]  px_S23.003 [69]  px_S23.003 [	key	Not present	mutual authentication for the TLS tunnel		
px_MCData_GroupCre ationXUI   px_MCData_GroupCre ationXUI   px_MCData_GroupCre ationXUI   px_MCData_GroupCre ationXUI   px_MCData_GroupCre ationXUI   px_MCData_GroupCre ationXUI   px_MCData_GroupCre ationXUI   px_MCData_GroupCre ationXUI   px_MCData_GroupCre ationXUI   px_MCData_GroupCre ationXUI   px_MCData_GroupCreation   px_MCData_GroupCre ationXUI   px_MCData_GroupCreation   px_MCData_GroupCre ationXUI   px_MCData_GroupCreation   px_MCData_GroupCreat	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-networkIndicates whether integrity protection is enabledTS 24.483 [13] clause 8.2.44F	group-creation-XUI		Indicates the group creation XUI information for creation	TS 24.483 [13]	
ootURI  configuration management server XCAP Root URI information  integrity-protection-enabled  "true"  Indicates whether integrity protection is enabled  confidentiality-protection-enabled  integrity protection is enabled  confidentiality-protection-enabled  off-network  TS 24.483 [13] clause 8.2.44E  TS 24.483 [13] clause 8.2.44F enabled	GMS-XCAP-root-URI		Indicates the group management server XCAP Root URI	TS 24.483 [13]	
integrity protection is enabled  confidentiality-protection- enabled  "true"  Indicates whether integrity protection is enabled  off-network  integrity protection is enabled  clause 8.2.44E  TS 24.483 [13] clause 8.2.44F  enabled			configuration management server XCAP Root URI	TS 24.483 [13]	
enabled integrity protection is clause 8.2.44F enabled off-network	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	100	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	
TEOAA	"1"	255 s	TO 04 070 [0]	
TFG14	1	Indicates the MCData timer for implicit priority	TS 24.379 [9] TS 24.483 [13]	
		downgrade (imminent	clause 8.2.54A	
		peril); Values: 0-255 s	Clause 6.2.54A	
TFP1	"2000"	Indicates the timer for	TS 24.379 [9]	
	2000	private call request	TS 24.483 [13]	
		retransmission; Values:	clause 8.2.55	
		0-65535 ms	0.2.00	
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:		
TEDE		0-65535 ms	TO 0 : 2 = 2 = 2	
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:		
TEDA	1100011	0-255 s	TO 04 070 101	
TFB1	"300"	Indicates the timer for	TS 24.379 [9]	
		max duration; Values: 0-600 s	TS 24.483 [13] clause 8.2.62	1

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	<b>=</b> 0 0 1 000 fo 12	
TFS1	"40"	Value in ms	TS 24.282 [91]	
			clause F.3.1	
TFS2	"40"	Value in ms	TS 24.282 [91]	
			clause F.3.1	
TFS3	"120"	Value in ms	TS 24.282 [91]	
			clause F.3.1	
Counters				
CFP1	"3"	Indicates the counter	TS 24.379 [9]	
		for private call request	TS 24.483 [13]	
		retransmission	clause 8.2.74	
CED2	"5"		TS 24.379 [9]	
CFP3	٥	Indicates the counter		
		for private call release	TS 24.483 [13]	
0554	101	retransmission	clause 8.2.75	
CFP4	"2"	Indicates the counter	TS 24.379 [9]	
		for private call accept	TS 24.483 [13]	
		retransmission	clause 8.2.76	
CFP6	"2"	Indicates the counter	TS 24.379 [9]	
		for private call accept	TS 24.483 [13]	
		retransmission	clause 8.2.77	
CFP11	"2"	Indicates the counter	TS 24.379 [9]	
J. 7 1 1	-	for MCData group call	TS 24.483 [13]	
			clause 8.2.78	
		emergency end	ciause 0.2.70	
OFD40	"0"	retransmission	TO 04 070 (0)	
CFP12	"2"	Indicates the counter	TS 24.379 [9]	
		for MCData imminent	TS 24.483 [13]	
		peril call emergency	clause 8.2.79	
		end retransmission		
C201	"3"	Indicates the counter	TS 24.379 [9]	
		for floor request	TS 24.483 [13]	
	ı		clause 8.2.80	l

Derivation Path: TS 24.484 [14], clause 7.2					
Information Element	Value/remark	Comment	Reference	Condition	
C204	"2"	Indicates the counter	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		

## 5.5.8.10 MCDATA UE Configuration

The structure of a UE configuration document is specified in TS 24.484 [14] clause 10.2. Single MCVideo group configuration parameters are defined in TS 24.483 [13] clause 9.2.

Table 5.5.8.10-1: MCDATA UE Configuration Defaults

Derivation Path: TS 24.484 [14] of Information Element	Value/remark	Comment	Reference	Condition
mcdata-UE-configuration				23
domain attribute	px_MCX_DomainName _Organization_A	Mandatory attribute: 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		3 3 1		
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	ny MOD-t- O C	Identifies - MOD (	TC 04 400	
MCDATA-Group-ID	px_MCData_Group_A_	Identifies a MCData	TS 24.483	
group-priority-hierarchy	ID   "7"	Group  Contains an integer that identifies the relative priority level of that MCData group with 0 being the lowest priority and 255 being the highest priority	clause 9.2.15 TS 24.483 [13] clause 9.2.16, 10.2	
conversation-management				
Conversation-Presentation- Priority				
MCData-Group-Priority				
MCData-Group-ID	px_MCData_Group_A_ ID	Identifies a MCData group	TS 24.483 clause 9.2.15	
group-priority-hierarchy	"7"	Indicates the requested presentation priority of conversation management transactions	TS 24.483 clause 9.2.16	

Information Element	Value/remark	Comment	Reference	Condition
transmission-control				
Max-Simul-Data- Transmissions-Nc4	"3"	Indicates the maximum number of simultaneous data transmissions.	TS 24.483 clause 9.2.21	
Max-Data-Transmissions-In- Group-Nc5	"3"	Indicates the maximum number of simultaneous data transmissions.	TS 24.483 clause 9.2.22	
Data-Presentation-Priority		lindicates the requested presentation priority of data received.	TS 24.483 clause 9.2.23	
MCData-Group-Priority				
MCData-Group-ID	px_MCData_Group_A_ ID			
group-priority-hierarchy	"7"	Indicates the requested presentation priority of data received.	TS 24.483 clause 9.2.26	
reception-control				
Max-Simul-Data_Reception-Nc4	"3"	Indicates the maximum number of simultaneous data receptions.		
Max-Simul- Data_Receptions-In-Group-Nc5	"5"	Indicates the maximum number of data receptions in a group.		
on-network				
IPv6Preferred	"false"	Indicates whether IPv6 is preferred over IPv4 for on-network operation when the MCDATA UE has both IPv4 and IPv6 host configuration.	TS 24.483 [13] clause 9.2.31, 10.2	
Relay-Service	"true"	Indicates the authorisation to use a relay service. NOTE: When the <relay-service> element is set to "false" a list of <relayed-mcdata-group> elements is not needed.</relayed-mcdata-group></relay-service>	TS 24.483 [13] clause 9.2.32, 10.2	

## 5.5.8.11 MCDATA User Profile

The structure of a user profile document is specified in TS 24.484 [14] clause 10.3.2.1. Single MCDATA configuration parameters are defined in TS 24.483 [13] clause 10.2.

Table 5.5.8.11-1: MCDATA User Profile Defaults

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	TS 24.483 clause 10.2.21 A	

Derivation Path: TS 24.484, clau Information Element	vse 10.3.2.1 Value/remark	Common <sup>4</sup>	Doforonas	Condition
		Comment	Reference	Condition
MCData_ID_KMSURI	tsc_MCX_KMS_Hostna me	Contains the KMS URI for the security domain of the MCData user identity (MCData ID) of the MCData user and corresponds to the "MCDataUserIDKMSU RI" element of clause 10.2.9A in 3GPP TS 24.483 [4]. If this parameter is absent, the KMS URI is identified by the <kmssec> element of the <app-server-info> of</app-server-info></kmssec>	TS 24.483 [13] clause 10.2.21 A	Condition
		the MCS UE initial configuration document as specified in clause 7.2.2.1		
TxRxControl				
MaxData1To1	"65535"	Indicates the maximum amount of data (in megabytes) that an MCData user can transmit in a single request during one-to-one communication.	TS 24.483 [13] clause 10.2.25	
MaxTime1to1	"65535"	Indicates the maximum amount of time that an MCData user can transmit for in a single request during one-to-one communication.	TS 24.483 [13] clause 10.2.26	
TxReleaseList	px_MCData_ID_User_ A	Indicates an MCData ID of an MCData user that this MCData user is allowed to request release of an ongoing transmission	TS 24.483 [13] clause 10.2.30	
GroupEmergencyAlert		Indicates the MCData group recipient for an MCData emergency Alert	TS 24.483 [13] clause 10.2.38	
entry	px_MCData_ID_User_ A			
OnNetwork				
index attribute	"0"	Is of type "token" and is included within some elements for uniqueness purposes, and does not appear in the user profile configuration managed object specified in 3GPP TS 24.483 [4].		
MCDataGroupInfo	1405	1 0 4 3 100	<b>TO</b> 0 : : : : :	
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"		TO 04 405	
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**  **Itrue**  **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, 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				

## 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
	value/reiliark	Comment	Reference	Condition
service configuration	THE MODELL HERE A CO	Manadatan attaila ata		
domain attribute	px_MCData_User_A_O rganization	Mandatory attribute: domain name of the		
		mission critical organization		
on-network		organization		
tx-and-rx-control				
max-data-size-sds-bytes	"10000000"	The maximum data		
max-data-size-sus-bytes	10000000	that the originating		
		client can send in an		
		SDS message		
max-payload-size-sds-	"1000"	The maximum payload		
cplane-bytes	1000	data that the originating		
		client can send in an		
		SDS message over C-		
		plane		
max-data-size-fd-bytes	"100000000"	The maximum data		
max data dizo la bytos	100000000	that the originating		
		client can send in an		1
		FD message		1
max-data-size-auto-recv-	"10000000"	The maximum data		
bytes	10000000	that the server can		
Syloc		send to the terminating		
		client without		1
		requesting the user to		
		indicate a present need		
		for the data		
default-file-availability	"10000000"	The default time for		
deradit ine dvandbinty	10000000	which a file is available		
		on the server for		
		download, if a explicit		
		time period is not		
		requested by the		
		originating client		
max-file-availability	"10000000"	The maximum time for		
,		which a file can be		
		made available on the		
		server for download		
signalling-protection				
confidentiality-protection	"true"	Indicating whether		
, .		confidentiality		
		protection of MCData		
		signalling is enabled or		
		disabled between the		
		MCData client and		
		MCData server		
integrity-protection	"true"	Indicating whether		
3 71		integrity protection of		
		MCData signalling is		
		enabled or disabled		
		between the MCData		
		client and MCData		
		server		1
protection-between-mcdata-				
servers				1
allow-signalling-protection	:true"	Indicating whether		
3 3.		protection of MCData		1
		signalling is enabled		1
		between MCData		
		servers		
off-network				
default-prose-per-packet-				
priority			TO 04 405 THE	
mcdata-one-to-one-call-	"1"		TS 24.483 [13]	1
signalling			clause 11.2.11	

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

- 5.5.9 Default miscellaneous messages and other information elements
- 5.5.9.1 MIKEY-SAKKE I\_MESSAGE
- CSK distribution (MIKEY-SAKKE sent by the UE)

Table 5.5.9.1-1: MIKEY-SAKKE I\_MESSAGE (CSK distribution by the UE)

Derivation path: RFC 6509 [23], RFC 6043 [2		Cammani	Condition
Field	Value/remark	Comment	Condition
MIKEY Common Header {	Any		
version	'0000001'B	CAKKE man (OC)	
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	Identifier for the next		
V	payload (NOTE 1) '0'B		
V PRF func	'000001'B	DDE LIMAC CLIA	
		PRF-HMAC-SHA- 256	
CSB ID	Any value but 4 most	32 bit CSK-ID: the	
	significant bits set to	4 most significant	
	'0010'B	bits indicate the	
		purpose of the	
		key, the other 28-	
		bits shall be	
		randomly	
		generated (TS 33.180 [94]	
		clause 5.2.2 and	
		E.6.11)	
#CS	'0000001'B or	Number of crypto	
# <b>00</b>	'00000001B 01	sessions in the	
	00000000	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	'00000110'B	CS ID of the	
		crypto session: '6'	
		for CSK use within	
		MCPTT	
		(TS 33.180 [94]	
		E.4.2) Editor's note:	
		value to be	
		confirmed	
Prot type	0	SRTP	
1 Tot type		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	
D. F		session	
Policy_no_1	Any value	a policy_no that	
		corresponds to	
		the policy_no of a	
1		SP payload	
}			

Derivation path: RFC 6509 [23], RFC 6043 [25]	, RFC 3830 [24]		
Field	Value/remark	Comment	Condition
Session Data Length	Length of Session Data (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 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 [2		· ·	
Field	Value/remark	Comment	Condition
RAND Payload {		Addressed by '00001011'B in the 'Next payload' field of the	
		previous payload	
Next payload	Identifier for the next payload (NOTE 1)		
RAND len	'00010000'B	At least 16 Bytes	
RAND	128-bit random number	128-bit random number	
} IDRi payload {		Addressed by '00001110'B in the 'Next payload' field of the previous payload	
Next payload	Identifier for the next payload (NOTE 1)		
ID Role	1	Initiator (IDRi)	
ID Type	1	URI	
ID len	Length of ID Data		
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)		
ID Role	2	Responder (IDRr)	
ID Type	1	URI	
ID len	Length of ID Data		
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)	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
ID Role	6	Initiator's KMS (IDRkmsi)	
ID Type	1	ÜRI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam e	KMS of the initiating user (UE)	
}			

Derivation path: RFC 6509 [23], RFC 6043 [25	], RFC 3830 [24]		
Field	Value/remark	Comment	Condition
IDRkmsr payload {		Addressed by	
		'00001110'B in the	
		'Next payload'	
		field of the	
Next perdeed	Identifier for the next	previous payload	
Next payload			
ID Role	payload (NOTE 1)	Responder's KMS	
ID Role	<i>'</i>	(IDRkmsr)	
ID Type	1	URI	
ID Type ID len	Length of ID Data	UKI	
ID data		KMS of the	
ID data	tsc_MCX_KMS_Hostnam		
	е	responder (MCX domain)	
1		Addressed by	
}		'00001010'B in the	
		'Next payload'	
		field of the	
		previous payload	
Security Properties payload {	Present if #CS > 0	If not present	
Geodiny i Toperties payloau {	1 163611 II #C3 > 0	(#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	Silali be asea	
Next payload	payload (NOTE 1)		
Policy no	same as Policy_no_1 in		
1 3113/113	the CS ID map info of the		
	header payload		
Prot type	0	SRTP	
Policy param length		- Citi	
Policy param {			
{			
Туре	0	Encryption	
. 71		Algorithm	
length		- ng crimin	
value	6	AES-GCM	
}			
{			
Туре	1	Session	
.,,,,,	·	encryption key	
		length	
length			
value	16	16 octets	
}			
{			
Туре	4	Session salt key	
		length	
length		_	
value	12	12 octets	
}			
{			
Type	5	SRTP PRF	
length			
value	0	AES-CM	
}			
{			
Type	6	Key derivation	
- 75~		rate	
lenath		· ·	
length value	0	No session key	

Field	25], RFC 3830 [24] Value/remark	Comment	Condition
}	Varao/Tomark	Commone	Condition
<u> </u>			
Туре	13	ROC transmission rate	
length			
value	1	ROC transmitted in every packet.	
}			
Туре	18	SRTP Authentication tag length	
length			
value	4	4 octets for transmission of ROC	
}			
Type	19	SRTCP Authentication tag length	
length			
value	0	ROC need not be transmitted in SRTCP.	
}			
{ Type	20	AEAD authentication tag length	
length		g	
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)		
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)	

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC 3			
Field	Value/remark	Comment	Condition
SIGN (ECCSI) payload {		Addressed by '00000100'B in the 'Next payload' field of the previous payload	
S type	2	ECCSI signature	
S len	Length of the signature field (in bytes)	12 bits	
S data	Signature: Shall be validated by the SS	The signature shall be validated according to RFC 3830 [24] clause 5.3 using the algorithm according to RFC 6507 [98] clause 5.2.2 using the UID generated from the MC Service user ID associated with the initiating user (provided in IDRi payload).	
}			
NOTE 1: MIKEY payloads may occur in any order apa and the signature payload which is always the		hich is always the firs	t 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	25], RFC 3830 [24]   Value/remark	Comment	Condition
MIKEY Common Header {	Value/Terriar K	Comment	Condition
version	'0000001'B		
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	'00000101'B	Next payload is	
Hox 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	GENERIC-ID	
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	
	, i	representing the	
		number of	
		seconds since 0h	
		on 1 January	
		1900 with respect	
		to the Coordinated	
		Universal Time (UTC)	
1		(010)	
} RAND Payload {			
Next payload	'00001110'B	Next payload is	
. Total payload	0000111015	IDRi	
RAND len	'00010000'B	16 Bytes RAND	
RAND	128-bit random number		
}			
IDRi payload {			
Next payload	'00001110'B	Next payload is	
		IDRi	
ID Role	1	Initiator (IDRi)	
ID Type	0	URI	
ID len	Length of ID Data	MCDTT ID	
ID data	px_MCPTT_ID_User_B	MCPTT ID	
		associated with the initiating user	
	px_MCVideo_ID_User_B	MCVideo ID	MCVIDEO
	Px_iviC vide0_ID_USer_B	See	INICAIDEO
		TS 33.180 [94]	
		clause E.4.1	
	px_MCData_ID_User_B	MCData ID	MCDATA
	PA_INIODAIA_ID_0361_D	See	MODATA
		TS 33.180 [94]	
		clause E.4.1	

Derivation path: RFC 6509 [23], RFC 6043 [2	25], RFC 3830 [24] Value/remark	Comment	Condition
riela \	value/remark	Comment	Condition
} IDRr payload {			
Next payload	'00001110'B	Next payload is	
Next payload	0000111018	IDRkmsi	
ID Role	2	Responder (IDRr)	
ID Type	0	responder (IDIN)	
ID len	Length of ID Data		
ID data	px_MCPTT_ID_User_A	MCPTT ID	
ID data	px_ivici i i_ib_osei_A	associated to the	
		receiving user	
	px_MCVideo_ID_User_A	MDSI of the	MCVIDEO
	px_wovideo_ib_coci_/(	MCVideo Domain	MOVIDEO
	px_MCData_ID_User_A	MDSI of the	MCDATA
	px_wobata_ib_osci_/t	MCData Domain	MODITIN
}		WODala Domain	
IDRkmsi payload {			
Next payload	'00001110'B	Next payload is	
rext payload	0000111018	IDRkmsr	
ID Role	6	Initiator's KMS	1
10 11010	Ŭ	(IDRkmsi)	
ID Type	0	(25) (((1)))	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
io dala	e	initiating user	
1		initiating user	
IDRkmsr payload {			
Next payload \(\)	'00001010'B	Next payload is	
Next payload	0000101010	Security	
		Properties	
ID Role	7	Responder's KMS	
ID Role	<b>'</b>	(IDRkmsr)	
ID Type	0	(IDIXKIIISI)	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
ID data	e	responding user	
	е	(UE)	
1		(OL)	
SAKKE payload {			
Next payload	'00000100'B	Next payload is	
Next payload	00000100 B	SIGN	
SAKKE params {	1	Parameter Set 1	
SARKE params (	'	according to RFC	
		6509 [23],	
		Appendix A	
ID Scheme	2	'3GPP MCX	
ID Scheme	2	hashed UID'	
		(33.180 [94]	
		E.1.2)	
SAKKE data length	Length of SAKKE data	16 bits	1
OAKKE data leligili	(in bytes)	าบ มแอ	
SAKKE data	Encapsulated PCK	The PCK is	1
UNINE Uala	Lilicapsulated FCN	encapsulated by	
		using the public	
		key (PubEncKey in KMS	
		Certificate) and	
		the UID generated	
		from the MC	
		Service user ID of	
		the terminating	1
1		user	1
}			1
CICN (ECCSI) payload (			
SIGN (ECCSI) payload { S type	2	ECCSI signature	

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC 3	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	, RFC 3830 [24]   Value/remark	Comment	Condition
MIKEY Common Header {	value/lelilaik	Comment	Condition
version	'0000001'B		
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	Identifier for the next	Or it it is mog (20)	
. Tom payroad	payload (NOTE 1)		
V	'0'B		
PRF func	'0000001'B	PRF-HMAC-SHA-	
		256	
CSB ID	'0001xxxx xxxxxxxx'B	32-bit PCK-ID	
		The 4 most	
		significant bits of	
		the PCK-ID	
		indicate the purpose of the	
		PCK is to protect	
		Private call	
		communications,	
		the other 28-bits	
		are randomly	
		generated	
#CS	'00000001'B or	Number of crypto	
	'00000000'B	sessions in the	
		CS ID map info: if	
		#CS is 0 the	
		default security	
		policies shall be	
		applied (TS 33.180 [94] E.1.2)	
CS ID map type	2 if #CS > 0	GENERIC-ID	
OO 10 map type	1 if #CS == 0	empty map	
CS ID map Info {	Present only if #CS > 0	Jinety map	
CS ID	'00000000'B or	CS ID of the	MCPTT
	'0000001'B	crypto session: '0'	
		for PCK use from	
		initiatior or '1' for	
		PCK use from	
		receiver within	
		MCPTT (TS	
	(00000040/D = =	33.180 [94] E.3.3)	MOVUDEO
	'0000011'B	CS ID of the	MCVIDEO
	'00000011'B	crypto session: '2' for PCK use from	
		initiatior or '3' for	
		PCK use from	
		receiver within	
		MCVideo (TS	
		33.180 [94] E.3.3)	
Prot type	0	SRTP	
		the security	
		protocol to be	
		used for the	
C	Approalise	crypto session	
S	Any value	S flag to indicate	
		whether the ROC and SEQ fields	
		are provided ('1')	
		or if they are	
		omitted ('0')	
#P	1	the number of	
		security policies	
		provided for the	
		crypto session	
Ps {		lists the policies	
		for the crypto	
	•	session	i contract of the contract of

Derivation path: RFC 6509 [23], RFC 604	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 Portered (		A dalana a a a d b	
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	
}		пиньсі	
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	
- ·- [y	payload (NOTE 1)		
ID Role	2	Responder (IDRr)	
ID Type	1	URI	· · · · ·
ID len	Length of ID Data	MODET IS	
ID data	px_MCPTT_ID_User_B	MCPTT ID	
		associated to the	
		receiving user	
	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 [2		Comment	Co
Field	Value/remark	Comment	Condition
Next payload	Identifier for the next payload (NOTE 1)		
ID Role	6	Initiator's KMS (IDRkmsi)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
1	e	initiating user (UE)	
IDRkmsr payload {		Addressed by	
IDKKIIISI payloau (		'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)	<u></u>
ID Type	1	ÙRI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
	е	responding user	
}		Addressed by '00001010'B in the 'Next payload' field of the previous payload	
Security Properties payload {	Present if #CS > 0	If not present (#CS == 0) then the default security profile defined in Annex E.4.2 of TS 33.180 [94] shall be used	
Next payload	Identifier for the next payload (NOTE 1)		
Policy no	same as Policy_no_1 in the CS ID map info of the header payload		
Prot type	0	SRTP	
Policy param length			
Policy param {			
f oney param (			
Туре	0	Encryption Algorithm	
length		7 agonami	
value	6	AES-GCM	
}	Ŭ	7.20 00W	
{			
Туре	1	Session encryption key length	
length			
value	16	16 octets	
<u> </u>			
Type	4	Session salt key length	
length		<u> </u>	
value	12	12 octets	
}	.=		
{			
Type	5	SRTP PRF	
length			

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	

Field	Value/remark	Comment	Condition
S data	Signature: In case of UL message the signature shall be validated by the SS	Signature created according to RFC 3830 [24] clause 5.2 using the algorithm according to RFC 6507 [98] clause 5.2.1 using the UID generated from the MC Service user ID of the initiating user	

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

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

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

Derivation path: RFC 6509 [23], RFC 604		Commont	Condition
	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-	
Tra falle	0000001B	256	
CSB ID	GUK-ID:	Group User Key	
CSB ID		Identifier	
	4 bit purpose tag ('0000'B		
	for GMK) & 28 bit	Derived from	
	identifier	GMK-ID and User	
		Salt according to	
		TS 33.180 [94]	
		clause 5,2,3	
#CS	'0000001'B	no crypto	
		sessions in the	
		CS ID map info.	
CS ID map type	1	empty map	
CS ID map Info	Not present	σπριγ παρ	
1 High Hillo	Not present		
} Time ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) (			
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	, , , , , , , , , , , , , , , , , , ,	
10.110	arbitrarily selected by the		
	SS SS		
1	<u> </u>		
DD: poulood (			
IDRi payload {	(22221127	<b>N</b>	
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	URI of the group	
	me	management	
	ille	_	
1		server	
IDDs mordered (			
IDRr payload {			
Next payload	'00001110'B	Next payload is	
		IDRkmsi	
ID Role	2	Responder (IDRr)	
ID Type	1		
ID len	Length of ID Data		
	- 3	I .	i .

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

General Extension Payload {  Next payload  Next payload    00000100'B    Next payload is SIGN    7    3GPP key parameters' See 33.180 [94] clause E.6.1    Length    Length    Length of the data (in bytes)    See TS 33.180 [94] clause E.6.1    Key Type   '00000000'B    Key Type   '00000000'B    GMK    Status   '1'    Activation Time    Activation Time    O   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 MKEY    LMESSAGE    Expiry Time    O   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 case clause 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 onger 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 onger 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 onger 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 lexpire. No text:  Text Text Text Text Text Text Text tement shall contain Length sub-element with the value 0 (see Ts 33, 180 [94] E.6.5)	Derivation path: RFC 6509 [23], RFC 6043 [2	25], RFC 3830 [24] <b>Value/remark</b>	Comment	Condition
Next payload is SIGN SIGN SIGN SIGN SIGN SIGN SIGN SIGN		value/remark	Comment	Condition
Type  7		'00000100'B		
Length Length of the data (in bytes)  Data {  See TS 33.180 [94] clause E.6  Key Type	Туре	7	'3GPP key parameters' See 33.180 [94]	
Data {    See   TS 33.180 [94]   clause E.6     Status   11   Not-revoked     Activation Time   O   The time in UTC at which the associated GMK is to be made active for transmission in seconds since midnight UTC of January 1, 1970 (not counting leap seconds). It shall be 5 octets in length.   A value of 0 shall imply the activation time is the timestamp of the received MIKEY   I MESSAGE	Length	` `	olados Elect	
Status  Activation Time  O  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  L MESSAGE  Expiry Time  O  The Expiry time element shall define the time in UTC at which the associated key shall not 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 visual in length is seconds. It shall be 5 octets in length.  A value of 0 shall imply the visual in length.  A value of 0 shall imply the visual in length is seconds. It shall be 5 octets in length.  A value of 0 shall imply the visual in length is sub-element with the value 0 (see TS 33.180 [94] E.6.5)	Data {	, ,	TS 33.180 [94]	
Activation Time  O  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  LMESSAGE  Expiry Time  O  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  Text  Text  Text  Text element shall contain Length sub-element with the value 0 (see TS 33.180 [94] E.6.5)				
a twhich 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   LMESSAGE    Expiry Time   O 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   ***  Text element shall contain Length sub-element with the value 0 (see TS 33.180 [94] E.6.5)				
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)			at which the associated GMK is to be made active for transmission in seconds since midnight UTC of January 1, 1970 (not counting leap seconds). It shall be 5 octets in length.  A value of 0 shall imply the activation time is the timestamp of the received MIKEY I_MESSAGE	
the value 0 (see TS 33.180 [94] E.6.5)			element shall define the time in UTC at which the associated key shall no longer be used in seconds since midnight UTC of January 1, 1970 (not counting leap seconds). It shall be 5 octets in length. A value of 0 shall imply the key shall not expire. no text: Text element shall contain Length	
	Oracia IDa (		TS 33.180 [94]	
Group IDs { Number of Group IDs '1'	Group IDs {	141		

5], RFC 3830 [24]		
Value/remark	Comment	Condition
px_MCPTT_Group_A_ID	The ID for the group associated with the key.	
px_MCVideo_Group_A_I D	The ID for the group associated with the key.	MCVIDEO
px_MCData_Group_A_I D	The ID for the group associated with the key.	MCDATA
	ŭ	
field (in bytes)		
Signature	shall be created according to RFC 3830 [24] clause 5.2 using the algorithm according to RFC 6507 [98] clause 5.2.1 using the UID generated from the identifier associated with the group management server	
	Value/remark  px_MCPTT_Group_A_ID  px_MCVideo_Group_A_I D  px_MCData_Group_A_I D	Value/remark  px_MCPTT_Group_A_ID  px_MCVideo_Group_A_I  D  px_MCData_Group_A_I  D  ECCSI signature  Length of the signature field (in bytes)  Signature  The signature shall be created according to RFC 3830 [24] clause 5.2 using the algorithm according to RFC 6507 [98] clause 5.2.1 using the UID generated from the identifier associated with the group management

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

Table 5.5.9.1-4: MIKEY-SAKKE I\_MESSAGE (MSCCK distribution by the SS)

Derivation path: RFC 6509 [23], RFC 6043 [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)	
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	
IDD/mai navload (			
IDRkmsi payload {	(00004440)D	November describe	
Next payload	'00001110'B	Next payload is	
10.0		IDRkmsr	
ID Role	6	Initiator's KMS	
		(IDRkmsi)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam		
	е		
}			
IDRkmsr payload {			
Next payload	'00011010'B	Next payload is	
		SAKKE (26)	
ID Role	7	Responder's KMS	
		(IDRkmsr)	
ID Type	1	URI	
ID len	Length of ID Data	Orti	
ID data	tsc_MCX_KMS_Hostnam	KMS of the UE	
ib data	e	Trivio of the OL	
)			
SAKKE payload {	(00000400)D	NI ( I I'	
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 Ocheme		hashed UID'	
		(33.180 [94]	
		E.1.2)	
SAKKE data length	Longth of SAKKE dots	L.1. <i>L)</i>	
SARNE uala leligili	Length of SAKKE data		
CAKKE data	(in bytes)	The MCCOV :-	
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 (			
SIGN (ECCSI) payload { S type	2	ECCSI signature	
S len	Length of the signature	12 bits	
	L LEIGHT OF THE SIGNATURE	1 1 <b>L</b> VIII	1

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC 3	830 [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	
ib data	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			10 "
Field	Value/remark	Comment	Condition
ID Type	1	URI	
ID len	Length of ID Data		
ID data	px_MCPTT_ID_User_A	MCPTT ID	
		associated to the	
		terminating user	
}			
IDRkmsi payload {			
Next payload	'00001110'B	Next payload is	
		IDRkmsr	
ID Role	6	Initiator's KMS	
		(IDRkmsi)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam		
	е		
}			
ÍDRkmsr 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	<b>.</b>	
ID data	tsc_MCX_KMS_Hostnam	KMS of the UE	
1D data	e	TAMO OF THE OL	
}			
SAKKE payload {			
Next payload	'00000100'B	Next payload is	
Noxt payload	00000100 B	SIGN	
SAKKE params	1	Parameter Set 1	
or title paramo	·	according to RFC	
		6509 [23],	
		Appendix A	
ID Scheme	2	'3GPP MCX	
ID Scheme	2	hashed UID'	
		(33.180 [94]	
		E.1.2)	
SAKKE data length	Length of SAKKE data	L.1.2)	
Or with Ladia length	(in bytes)		
SAKKE data	Encapsulated MuSiK	The MuSiK is	
OAINE data	Liteapsulated ividSiK	encapsulated by	
		using the SAKKE	
		public key and the	
		UID generated from the MC	
		Service user ID of	
		the terminating	
1		user	
)			
SIGN (ECCSI) payload {		E0001 -: /	
S type	2	ECCSI signature	
S len	Length of the signature	12 bits	
	field (in bytes)		

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC	C 3830 [24]		
Field	Value/remark	Comment	Condition
S data	Signature	The signature shall be created according to RFC 3830 [24] clause 5.2 using the algorithm according to RFC 6507 [98] clause 5.2.1 using the UID generated from the public service identity identifying the participating MCPTT function	
}			

# 5.5.10 Common MCS test USIM parameters

### 5.5.10.1 General

The format and coding of elementary files of the USIM are defined in 3GPP TS 31.102 [73]. Those of the ISIM are defined in 3GPP TS 31.101 [79] and 3GPP TS 31.103 [80].

The present clause defines default MCS relevant parameters for programming the elementary files of the test USIM when running conformance test cases defined in TS 36.579-2 [2], TS 36.579-6 [84], or TS 36.579-7 [85].

For requirements to the test USIM/ISIM needed for the E-UTRA/EPC and MCS off-network ProSe operation see 3GPP TS 36.508 [6], clause 4.9.

## 5.5.10.2 Default settings for the Elementary Files (EFs)

## EFUST (USIM Service Table)

Services	Discription	Activated	Version
Service n°109	Mission Critical Services	Yes	
NOTE: Only the relevant MCS related services indicated.			

## EF<sub>MST</sub> (MCS Service Table)

This file shall be present. This EF indicates the coding of the MCS management objects and which MCS services are available.

Coding of the MCPTT management objects = '00' (XML format).

Services	Discription	Activated	Version
Service n°1:	MCPTT UE configuration data	Yes	
Service n°2:	MCPTT User profile data	Yes	
Service n°3:	MCS Group configuration data	Yes	
Service n°4:	MCPTT Service configuration data	Yes	
Service n°5:	MCS UE initial configuration data	Yes	
Service n°6:	MCData UE configuration data	Yes	
Service n°7:	MCData user profile data	Yes	
Service n°8:	MCData service configuration data	Yes	
Service n°9:	MCVideo UE configuration data	Yes	
Service n°10:	MCVideo user profile data	Yes	
Service n°11:	MCVideo service configuration data	Yes	•

EF<sub>MCS\_CONFIG</sub> (MCS configuration data)

This file shall be present.

Encoded in XML format (as specified in the MCS Service Table).

MCPTT configuration data objects	Tag Values	Condition
MCPTT UE configuration data	'80'	Shall be present. The content of the MCPTT UE configuration data object shall be as specified in Table 5.5.8.2-1.
MCPTT user profile data	'81'	Shall be present. The content of the MCPTT User configuration data object shall be as specified in Table 5.5.8.3-1.
MCS Group configuration data	'82'	Shall be present. The content of the MCS Group configuration data object shall be as specified in Table 5.5.7.1 for MCPTT, Table 5.5.7.2-1 for MCVideo, and Table 5.5.7.3-1 for MCData.
MCPTT Service configuration data	'83'	Shall be present. The content of the MCPTT Server configuration data object shall be as specified in Table 5.5.8.4-1.
MCS UE initial configuration data	'84'	Shall be present. The content of the MCS UE initial configuration data object shall be as specified in Table 5.5.8.1-1 for MCPTT, Table 5.5.8.5-1 for MCVideo, and Table 5.5.8.9-1 for MCData,
MCData UE configuration data	'85'	Shall be present. The content of the MCData UE configuration data object shall be as specified in Table 5.5.8.10-1.
MCData user profile data	'86'	Shall be present. The content of the MCData user profile data object shall be as specified in Table 5.5.8.11-1.
MCData service configuration data	'87'	Shall be present. The content of the MCData service configuration data object shall be as specified in Table 5.5.8.12-1.
MCVideo UE configuration data	'88'	Shall be present.  The content of the MCVideo UE configuration data object shall be as specified in Table 5.5.8.6-1.
MCVideo user profile data	'89'	Shall be present.  The content of the MCVideo user profile data object shall be as specified in Table 5.5.8.7-1.
MCVideo service configuration data	'8A'	Shall be present.  The content of the MCVideo service configuration data object shall be as specified in Table 5.5.8.8-1.

# 5.5.11 Default MCVideo Transmission Control Messages and other Information Elements

Considerations in regard to describing specific values:

#### - SSRC

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

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

# 5.5.11.1 Transmission Control Specific Messages Sent by the Transmission Participant

## 5.5.11.1.1 Transmission Request

Table: 5.5.11.1.1-1 Transmission Request

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	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 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		
Spare bits	An 8-bit binary value set	described in clause y.z.		
	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 1	
Transmission Indicator field ID	"00001101"		TC 24.581 [88] clause 9.2.3.1 .1	
Transmission Indicator Length	"10"	value is a binary value and has the value '2'		

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

## 5.5.11.1.2 Transmission Release

Table: 5.5.11.1.2-1 Transmission Release

Derivation Path: TS 24.581 [88] Information Element	Value/remark	Comment	Reference	Condition
Subtype	"00010"	Transmission control	TC	Condition
Cubtype	00010	messages sent by the	24.581 [88]	
		transmission control	clause 9.2.7	
		participant to the	and Table	
		transmission control	9.2.2.1-1	
		server		
SSRC	The SSRC of the	The SSRC field carries	IETF RFC 35	
	message sender	the SSRC of the	50 [3].	
		transmission participant		
		with permission to send		
		media.		
User ID		The User ID field is	TC	
		used in off-network	24.581 [88]	
		only. The User ID field	clause 9.3.2.8	
		carries the MCVideo ID		
		of the transmission		
		participant sending the		
		Transmission Release		
		message.		
User ID field ID	"00000110"			
User ID length	a binary value that			
	includes the value			
	indicating the length in			
	octets of the <user id=""></user>			
	value item except			
	padding.			
User ID	px_MCVideo_ID_User_	If the length of the		
	Α	<user id=""> value is not</user>		
		(2 + multiple of 4) bytes		
		User ID field shall be		
		padded to		
		(2 + multiple of 4) bytes.		
		The value of the padding bytes is to		
		zero. The padding bytes		
		are ignored by the		
		receiver.		
Transmission Indicator				
Transmission Indicator field	"00001101"		TC	
ID			24.581 [88]	
			clause 9.2.3.1 .1	
Transmission Indicator	"10"	value is a binary value		
Length		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]	Derivation Path: TS 24.581 [88] Table 9.2.11-1				
Information Element	Value/remark	Comment	Reference	Condition	
Subtype	"00011"	Server → client	TS 24.581 [88] 9.2.2.1-1		
SSRC	The SSRC of the message sender	The SSRC field carries the SSRC of the transmission participant requesting information about its position in the transmission request queue.	RFC 3550 [3], Appendix 6 shows how to generate a random 32-bit identifier		
User ID			TS 24.581 [88] 9.2.3.8		
User ID field ID	"00000110"				

Derivation Path: TS 24.581 [88]	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

Derivation Path: TS 24.581 [88]	Table 9.2.14-1			
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.	Reference	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-	TS 24.581 [88] Table 9.2.3.1- 1-1	
Transmission Indicator Length	"00000010"	1. An 8-bit binary value (2 in binary)	TS 24.581 [88] Table 9.2.3.1- 1-1	
Transmission Indicator	Any allowed value	A 16 bit bit-map	TS 24.581 [88] Table 9.2.3.11-2	

Derivation Path: TS 24.581 [88]	Value/remark	Commont	Deference	Condition
Information Element	value/remark	Comment	Reference	Condition
Reception Priority		Describes the level of		
		reception priority		
		requested in a		
		Reception Request		
		message or granted in		
		a Reception Granted		
		message. The max		
		reception priority that		
		can be requested in a		
		Reception Request		
		message is negotiated		
		between the		
		transmission control		
		participant and the		
		transmission control		
		server		
Reception Priority field ID	"00010011"	Uniquely identifies the		
		instance of the		
		Reception Priority Field		
Reception Priority length	"0000010"	Indicates the total	TS 24.581 [88]	
recopusit fronty longer	00000010	length in octets of the <	9.2.3.19	
		Reception Priority>	0.2.0.10	
		value item and the		
		spare bits.		
Reception Priority value	any allowed value	The reception priority	TS 24.581 [88]	
Reception i nonty value	arry allowed value	('0' to '255') where '0' is	9.2.3.19	
		the lowest reception	9.2.3.19	
		priority and '255' is the		
		highest reception		
		priority. If the Reception		
		Priority field is not		
		included in the		
		message the default		
		reception priority is		
		used as the Reception		
		Priority value. The		
		value of the default		
		reception priority is '0'.		
		The default reception		
		priority is sometimes		
		referred to as normal		
		reception priority.		
Track Info	Not present	The MCVideo call does	TS 24.581 [88]	
	·	not involve a non-	9.2.3.13	
		controlling MCVideo		
		function		1

# 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] T	able 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	Containe
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

Derivation Path: TS 24.581 [88]	Table 9.2.5-1			
Information Element	Value/remark	Comment	Reference	Condition
Subtype	"00000"	Server → client	TS 24.581 [88 ] 9.2.2.1-2	
SSRC	The SSRC of the message sender	The SSRC of the Transmission Control server for on-network and transmission arbitrator for 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 control participant		
Duration		•		
Duration field ID	"0000001"			
Duration length	"10"	value is a binary value and has the value '2' indicating the total length in octets of the <duration> value item</duration>		
Duration	"00000000 10000000"	128 sec (an arbitrary value)		

Derivation Path: TS 24.581 [88] Ta	Value/remark	Comment	Reference	Condition
SSRC of granted transmission	The SSRC of the	Notation in accordance		
participant	intended recipient of the	with clause 5.5.6.1.		
	message	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-
Harri ID				NETWORK
User ID				OFF- NETWORK
User ID field ID	"00000110"			TIL TWO THE
User ID length	a binary value that			
	includes the value			
	indicating the length in			
	octets of the <user id=""></user>			
	value item except padding.			
User ID	px_MCVideo_ID_User_	If the length of the		
0301 12	A	<ul><li>User ID&gt; value is not</li></ul>		
		(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.		
Queue Size	Not present	receiver.		ON-
				NETWORK
Queue Size	"0"	the number of queued		OFF-
		MCVideo clients in the		NETWORK
0000 ( 10 000	<b>N</b>	MCVideo call		
SSRC of queued floor participant Queued User ID	Not present			
Queue Info	Not present Not present			
Track Info	Not present	The MCVideo call does		
Track IIIIO	Not present	not involve a non-		
		controlling MCVideo		
		function		
Transmission Indicator				
Transmission Indicator field ID	"00001101"	An 8-bit binary value set	TS 24.581 [88	
		according to	] Table	
		TS 24.581 [88] 9.2.3.1-1.	9.2.3.1-1-1	
Transmission Indicator Length	"0000010"	An 8-bit binary value (2	TS 24.581 [88	
20.09.0		in binary)	] 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] T	able 9.2.6-1			
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</transmission></transmission>	TS 24.581 [88] 9.2.3.11	Condition
		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>		
		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

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] Table 9.2.8-1					
Information Element	Value/remark	Comment	Reference	Condition	
Granted Party's Identity length	value is a binary value and includes the value indicating the length in octets of the <user id=""> value item except padding</user>		TS 24.581 [88] 9.2.3.8		
Granted Party's Identity	px_MCVideo_ID_User_ A	If the length of the <granted party's=""> value is not (2 + multiple of 4) bytes, the Granted Party's Identity field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is set to zero. The padding bytes are ignored by the receiver.</granted>	TS 24.581 [88] 9.2.3.8		
Permission to Request the Transmission	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"	O The receiver is not permitted to request transmission.  The receiver is permitted to request transmission.	TS 24.581 [88] 9.2.3.7		
User ID		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				0. 1121
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 Sequence Number&gt; value can be between '0' and '65535'. When the '65535' value is reached, the <message Sequence Number&gt; value starts from '0' again.</message </message 		
Transmission Indicator		The Transmission Indicator contains additional information about a received transmission control message.  The <transmission field="" id="" indicator=""> value is a binary value and is set according to table 9.2.3.1-1. The <transmission indicator="" length=""> value is a binary value and has the value '2'. The <transmission indicator=""> value is a 16 bit bit-map. When set to 1 these meanings apply:  A = Normal call B = Broadcast group call C = System call D = Emergency call E = Imminent peril call</transmission></transmission></transmission>	TS 24.581 [88] 9.2.3.1.1	

Derivation Path: TS 24.581 [88] 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] 1 Information Element	Value/remark	Comment	Reference	Condition
User ID	value/remark	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	Condition
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>		

Derivation Path: TS 24.581 [88] Table 9.2.9-1					
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] 9.2.3.1.1		
		The <transmission field="" id="" indicator=""> value is a binary value and is set according to table 9.2.3.1-1. The <transmission indicator="" length=""> value is a binary value and has the value '2'. The <transmission indicator=""> value is a 16 bit bit-map. When set to 1 these meanings apply:</transmission></transmission></transmission>			
		A = Normal call B = Broadcast group call C = System call D = Emergency call E = Imminent peril call			
Transmission Indicator field ID	"00001101"		TC 24.581 [88] clause 9.2.3.1.		
Transmission Indicator Length	"10"	value is a binary value and has the value '2'			

Derivation Path: TS 24.581 [88]				
Information Element	Value/remark	Comment	Reference	Condition
Transmission Indicator	"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	TC 24.581 [88] clause 9.2.3.1.	
		B = Broadcast group call C = System call		
		D = Emergency		
		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.		
SSRC of Granted Transmission Participant	The SSRC of the intended recipient of the message		IETF RFC 355 0 [3]	

#### 5.5.11.2.5 Transmission Revoked

Table: 5.5.11.2.5-1 Transmission Revoked

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.	
		TOVORGU.	
		Cause #5 - Receive	
		only	
		The Peiest sauss	
		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	
		13000.030 αταπασίο	
		The <reject cause=""></reject>	
		value set to '6' indicates	
		that the transmission	
		control server cannot	

Derivation Path: TS 24.581 [88] T Information Element	Value/remark	Comment	Reference	Condition
mormation Element	varaonoman	grant the transmission request due to congestion.	Koloronoo	Condition
		Cause #255 - Other reason		
		The <reject cause=""> value set to '255' indicates that the transmission control server does not grant the transmission request due to the transmission control server local policy.</reject>		
Reject Cause Phrase	"Other reason"	A text string encoded the text string in the SDES item CNAME.	IETF RFC 355 0 [3]	
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>		
		<ul> <li>A = Normal call</li> <li>B = Broadcast group call</li> <li>C = System call</li> <li>D = Emergency call</li> <li>E = Imminent peril call</li> </ul>		
Transmission Indicator field ID	"00001101"		TC 24.581 [88] clause 9.2.3.1.	
Transmission Indicator Length	"10"	value is a binary value and has the value '2'		

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

#### 5.5.11.2.6 Queue Position Info

Table: 5.5.11.2.6-1 Queue Position Info

Derivation Path: TS 24.581 [88] 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** 

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	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	
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	

Derivation Path: TS 24.581 [88] Information Element	Value/remark	Comment	Reference	Condition
SSRC	The SSRC of the	The SSRC field carries	RFC 3550 [3],	Condition
OONO	message sender	the SSRC of the	Appendix 6	
	message sender	transmission participant	shows how to	
		requesting the	generate a	
		reception of the media	random 32-bit	
		from another user.	identifier	
Result			identillei	
Result		Indicates whether		
		media reception is		
		possible as per the		
D	""	request	TO 04 F04 [00]	
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		
Reject Cause	not present	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	Derivation Path: TS 24.581 [88] Table 9.2.15-1				
Information Element	Value/remark	Comment	Reference	Condition	
Transmission Indicator		The Transmission Indicator contains additional information about a received transmission control message.	TS 24.581 [88] 9.2.3.11		
		The <transmission field="" id="" indicator=""> value is a binary value and is set according to table 9.2.3.1-1.  The <transmission indicator="" length=""> value is a binary value and has the value '2'.  The <transmission indicator=""> value is a 16 bit bit-map. When set to 1 these meanings apply:</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		
Transmission Indicator Length	"0000010"	An 8-bit binary value (2 in binary)	TS 24.581 [88] Table 9.2.3.1- 1-1		
Transmission Indicator	"10000000000000000"	A 16 bit bit-map	TS 24.581 [88] Table 9.2.3.11-2		

#### 5.5.11.2.9 Media Reception Notification

Table: 5.5.11.2.9-1 Media Reception Notification

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				
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	The SSRC field carries	RFC 3550 [3],	
	message sender	the SSRC of the	Appendix 6	
	_	transmission control	shows how to	
		server.	generate a	
			random 32-bit	
			identifier	
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.		

## 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 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] 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]	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>		
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] T	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

Derivation Path: TS 24.581 [88]				
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	
			] 9.2.2.1-2	

Derivation Path: TS 24.581 [88]				
Information Element	Value/remark	Comment	Reference	Condition
SSRC	The SSRC of the message sender	The SSRC of the Transmission Control server for on-network and transmission arbitrator for off- network. Notation in accordance with clause 5.5.6.1. Coded as specified in		
User ID		IETF RFC 3550 [76].  The User ID field is used to carry the identity of the user whose media transmission is requested to be terminated.		
User ID field ID User ID length	"00000110" a binary value that			
	includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
Media ID	Not Present	The Media ID field is present only if media multiplexing is used. The Media ID field identified a media flow within a media multiplex.		

## 5.5.11.3.2 Transmission End Response

Table: 5.5.11.3.2-1 Transmission End Response

Derivation Path: TS 24.581 [88 Information Element	Value/remark	Comment	Reference	Condition
Subtype	"00001"		TS 24.581 [88 ] 9.2.2.1-2	
SSRC	The SSRC of the message sender	The SSRC of the Transmission Control server for on-network and transmission arbitrator for offnetwork.  Notation in accordance with clause 5.5.6.1.  Coded as specified in IETF RFC 3550 [76].		
User ID		The User ID field is used to carry the identity of the user whose media transmission is requested to be terminated.		
User ID field ID	"00000110"			
User ID length	a binary value that includes the value indicating the length in octets of the <user id=""> value item except padding.</user>			
User ID	px_MCVideo_ID_User_ A	If the length of the <user id=""> value is not (2 + multiple of 4) bytes User ID field shall be padded to (2 + multiple of 4) bytes. The value of the padding bytes is to zero. The padding bytes are ignored by the receiver.</user>		
Media ID	Not Present	The Media ID field is present only if media multiplexing is used. The Media ID field identified a media flow within a media multiplex.		

# 5.5.11.3.3 Media Reception End Request

#### Table: 5.5.11.3.3-1 Media Reception End Request

Derivation Path: TS 24.581 [88] Table 9.2.26-1				
Information Element	Value/remark	Comment	Reference	Condition
Subtype	"00010"	Server → client	TS 24.581 [88	
			] 9.2.2.1-3	

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				
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	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		1211 141 0 0000 [70]:				
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				
Message name		reserved for future use				
Message Name field ID	"00010000"					
Message Name Length	"110"	value is a binary value and has the value '6'.				
Message Name	the message name of the received message	value is as coded as an ascii name field				
Message type	#0000 ( 1 C C !!	ļ				
Message Type field ID	"00001100"	<u> </u>		<u> </u>		
Message Type Length	"10"	value is a binary value and has the value '2'				

Derivation Path: TS 24.581 [88] Ta	Derivation Path: TS 24.581 [88] Table 9.2.31-1				
Information Element	Value/remark	Comment	Reference	Condition	
Message Type	"000" <the of<="" subtype="" td=""><td>value is an 8 bit binary</td><td></td><td></td></the>	value is an 8 bit binary			
	the received	value containing the			
	message>	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&gt;"\$"</transaction 	an end-line of seven hyphens, the transaction identifier, and a "\$" to indicate that this request contains the end of a complete message		

# - Empty MSRP SEND from the UE for Binding

Table 5.5.12.1-2: Empty MSRP SEND from the UE for Binding

		Reference	Condition
any allowed value			
-			
px_MSRP_URI_SS_ID			
px_MSRP_URI_A_ID			
any allowed value			
	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		
·			
			+
			+
			<del> </del>
	px_MSRP_URI_A_ID	px_MSRP_URI_A_ID  any allowed value  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  "1-"  "0/"  "0"  not present  "" <transaction< td=""><td>px_MSRP_URI_A_ID  any allowed value  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  "1-" "0/" "0"  not present ""<transaction< td=""></transaction<></td></transaction<>	px_MSRP_URI_A_ID  any allowed value  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  "1-" "0/" "0"  not present "" <transaction< td=""></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	Value/Telliark	Comment	Reference	Condition
value	any allowed value			
To-Path	any anowed value			
value	px_MSRP_URI_SS_ID			
From-Path				
value	px_MSRP_URI_A_ID			
Message-ID	px_WSKF_UKI_A_ID			
value	any allowed value	If chunking is done:		
value	any anoweu value	The message ID corresponds to the whole message, so the receiver can also use it to reassemble the message and tell which chunks belong with which message.		
Byte-Range		The Byte-Range header field value contains a starting value (range-start) followed by a "-", an ending value (range-end) followed by a "/", and finally the total length. The first octet in the message has a position of one, rather than a zero. The Byte-Range header field identifies the portion of the message carried in this chunk and the total size of the message.  Example: Byte-Range for Chunk 1 of 2: 1-2/8 Byte-Range for Chunk 2 of 2: 5-8/8		
range-start	<any allowed="" value="">"-"</any>			
range-end	<any allowed="" value="">"/"</any>	The range-end field SHOULD indicate the position of the last byte in the body, if known. It MUST take the value of "*" if the position is unknown, or if the request needs to be interruptible.		
total length	the total length			
Content-Type			TS 24.582 [89] , clause 6.4	
media-type	"multipart/mixed"			
MIME body part		SDS SIGNALLING PAYLOAD		
MIME-Content-Type	"application/vnd.3gpp. mcdata-signalling"			
MIME-part-body	As described in Table 5.5.3.8.1-1			
MIME body part		SDS DATA PAYLOAD		
MIME-Content-Type	"application/vnd.3gpp. mcdata-payload"			
MIME-part-body	As described in Table 5.5.3.9-1			

End-line	"" <transaction Identifier value&gt;"+"</transaction 	an end-line of seven hyphens, the transaction identifier, and a "+" to indicate that this request is not the end of a complete	
		message	

- 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	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 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	th - 4-4-11	The Date Deserve		
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 PAYLOAD		
MIME-Content-Type	"application/vnd.3gpp.	PATLOAD		
WilWE-Content-Type	mcdata-signalling"			
MIME-part-body	As described in Table			
IIIII pair soay	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< 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&gt;"\$"</transaction 	an end-line of seven hyphens, the transaction identifier, and a "\$" to indicate that this request contains the end of a complete message		

# 5.5.12.2.2 MSRP 200 (OK) from the SS

Table 5.5.12.2.2-1: MSRP 200 (OK) from the SS

Derivation Path: RFC 4975 [X]				
Information Element	Value/remark	Comment	Reference	Condition
Transaction Identifier				
value	same value as received in the MSRP SEND message			
To-Path				
value	px_MSRP_URI_A_ID			
From-Path				
value	px_MSRP_URI_SS_ID			
End-line	"" <transaction Identifier value&gt;"\$"</transaction 	an end-line of seven hyphens, the transaction identifier, and a "\$" to indicate that this request contains the end of a complete message		

# 5.5.13 Default XML messages and elements for XML security

# 5.5.13.1 XML signature for integrity protection of MIME bodies

Table 5.5.13.1-1: XML signature MIME body from the UE

Information Element	Value/remark	Comment	Reference	Condition
Signatures		list of N signatures for		
_		the signed XML bodies		
		of a SIP message		
Signature [n]		n ∈ {1N}		
id	any value if present			
SignedInfo				
CanonicalizationAlgorithm	any value	canonicalisation method e.g. "http://www.w3.org/TR/ 2001/REC-xml-c14n- 20010315"		
SignatureAlgorithm	"HMAC-SHA-256"	Hashing algorithm to be applied to sign the SignedInfo with the key given in the KeyInfo		
Reference				
URI	same value as the Content-ID of the XML MIME body the signature belongs to			
DigestAlgorithm	"SHA-256"	Hashing algorithm to be applied to sign the data object		
DigestValue	Hash signing the data object (referred to by the URI)			
SignatureValue	Hash signing the SignedInfo	The signing key is derived from the CSK according to TS 33.180 [94] Annex F.1.4 with FC = 0x52 XPK-ID = CSK-ID		
KeyInfo				
KeyName	base64 encoded CSK- ID			

Table 5.5.13.1-2: XML signature MIME body from the SS

Information Element	Value/remark	Comment	Reference	Condition
Signatures		list of N signatures for the signed XML bodies		
		of a SIP message		
Signature [n]		n ∈ {1N}		
id	"signature" & n			
SignedInfo				
CanonicalizationAlgorithm	"http://www.w3.org/TR/ 2001/REC-xml-c14n- 20010315"	canonicalisation method		
SignatureAlgorithm	"HMAC-SHA-256"	Hashing algorithm to be applied to sign the SignedInfo with the key given in the KeyInfo		
Reference				
URI	same value as the Content-ID of the XML MIME body the signature belongs to			
DigestAlgorithm	"SHA-256"	Hashing algorithm to be applied to sign the data object		
DigestValue	Hash signing the data object (referred to by the URI)			
SignatureValue	Hash signing the SignedInfo	The signing key is derived from the CSK according to TS 33.180 [94] Annex F.1.4 with FC = 0x52 XPK-ID = CSK-ID		
KeyInfo				
KeyName	base64 encoded CSK- ID			

#### 5.5.13.2 XML <EncryptedData> element for encryption of XML element content

Table 5.5.13.2-1: XML < 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-ID	The CSK-ID is provided by the UE at CSK distribution				
CipherData						
CipherValue	encrypted XML element content	The encryption key is derived from the CSK according to TS 33.180 [94] Annex F.1.4 with FC = 0x51 XPK-ID = CSK-ID	TS 33.180 [94] clause 9.3.4.2			

Table 5.5.13.2-2: XML < Encrypted Data > element from the SS

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"						
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				

### 5.6 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"</pre>
    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</UserUri>
  <Time>2014-01-26T10:07:14</Time>
  <KmsId>KMSProvider12345/KmsId>
  <ClientReqUrl>http://kms.example.org/keymanagement/identity/v1/keyprov</ClientReqUrl>
    <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:KeyInfo>
            <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>
        </UserSigningKevSSK>
        <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:KevInfo>
            <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:KevInfo>
                <ds:KeyName>tk.12.user@example.org</KeyName>
              </ds:KeyInfo>
                <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#">
                           <CanonicalizationMethod Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-20010315"/>
                           < Signature \texttt{Method Algorithm="http://www.w3.org/2001/04/xmldsig-more\#hmac-sha256"> \texttt{New Method Algorithm="http://www.w3.org/2001/04/xmldsig-more\#hmac-sha256"> \texttt{New Method Algorithm="http://www.w3.org/2001/04/xmldsig-more#hmac-sha256"> \texttt{New Method Algorithm="http://www
                                    <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>
                 <KevInfo>
                           <KeyName>tk.12.user@example.org</KeyName>
         </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:annotation>
            <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:sequence>
            <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:sequence>
            <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: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="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: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:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tSignallingEventType">
            <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="ServingEcgi" 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: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:sequence>
            <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: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="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: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"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="anyExtType">
        <xs:sequence>
           <xs:any namespace="##any" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
        </xs:sequence>
    </xs:complexType>
</xs:schema>
```

#### 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"
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:choice>
               <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:sequence>
            <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"/>
        </r></r></r></r>
        <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="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:extension>
        </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:element name="anyExt" type="mcvideoloc: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="mcvideoloc: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="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:sequence>
            <xs:element name="CurrentServingEcgi" type="mcvideoloc:tLocationType" minOccurs="0"/>
            <xs:element name="NeighbouringEcqi" 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:attribute name="type" type="protectionType"/>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tGeographicalAreaChange">
        <xs:sequence>
            <xs:element name="AnyAreaChange" type="mcvideoloc:tEmptyTypeAttribute" minOccurs="0"/>
            <xs:element name="EnterSpecificAreaType" type="mcvideoloc:tSpecificAreaType"</pre>
minOccurs="0"/>
            <xs:element name="ExitSpecificAreaType" type="mcvideoloc:tSpecificAreaType"</pre>
minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tSpecificAreaType">
        <xs:sequence>
            <xs:element name="GeographicalArea" type="mcvideoloc:tGeographicalAreaDef"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        <xs: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"/>
        </r></r></r></r>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tCoordinateType">
        <xs:choice minOccurs="1" maxOccurs="1">
            <xs:element name="threebytes" type="mcvideoloc:tThreeByteType" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax"/>
            <xs:element name="anyExt" type="mcvideoinfo:anyExtType" minOccurs="0"/>
        </xs:choice>
        <xs:attribute name="type" type="protectionType"/>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
```

```
<xs:simpleType name="tThreeByteType">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="0"/>
            <xs:maxInclusive value="16777215"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tGeographicalAreaDef">
        <xs:sequence>
            <xs:element name="PolygonArea" type="mcvideoloc:tPolygonAreaType" minOccurs="0"/>
            <xs:element name="EllipsoidArcArea" type="mcvideoloc:tEllipsoidArcType" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tPolygonAreaType">
        <xs:sequence>
            <xs:element name="Corner" type="mcvideoloc:tPointCoordinate" minOccurs="3"</pre>
maxOccurs="15"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tEllipsoidArcType">
        <xs:sequence>
            <xs:element name="Center" type="mcvideoloc:tPointCoordinate"/>
            <xs:element name="Radius" type="xs:nonNegativeInteger"/>
            <xs:element name="OffsetAngle" type="xs:unsignedByte"/>
            <xs:element name="IncludedAngle" type="xs:unsignedByte"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
<xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="anyExtType">
        <xs:sequence>
            <xs:any namespace="##any" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
        </xs:sequence>
    </xs:complexType>
</xs:schema>
```

# Annex A (informative): Change history

Change history							
Date	Meeting	TDoc	CR	R	Cat	Subject/Comment	New
2017-02	R5#74	R5-171298	_	ev -	_	Introduction of TS 36.579-1.	<b>version</b> 0.0.1
2017-02	R5#75	R5-171200	<u> </u>	H	_	Introduction of default message content for some media control	0.0.1
2011 00	1.100	110 112100				messages, some generic procedures from	0.0.2
						R5-172078 Default MCPTT media plane control messages	
0047.00	DANE#75		-	-		R5-172079 Generic MCPTT procedures	0.4.0
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'	0.2.0
						R5-173703 'Update of MCPTT generic procedures'	
						R5-173704 'New Generic procedures ProSe and MCPTT'	
						R5-173705 'Update default media plane control messages' R5-173706 'Update of MCPTT Default MCPTT call control Off-	
						network messages'	
						R5-173707 'Update of MCPTT MIKEY-SAKKE I.MESSAGE'	
						R5-173766 'Update of TS 36.579-1 to version 0.2.0'	
						R5-174599 'SIP message defaults for 36.579-1' R5-174600 'MCPTT Off-Network Group Call Signaling Message	
						Defaults'	
2017-12	RAN5#77	R5-176835	-	-	-	Implemented approved:	0.3.0
						R5-177000 "Update of SIP Message Defaults for MCPTT"	
						R5-176345 "Update of Specific SIP messages in Generic procedures"	
						R5-177001 "Update of Generic procedures for SIP registration"	
						R5-176347 "New Generic Procedure for ProSe group calls	
						Announcing-Discoveree procedure for group member discovery"	
						R5-176348 "New Generic Procedure for ProSe group calls Monitoring/Discoverer procedure for group member discovery"	
						R5-177002 "Update with UE Configuration Defaults"	
						- References updates	
2017-12	RAN#78	RP-172182	-	-	-	Draft version for information purposes to the RAN Plneary	1.0.0
2018-03	RAN5#78	R5-180684	-	-	-	Implemented approved: R5-180534 "Update of Section 5.5.2 and 5.5.3 for TS 36.579-1"	1.1.0
						R5-180535 "Update of Section 5.5.5 for TS 36.579-1"	
						R5-180536 "Update of Section 5.5.6 for TS 36.579-1"	
						R5-181241 "Update of Section 5.5.9 TS 36.579-1"	
						R5-180633 "Update of Default HTTP message and other information elements"	
						R5-180634 "Update of Default MCPTT configuration management	
						messages"	
						R5-180635 "New Generic procedures for MCPTT	
						Authorization/Configuration and Key Generation" R5-18063 "New Generic procedures for MCPTT communication in	
						E-UTRA / Change of cells"	
						R5-180637 "Generic Test Procedure for MCPTT communication	
						over MBMS" R5-180638 "Various updates to 36579-1"	
2018-03	RAN#79	RP-180126	-	+-	-	Draft version for approval to move the spec under revision control to	2.0.0
						the RAN Plenary	
2018-03	RAN#79	-	-	-	-	Editorial changes and promoted to v13.0.0	13.0.0
2018-06	RAN#80	R5-182418	0001	-	F	Addition and correction of GNSS information	13.1.0
2018-06 2018-06	RAN#80 RAN#80	R5-182419 R5-182430	0002 0003	-	F	Editorial correction of typos and incorrect references  Editorial Update of 36.579-2 for style H6	13.1.0 13.1.0
2018-06	RAN#80	R5-182431	0003	1-	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	T -	F F	Updates of TC 6.3.2 Update to TLS setup	13.1.0 13.2.0
2018-09	RAN#81	R5-185122	0003	1	F	Corrections to MCPTT Authorization	13.2.0
2018-09	RAN#81	R5-184685	0008	-	F	Update of default message contents for new Rel-14 TCs for Private	14.0.0
001-				<u> </u>	<u> </u>	Call Call-Back and Ambient listening call	
2018-12	RAN#82	R5-186878	0010	-	F	Correction to Generic Test Procedure for MCPTT pre-established	14.1.0
2018-12	RAN#82	R5-186879	0011	-	F	session establishment CO Editorial update of the default SDP and Resource-list Messages	14.1.0
2018-12	RAN#82	R5-186880	0011	-	F	Update of default MCPTT media plane control messages and other	14.1.0
						information elements to reflect latest Rel-13 core specs	
2018-12	RAN#82	R5-186881	0013	-	F	Update of XML schema for MCPTT location information to reflect	14.1.0
2019 12	D / N1#00	DE 107700	0014	1	F	latest Rel-13 core specs	1410
2018-12 2018-12	RAN#82 RAN#82	R5-187709 R5-187710	0014 0015	1	F	Corrections to clause 5.5.9 of 36.579-1 Corrections to clause 5.5.7.1 of 36.579-1	14.1.0 14.1.0
2010-12	I VALINTUZ	107710	0010	1'-	<u> </u>	Outrodions to diadec 0.0.7.1 of 00.075-1	17.1.0

T		1_				Table 1 and	1
	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 14.1.0
	RAN#82	R5-187713	0018	1	F		
	RAN#82	R5-187714	0019	1	F	Correction to Table 5.5.4.2-1 in 36.579-1	
2018-12	RAN#82	R5-187715	0020	1	F	Correction to SIP NOTIFY message in 36.579-1	
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	
2019-03	RAN#83	R5-191210	0023	-	F	Correction of default contents in SIP INVITE from the UE	14.2.0
2019-03	RAN#83	R5-191902	0024	-	F	Update to MCPTT floor control default messages	14.2.0
2019-03	RAN#83	R5-192155	0025	-	F	Update 36.579-1 Section 4.2 and 4.3	14.2.0
2019-03	RAN#83	R5-192156	0026	-	F	Update 36.579-1 Delete clauses inside the present spec	14.2.0
2019-03	RAN#83	R5-192157	0027	-	F	Update 36.579-1 Blue text removal	14.2.0
2019-06	RAN#84	R5-194001	0028	-	F	Correction of default contents in the SIP INVITE from the UE	14.3.0
2019-06	RAN#84	R5-194665	0030	-	F	Typo for MCPTT in 36.579-1	14.3.0
2019-06	RAN#84	R5-195216	0029	1	F	Update of UE registration procedure for location info configuration	14.3.0
2019-06	RAN#84	R5-195217	0031	1	F	References and derivation path updates for SIP messages	14.3.0
2019-09	RAN#85	R5-196773	0045	-	F	Updates to conditions Table 5.5.1-1	14.4.0
2019-09	RAN#85	R5-196983	0046	-	F	Correction of SIP messages	14.4.0
2019-09	RAN#85	R5-197133	0044	1	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
_0.00		1.0 101204	30 17		l	comments	
2019-09	RAN#85	R5-197295	0041	2	F	Corrections to MCPTT UE registration procedures	14.4.0
2019-12	RAN#86	R5-198159	0050	_	F	Corrections to SIP signalling for MCPTT CO and CT communication	14.5.0
2010 12	10 11 1/1/00	100100	0000			procedures	14.0.0
2019-12	RAN#86	R5-199043	0049	1	F	Correction to default HTTP messages	14.5.0
	RAN#86	R5-199044	0051	1	F	Corrections to MCPTT UE registration procedures	14.5.0
2019-12	RAN#86	R5-199045	0052	1	F	Additions of further references	14.5.0
2019-12	RAN#86	R5-199046	0052	1	F	Corrections related to MIKEY protocol	14.5.0
2019-12	RAN#86	R5-199047	0054	1	F	Correction to default messages for MCPTT group management and	14.5.0
2019-12	IXAIN#00	13-133047	0034	'	!	configuration management	14.5.0
2019-12	RAN#86	R5-199048	0055	1	F	Correction of default SDP message and other information elements	14.5.0
2019-12	RAN#86	R5-199051	0056	1	F	SDP Default for MCVideo and MCData	14.5.0
2019-12	RAN#86	R5-199052	0058	1	F	Adding MCVideo Transmission Control Messages	14.5.0
2019-12	RAN#86	R5-199053	0060	1	F	Updates TS 33.179 references to TS 33.180	14.5.0
2019-12	RAN#86	R5-199077	0048	2	F	Correction to default SIP messages	14.5.0
2020-03	RAN#87	R5-200264	0048	_	F	Corrections to default SIP messages and other information elements	14.6.0
2020-03	RAN#87	R5-200264	0064	-	F	Addition of further references	14.6.0
2020-03	RAN#87		0065	-	F	Corrections to default HTTP message and other information	14.6.0
2020-03	KAN#07	R5-200301	0005	_	Г	elements	14.6.0
2020-03	RAN#87	R5-200385	0066	-	F	Corrections to default MCPTT configuration management messages	14.6.0
						and other information elements	
	RAN#87	R5-201220	0062	1	F	Corrections to MCPTT UE registration procedures	14.6.0
2020-06	RAN#88	R5-202552	0069	1	F	Correcting core spec reference for APN requirements	14.7.0
2020-06	RAN#88	R5-202698	0073	1	F	SDP updates for MCVideo and MCData	14.7.0
2020-06	RAN#88	R5-202699	0076	1	F	Default MCVideo Transmission Control Messages	14.7.0
2020-06	RAN#88	R5-203001	0077	1	F	SIP 202 (Accepted) message default	14.7.0
2020-06	RAN#88	R5-203073	0067	1	F	Updates to MCX generic test procedures and default message	14.7.0
0000.00	DANI"CO	DE 000074	0000	_	_	contents	4470
2020-06	RAN#88	R5-203074	0068	1	F	Updates to generic test procedure for MCPTT Authorization/Configuration and Key Generation	14.7.0
2020-09	RAN#89	R5-204226	0082	-	F	Addition of XML schema for MCVideo location information	14.8.0
2020-09	RAN#89	R5-204229	0083	-	F	MCVideo and MCData in Clause 4	14.8.0
2020-09	RAN#89	R5-204490	0084	1	F	MCVideo and MCData in Clause 5.5.7	14.8.0
2020-09					F		
	RAN#89	R5-204491	0085	1		Updates to UE configuration document	14.8.0
2020-09	RAN#89	R5-204492	0086	1	F	Update of content with Rel-14 requirements	14.8.0
2020-09	RAN#89	R5-204533	0078	1	F		14.8.0
2020-09	RAN#89	R5-204534	0079	1	F	Updates to MCX generic test procedures and default message	14.8.0
2020-09	RAN#89	R5-204535	0081	1	F	contents   Description of the distribution of MSCCK and MuSiK	14.8.0

## History

Document history					
V14.0.0	October 2018	Publication			
V14.1.0	December 2018	Publication			
V14.2.0	May 2019	Publication			
V14.3.0	July 2019	Publication			
V14.4.0	October 2019	Publication			
V14.5.0	January 2020	Publication			
V14.6.0	April 2020	Publication			
V14.7.0	July 2020	Publication			
V14.8.0	November 2020	Publication			