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Foreword

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

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

Version x.y.z

where:

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

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

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

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

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

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

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

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

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

1 Scope

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

It contains definitions of reference conditions and test signals, default messages and other parameters, generic procedures, and, common requirements for test equipment with the goal for facilitating testing in general and test procedures specification in particular. Various parts of its content are referred to from other parts of the Mission Critical Services over LTE protocol conformance testing specification e.g. TS 36.579-2 [2], TS 36.579-3 [3], 3GPP TS 36.579-6 [84], 3GPP TS 36.579-7 [85].

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

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

2 References

[13]

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

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

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".
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[130]	IETF RFC 4585: "Extended RTP Profile for Real-time Transport Control Protocol (RTCP)-Based Feedback (RTP/AVPF)"

3 Definitions, symbols and abbreviations

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

3.1 Definitions

For the purposes of the present document, the terms and definitions given in TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1].

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

An MCPTT user is affiliated to an MCPTT group

An MCPTT user is affiliated to an MCPTT group at an MCPTT client

Affiliation status

Group identity

In-progress emergency private call state

In-progress imminent peril group state

MCPTT client ID

MCPTT emergency alert state

MCPTT emergency group state

MCPTT emergency group call state

MCPTT emergency private call state

MCPTT emergency private priority state

MCPTT imminent peril group call state

MCPTT imminent peril group state

MCPTT private emergency alert state

MCPTT speech

Media-floor control entity

Temporary MCPTT group identity

Trusted mutual aid

Untrusted mutual aid

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

In-progress emergency

MCPTT emergency alert

MCPTT emergency group call

MCPTT emergency state

Partner MCPTT system

Primary MCPTT system

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

MBMS subchannel

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

Pre-selected MCPTT user profile

3.2 Symbols

Void.

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

ECGI E-UTRAN Cell Global Identification

FFS For Further Study

ICS Implementation Conformance Statement

IPEG In-Progress Emergency Group
IPEPC In-Progress Emergency Private Call
IPIG In-Progress Imminent peril Group
IUT Implementation Under Test

IXIT Implementation eXtra Information for Testing MBMS Multimedia Broadcast and Multicast Service

MBSFN Multimedia Broadcast multicast service Single Frequency Network

MCData Mission Critical Data

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

MCX Mission Critical X, with X = PTT or X = Video or X = Data

MEA MCPTT Emergency Alert
MEG MCPTT Emergency Group
MEGC MCPTT Emergency Group Call
MEPC MCPTT Emergency Private Call
MEPP MCPTT Emergency Private Priority

MES MCPTT Emergency State

MIME Multipurpose Internet Mail Extensions
MIG MCPTT Imminent peril Group

MIGC MCPTT Imminent peril Group Call
MONP MCPTT Off-Network Protocol
MPEA MCPTT Private Emergency Alert
NAT Network Address Translation

QCI QoS Class Identifier

RTP Real-time Transport Protocol
SAI Service Area Identifier
SDP Session Description Protocol
SIP Session Initiation Protocol

SS System Simulator SSRC Synchronization SouRCe

TGI Temporary MCPTT Group Identity
TMGI Temporary Mobile Group Identity

TP Transmission Point

URI Uniform Resource Identifier

4 General

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

4.0 Introduction

Depending on the TS 36.579-5[5] test model being used, either the LTE UE (with the MCX Client installed) is considered as the IUT (MCX EUTRA test model), or, only the MCX Client is considered as the IUT (MCX IPCAN test model).

4.1 MCPTT Conformance testing test points overview

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

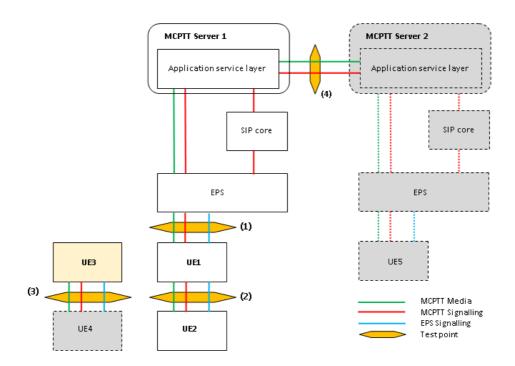


Figure 4.1.1: MCPTT Conformance testing test points model

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

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

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

- MCPTT on-network (whenever relevant, reference points as specified in TS 23.179 [8] Functional model description clause 7.3.1 'On-network functional model' are referred):
 - Application plane (MCPTT-1, MCPTT-4, MCPTT-7, MCPTT-8 and MCPTT-9), and, (CSC-1, CSC-2, CSC-4 and CSC-8); Signalling control plane (SIP-1, HTTP-1 and HTTP-2). Test point: (1) or (2). IUT: the UE or the MCPTT Client or the MCPTT Server.

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

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

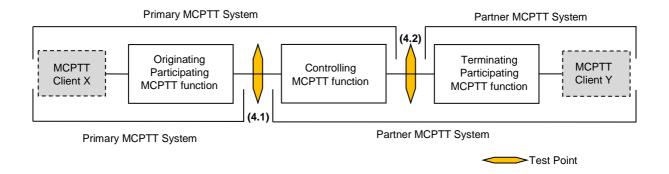


Figure 4.1.2: MCPTT Conformance testing Client-to-Client test points model

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

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

4.2 MCPTT Conformance testing test environment overview

Based on the test points models shown in clause 4.1 examples for test environment implementations are provided below. Figures 4.2.1 to 4.2.3 show test configuration where the Implementation Under Test (IUT) and the System Simulator communicate, one with the other, over the 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)).

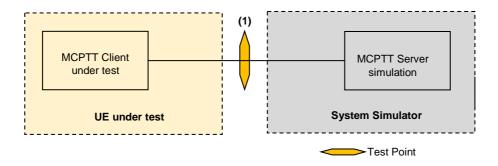


Figure 4.2.1: Testing the MCPTT Client (on-network)

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.

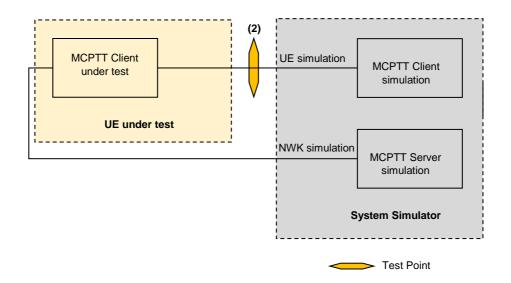


Figure 4.2.2: Testing the MCPTT Client (on-network) Relay side

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.

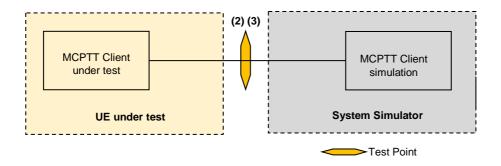


Figure 4.2.3: Testing the MCPTT Client (off-network)

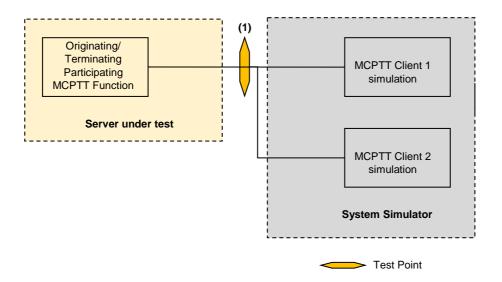


Figure 4.2.4: Testing the MCPTT Server (server-to-client)

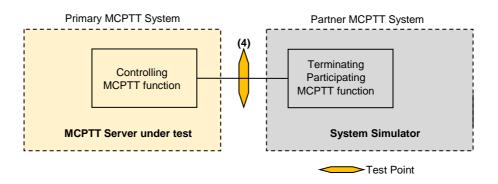


Figure 4.2.5: Testing the MCPTT Server (server-to-server), Controlling function

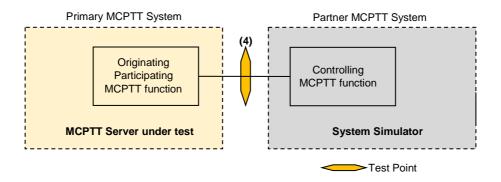


Figure 4.2.6: Testing the MCPTT Server (server-to-server), Originating function

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.

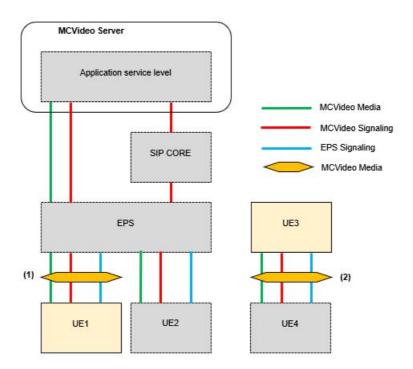


Figure 4.5.1: MCVideo Conformance testing test points model

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 or the MCVideo Client.
- MCVideo off-network (TS 23.280 [110], clause 7.3.2 'Off-network functional model' and TS 23.281 [91], clause 6.1.2 'Off-network functional model'.). Test point: (2). IUT: the UE.
- LTE Legacy requirements between UE and EPS and between 2 UEs (covering e.g. Bearer Management at the UE side, ProSe, MBMS). Test point: (1) or (2).

4.6 MCVideo Conformance testing test environment overview

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

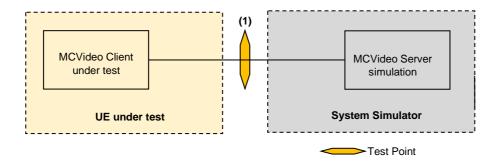


Figure 4.6.1: Testing the MCVideo Client (on-network)

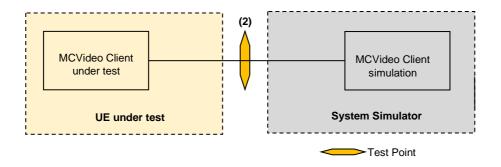


Figure 4.6.2: Testing the MCVideo Client (off-network)

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.

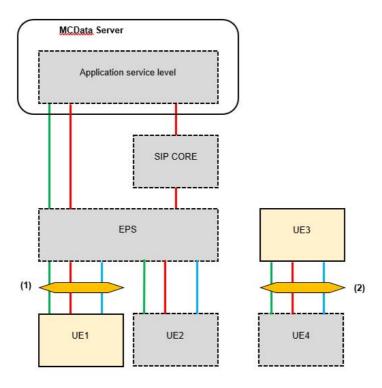


Figure 4.8.1: MCData Conformance testing test points model

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 or the MCData Client.
- MCData off-network (TS 23.280 [110], clause 7.3.2 'Off-network functional model' and TS 23.282 [91], clause 6.4.2 'Off-network functional model'.). Test point: (2). IUT: the UE.
- LTE Legacy requirements between UE and EPS and between 2 UEs (covering e.g. Bearer Management at the UE side, ProSe). Test point: (1) or (2).

4.9 MCData Conformance testing test environment overview

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

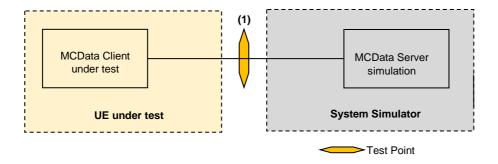


Figure 4.9.1: Testing the MCData Client (on-network)

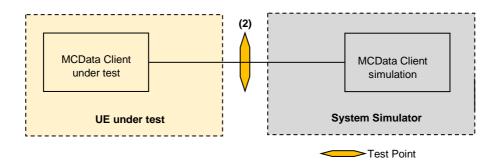


Figure 4.9.2: Testing the MCData Client (off-network)

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 Initial MCX Authentication, Registration, Configuration and Subscription

5.3.2.1 Initial conditions

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

System Simulator:

- SS (MCX 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 MCX operation in the MCX configuration document).

Implementation Under Test (IUT):

- UE (MCX client)
 - The MCX Client has been provisioned either with the address information of the server from which the client can retrieve the MCX UE initial configuration document (steps 1a1-1a2 of procedure 'MCX Initial Configuration and User Authentication', Table 5.3.2.3.1-1) or directly with the Initial UE Configuration Data as specified in Table 5.5.8.1-1.
 - According to TS 33.180 [94] all HTTP connections are secured by TLS.

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

5.3.2.2 Main Procedure

5.3.2.2.1 Procedure

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

St	Procedure		Message Sequence
		U - S	Message
-	EXCEPTION: The procedures of steps 1 and 2 happen in parallel	-	-
1	The UE (MCX client) performs procedure 'MCX Initial Configuration and User Authentication' as described in Table 5.3.2.3.1-1	-	-
2	The UE (MCX client) performs procedure 'SIP registration' as described in Table 5.3.2.4.1-1 (NOTE 1)	-	-
-	EXCEPTION: The procedures of steps 3, 4 and 5 happen in parallel	-	-
3	The UE (MCX client) performs procedure 'Publication of MCX service settings' as described in Table 5.3.2.5.1-1 (NOTE 1)	-	-
4	The UE (MCX client) performs procedure 'Configuration management subscription' as described in Table 5.3.2.6.1-1	-	-
5	The UE (MCX client) performs procedure 'Group management subscription with optional GMK retrieval' as described in Table 5.3.2.7.1-1	-	-
6	The SS (MCX server) sends a SIP MESSAGE for configuration of Location Info reporting.	<	SIP MESSAGE
7	The UE (MCX client) responds with SIP 200 (OK)	>	SIP 200 (OK)

NOTE 1: Based on UE implementation, the access token may be provided using either a SIP REGISTER at initial SIP registration (Table 5.3.2.4.1-1 step 3a1) or in the SIP PUBLISH for MCPTT server settings (Table 5.3.2.5.1-1 step 1b1); the SIP REGISTER can only be used when the access token is already available.

5.3.2.2.2 Specific message contents

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

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

Information Element	Value/remark	Comment	Reference	Condition
Message-body				
MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-body	MCPTT-Info as described in Table 5.3.2.2.2-2			MCPTT
	MCVideo-Info as described in Table 5.3.2.2.2-3			MCVIDEO
	MCData-Info as described in Table 5.3.2.2.4			MCDATA

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

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

Table 5.3.2.2.3: MCVideo Info in SIP MESSAGE (Table 5.3.2.2.2-1)

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

Table 5.3.2.2.4: MCData Info in SIP MESSAGE (Table 5.3.2.2.2-1)

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

5.3.2.3 MCX Initial Configuration and User Authentication

5.3.2.3.1 Procedure

Table 5.3.2.3.1-1: MCX Initial Configuration and User Authentication

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

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

IOTE 1: The UE is expected to prompt the MCX user for username and password, or it may be stored on the UE. The provision of the username/password is expected to be done via a suitable implementation dependent MMI.

5.3.2.3.2 Specific message contents

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

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

Derivation Path: Table 5.5.4.2-1, condition UEINITIALCONFIG

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

Derivation Path: Table 5.5.4.6-1, condition UEINITIALCONFIG

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

Derivation Path: Table 5.5.4.2-1, condition AUTH

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

Derivation Path: Table 5.5.4.3-1, condition AUTH

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

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

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

Derivation Path: Table 5.5.4.3-1, condition USERAUTH

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

Derivation Path: Table 5.5.4.8-1, condition AUTH.

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

Derivation Path: Table 5.5.4.3-1, condition TOKEN

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

Derivation Path: Table 5.5.4.6-1, condition TOKEN

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

Derivation Path: Table 5.5.4.33-1, condition KMSINIT.

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

Derivation Path: Table 5.5.4.6-1, condition KMSINIT.

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

Derivation Path: Table 5.5.4.3-1, condition KMSKEY.

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

Derivation Path: Table 5.5.4.6-1, condition KMSKEY.

5.3.2.4 SIP Registration

5.3.2.4.1 Procedure

Table 5.3.2.4.1-1: SIP Registration

St	Procedure		Message Sequence
		U - S	Message
1	The UE sends an initial registration for IMS	>	SIP REGISTER
	services.		
2	The SS responds with a valid AKAv1-MD5	<	SIP 401 Unauthorized
	authentication challenge and security		
	mechanisms supported by the network.		
-	EXCEPTION: The UE completes the security	-	-
	negotiation procedures, sets up a temporary		
	set of SAs and uses those for sending another		
	SIP REGISTER with AKAv1-MD5 credentials		
	at step 3a1 or 3a2		
-	EXCEPTION: Steps 3a1-3b1 describe	-	-
	behaviour that depends on UE implementation and on availability of an access-token		
	(NOTE 1)		
3a1	IF the client has retrieved the access token	>	SIP REGISTER (access token, CSK)
Jai	already at MCX User Authentication (Table		on Redioter (decess token, cort)
	5.3.2.3.1-1 steps 9-10) THEN the UE may use		
	the SIP REGISTER to provide access token		
	and CSK for service authorisation		
	(NOTE 2)		
3b1	ELSE the UE sends SIP REGISTER without	>	SIP REGISTER
	access token and CSK		
4	The SS responds with 200 OK.	<	SIP 200 OK
NOT	1. According to TC 22 190 [04] player F 1 2 2	1 00000	of the SID DECISTED shall not be deleved for look of

NOTE 1: According to TS 33.180 [94], clause 5.1.3.2.1 sending of the SIP REGISTER shall not be delayed for lack of an access token ⇒ If the client does not have the access token yet, the client shall sent the SIP REGISTER without service authorisation and shall provide the access token in the SIP PUBLISH (Table 5.3.2.5.1-1, step 1b1)

NOTE 2: As the MCPTT/MCVideo/MCData Info containing the access token is security protected the client also needs to provide the CSK used for cyphering and integrity protection.

5.3.2.4.2 Specific message contents

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

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

Derivation Path: Table 5.5.2.13-1, condition SIP_REGISTER_INITIAL

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

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

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

Derivation Path: Table 5.5.3.2.1-1, condition CONFIG, REGISTER_PUBLISH

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

Derivation Path: Table 5.5.3.2.1-2, condition CONFIG, REGISTER_PUBLISH

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

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

5.3.2.5 Publication of MCX service settings

5.3.2.5.1 Procedure

Table 5.3.2.5.1-1: Publication of MCX service settings

St	Procedure	Message Sequence		TP	Verdict
		U-S	Message		
	EXCEPTION: Steps 1a1-1b1 describe behaviour that depends on whether or not the client has provided an access token for service authorisation already at SIP registration (Table 5.3.2.4.1-1)				
1a1	IF the UE (MCX client) has provided the access token at SIP registration THEN the UE (MCX client) sends a SIP PUBLISH request for update of PoC-settings only. (NOTE 1).	>	SIP PUBLISH	-	Р
1b1	ELSE the UE (MCX client) sends a SIP PUBLISH request for service authorisation and update of PoCsettings. (NOTE 1).	>	SIP PUBLISH	-	Р
2	The SS (MCX server) sends SIP 200 (OK).	<	SIP 200 (OK)	-	-

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

5.3.2.5.2 Specific message contents

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

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

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

[⇒] In general the UE sends the SIP PUBLISH request not before it has retrieved the user profile at step 8 in Table 5.3.2.6.1-1.

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

Derivation Path: Table 5.5.2.11	Value/remark	Comment	Reference	Condition
Message-body	Value/Terriark	Comment	Reference	Condition
MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-body	MCPTT-Info as described in Table 5.3.2.5.2-3			MCPTT
	MCVideo-Info as described in Table 5.3.2.5.2-4			MCVIDEO
	MCData-Info as described in Table 5.3.2.5.2-5			MCDATA

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

Derivation Path: Table 5.5.3.2.1-1, condition CONFIG, REGISTER_PUBLISH

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

Derivation Path: Table 5.5.3.2.1-2, condition CONFIG, REGISTER_PUBLISH

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

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

5.3.2.6 Configuration management subscription

5.3.2.6.1 Procedure

Table 5.3.2.6.1-1: Configuration management subscription

St	Procedure		Message Sequence	TP	Verdict
		U-S	Message		
1	The UE (MCX client) sends a SIP SUBSCRIBE -	>	SIP SUBSCRIBE	-	Р
	subscription to multiple documents simultaneously -				
	containing the access token and a resource list body				
	containing a list adressing the following documents:				
	MCX UE Configuration document, MCX User Profile				
	Configuration Document, and the MCX Service				
	configuration document. The base URI of each list entry				
	is set to the CMS XCAP-ROOT-URI.				
2	The SS sends a SIP 200 (OK).	<	SIP 200 (OK)	-	-
3	The SS sends a SIP NOTIFY containing the XCAP-		SIP NOTIFY		-
3		<	SIPNOTIFY	-	-
	URIs of the documents.				
-	EXCEPTION: The order of steps 4, 5, 7 and 9 depends	-	-	-	-
	on UE and SS implementation and is not checked by				
	the implementation				
4	The UE (MCX client) sends a SIP 200 (OK).	>	SIP 200 (OK)	-	Р
5	The UE (MCX client) sends an HTTP GET Request	>	HTTP GET	-	Р
	containing the access token and the XCAP-URI of the				
	MCX UE Configuration Document.				
	NOTE: The MCX Client is requesting the MCX UE				
	Configuration Document.				
6	The SS sends an HTTP 200 (OK) including the MCX UE	<	HTTP 200 (OK)	-	-
	Configuration Document.				
7	The UE (MCX client) sends an HTTP GET Request	>	HTTP GET	_	Р
•	containing the access token and the XCAP-URI of the		0		
	MCX User Profile Configuration Document.				
	more con i romo coninguiamen zocamenii				
	NOTE: The MCX Client is requesting the MCX User				
	Profile Configuration Document.				
8	The SS sends an HTTP 200 (OK) including the MCX	<	HTTP 200 (OK)	_	_
	User Profile Configuration Document.		11111 200 (011)		
	Osci i Tome Comiguration Document.				
	NOTE: The MCX User Profile Configuration Document				
	includes information on MCX groups including for which				
	groups the MCX Client is a member. The MCX User				
	Profile Configuration Document includes Group A as a				
	group for which the MCX Client is a member and is				
	implicitly affiliated. Group A is used as the default group				
	for all test cases in TS 36.579-2 and TS 36.579-3.		LITTO OFT		
9	The UE (MCX client) sends an HTTP GET Request	>	HTTP GET	-	Р
	containing the access token and the XCAP-URI of the				
	MCX Service Configuration Document.				
	NOTE: The MCX Client is requesting the MCX Service				
	Configuration Document.				
10	The SS sends an HTTP 200 (OK) including the MCX	<	HTTP 200 (OK)	-	
	Service Configuration Document.				

5.3.2.6.2 Specific message contents

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

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

Derivation Path: Table 5.5.2.14-1, condition CONFIG

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

Derivation Path: Table 5.5.2.8-1, condition CONFIG

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

Derivation Path: Table 5.5.4.2-1, condition UECONFIG.

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

Derivation Path: Table 5.5.4.2-1, condition UEUSERPROF.

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

Derivation Path: Table 5.5.4.2-1, condition UESERVCONFIG.

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

Derivation Path: Table 5.5.4.6-1, condition UECONFIG.

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

Derivation Path: Table 5.5.4.6-1, condition UEUSERPROF.

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

Derivation Path: Table 5.5.4.6-1, condition UESERVCONFIG.

5.3.2.7 Group management subscription with optional GMK retrieval

5.3.2.7.1 Procedure

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

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

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

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

5.3.2.7.2 Specific message contents

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

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

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

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

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

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

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

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

Derivation Path: Table 5.5.3.3.1A-1, condition GROUPCONFIG

Table 5.3.2.7.2-5: SIP SUBSCRIBE (Step 1c1, Table 5.3.2.7.1-1; step 2a1, Table 5.3.2.7.1-2)

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

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

Derivation Path: Table 5.5.3.3.1A-1, condition GROUPKEY

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

Derivation Path: Table 5.5.2.8-1, condition GROUPCONFIG

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

Derivation Path: Table 5.5.4.2-1, condition GROUPCONFIG

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

Derivation Path: Table 5.5.4.6-1, condition GROUPCONFIG.

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

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

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

Derivation Path: Table 5.5.3.12-2, condition GROUPKEY

5.3.2A - 5.3.2B Void

5.3.3 MCX pre-established session establishment

5.3.3.1 Initial conditions

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

System Simulator:

- SS (MCX 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 MCX operation in the MCX configuration document)

IUT:

- UE (MCX client)
 - The UE has performed the procedure for MCX Authorization/Configuration and Key Generation as specified in clause 5.3.2 and thereby the MCX client is authorised for and able to use the MCX service including making group and private calls on- and off-network, and, the MCX user is registered for receiving MCX service through the MCX 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: MCX pre-established session establishment CO

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
1	Void	-	-	-	-
1A	EXCEPTION: The E-UTRA/EPC actions which are related to the MCX call establishment as described in clause 5.4.3 'MCX CO communication in E-UTRA' take place.	-	-	-	-
2-7	Void	-	-	-	-
8	Check: Does the UE (MCX Client) send a SIP INVITE message in order to create a pre-established session?	>	SIP INVITE	-	Р
8A	The SS sends a SIP 100 Trying	<	SIP 100 Trying	-	-
9	Void	-	-	-	-
10	The SS (MCX server) responds with a SIP 200 (OK) message.	<	SIP 200 (OK)	-	-
10A	Check: Does the UE (MCX Client) respond with a SIP ACK message?	>	SIP ACK	-	Р
11	Void	-	-	-	-
11A	The SS waits 2 seconds to ensure that lower layer signalling (TCP) is finished.	-	-	-	-
12	The SS transmits an RRCConnectionRelease message.	<	RRC: RRCConnectionRelease	-	-

5.3.3.4 Specific message contents

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

Derivation Path: Table 5.5.2.5.1-1				
Information Element	Value/remark	Comment	Reference	Condition
Contact			RFC 3261 [22 RFC 3840 [33]	
feature-param	"+g.3gpp.mcptt"	This media feature tag when used in a SIP	10 0040 [00]	MCPTT
		request or a SIP		
		response indicates that		
		the function sending the SIP message		
		supports Mission		
		Critical Push To Talk		
		(MCPTT)		
	". a 2ann movidoo"	communication.		MCVIDEO
	"+g.3gpp.mcvideo"	This media feature tag when used in a SIP		MCVIDEO
		request or a SIP		
		response indicates that		
		the function sending the SIP message		
		supports Mission		
		Critical Video		
		(MCVideo)		
	II. o. Oomer resided 1."	communication.		MODATA
	"+g.3gpp.mcdata.sds"	This media feature tag when used in a SIP		MCDATA_ SDS
		request or a SIP		303
		response indicates that		
		the function sending		
		the SIP message		
		supports mission critical data (MCData)		
		service.communication.		
feature-param	"audio"	This feature tag		MCPTT
		indicates that the		OR MCV/IDEO
		device supports audio as a streaming media		MCVIDEO
		type.		
feature-param	"video"	This feature tag		MCVIDEO
		indicates that the device supports video		
		as a streaming media		
		type.		
feature-param	"text"	This feature tag		MCDATA_
		indicates that the		SDS
		device supports text as a streaming media		
		type.		
Accept			RFC 3261 [22]	
media-range[1] Answer-Mode	"application/sdp"			
Content-Type	not present			
media-type	"application/sdp"			MCPTT
				OR
modia type	"no ultip o rt/pc is a d"			MCVIDEO
media-type	"multipart/mixed"			MCDATA_ SDS
Message-body				MCPTT
				OR
CDD Massage	000			MCVIDEO
SDP Message	SDP message as described in Table			MCPTT
	5.5.3.1.1-1 with			
	conditions			
	PRE_ESTABLISHED_			
	SESSION,			
	INITIAL_SDP_OFFER			

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

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

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

5.3.3A Void

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

5.3.4.1 Initial conditions

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

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

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: MCX 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 MCX call establishment as described in clause 5.4.4 'MCX CT communication in E-UTRA' take place.	-	-	-	-
2	The SS (MCX Server) sends a SIP INVITE requesting the establishment/modification of an MCX call.	<	SIP INVITE	-	-
-	EXCEPTION: Step 3a1 describes behaviour that depends on the UE implementation; the "lower case letter" identifies a step sequence that take place if the UE responds to a SIP INVITE with a SIP 100 (Trying).	-	-	-	-
3a1	The UE (MCX client) sends a SIP 100 (Trying)	>	SIP 100 (Trying)	-	-
4	Check: Does the UE (MCX client) respond to the SIP INVITE with SIP 200 (OK)?	>	SIP 200 (OK)	-	Р
5	The SS (MCX server) sends a SIP ACK to acknowledge the session establishment/modification	<	SIP ACK	-	-

5.3.4.4 Specific message contents

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

None

Table 5.3.4.4-1: Void

5.3.5 MCX CT group call establishment with manual commencement

5.3.5.1 Initial conditions

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

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

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: MCX CT group call establishment with manual commencement

St	Procedure	Message Sequence		TP	Verdict
		U-S	Message		
-	EXCEPTION: Steps 1a1describes 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 MCX call establishment	-	-	-	-
	described in clause 5.4.4 'MCX CT				
	communication in E-UTRA' take place.				
2	The SS (MCX Server) sends an initial SIP	<	SIP INVITE	_	-
	INVITE requesting the establishment of an MCX				
	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 (MCX client) sends SIP 100 (Trying).	>	SIP 100 (Trying)	-	-
4	The SS starts timer Timer_1 = 5 seconds.	-	-	-	-
-	EXCEPTION: Steps 5a1 to 5c1 describe	-	-	-	-
	behaviour that depends on the UE implementation; the "lower case letter" identifies				
	a step sequence that may take place if the UE				
	responds reliably or unreliably to a SIP INVITE				
	with a SIP 183 (Session Progress)				
5a1	Check: Does the UE (MCX client) send a SIP	>	SIP 183 (Session Progress)	-	Р
	183 (Session Progress) unreliably?				
5a2	The SS stops Timer_1.	-	-	-	-
5b1	Check: Does the UE (MCX client) send a SIP	>	SIP 183 (Session Progress)	-	Р
	183 (Session Progress) reliably?				
5b2	The SS stops Timer_1.	-	-	-	-
5b3	The SS (MCX Server) acknowledges the receipt	<	PRACK	-	-
	of SIP 183 (Session Progress)		017 222 (010)		
5b4	The UE (MCX Client) responds PRACK with SIP	>	SIP 200 (OK)	-	-
	200 (OK)				
5c1	Check: Does Timer_1 expire? Check: Does the UE (MCX client) notify the User	-	-	-	P P
5A	of the incoming call request?	-	-	-	Р
	(NOTE 1)				
6	Make UE (MCX User) accept the call.		-	_	_
"	(NOTE 1)	-		_	_
7	Check: Does the UE (MCX client) respond to the	>	SIP 200 (OK)	-	Р
'	SIP INVITE with SIP 200 (OK)?				•
8	The SS (MCX server) sends a SIP ACK to	<	SIP ACK	-	-
	acknowledge the session establishment	•	_		
NOTE	1: This expected to be done via a suitable impleme	entation de	pendent MMI.		

5.3.5.4 Specific message contents

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

None

Table 5.3.5.4-1..3: Void

5.3.6 MCX CT private call establishment with manual commencement

5.3.6.1 Initial conditions

The same initial conditions apply as specified in clause 5.3.3.1.

Within the context of this procedure, MCX refers to MCPTT or MCVideo

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: MCX CT private call establishment with manual commencement

St	Procedure	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 MCX call establishment described in clause 5.4.4 'MCX CT communication in E-UTRA' take place.	-	-	-	-
2	The SS (MCX Server) sends an initial SIP INVITE requesting the establishment of an MCX private call.	<	SIP INVITE	-	-
-	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 SIP 100 (Trying)	-	-	-	-
3a1	The UE (MCX client) sends a SIP 100 (Trying).	>	SIP 100 (Trying)	-	-
-	EXCEPTION: Steps 4a1 to 4b3 describe behaviour that depends on the UE implementation; the "lower case letter" identifies a step sequence that takes place if the UE responds either unreliably or reliably to a SIP INVITE with a SIP 180 (Ringing)	-	-	-	-
4a1	Check: Does the UE (MCX client) send a SIP 180 (Ringing) unreliably?	>	SIP 180 (Ringing)	-	Р
4b1	Check: Does the UE (MCX client) send a SIP 180 (Ringing) reliably?	>	SIP 180 (Ringing)	-	Р
4b2	The SS (MCX Server) acknowledges the receipt of SIP 180 (Ringing)	<	PRACK	-	-
4b3	The UE (MCX Client) responds PRACK with SIP 200 (OK)	>	SIP 200 (OK)	-	-
4A	Check: Does the UE (MCX client) notify the user of the incoming call? (NOTE 1)	-	-	-	Р
5	Make UE (MCX client) accept the call. (NOTE 1)	-	-	-	ı
6	Check: Does the UE (MCX client) respond to the SIP INVITE with SIP 200 (OK)?	>	SIP 200 (OK)	-	Р
7	The SS (MCX server) sends a SIP ACK to acknowledge the session establishment	<	SIP ACK	-	-
NOTE	1: This expected to be done via a suitable implemen	ntation dep	endent MMI.		

5.3.6.4 Specific message contents

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

Table 5.3.6.4-1..1A: Void

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

Derivation Path: Table 5.5.2.16.2.1-1, condition 100rel

Table 5.3.6.4-3: Void

5.3.7 - 5.3.9 Void

5.3.10 MCX CO call release

5.3.10.1 Initial conditions

As specified in the test case which calls the procedure.

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

5.3.10.2 Definition of system information messages

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

5.3.10.3 Procedure

Table 5.3.10.3-1: MCX CO call release

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

5.3.10.4 Specific message contents

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

None

5.3.11 Void

5.3.12 MCX CT call release

5.3.12.1 Initial conditions

As specified in the test case which calls the procedure.

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

5.3.12.2 Definition of system information messages

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

5.3.12.3 Procedure

Table 5.3.12.3-1: MCX CT call release

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

5.3.12.4 Specific message contents

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

None

5.3.13 - 21 Void

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

5.3.22.1 Initial conditions

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

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

5.3.22.2 Definition of system information messages

5.3.22.3 Procedure

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

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

5.3.22.4 Specific message contents

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

Table 5.3.22.4-1: SIP NOTIFY (Step 1)

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

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

Derivation Path: Table 5.5.3.12-2, condition GROUPCONFIG

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

Derivation Path: Table 5.5.2.17.1.1-1

Table 5.3.22.4-2A..2G: Void

Table 5.3.22.4-3: HTTP GET (Step 3)

Derivation Path: Table 5.5.4.2-1, condition GROUPCONFIG

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

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

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

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

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

Table 5.3.22.4-5A: Void

Table 5.3.22.4-6: SIP NOTIFY (Step 5)

Derivation Path: Table 5.5.2.14-1, condition GROUPCONFIG					
Information Element	Value/remark	Comment	Reference	Condition	
Message-body					
xcap-diff document	xcap-diff document as described in Table 5.3.22.4-7				

Table 5.3.22.4-7: xcap-diff document for MCX group configuration (Table5.3.22.4-6)

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

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

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

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

Table 5.3.22.4-9: MIKEY-SAKKE I_MESSAGE (GMK distribution by the SS) (Table 5.3.22.4-8)

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

5.3.23 - 5.3.25 Void

5.3.26 MCX CO Group Creation

5.3.26.1 Initial conditions

As specified in the test case which calls the procedure.

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

5.3.26.2 Definition of system information messages

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

5.3.26.3 Procedure

Table 5.3.26.3-1: MCX CO Group Creation procedure

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message		
1a1-	Void	-	-	-	-
1a2					
1	Check: Does the UE (MCX Client) send an HTTP PUT to request for creation of the new group?	>	HTTP PUT	-	Р
2	The SS (MCX Server) sends an HTTP 201 (Created).	<	HTTP 201 (Created)	-	-
3-5	Void	-	-	-	-

5.3.26.4 Specific message contents

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

None

Table 5.3.26.4-1..5: Void

5.3.27 MCX CO Temporary Group Creation

5.3.27.1 Initial conditions

As specified in the test case which calls the procedure.

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

5.3.27.2 Definition of system information messages

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

5.3.27.3 Procedure

Table 5.3.27.3-1: MCX CO Temporary Group Creation procedure

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

5.3.27.4 Specific message contents

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

None

Table 5.3.27.4-1..2: Void

5.3.28 MCX CO Temporary Group Tear Down

5.3.28.1 Initial conditions

As specified in the test case which calls the procedure.

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

5.3.28.2 Definition of system information messages

5.3.28.3 Procedure

Table 5.3.28.3-1: MCX CO Temporary Group Creation procedure

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

5.3.28.4 Specific message contents

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

None

Table 5.3.28.4-1: Void

5.3.29 MCX Subscription and Notification

5.3.29.1 Initial conditions

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

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

5.3.29.2 Definition of system information messages

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

5.3.29.3 Procedure

Table 5.3.29.3-1: MCX Subscription and Notification

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 MCX call establishment described in clause 5.4.3 'MCX CO communication in E-UTRA' take place.	-	-	-	-
2	Check: Does the UE (MCX Client) send a SIP SUBSCRIBE message request?	>	SIP SUBSCRIBE	-	Р
3	The SS (MCX Server) responds to the SIP SUBSCRIBE message with a SIP 200 (OK) message.	<	SIP 200 (OK)	-	-
4	The SS (MCX Server) sends a SIP NOTIFY message	<	SIP NOTIFY	-	-
5	The UE (MCX Client) responds with a SIP 200 (OK) message.	>	SIP 200 (OK)	-	-
6	The SS waits 2 seconds before the SS releases the RRC connection. (NOTE 1)	-	-	-	-
NOTE	1: The specified wait period of 2s shall ensure th	at lower	layer signalling (TCP) is finished.	•	

5.3.29.4 Specific message contents

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

None

5.3.30 MCX SIP MESSAGE Request - Accept CO

5.3.30.1 Initial conditions

As specified in the test case which calls the procedure.

Within the context of this procedure, MCX refers to MCPTT or MCVideo

5.3.30.2 Definition of system information messages

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

5.3.30.3 Procedure

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

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 MCX call establishment as described in clause 5.4.3 'MCX CO communication in E-UTRA' take place.	-	-	-	-
2	Check: Does the UE (MCX Client) send a SIP MESSAGE message?	>	SIP MESSAGE	-	Р
3	The SS (MCX Server) responds with a SIP 200 (OK) message?	<	SIP 200 (OK)	-	-
4	The SS (MCX server) sends SIP MESSAGE accepting the request.	<	SIP MESSAGE	-	-
5	Check: Does the UE (MCX Client) respond with a SIP 200 (OK) message?	>	SIP 200 (OK)	-	Р
6	The SS waits 2 seconds before the SS releases the RRC connection. (NOTE 1)	-	-	-	-
NOTE	1: The specified wait period of 2s shall ensure th	at lower	layer signalling (TCP) is finished.		

5.3.30.4 Specific message contents

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

None

5.3.31 MCX SIP MESSAGE Request - Accept CT

5.3.31.1 Initial conditions

As specified in the test case which calls the procedure.

Within the context of this procedure, MCX refers to MCPTT or MCVideo

5.3.31.2 Definition of system information messages

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

5.3.31.3 Procedure

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

St	Procedure		Message Sequence	TP	Verdict
		U-S	Message		
-	EXCEPTION: Step 1a1 describes behaviour	-	-	-	-
	that depends on the 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 MCX call				
	establishment as described in clause 5.4.3				
	'MCX CO communication in E-UTRA' take				
	place.				
2	The SS (MCX server) sends SIP MESSAGE	' -	SIP MESSAGE	-	-
3	Check: Does the UE (MCX Client) respond	>	SIP 200 (OK)	-	Р
	with a SIP 200 (OK) message?				
4	Check: Does the UE (MCX Client) send a SIP	>	SIP MESSAGE	-	Р
	MESSAGE message?				
5	The SS (MCX Server) responds with a SIP 200	<	SIP 200 (OK)	-	-
	(OK) message?				
6	The SS waits 2 seconds before the SS	-	-	-	-
	releases the RRC connection.				
	(NOTE 1)				
NOTE	1: The specified wait period of 2s shall ensure th	at lower	layer signalling (TCP) is finished.		

5.3.31.4 Specific message contents

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

None

5.3.32 MCX SIP MESSAGE CO

5.3.32.1 Initial conditions

As specified in the test case which calls the procedure.

Within the context of this procedure, MCX refers to MCPTT, MCVideo or MCData

5.3.32.2 Definition of system information messages

5.3.32.3 Procedure

Table 5.3.32.3-1: MCX SIP MESSAGE CO

St	Procedure		Message Sequence	TP	Verdict
		U-S	Message		
-	EXCEPTION: Step 1a1 describes behaviour	-	-	-	-
	that depends on the 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 MCX call				
	establishment as described in clause 5.4.3				
	'MCX CO communication in E-UTRA' take				
	place.				
2	Check: Does the UE (MCX Client) send a SIP	>	SIP MESSAGE	-	Р
	MESSAGE message?				
3	The SS (MCX Server) responds with a SIP 200	<	SIP 200 (OK)	-	-
	(OK) message?				
4	The SS waits 2 seconds before the SS	-	-	-	-
	releases the RRC connection.				
	(NOTE 1)				
NOTE	1: The specified wait period of 2s shall ensure th	at lower	ayer signalling (TCP) is finished.		

5.3.32.4 Specific message contents

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

None

5.3.33 MCX SIP MESSAGE CT

5.3.33.1 Initial conditions

As specified in the test case which calls the procedure.

Within the context of this procedure, MCX refers to MCPTT, MCVideo or MCData

5.3.33.2 Definition of system information messages

5.3.33.3 Procedure

Table 5.3.33.3-1: MCX SIP MESSAGE CT

St	Procedure		Message Sequence	TP	Verdict
		U-S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the 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 MCX call establishment as described in clause 5.4.4 'MCX CT communication in E-UTRA' take place.	-	-	-	-
2	The SS (MCX server) sends SIP MESSAGE	<	SIP MESSAGE	-	-
3	Check: Does the UE (MCX Client) respond with a SIP 200 (OK) message?	>	SIP 200 (OK)	-	Р
4	The SS waits 2 seconds before the SS releases the RRC connection. (NOTE 1)	-	-	-	-
NOTE	1: The specified wait period of 2s shall ensure th	at lower	layer signalling (TCP) is finished.		

5.3.33.4 Specific message contents

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

None

5.3.34 MCX Group Affiliation Status Change

5.3.34.1 Initial conditions

As specified in the test case which calls the procedure.

Within the context of this procedure, MCX refers to MCPTT, MCVideo or MCData

5.3.34.2 Definition of system information messages

5.3.34.3 Procedure

Table 5.3.34.3-1: MCX Group Affiliation Status Change

St	Procedure		Message Sequence	TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the 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 MCX call establishment as described in clause 5.4.4 'MCX CT communication in E-UTRA' take place.	-	-	-	-
2	Check: Does the UE (MCX Client) send a SIP PUBLISH message?	>	SIP PUBLISH	-	Р
3	The SS responds to the SIP PUBLISH message with a SIP 200 (OK) message.	<	SIP 200 (OK)	ı	-
4	The SS sends a SIP NOTIFY message informing about the status change progress.	<	SIP NOTIFY	-	-
5	The UE responds with a SIP 200 (OK)	>	SIP 200 (OK)	-	-
6	The SS sends a SIP NOTIFY informing about the affiliation status of the user.	<	SIP NOTIFY	-	-
7	The UE responds with a SIP 200 (OK)	>	SIP 200 (OK)	-	-
8	The SS waits 2 seconds before the SS releases the RRC connection. (NOTE 1)	-	-	-	-
NOTE	 The specified wait period of 2s shall ensure the 	at lower	layer signalling (TCP) is finished.		

5.3.34.4 Specific message contents

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

None

5.3.35 MCX CO private call establishment with manual commencement

5.3.35.1 Initial conditions

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

Within the context of this procedure, MCX refers to MCPTT, MCVideo or MCData

5.3.35.2 Definition of system information messages

5.3.35.3 Procedure

Table 5.3.35.3-1: MCX CO private call establishment with 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 MCX call				
	establishment described in clause 5.4.3 'MCX				
	CO communication in E-UTRA' take place.				
2	Check: Does the UE (MCX client) send a SIP	>	SIP INVITE	-	Р
	INVITE requesting the establishment of a				
	private call?				
3	The SS sends a SIP 100 Trying	<	SIP 100 (Trying)	-	-
4	The SS (MCX server) responds with a SIP 180	<	SIP 180 (Ringing)	-	-
	(Ringing)				
5	The SS (MCX server) responds with a SIP 200	<	SIP 200 (OK)	-	-
	(OK)				
6	Check: Does the UE (MCX client) send a SIP	>	SIP ACK	-	Р
	ACK to acknowledge the session				
	establishment/modification?				

5.3.35.4 Specific message contents

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

None

5.3.36 UE initiated MCX functional alias status determination and subscription

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

5.3.36.1 Initial conditions

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

5.3.36.2 Definition of system information messages

5.3.36.3 Procedure

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

St Procedure		Message Sequence		Verdict	
	U-S	Message		I	
Make the UE (MCX client) request to determine the current status of a functional alias and later notification of status changes of a functional alias. (NOTE 1)	-	-	-	-	
EXCEPTION: Step 2a1 describes behaviour that depends on the E-UTRA RRC state at the time the present procedure is called.	-	-	-	-	
1 IF in RRC_IDLE state, the E-UTRA/EPC actions which are related to the procedure described in clause 5.4.3 'MCX CO communication in E- UTRA' take place.	-	-		-	
Check: Does the UE (MCX client) send a SIP SUBSCRIBE requesting the status of any existing functional aliases?	>	SIP SUBSCRIBE	-	Р	
The SS (MCX server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-	
The SS (MCX server) sends a SIP NOTIFY with functional alias information	<	SIP NOTIFY	-	-	
Check: Does the UE (MCX client) send a SIP 200 (OK)?	>	SIP 200 (OK)	-	Р	
The SS waits 2 seconds before the SS releases the RRC connection. (NOTE 2)	-	-	-	-	
the RRC conn (NOTE 2) TE 1: This is expe	ection. ected to be done via a suitable impler	ection. ected to be done via a suitable implementation	ection. ected to be done via a suitable implementation dependent MMI	ection.	

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

5.3.36.4 Specific message contents

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

Table 5.3.36.4-1: SIP SUBSCRIBE (step 3, Table 5.3.36.3-1)

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

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

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

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

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

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

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

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

Information Element	Value/remark	Comment	Reference	Condition
Message-body				
MIME body part		PIDF		
MIME-part-body	PIDF for MCPTT as		TS 24.379 [9]	MCPTT
•	described in Table		clause	
	5.5.3.5.2-1 (NOTE 1)		9A.2.2.2.5	
MIME-part-body	PIDF for MCData as		TS 24.282 [87]	MCDATA
	described in Table		clause 22.2.2.	
	5.5.3.5.2-3 (NOTE 1)		2.5	
NOTE 1: PIDF document cont	ains tuple with empty <status></status>	element (i.e. there ar	e no <functionalalias></functionalalias>	entries at
all) and not containing	g a <p-id-fa> element</p-id-fa>	•		

5.3.37 UE initiated MCX functional alias status change

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

5.3.37.1 Initial conditions

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

5.3.37.2 Definition of system information messages

5.3.37.3 Procedure

Table 5.3.37.3-1: MCX functional alias status change

St	Procedure	Message Sequence		TP	Verdict
		U-S	Message		
1	Make the UE (MCX client) request to change the	-	-	-	-
	status of a functional alias to 'activated'. (NOTE 1)				
-	EXCEPTION: Step 2a1 describes behaviour that	-	-	-	-
	depends on the E-UTRA RRC state at the time the present procedure is called.				
2a1	IF in RRC_IDLE state, the E-UTRA/EPC actions	-	-	-	-
	which are related to the procedure described in				
	clause 5.4.3 'MCX CO communication in E-U'RA'				
	take place.		015 51 151 161 1		
3	Check: Does the UE (MCX client) send a SIP	>	SIP PUBLISH	-	Р
	PUBLISH requesting the status change of a functional alias?				
4	The SS (MCX server) responds with a SIP 200	<	SIP 200 (OK)	-	-
	(OK)				
5	The SS (MCX server) sends a SIP NOTIFY with	<	SIP NOTIFY	-	-
	functional alias information				
6	Check: Does the UE (MCX client) send a SIP	>	SIP 200 (OK)	-	Р
	200 (OK)?				
7	The SS waits 2 seconds before the SS releases	-	-	-	-
	the RRC connection.				
	(NOTE 2)				
NOTE	1: This is expected to be done via a suitable impler	mentation	dependent MMI		

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

5.3.37.4 Specific message contents

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

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

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

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

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

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

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

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

Derivation Path: Table 5.5.3.5.1-1, condition FUNCTIONAL_ALIAS_STATUS_CHANGE

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

Derivation Path: Table 5.5.3.5.1-3, condition FUNCTIONAL_ALIAS_STATUS_CHANGE

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

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

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

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

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

Derivation Path: Table 5.5.3.5.2-1, condition FUNCTIONAL_ALIAS_ACTIVATED, NOTIFY_FOR_PUBLISH

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

Derivation Path: Table 5.5.3.5.2-3, condition FUNCTIONAL_ALIAS_ACTIVATED, NOTIFY_FOR_PUBLISH

5.3A Generic test procedures for UE MCPTT operation

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

5.3A.1.1 Initial conditions

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

5.3A.1.2 Definition of system information messages

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

5.3A.1.3 Procedure

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

St	Procedure	Message Sequence		TP	Verdict
		U-S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that	-	-	-	-
	depends on the E-UTRA RRC state at the time				
L	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 'MCX				
	CO communication in E-UTRA' take place.		0.5		
2	Check: Does the UE (MCPTT client) send a SIP	>	SIP INVITE	-	Р
	INVITE requesting the				
	establishment/modification of an MCPTT call?				
3	The SS sends a SIP 100 Trying	<	SIP 100 (Trying)	-	-
4	The SS (MCPTT server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
5	Check: Does the UE (MCPTT client) send a SIP	>	SIP ACK	-	Р
	ACK to acknowledge the session		0 / 1.0.1		
	establishment/modification?				
-	EXCEPTION: Steps 6a1 describes behaviour	-	-	-	-
	that depends on the test case requirements; the				
	"lower case letter" identifies a step sequence that				
	takes place if the UE requests implicit floor				
	control in step 2 (i.e. the "mc_implicit_request"				
	fmtp attribute included in the SDP offer and the				
	SS responded with the "mc_implicit_request"				
	fmtp attribute included and the "mc_granted"				
	fmtp attribute not present in the SDP answer.				
	(NOTE 1)				
6a1	The SS (MCPTT server) sends a Floor Granted	<	Floor Granted	-	-
	message.				

NOTE 1: Possibilities in SDP-offer/answer depend on the test case requirements

- a. UE sends SDP offer with media description for floor control but without implicit floor request
- b. UE sends SDP offer with media description for floor control and with implicit floor request
 - i. SDP answer from SS contains "mc_implicit_request" and "mc_granted" (Floor is implicitly granted)
 - ii. SDP answer from SS contains "mc_implicit request" and but no "mc_granted" (Floor needs to be explicitly granted at step 6a1)
 - iii. SDP answer from SS contains no "mc_implicit_request" and no "mc_granted" (the UE needs to explicitly request the floor)
- c. UE sends SDP offer without media description for floor control

5.3A.1.4 Specific message contents

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

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

Derivation Path: Table 5.5.2.5.1-1, condition MCPTT

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

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

5.3A.2 Void

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

5.3A.3.1 Initial conditions

As specified in the test case which calls the procedure.

5.3A.3.2 Definition of system information messages

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

5.3A.3.3 Procedure

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

St	Procedure	Message Sequence		TP	Verdict
		U - S	Message		
-	EXCEPTION: Step 1a1 describes behaviour	-	-	-	-
	that depends on the 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 'MCX				
	CO communication in E-UTRA' take place.				
2	Check: Does the UE (MCPTT client) send a	>	SIP REFER	-	Р
	SIP REFER message to request the				
	establishment of an MCPTT call using a pre-				
	established session?				
3	The SS (MCPTT server) responds with a SIP	<	SIP 200 (OK)	-	-
	200 (OK) message indicating that the MCPTT				
	call has been established				
4	The SS sends a Connect message	<	Connect	-	-
5	Check: Does the UE (MCPTT client) send an	>	Acknowledge	-	Р
	Acknowledge message in response to the				
	Connect message?				

5.3A.3.4 Specific message contents

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

None

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

5.3A.4.1 Initial conditions

As specified in the test case which calls the procedure.

5.3A.4.2 Definition of system information messages

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

5.3A.4.3 Procedure

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

St	Procedure		Message Sequence	TP	Verdict
		U-S	Message		
1	Check: Does the UE (MCPTT client) send a SIP REFER message with method "BYE" to release the MCPTT session and keep the preestablished session?	>	SIP REFER	-	Р
2	The SS (MCPTT server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
3	The SS waits 2 seconds before the SS releases the RRC connection. NOTE: The specified wait period of 2s shall ensure that lower layer signalling (TCP) is finished and any not allowed behaviour captured.	-	-	-	-

5.3A.4.4 Specific message contents

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

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

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

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

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

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

5.3A.5.1 Initial conditions

As specified in the test case which calls the procedure.

5.3A.5.2 Definition of system information messages

5.3A.5.3 Procedure

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

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

5.3A.5.4 Specific message contents

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

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

Derivation Path: Table 5.5.6.13-1, condition ACK

5.3A.6 MCPTT CO session modification

5.3A.6.1 Initial conditions

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

5.3A.6.2 Definition of system information messages

5.3A.6.3 Procedure

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

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

NOTE 1: An implicit floor control may be requested in case of upgrade to an emergency or imminent peril group call but not in case of a downgrade or any other re-INVITE

5.3A.6.4 Specific message contents

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

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

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

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

Derivation Path: Table 5.5.6.3-1, condition ACK

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

Derivation Path: Table 5.5.6.11-1, condition UPLINK

5.3A.7 Void

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

5.3A.8.1 Initial conditions

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

5.3A.8.2 Definition of system information messages

5.3A.8.3 Procedure

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

St	Procedure		Message Sequence	TP	Verdict
		U-S	Message		
1	E-UTRA/EPC signalling according to clause 5.4.4 'MCX CT communication in E-UTRA' takes place	-	-	-	-
2	SS initiates an on-demand pre-arranged group call with automatic commencement mode using a pre-established session by sending a Connect message	<	Connect	-	-
3	Check: Does the UE (MCPTT client) send an Acknowledge message to accept the incoming pre-arranged group call using a preestablished session?	>	Acknowledge	-	Р

5.3A.8.4 Specific message contents

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

None

5.3A.9 Void

5.3A.10 Void

5.3A.11 MCPTT Floor Request - Floor Granted

5.3A.11.1 Initial conditions

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

5.3A.11.2 Definition of system information messages

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

5.3A.11.3 Procedure

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

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

5.3A.11.4 Specific message contents

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

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

Derivation Path: Table 5.5.6.3-1, condition ACK

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

Derivation Path: Table 5.5.6.11-1, condition UPLINK

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

5.3A.12.1 Initial conditions

As specified in the test case which calls the procedure.

5.3A.12.2 Definition of system information messages

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

5.3A.12.3 Procedure

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

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

5.3A.12.4 Specific message contents

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

None

5.3A.13 MCPTT Queuing Position Request

5.3A.13.1 Initial conditions

As specified in the test case which calls the procedure.

5.3A.13.2 Definition of system information messages

5.3A.13.3 Procedure

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

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

5.3A.13.4 Specific message contents

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

None

5.3A.14 MCPTT Floor Request – Floor Deny

5.3A.14.1 Initial conditions

As specified in the test case which calls the procedure.

5.3A.14.2 Definition of system information messages

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

5.3A.14.3 Procedure

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

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

5.3A.14.4 Specific message contents

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

None

5.3A.15 MCPTT Floor Release - Floor Idle

5.3A.15.1 Initial conditions

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

5.3A.15.2 Definition of system information messages

5.3A.15.3 Procedure

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

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

5.3A.15.4 Specific message contents

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

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

Derivation Path: Table 5.5.11.3-1, condition DOWNLINK

5.3A.16 MCPTT Floor Release - Floor Taken

5.3A.16.1 Initial conditions

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

5.3A.16.2 Definition of system information messages

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

5.3A.16.3 Procedure

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

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

5.3A.16.4 Specific message contents

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

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

Derivation Path: Table 5.5.11.3-1, condition DOWNLINK

5.3B Generic test procedures for UE MCVideo operation

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

5.3B.1.1 Initial conditions

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

5.3B.1.2 Definition of system information messages

5.3B.1.3 Procedure

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

St	Procedure		Message Sequence	TP	Verdict
		U-S	Message		
1	EXCEPTION: Step 1a1 describes behaviour that depends on the E-UTRA RRC state at the time the present procedure is called.	-	-	-	
1a1	IF in RRC_IDLE state, the E-UTRA/EPC actions which are related to the MCVideo call establishment described in clause 5.4.3 'MCX CO communication in E-UTRA' take place.	-	-	-	•
2	Check: Does the UE (MCVideo client) send a SIP INVITE requesting the establishment/modification of an MCVideo call?	>	SIP INVITE	-	Р
3	The SS sends SIP 100 Trying	<	SIP 100 (Trying)	-	-
4	The SS (MCVideo server) responds with a SIP 200 (OK)	<	SIP 200 (OK)	-	-
5	Check: Does the UE (MCVideo client) send a SIP ACK to acknowledge the session establishment/modification?	>	SIP ACK	-	Р
-	EXCEPTION: Steps 6a1-6a2 describe behaviour that depends on the test case requirements; the "lower case letter" identifies a step sequence that takes place if the UE requests implicit transmission control in step 2 (i.e. the "mc_implicit_request" fmtp attribute included in the SDP offer and the SS responded with the "mc_implicit_request" fmtp attribute included and the "mc_granted" fmtp attribute not present in the SDP answer. (NOTE 1)	-	-	-	•
6a1	The SS (MCVideo server) sends a Transmission Granted message with request for acknowledgement.	<	Transmission Granted	-	-
6a2	Check: Does the UE (MCVideo client) send a Transmission Control Ack message?	>	Transmission Control Ack	-	Р

NOTE 1: Possibilities in SDP-offer/answer depend on the test case requirements

- a. UE sends SDP offer with media description for transmission control but without implicit transmission request
- b. UE sends SDP offer with media description for transmission control and with implicit transmission requesti. SDP answer from SS contains "mc_implicit_request" and "mc_granted" (Transmission is
 - i. SDP answer from SS contains "mc_implicit_request" and "mc_granted" (Transmission is implicitly granted)
 - ii. SDP answer from SS contains "mc_implicit request" and but no "mc_granted" (Transmission needs to be explicitly granted ar step 6a1)
 - iii. SDP answer from SS contains no "mc_implicit_request"and no "mc_granted" (the UE needs to explicitly request the transmission)
- c. UE sends SDP offer without media description for transmission control

5.3B.1.4 Specific message contents

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

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

Derivation Path: Table 5.5.2.5.1-1, condition MCVIDEO

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

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

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

Derivation Path: Table 5.5.11.2.1-1, condition ACK

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

Derivation Path: Table 5.5.11.3.5-1, condition UPLINK

5.3B.2 MCVideo Transmission request – Transmission Granted

5.3B.2.1 Initial conditions

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

5.3B.2.2 Definition of system information messages

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

5.3B.2.3 Procedure

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

• • • • • • • • • • • • • • • • • • •		Message Sequence	TP	Verdict
	U - S	Message		
Check: Does the UE (MCVideo client) send a Transmission Request message?	>	Transmission Request	-	Р
The SS (MCVideo server) sends a Transmission Granted message with request for acknowledgement.	<	Transmission Granted	-	-
Check: Does the UE (MCVideo client) send a Transmission Control Ack message?	>	Transmission Control Ack	-	Р
Check: Does the UE (MCVideo client) provide transmission granted notification to the user? (NOTE 1)	-	-	-	Р
7 f ()	Transmission Request message? The SS (MCVideo server) sends a Transmission Granted message with request or acknowledgement. Check: Does the UE (MCVideo client) send a Transmission Control Ack message? Check: Does the UE (MCVideo client) provide ransmission granted notification to the user? NOTE 1)	Fransmission Request message? The SS (MCVideo server) sends a Fransmission Granted message with request or acknowledgement. Check: Does the UE (MCVideo client) send a Fransmission Control Ack message? Check: Does the UE (MCVideo client) provide ransmission granted notification to the user? NOTE 1)	Transmission Request message? The SS (MCVideo server) sends a Transmission Granted message with request or acknowledgement. Check: Does the UE (MCVideo client) send a Transmission Control Ack message? Check: Does the UE (MCVideo client) provide ransmission granted notification to the user?	Fransmission Request message? The SS (MCVideo server) sends a Fransmission Granted message with request or acknowledgement. Check: Does the UE (MCVideo client) send a Fransmission Control Ack message? Check: Does the UE (MCVideo client) provide ransmission granted notification to the user? NOTE 1)

5.3B.2.4 Specific message contents

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

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

Derivation Path: Table 5.5.11.2.1-1, condition ACK

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

Derivation Path: Table 5.5.11.3.5-1, condition UPLINK

5.3B.3 MCVideo Media Transmission Notification and Request CT

5.3B.3.1 Initial conditions

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

5.3B.3.2 Definition of system information messages

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

5.3B.3.3 Procedure

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

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

5.3B.3.4 Specific message contents

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

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

Derivation Path: Table 5.5.11.3.5-1, condition UPLINK

5.3B.4 MCVideo Transmission Request - Queue Position Info

5.3B.4.1 Initial conditions

As specified in the test case which calls the procedure.

5.3B.4.2 Definition of system information messages

5.3B.4.3 Procedure

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

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

5.3B.4.4 Specific message contents

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

None

5.3B.5 MCVideo Queue Position Request

5.3B.5.1 Initial conditions

As specified in the test case which calls the procedure.

5.3B.5.2 Definition of system information messages

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

5.3B.5.3 Procedure

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

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

5.3B.5.4 Specific message contents

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

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

Derivation Path: Table 5.5.11.3.5-1, condition UPLINK

5.3B.6 MCVideo Transmission Request - Transmission Rejected

5.3B.6.1 Initial conditions

As specified in the test case which calls the procedure.

5.3B.6.2 Definition of system information messages

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

5.3B.6.3 Procedure

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

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

5.3B.6.4 Specific message contents

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

none

5.3B.7 MCVideo Transmission End Request CO

5.3B.7.1 Initial conditions

As specified in the test case which calls the procedure.

5.3B.7.2 Definition of system information messages

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

5.3B.7.3 Procedure

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

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

5.3B.7.4 Specific message contents

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

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

Derivation Path: Table 5.5.11.3.1-1, condition UPLINK

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

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

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

Derivation Path: Table 5.5.11.3.5-1, condition UPLINK

5.3B.8 MCVideo Media Reception End Request CO

5.3B.8.1 Initial conditions

As specified in the test case which calls the procedure.

5.3B.8.2 Definition of system information messages

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

5.3B.8.3 Procedure

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

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

5.3B.8.4 Specific message contents

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

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

Derivation Path: Table 5.5.11.3.3-1, condition UPLINK

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

Derivation Path: Table 5.5.11.3.4-1, condition DOWNLINK

5.3B.9 MCVideo Transmission End Request CT

5.3B.9.1 Initial conditions

As specified in the test case which calls the procedure.

5.3B.9.2 Definition of system information messages

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

5.3B.9.3 Procedure

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

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

5.3B.9.4 Specific message contents

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

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

Derivation Path: Table 5.5.11.3.1-1, condition DOWNLINK

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

Derivation Path: Table 5.5.11.3.2-1, condition UPLINK

5.3B.10 MCVideo Media Reception End Request CT

5.3B.10.1 Initial conditions

As specified in the test case which calls the procedure.

5.3B.10.2 Definition of system information messages

5.3B.10.3 Procedure

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

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

5.3B.10.4 Specific message contents

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

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

Derivation Path: Table 5.5.11.3.3-1, condition DOWNLINK

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

Derivation Path: Table 5.5.11.3.4-1, condition UPLINK

5.3B.11 MCVideo CO session modification

5.3B.11.1 Initial conditions

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

5.3B.11.2 Definition of system information messages

5.3B.11.3 Procedure

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

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

NOTE 1: An implicit transmit media request may be requested in case of upgrade to an emergency or imminent peril MCVideo group call but not in case of a downgrade or any other re-INVITE

5.3B.11.4 Specific message contents

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

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

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

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

Derivation Path: Table 5.5.11.2.1-1, condition ACK

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

Derivation Path: Table 5.5.11.3.5-1, condition UPLINK

5.3C Generic test procedures for UE MCData operation

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

5.3C.1.1 Initial conditions

As specified in the test case which calls the procedure.

5.3C.1.2 Definition of system information messages

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

5.3C.1.3 Procedure

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

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 described in clause 5.4.3 'MCX CO communication in E-UTRA' take place.	-	-	-	-
2	Check: Does the UE (MCData client) send a SIP MESSAGE request?	^	SIP MESSAGE	1	Р
3	The SS (MCData server) sends a SIP 202 (Accepted) response	\ \	SIP 202 (Accepted)	1	-
4	The SS waits 2 seconds before the SS releases the RRC connection. (NOTE 1)	-	-	-	-
NOTE	1: The specified wait period of 2s shall ensure that	lower laye	r signalling (TCP) is finished.		

5.3C.1.4 Specific message contents

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

None

5.3C.2 CO MCData Call Establishment

5.3C.2.1 Initial conditions

As specified in the test case which calls the procedure.

5.3C.2.2 Definition of system information messages

5.3C.2.3 Procedure

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

St	Procedure		Message Sequence		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	-	-	-	-
	described in clause 5.4.3 'MCX CO				
	communication in E-UTRA' take place.				
2	Check: Does the UE (MCData client) send a SIP	>	SIP INVITE	-	Р
	INVITE requesting the establishment of an				
	MCData call?				
3	The SS sends a SIP 100 Trying	<	SIP 100 (Trying)	-	1
4	The SS (MCData server) responds with a SIP	<	SIP 200 (OK)	-	-
	200 (OK)				
5	Check: Does the UE (MCData client) send a SIP	>	SIP ACK	-	Р
	ACK to acknowledge the session				
	establishment/modification?				
6	The UE (MCData client) connects to the TCP	-	-	-	-
	server at the SS side to establish an MSRP				
	connection.				
	(NOTE 1)				
7	Check: Does the UE (MCData client) send an	>	MSRP SEND	-	Р
	empty MSRP SEND request to bind the TCP				
	connection to the MSRP session?				
8	The SS (MCData server) sends an MSRP 200	<	MSRP 200 (OK)	-	-
	(OK) response.				

NOTE 1: According to TS 24.282 [87] clauses 9.2.3.4.2, 9.2.4.4.2 and 10.2.5.4.2 the SS sets the a=setup attribute set to "passive" (see table 5.5.3.1.2-3) ⇒ The UE's MCData client has the role of the active endpoint

5.3C.2.4 Specific message contents

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

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

Derivation Path: Table 5.5.12.1-1, condition EMPTY_SEND_REQ

5.3C.3 CT MCData Call Establishment

5.3C.3.1 Initial conditions

As specified in the test case which calls the procedure.

5.3C.3.2 Definition of system information messages

5.3C.3.3 Procedure

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

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 described in clause 5.4.4 'MCX CT				
	communication in E-UTRA' take place.				
2	The SS (MCX Server) sends a SIP INVITE	<	SIP INVITE	-	-
	requesting the establishment of an MCData call.				
-	EXCEPTION: Step 3a1 describes behaviour that	-	-	-	-
	depends on the UE implementation; the "lower				
	case letter" identifies a step sequence that take				
	place if the UE responds to a SIP INVITE with a				
	SIP 100 (Trying)				
3a1	The UE (MCX client) sends a SIP 100 (Trying)	>	SIP 100 (Trying)	-	-
4	Check: Does the UE (MCX client) send a SIP	>	SIP 200 (OK)	-	Р
	200 (OK)?				
5	The SS (MCX server) sends a SIP ACK	<	SIP ACK	-	-
-	EXCEPTION: Steps 6a1 - 6b3 describe	-	-	-	-
	behaviour that depends on which role of an				
	endpoint the UE (MCData client) has chosen in				
	its SDP answer sent at step 4				
6a1	IF the UE (MCData client) acts as passive	-	-	-	-
	endpoint (NOTE 1) THEN the SS connects to the				
	TCP server at the UE side to establish an MSRP				
	connection				
6a2	The SS sends an empty MSRP SEND request to	<	MSRP SEND	-	-
	bind the TCP connection to the MSRP session.				
6a3	Check: Does the UE (MCData client) send an	>	MSRP 200 (OK)	-	Р
	MSRP 200 (OK) response?				
6b1	ELSE (NOTE 2) the UE (MCData client)	-	-	-	-
	connects to the TCP server at the SS side to				
	establish an MSRP connection				
6b2	Check: Does the UE (MCData client) send an	>	MSRP SEND	-	Р
	empty MSRP SEND request to bind the TCP				
	connection to the MSRP session?				
6b3	The SS (MCData server) sends an MSRP 200	<	MSRP 200 (OK)	-	-
	(OK) response.				

NOTE 2: The MCData client indicates to act as active endpoint by setting the a=setup attribute of the SDP answer at step 4 to "active" (according to RFC 4145 [119])

5.3C.3.4 Specific message contents

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

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

Derivation Path: Table 5.5.12.2-1, condition EMPTY_SEND_REQ

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

Derivation Path: Table 5.5.12.1-1, condition EMPTY_SEND_REQ

5.3C.4 CO MSRP message transfer

5.3C.4.1 Initial conditions

As specified in the test case which calls the procedure.

5.3C.4.2 Definition of system information messages

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

5.3C.4.3 Procedure

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

St	Procedure		Message Sequence		Verdict
		U-S	Message		
-	EXCEPTION: Steps 1-2 are repeated until the UE (MCData client) indicates the end of the message by setting the continuation-flag to "\$" in the End-line of the MSRP SEND request at step 1	-	-	-	
1	Check: Does the UE (MCData client) send an MSRP SEND request?	>	MSRP SEND	-	Р
2	The SS (MCData server) sends an MSRP 200 (OK) response.	<	MSRP 200 (OK)	-	-
3	In case of chunking the SS reassembles the data contained in the bodies of the MSRP SEND requests. (NOTE 1)	-	-	-	•

NOTE 1: In case of no chunking there is only one MSRP SEND request which contains the entire data.

In case of chunking there are more than one MSRP SEND requests containing the chunks of data and the content type shall be the same for all MSRP SEND requests.

5.3C.4.4 Specific message contents

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

None

5.3C.5 CT MSRP message transfer

5.3C.5.1 Initial conditions

As specified in the test case which calls the procedure.

5.3C.5.2 Definition of system information messages

5.3C.5.3 Procedure

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

St	Procedure Message Sequ		Message Sequence	TP	Verdict
		U-S	Message		
1	The SS sends an MSRP SEND request containing the entire data. (NOTE 1)	<	MSRP SEND	-	-
2	Check: Does the UE (MCData client) send an MSRP 200 (OK) response?	>	MSRP 200 (OK)	-	Р

5.3C.5.4 Specific message contents

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

None

5.3C.6 CO MCData call release

5.3C.6.1 Initial conditions

As specified in the test case which calls the procedure.

5.3C.6.2 Definition of system information messages

5.3C.6.3 Procedure

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

St	St Procedure		Message Sequence	TP	Verdict
		U-S	Message		
1	Check: Does the UE (MCData client) send a SIP BYE request to terminate the MCData communication?	>	SIP BYE	-	Р
2	The SS (MCData server) sends a SIP 200 (OK) response.	<	SIP 200 (OK)	-	ı
-	EXCEPTION: Steps 3a1 - 3b1 describe behaviour that depends on the endpoint role the UE (MCData client) has chosen at call establishment. (NOTE 1)	-	-	-	1
3a1	IF the client is the active endpoint THEN the SS waits 3s for the client to close the MSRP TCP connection. (NOTE 2)	-	-	-	-
3b1	ELSE the SS closes the MSRP TCP connection. (NOTE 3)	-	-	-	-
4	The SS waits 2 seconds before it deactivates the dedicated EPS bearer. (NOTE 4, 5).	-	-	-	-

- NOTE 1: The endpoint role is negotiated in the SDP signalling at call establishment (table 5.3C.2.3-1 and 5.3C.3.3-1)
- NOTE 2: After the wait period the SS may stop the MSRP TCP server independent from whether or not the UE has closed the connection.
- NOTE 3: When the SS has the role of the active endpoint it means that the MCData client hosts the TCP server of the MSRP connection.
- NOTE 4: The specified wait period of 2s shall ensure that lower layer signalling (TCP) is finished and any not allowed behaviour captured.
- NOTE 5: The RRC connection is kept to allow subsequent signalling using the control plane as e.g. an SDS NOTIFICATION in case of Standalone SDS.

5.3C.6.4 Specific message contents

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

None

5.3C.7 CT MCData call release

5.3C.7.1 Initial conditions

As specified in the test case which calls the procedure.

5.3C.7.2 Definition of system information messages

5.3C.7.3 Procedure

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

St	Procedure		Message Sequence		Verdict
		U-S	Message		
1	The SS (MCData server) sends a SIP BYE request to terminate the MCData communication.	V	SIP BYE	-	•
2	Check: Does the UE (MCData client) send a SIP 200 (OK) response?	^	SIP 200 (OK)	•	Р
-	EXCEPTION: Steps 3a1 - 3b1 describe behaviour that depends on the endpoint role the UE (MCData client) has chosen at call establishment. (NOTE 1)	1	-	-	1
3a1	IF the client is the active endpoint THEN the SS waits 3s for the client to close the MSRP TCP connection. (NOTE 2)	1	-	-	•
3b1	ELSE the SS closes the MSRP TCP connection. (NOTE 3)	1	-	-	•
4	The SS waits 2 seconds before the SS deactivates the dedicated EPS bearer. (NOTE 4, 5)	1	-	-	-

- NOTE 1: The endpoint role is negotiated in the SDP signalling at call establishment (table 5.3C.2.3-1 and 5.3C.3.3-1)
- NOTE 2: After the wait period the SS may stop the MSRP TCP server independent from whether or not the UE has closed the connection..
- NOTE 3: When the SS has the role of the active endpoint it means that the MCData client hosts the TCP server of the MSRP connection.
- NOTE 4: The specified wait period of 2s shall ensure that lower layer signalling (TCP) is finished and any not allowed behaviour captured.
- NOTE 5: The RRC connection is kept to allow subsequent signalling using the control plane as e.g. an SDS NOTIFICATION in case of Standalone SDS.

5.3C.7.4 Specific message contents

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

None

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

5.3C.8.1 Initial conditions

As specified in the test case which calls the procedure.

5.3C.8.2 Definition of system information messages

5.3C.8.3 Procedure

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

St	Procedure		Message Sequence		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 and on the UE implementation.	-	-	-	-
1a1	IF in RRC_IDLE state and pc_MCData_MSFDiscoverySignalling, the E-UTRA/EPC actions described in clause 5.4.3 'MCX CO communication in E-UTRA' take place.	-	-	-	-
-	EXCEPTION: Steps 2a1 – 2b1 describe behaviour that depends on the UE implementation	-	-	-	-
2a1	IF pc_MCData_MSFDiscoverySignalling THEN Check: Does the UE (MCData client) send a SIP MESSAGE request to discover the absolute URI of the media storage function?	>	SIP MESSAGE	-	Р
2a2	The SS (MCData server) sends a SIP 200 (OK) response.	<	SIP 200 (OK)	-	-
2a3	The SS (MCData server) sends a SIP MESSAGE request containing the absolute URI of the media storage function in the <mcdata-controller-psi> element of the mcdata-info.</mcdata-controller-psi>	<	SIP MESSAGE	-	-
2a4	Check: Does the UE (MCData client) send a SIP 200 (OK) response?	>	SIP 200 (OK)	-	Р
2b1	ELSE the UE determines the value of the absolute URI associated with the media storage function of the MCData content server from the <mcdatacontentserveruri> element of the MCData user profile document</mcdatacontentserveruri>	-	-	-	-

5.3C.8.4 Specific message contents

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

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

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

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

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

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

Derivation Path: Table 5.5.2.7.2-1	, condition MCDATA_FD			
Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
Request-URI	tsc_MCData_PublicSer viceId_A	According to TS 24.282 [87] clause 10.2.1.3.3 the participating function just forwards the SIP MESSAGE received from the controlling function to the client		
Accept-Contact				
ac-value[2]	not present			
P-Asserted-Identity				
name-addr	px_MCX_SIP_PublicUs erld_A_1	Public user ID of the calling MCData user (TS 24.282 [87] clause 10.2.1.3.4)		
Message-body				
MIME body part		MCData-Info		
MIME-part-body	MCData-Info as described in Table 5.3C.8.4-4			

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

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

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

5.3C.9.1 Initial conditions

Same as 5.3C.8.1.

5.3C.9.2 Definition of system information messages

Same as 5.3C.8.2.

5.3C.9.3 Procedure

Same as 5.3C.8.3.

5.3C.9.4 Specific message contents

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

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

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

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

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

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

Same as Table 5.3C.8.4-3

5.3C.10 FD file upload using HTTP

5.3C.10.1 Initial conditions

As specified in the test case which calls the procedure.

5.3C.10.2 Definition of system information messages

5.3C.10.3 Procedure

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

St	Procedure		Message Sequence	TP	Verdict	
		U-S	Message			
-	EXCEPTION: Step 1a1 describes behaviour that	-	-	-	-	
	depends on the E-UTRA RRC state at the time the present procedure is called.					
1a1	IF in RRC_IDLE state, the E-UTRA/EPC actions	-	-	-	-	
	described in clause 5.4.3 'MCX CO communication in E-UTRA' take place.					
2	Check: Does the UE (MCData client) send an HTTP POST request to upload a file to the media	>	HTTP POST	-	Р	
	storage function?					
3	The SS (MCData server) sends an HTTP 201 Created response containing a Location header field with a URL identifying the location of the resource where the file has been stored at the media storage function.	<	HTTP 201 Created	-		
4	Check: Does the UE (MCData client) send a SIP MESSAGE request containing an FD SIGNALLING PAYLOAD with Payload content type "FILEURL" and with the Payload data containing the URL of the file?	>	SIP MESSAGE	-	Р	
5	The SS (MCData server) sends a SIP 202 (Accepted) response	<	SIP 202 (Accepted)	-		
6	The SS waits 2 seconds before the SS releases	-	-	-	-	
	the RRC connection.					
	(NOTE 1)					
NOTE	1: The specified wait period of 2s shall ensure that	lower laye	er signalling (TCP) is finished	i		

5.3C.10.4 Specific message contents

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

None

5.3C.11 FD file accept and download using HTTP

5.3C.11.1 Initial conditions

As specified in the test case which calls the procedure.

5.3C.11.2 Definition of system information messages

5.3C.11.3 Procedure

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

St	Procedure	Message Sequence		TP	Verdict
		U-S	Message		
-	EXCEPTION: Step 1a1 describes behaviour that depends on the E-UTRA RRC state at the time the present procedure is called.	-	-	-	-
1a1	IF in RRC_IDLE state, the E-UTRA/EPC actions described in clause 5.4.3 'MCX CO communication in E-UTRA' take place.	-	-	-	-
2	Check: Does the UE (MCData client) send a SIP MESSAGE request containing an FD NOTIFICATION with FD disposition notification type "FILE DOWNLOAD REQUEST ACCEPTED"?	>	SIP MESSAGE	-	Р
3	The SS (MCData server) sends a SIP 202 (Accepted) response	<	SIP 202 (Accepted)	-	-
4	Check: Does the UE (MCData client) send an HTTP GET request to download the file?	>	HTTP GET	-	Р
5	SS (MCData server) sends an HTTP 200 OK response containing the requested file.	<	HTTP 200 OK	-	-
-	EXCEPTION: Steps 6a1 describes behaviour that depends on the test case requirements; the "lower case letter" identifies a step sequence that takes place when the SS has included a FD disposition request of "FILE DOWNLOAD COMPLETED UPDATE" in the FD SIGNALLING PAYLOAD	-	-	-	•
6a1	Check: Does the UE (MCData client) send a SIP MESSAGE request containing an FD NOTIFICATION with disposition notification type "FILE DOWNLOAD COMPLETED"?	>	SIP MESSAGE	-	Р
6a2	The SS (MCData server) sends a SIP 202 (Accepted) response	<	SIP 202 (Accepted)	-	-
7	The SS waits 2 seconds before the SS releases the RRC connection. (NOTE 1)	-	-	-	-
NOTE	1: The specified wait period of 2s shall ensure that	lower laye	r signalling (TCP) is finished	l	

5.3C.11.4 Specific message contents

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

None

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

5.3C.12.1 Initial conditions

As specified in the test case which calls the procedure.

5.3C.12.2 Definition of system information messages

5.3C.12.3 Procedure

Table 5.3C.12.3-1: CO MCData Call Establishment

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

NOTE 1: According to TS 24.282 [87] clauses 9.2.3.4.2, 9.2.4.4.2 and 10.2.5.4.2 the SS sets the a=setup attribute set to "passive" (see table 5.5.3.1.2-3) ⇒ The UE's MCData client has the role of the active endpoint

5.3C.12.4 Specific message contents

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

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

Derivation Path: Table 5.5.2.5.2-1, condition MCDATA_SDS, re_INVITE						
Information Element	Value/remark	Comment	Reference	Condition		
Request-Line						
Request-URI	tsc_MCX_SessionID_B	session identity of the pre-established session	TS 24.282 [87] clause 9.2.5.2.2.1			
Message-body						
MIME body part	not present	SDP message				
MIME body part		MCData Info				
MIME-part-body	MCData-Info message as described in Table 5.3C.12.4-2					

Editor's Note: TS 24.282 [87] clause 9.2.5.1.2 does not clearly specify the header fields of the INVITE and therefore the default header fields are used

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

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

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

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

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

Derivation Path: Table 5.5.12.1-1, condition EMPTY_SEND_REQ

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

5.3C.13.1 Initial conditions

As specified in the test case which calls the procedure.

5.3C.13.2 Definition of system information messages

5.3C.13.3 Procedure

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

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

NOTE 1: The endpoint role is negotiated in the SDP signalling at call establishment.

NOTE 2: After the wait period the SS may stop the MSRP TCP server independent from whether or not the UE has closed the connection.

NOTE 3: When the SS has the role of the active endpoint it means that the MCData client hosts the TCP server of the MSRP connection.

5.3C.13.4 Specific message contents

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

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

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

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

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

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

Derivation Path: Table 5.5.2.5.2-1, condition MCDATA_SDS, re_INVITE					
Information Element	Value/remark	Comment	Reference	Condition	
Request-Line					
Request-URI	tsc_MCX_SessionID_B	session identity of the pre-established session	TS 24.282 [87] clause 9.2.5.4.2.1		
Message-body					
MIME body part	not present	SDP message			
MIME body part		MCData Info			
MIME-part-body	MCData-Info message as described in Table 5.3C.13.4-4				

Editor's Note: TS 24.282 [87] clause 9.2.5.1.2 does not clearly specify the header fields of the INVITE and therefore the default header fields are used

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

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

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

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

5.4 Generic test procedures for UE operation over E-UTRA/EPC

5.4.1 General

The purpose of the procedures specified in the following clauses is to facilitate test description by providing procedure sequences which can be referred from the relevant test cases specified e.g. in 3GPP TS 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/EPC 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".

Depending on the TS 36.579-5[5] test model being used, the E-UTRA/EPC signalling is:

- MCX EUTRA test model: normative.

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

5.4.1A UE APN/PDN support assumptions

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

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

NOTE 2: Void.

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

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

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

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

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

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

To serve the above scenarios the following parameters are defined in TS 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).

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

- MCPTT:

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

MCVideo:

A single dedicated EPS bearer with QCI=67 is used with packet filters for the audio and video streams and transmission control signalling (see also TS 23.281 [90] clause 5.5.3)

- MCData:

A single dedicated EPS bearer with QCI=70 is used with packet filter for the TCP data stream (see also TS 23.282 [91] clause 5.8.3)

5.4.2 MCPTT UE registration

5.4.2.1 Initial conditions

System Simulator:

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

IUT:

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

5.4.2.2 Definition of system information messages

5.4.2.3 Procedure

Table 5.4.2.3-1: E-UTRA/EPC signalling for UE registration

St	Procedure	Message Sequence		
31	Flocedule	U-S	Message Message	
0	Switch the UE on.	-	- Message	
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			
	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.		DDO: III lafa was dia a Tua a afa a	
6	The UE transmits an AUTHENTICATION RESPONSE	>	RRC: ULInformationTransfer	
7	message and establishes mutual authentication. The SS transmits a NAS SECURITY MODE		NAS: AUTHENTICATION RESPONSE 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.		I W.S. SESSICITI MODE SOWII LETE	
-	EXCEPTION: Steps 9a1 to 9a2 describe behaviour that	-	-	
	depends on UE configuration; the "lower case letter"			
	identifies a step sequence that take place if the UE has			
	ESM information which needs to be transferred.			
9a1	IF the UE sets the ESM information transfer flag in the	<	RRC: DLInformationTransfer	
	last PDN CONNECTIVITY REQUEST message THEN		NAS: ESM INFORMATION REQUEST	
	the SS transmits an ESM INFORMATION REQUEST			
	message to initiate exchange of protocol configuration			
	options and/or APN.		DDC 1111 (T. (
9a2	The UE transmits an ESM INFORMATION RESPONSE	>	RRC: ULInformationTransfer NAS: ESM INFORMATION RESPONSE	
	message to transfer protocol configuration options and/or APN.		NAS. ESIVI INFORIVIATION RESPONSE	
10	The SS transmits a SecurityModeCommand message	<	RRC: SecurityModeCommand	
10	to activate AS security.	,	Titte. Godantywood Command	
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 <i>UECapabilityInformation</i> 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: ACTIVATE DEFAULT EDS	
	SRB2-DRB(1, 0) according to TS 36.508 [6] clause 4.8.2.2.1.1.		NAS: ACTIVATE DEFAULT EPS BEARER CONTEXT REQUEST	
	This message includes the ATTACH ACCEPT		BLANCK CONTEXT REQUEST	
	message. The ACTIVATE DEFAULT EPS BEARER			
	CONTEXT REQUEST message is piggybacked in			
	ATTACH ACCEPT. (NOTE 1)			
15	The UE transmits an	>	RRC:	
	RRCConnectionReconfigurationComplete message to		RRCConnectionReconfigurationComplet	
	confirm the establishment of default bearer.		е	
-	EXCEPTION: In parallel to the event described in steps	-	-	
	16 and 16A below, if initiated by the UE the generic			
	procedure for IP address allocation in the U-plane as			
	defined in TS 36.508 [6] clause 4.5A.1 takes place. EXCEPTION: IF the UE is configured to register for			
1 -	MCX as first PDN during initial registration, THEN in	-	-	
	parallel to the event described in steps 16 and 16A			
	below the main procedure for Initial MCX			
	Authentication, Registration, Configuration and			
	Subscription described in Table 5.3.2.2.1-1 takes place.			

St	Procedure	Message Sequence		
٥٠	riocedure	U - S Message		
<u> </u>	EXCEPTION: IF the UE is configured to register for IMS		- message	
	as first PDN during initial registration, THEN in parallel			
	to the event described in steps 16 and 16A below the			
	generic procedure for IMS signalling in the U-plane			
	specified in TS 36.508 clause 4.5A.3 takes place if			
	requested by the UE			
16	This message includes the ATTACH COMPLETE	>	RRC: ULInformationTransfer	
	message. The ACTIVATE DEFAULT EPS BEARER		NAS: ATTACH COMPLETE	
	CONTEXT ACCEPT message is piggybacked in		NAS: ACTIVATE DEFAULT EPS	
	ATTACH COMPLETE.		BEARER CONTEXT ACCEPT	
-	EXCEPTION: Depending on the UE capability step 16A	-	-	
	may be performed 0, 1 or 2 times. (NOTE 1)			
16A	The E-UTRA/EPC signalling for establishment of an	-	-	
	additional PDN connectivity according to table 5.4.2.3-			
	1A takes place			
17	The SS transmits an RRCConnectionRelease	<	RRC: RRCConnectionRelease	
	message.			
-	EXCEPTION: IF the UE is not configured to register for	-	-	
	MCX during initial registration, THEN steps 18 to 27			
40	take place.			
18	Make the UE user request MCPTT service	-	-	
19	authorisation/configuration. The UE transmits an RRCConnectionRequest		RRCConnectionRequest	
19	message.	>	RRCConnectionRequest	
20	SS transmit an RRCConnectionSetup message.		RRC: RRCConnectionSetup	
21	The UE transmits an RRCConnectionSetupComplete	<	RRC: RRCConnectionSetupComplete	
21	message to confirm the successful completion of the		NAS: SERVICE REQUEST	
	connection establishment and to initiate the session		TWIST SERVISE REGISTS	
	management procedure by including the SERVICE			
	REQUEST message.			
22	The SS transmits a SecurityModeCommand message	<	RRC: SecurityModeCommand	
	to activate AS security.		,	
23	The UE transmits a SecurityModeComplete message	>	RRC: SecurityModeComplete	
	and establishes the initial security configuration.			
24	The SS configures a new data radio bearer, associated	<	RRC: RRCConnectionReconfiguration	
	with the default EPS bearer context.			
	The RRCConnectionReconfiguration message is using			
	condition SRB2-DRB(N, 0) with N being the number of			
	PDN connectivities established during initial registration			
	(steps 0 – 17).			
	The DRBs associated with the respective default EPS			
	bearer context obtained during the attach procedure are established			
25			RRC:	
25	The UE transmits an RRCConnectionReconfigurationComplete message to	>	RRCConnectionReconfigurationComplet	
	confirm the establishment of the new radio bearer,		e	
	associated with the default EPS bearer context.			
26	The E-UTRA/EPC signalling for establishment of an	_	-	
	additional PDN connectivity according to table 5.4.2.3-			
	1A takes place			
27	The SS transmits an RRCConnectionRelease	<	RRC: RRCConnectionRelease	
	message.			

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.

Table 5.4.2.3-1A: E-UTRA/EPC signalling for establishment of an additional PDN connectivity

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

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: Void

5.4.2.4 Specific message contents

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

Table 5.4.2.4-1..6: Void

5.4.2A 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 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 MCX CO communication in E-UTRA

5.4.3.1 Initial conditions

System Simulator:

- SS (MCX 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 (MCX client)
 - The test USIM set as defined in clause 5.5.10 is inserted.
 - The UE has performed MCX registration as specified in clause 5.4.2 for MCPTT, in clause 5.4.2A for MCVideo or in clause 5.4.2B for MCData and is in E-UTRA Registered, Idle Mode state with the MCX 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 MCX and SIP signalling.
- NOTE 1: The assumptions for the PDN support, including the default EPS bearer context QCI requirements in regard to the different PDN are described in 5.4.1A.
 - Detailed initial conditions for the UE (MCX client) shall be specified in the test case 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: E-UTRA/EPC signalling for MCX CO communication

St	Procedure	Message Sequence	
		U - S	Message
1	Void	-	-
2	The UE transmits an RRCConnectionRequest message	>	RRCConnectionRequest
	with 'establishmentCause' set to 'mo-Data'.		
3	SS transmit an <i>RRCConnectionSetup</i> 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.		

St Procedure Message Seque			Message Sequence
		U - S	Message
7	The SS configures a data radio bearer, associated with the default EPS bearer context. The RRCConnectionReconfiguration message is using condition SRB2-DRB(n, m) as specified in TS 36.508 [6] clause 4.8.2.2.1, with	<	RRC: RRCConnectionReconfiguration
	n=13 depending on the number of PDNs (see clause 5.4.1A)		
	m=01 depending on the use case: IF the procedure is used for on-demand call or communication establishment, for establishment of a pre-established session or IF a pre-established session exists THEN m=1		
	ELSE m=0		
-	EXCEPTION: In parallel to the events described below, depending on the context in which the procedure is used, the MCX client may start with user plane signalling (NOTE 1).	-	-
8	The UE transmits an RRCConnectionReconfigurationComplete message to confirm the establishment of the new data radio bearer, associated with the default EPS bearer context.	>	RRC: RRCConnectionReconfigurationComplet e
9-15	Void.	-	-
-	EXCEPTION: Steps 16a1-16a3 describe behaviour that depends on the context in which the procedure is used: The steps take place if the procedure is used for ondemand call or communication establishment or establishment of a pre-established session,	-	-
16a1	The SS configures a new RLC-UM data radio bearer, associated with the dedicated EPS bearer context. The RRCConnectionReconfiguration message contains an ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST message for a dedicated EPS bearer according to TS 36.508 [6] clause 6.6.2 with - MCPTT using dedicated EPS bearer context #5 (QCI 65) - MCVideo using dedicated EPS bearer context #10 (QCI 67) - MCData using dedicated EPS bearer context #9 (QCI 70)	<	RRC: RRCConnectionReconfiguration NAS: ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST
16a2	The UE transmits an RRCConnectionReconfigurationComplete message to confirm the establishment of the data radio bearer associated with the default EPS.	>	RRC: RRCConnectionReconfigurationComplet e
16a3	The UE transmits an ACTIVATE DEDICATED EPS BEARER CONTEXT ACCEPT message.	>	RRC: ULInformationTransfer NAS:ACTIVATE DEDICATED EPS BEARER CONTEXT ACCEPT
NOTE	1: User plane signalling can be SIP or HTTP signalling.		

Table 5.4.3.3-2: Void

5.4.3.4 Specific message contents

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

5.4.3A Void

5.4.3B Void

5.4.4 MCX CT communication in E-UTRA

5.4.4.1 Initial conditions

System Simulator:

- SS (MCX 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 (MCX client):
 - The test USIM set as defined in clause 5.5.10 is inserted.
 - The UE has performed MCX registration as specified in clause 5.4.2 for MCPTT, in clause 5.4.2A for MCVideo or in clause 5.4.2B for MCData and is in E-UTRA Registered, Idle Mode state with the MCX 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 MCX and SIP signalling.
- NOTE 1: The assumptions for the PDN support , including the default EPS bearer context QCI requirements in regard to the different PDN are described in 5.4.1A.
 - Detailed initial conditions for the UE (MCX client) shall be specified in the test case 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: E-UTRA/EPC signalling for MCX CT communication

St	Procedure	Message Sequence		
		U - S	Message	
1	SS sends a <i>Paging</i> message on the appropriate paging 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 <i>SecurityModeCommand</i> 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 data radio bearer, associated with the default EPS bearer context. The RRCConnectionReconfiguration message is using condition SRB2-DRB(n, m) as specified in TS 36.508 [6] clause 4.8.2.2.1, with n=13 depending on the number of PDNs (see clause 5.4.1A) m=01 depending on the use case: IF the procedure is used for call or communication establishment or IF a pre-established session exists THEN m=1	<	RRC: RRCConnectionReconfiguration	
	ELSE m=0			
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	
9-16	Void.	-	-	
-	EXCEPTION: Steps 17a1-17a3 describe behaviour that depends on the context in which the procedure is used: The steps take place if the procedure is used for ondemand call or communication establishment,	-	-	
-	EXCEPTION: In parallel to the events described below there is SIP signalling for the on-demand call or communication establishment.	-	-	
17a1	The SS configures a new RLC-UM data radio bearer, associated with the dedicated EPS bearer context. The RRCConnectionReconfiguration message contains an ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST message for a dedicated EPS bearer according to TS 36.508 [6] clause 6.6.2 with - MCPTT using dedicated EPS bearer context #5 (QCI 65) - MCVideo using dedicated EPS bearer context #10 (QCI 67) - MCData using dedicated EPS bearer context #9 (QCI 70)	<	RRC: RRCConnectionReconfiguration NAS: ACTIVATE DEDICATED EPS BEARER CONTEXT REQUEST	
17a2	The UE transmits an RRCConnectionReconfigurationComplete message to confirm the establishment of the data radio bearer associated with the default EPS.	>	RRC: RRCConnectionReconfigurationComplet e	
17a3	The UE transmits an ACTIVATE DEDICATED EPS BEARER CONTEXT ACCEPT message.	>	RRC: ULInformationTransfer NAS:ACTIVATE DEDICATED EPS BEARER CONTEXT ACCEPT	

Table 5.4.4.3-2: Void

5.4.4.4 Specific message contents

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

- 5.4.4A Void
- 5.4.4B Void

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

5.4.5.1 Initial conditions

System Simulator:

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

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

IUT:

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

5.4.5.2 Definition of system information messages

N/a (out of E-UTRA coverage)

5.4.5.3 Procedure

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

St	Procedure	Message Sequence		
		U - S	Message	
1	Power up the UE.	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.	<	DIRECT_SECURITY_MODE_COMMAND	
6	UE sends a DIRECT_SECURITY_MODE_COMPLETE message ciphered and integrity protected with the new security context.	->	DIRECT_SECURITY_MODE_COMPLET E	
7	SS-UE1 sends a DIRECT_COMMUNICATION_ACCEPT message.	<	DIRECT_COMMUNICATION_ACCEPT	
-	EXCEPTION: After the communication is established, an IP address configuration procedure is performed depending on what the UE has indicated in the IP Address Config IE (if it is not "address allocation not supported") in the DIRECT_COMMUNICATION_REQUEST message, and, the SS-UE1 itself indicating "address allocation not supported" in the DIRECT_COMMUNICATION_ACCEPT message. EXCEPTION: Steps 9a1 to 9a2 describe behaviour that depends on UE implementation; the "lower case letter" identifies a step sequence that depends on the UE implementation of keepalive procedure.	-	-	
9a1	UE sends a DIRECT_COMMUNICATION_KEEPALIVE message.	>	DIRECT_COMMUNICATION_KEEPALI VE	
9a2	SS-UE1 sends a DIRECT_COMMUNICATION_KEEPALIVE_ACK message.	<	DIRECT_COMMUNICATION_KEEPALI VE_ACK	

5.4.5.4 Specific message contents

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

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

Table 5.4.5.4-2: DIRECT_SECURITY_MODE_COMMAND (step 5, Table 5.4.5.3-1)

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

Table 5.4.5.4-3: DIRECT_SECURITY_MODE_COMPLETE (step 6, Table 5.4.5.3-1)

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

Table 5.4.5.4-4: DIRECT_COMMUNICATION_KEEPALIVE (step 9a1, Table 5.4.5.3-1)

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

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

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

IUT:

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

UE state:

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

5.4.6.2 Definition of system information messages

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

5.4.6.3 Procedure

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

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

5.4.6.4 Specific message contents

Table 5.4.6.4-1: DIRECT_COMMUNICATION_REQUEST (step 3, Table 5.4.6.3-1)

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

Table 5.4.6.4-2: DIRECT_SECURITY_MODE_COMMAND (step 4 Table 5.4.6.3-1)

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

Table 5.4.6.4-3: DIRECT_SECURITY_MODE_COMPLETE (step 5, Table 5.4.6.3-1)

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

Table 5.4.6.4-4: DIRECT_COMMUNICATION_KEEPALIVE (step 8, Table 5.4.6.3-1)

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

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

IUT:

- UE (MCX client)

ProSe related configuration

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

UE state

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

5.4.7.2 Definition of system information messages

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

5.4.7.3 Procedure

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

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

5.4.7.4 Specific message contents

Table 5.4.7.4-1: DIRECT_COMMUNICATION_RELEASE (step 1, Table 5.4.7.3-1)

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

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

5.4.8.1 Initial conditions

System Simulator:

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

IUT:

- UE (MCX client)

ProSe related configuration

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

UE state

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

5.4.8.2 Definition of system information messages

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

5.4.8.3 Procedure

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

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

5.4.8.4 Specific message contents

Table 5.4.8.4-1: DIRECT_COMMUNICATION_RELEASE (step 1, Table 5.4.8.3-1)

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

5.4.9 MCX communication in E-UTRA / Change of cells

5.4.9.1 Initial conditions

System Simulator:

- SS (MCX 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 (MCX client)
 - The UE is allowed to operate on both PLMN1 and PLMN2. PLMN1 is set as HPLMN and PLMN2 is set as VPLMN in Table 5.5.8.1-1 (MCX Initial UE Configuration Defaults).
- NOTE 1: The assumptions for the PDN support of a MCX capable UE, including the default EPS bearer context QCI requirements in regard to the different PDN are described in 5.4.1A.
 - Detailed initial conditions for the UE (MCX 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 EPRE	dBm/15k Hz	-79	"Off"	"Off"
T1	Cell-specific RS EPRE	dBm/15k Hz	"Off"	-79	"Off"
T2	Cell-specific RS EPRE	dBm/15k Hz	"Off"	"Off"	-79

Table 5.4.9.3-2: E-UTRA/EPC signalling for UE changing cells

St	Procedure	Message Sequence	
		U-S	Message
1	The SS configures: Cell 1 and Cell 2 parameters according to the row "T1" in table 5.4.9.3-1 in order to simulate needs for cell reselection to Cell2.	-	-
2	Wait for 5 sec to allow the UE to adjust to cell changes. NOTE 1.	-	-
3	The SS configures: Cell 2 and Cell 4 parameters according to the row "T2" in table 5.4.9.3-1 in order to simulate needs for cell reselection to Cell4.	-	-
4	The Generic test procedure for 'Tracking area updating procedure' defined in TS 36.508 [6] clause 4.5A.2 takes place. NOTE 2.	-	-

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

NOTE 2: The UE may start transmitting MCX 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 MCX CT communication over ProSe direct one-to-many communication out of E-UTRA coverage / Announcing/Discoveree procedure for group member discovery

5.4.10.1 Initial conditions

System Simulator:

- SS-UE1 (MCX client).
 - For the underlying "transport bearer" over which the SS and the UE will communicate, the SS is behaving as SS-UE1 as defined in TS 36.508 [6], configured for and operating as ProSe Direct Communication transmitting and receiving device.

- GNSS simulator configured to simulate a location in the centre of Geographical area #1 and providing timing reference as defined in TS 36.508 [6] Table 4.11.2-2 scenario #1, for the assistance of E-UTRAN off-network testing.

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

IUT:

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

UE state:

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

5.4.10.2 Definition of system information messages

N/a (out of E-UTRA coverage)

5.4.10.3 Procedure

Table 5.4.10.3-1: ProSe Direct Discovery for public safety use / Announcing/Discoveree procedure for group member discovery for MCX off-network CT group calls

St	Procedure		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 MCX procedure taking place.	-	-		
-	EXCEPTION: Step 4 is repeated until the MCX protocol data unit provided by the higher layers is transmitted in full. NOTE 2.	-	-		
4	SS-UE1 sends sidelink communication over the PC5 interface in the next transmission period using the timing reference provided by the GNSS simulator (same to be used by the UE). NOTE 3.	<	STCH PDCP SDU packet		
-	EXCEPTION: Step 5 is repeated until the MCX protocol data unit provided by the higher layers is transmitted in full. NOTE 4.	-	-		
5	The UE sends sidelink communication over the PC5 interface in the next transmission period using the timing reference provided by the GNSS simulator (same to be used by the SS-UE1). NOTE 3.	>	STCH PDCP SDU packet		

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

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

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

5.4.10.4 Specific message contents

Table 5.4.10.4-1: PC5_DISCOVERY (step 3a2 Table 5.4.10.3-1)

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

Table 5.4.10.4-2: PC5_DISCOVERY (step 3b2 Table 5.4.10.3-1)

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

Table 5.4.10.4-3: PC5_DISCOVERY (step 3b3a1 Table 5.4.10.3-1)

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

5.4.11 MCX CO communication over ProSe direct one-to-many communication out of E-UTRA coverage / Monitoring/Discoverer procedure for group member discovery / One-to-many communication

5.4.11.1 Initial conditions

System Simulator:

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

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

IUT:

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

UE state:

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

5.4.11.2 Definition of system information messages

N/a (out of E-UTRA coverage)

5.4.11.3 Procedure

Table 5.4.11.3-1: ProSe Direct Discovery for public safety use / Monitoring/Discoverer procedure for group member discovery for MCX off-network CO group calls

St Procedure Mes		Message Sequence	
		U - S	Message
1	Power up the UE.	-	-
2	Wait for 60 sec to allow the UE to determine that it is in the Geographical area #1 set in the USIM for operation when UE is "not served by E-UTRAN and acquire reference timing.	-	-
-	EXCEPTION: Steps 3a1-3b3 describe events which depend on the UE capabilities; the "lower case letter" identifies a step sequence that takes place if the UE is capable or not of Monitoring for group member discovery.	-	-
3a1	IF pc_ProSeMonForGtoupMemberDiscovery (TS 36.523-2 [75]) THEN the SS-UE1 starts continuously transmitting in the relevant transmission periods a PC5_DISCOVERY message for Group Member Discovery Announcement applying DUIK, DUSK, and DUCK with the associated Encrypted Bitmask, along with the UTC-based counter to the PC5_DISCOVERY message.	<	PC5_DISCOVERY
3b1	ELSE Force the UE upper layer application corresponding to ProSe Application ID px_ProSeAnnApplicationIdentity2 (TS 36.523-3 [74]) to solicit proximity of other UEs in a discovery group. NOTE 1.	-	-
3b2	The UE transmits in the next transmission period a PC5_DISCOVERY message for Group Member Discovery Solicitation applying DUIK, DUSK, and DUCK with the associated Encrypted Bitmask, along with the UTC-based counter to the PC5_DISCOVERY message.	>	PC5_DISCOVERY
3b3	SS-UE1 transmits a PC5_DISCOVERY message for Group Member Discovery Response applying DUIK, DUSK, and DUCK with the associated Encrypted Bitmask, along with the UTC-based counter to the PC5_DISCOVERY message and including the target Discovery Group ID of the discovery group to be discovered in step 2b2.	<	PC5_DISCOVERY
-	EXCEPTION: Steps 4 and 5 may be repeated multiple times depending on the MCX procedure taking place.	-	-
-	EXCEPTION: Step 4 is repeated until the MCX protocol data unit provided by the higher layers is transmitted in full. NOTE 2.	-	-
4	The UE sends sidelink communication over the PC5 interface in the next transmission period using the timing reference provided by the GNSS simulator (same to be used by the SS-UE1). NOTE 3.	>	STCH PDCP SDU packet
-	EXCEPTION: Step 5 is repeated until the MCX protocol data unit provided by the higher layers is transmitted in full. NOTE 4.	-	-
5	SS-UE1 sends sidelink communication over the PC5 interface in the next transmission period using the timing reference provided by the GNSS simulator (same to be used by the UE). NOTE 3.	<	STCH PDCP SDU packet

St	Procedure	Message Sequence		
		U-S	Message	
NOTE	1: UEs which are not capable of Monitoring for group member discovery may start Discoverer procedure automatically.			
NOTE	2: The UE may need to send more than one MCX protocol data unit in sequence with no response expected between them from the SS-UE1.			
NOTE	3: Which MCX protocol data units are included in the sidelink communication is defined in the test case using the present procedure.			
NOTE	4: The SS-UE1 may need to send more than one MCX presented between them from the UE.	rotocol data	a unit in sequence with no response	

5.4.11.4 Specific message contents

Table 5.4.11.4-1: PC5_DISCOVERY (step 3a1 Table 5.4.11.3-1)

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

Table 5.4.11.4-2: PC5_DISCOVERY (step 3b2 Table 5.4.11.3-1)

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

Table 5.4.11.4-3: PC5_DISCOVERY (step 3b3 Table 5.4.11.3-1)

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

5.4.12 MCX communication over MBMS

5.4.12.1 Initial conditions

System Simulator:

- SS (MCX 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 (MCX client):
 - E-UTRAN UE supporting MBMS services. The UE has performed MCX registration as specified in clause 5.4.2 for MCPTT, in clause 5.4.2A for MCVideo or in clause 5.4.2B for MCData 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 (MCX 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: MCX communication over MBMS

St	Procedure		Message Sequence
		U-S	Message
1	SS transmits MBSFNAreaConfiguration message	<	MBSFNAreaConfiguration
2	Wait for a period equal to the MCCH modification period for the UE to receive MBSFNAreaConfiguration message.	-	-
-	EXCEPTION: Step 3 is repeated continuously to carry the relevant MCX protocol data units provided by the higher layers.	-	-
3	The SS transmits 1 MBMS Packet on the MTCH in the next MCH Scheduling Period.	<	MBMS Packet
	NOTE: Which MCX protocol data units are sent and at which time is defined in the test case using the present procedure.		

5.4.12.4 Specific message contents

None

5.4.13 Void

5.5 Default message and other information elements content

5.5.1 General

The following conditions apply throughout clause 5.5:

Table 5.5.1-1: Conditions

Condition	Explanation

ON-NETWORK	Message/IE sent only in on-network scenario.
OFF-NETWORK	Message/IE sent only in off-network scenario.
PRIVATE-CALL	Message/IE sent only as part of a Private call handling.
GROUP-CALL	Message/IE sent only as part of a Group call handling.
BROADCAST-CALL	Message/IE sent only as part of a Broadcast group call handling.
EMERGENCY-CALL	Message/IE sent only as part of an Emergency call handling.
IMMPERIL-CALL	Message/IE sent only as part of an Immanent Peril call handling.
CHAT-GROUP-CALL	Message/IE sent only as part of a Chat group call scenario.
AMBIENT-LISTENING	Message/IE sent only as part of an ambient listening call
FIRST-TO-ANSWER	Message/IE sent only as part of a first-to-answer call
CONFIG	Message/IE sent only in configuration/authentication/authorisation scenario.
GROUPCONFIG	Message/IE sent only in group configuration scenario.
GROUPKEY	Message/IE sent only in group key material retrieval scenario.
SERVICE_AUTH	Message/IE for service authorisation
PRESENCE-EVENT	Message/IE for presence even package
POC-SETTINGS-EVENT	Message/IE for poc-settings even package
AFFILIATION	Message/IE for affiliation
LOCATION-INFO	Message containing location info
UDP	UE uses UDP for sending a request (this implies UDP to be used for a
	corresponding response)
TCP	UE uses TCP for sending a request (this implies TCP to be used for a
	corresponding response)
MO_CALL	Call (dialog) has been initiated by the UE (mobile originated call)
MT_CALL	Call (dialog) has been initiated by the SS (mobile terminated call)
MCPTT	MCPTT specific message content
MCVIDEO	MCVideo specific message content
MCDATA	MCData specific message content

5.5.2 Default SIP message and other information elements

5.5.2.1 SIP ACK

5.5.2.1.1 SIP ACK from the UE

Table 5.5.2.1.1-1: SIP ACK from the UE

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Request-Line	Taras, sinan	00	RFC 3261 [22]	Containen
Method	"ACK"		141 0 0201 [22]	
Request-URI	same URI as the SS			
Request-ORI	has sent earlier in the			
	Contact header of a			
	response within the			
CID Varaian	same dialog "SIP/2.0"			
SIP-Version Via	SIP/2.0		DEC 0004 [00]	
	HOLD/O O/LIDDII		RFC 3261 [22]	LIDD
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			RFC 3261 [22]	
addr-spec	same value as in the	Local URI of the dialog	, <u></u>	
addi opoo	INVITE message	(from the UE's point of		
		view)		
tag	same value as in the	Local tag of the dialog		
lag	INVITE	ID (from the UE's point		
	IIIVII L	of view)		
То		Of View)	RFC 3261 [22]	
addr-spec	same value as in the	Remote URI of the	10 0 0 0 0 1 [22]	
addi-spec	INVITE	dialog (from the UE's		
	INVITE	point of view)		
tos	same tag as in the To-	Remote tag of the		
tag				
	header of the response	dialog ID (from the UE's		
	which has established	point of view)		
Call ID	the dialog		DEC 0004 [00]	
Call-ID			RFC 3261 [22]	
callid	same value as in			
_	INVITE message			
Cseq			RFC 3261 [22]	
value	same value as in			
	INVITE message			
method	"ACK"			
Max-Forwards			RFC 3261 [22]	
value	any allowed value	Non-zero value		
Content-Length	if present		RFC 3261 [22]	
value	"0"	No message body	` 1	
		included		
			i and the second	

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],	clause A.2.1.4.2, A.2.2.4.2			
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")		
	same value as in the INVITE			NON-2XX
SIP-Version	"SIP/2.0"			
Via	same as in the INVITE but with updated via-branches in case of an ACK for 2xx response same as in the INVITE	see Table 5.5.2.5.2-1	RFC 3261 [22]	NON-2XX
	(with the same via- branches)			
Route	not present		RFC 3261 [22]	
From			RFC 3261 [22]	
addr-spec	same URI as in the From-header of the INVITE	remote URI of the dialog (from the UE's point of view)		
tag	same tag as in the From-header of the INVITE	remote tag of the dialog (from the UE's point of view)		
То			RFC 3261 [22]	
addr-spec	same URI as in the To- header of the INVITE	local URI of the dialog (from the UE's point of view)		
tag	same tag as in the To- header of the response which has established the dialog	local tag of the dialog (from the UE's point of view)		
Call-ID			RFC 3261 [22]	
callid	Same value as in INVITE	Call-Id of the dialog		
Cseq			RFC 3261 [22]	
value	Same value as in INVITE			
method	"ACK"			
Max-Forwards			RFC 3261 [22]	
value	"68"	The recommended initial value is 70 in RFC 3261. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UE		
Content-Length			RFC 3261 [22]	
value	"0"	No message body included		

	Condition	Explanation
NON-2X	X	ACK for non-2xx response
NOTE:	For further conditions see table 5.5.1-	1

5.5.2.2 SIP BYE

5.5.2.2.1 SIP BYE from the UE

Table 5.5.2.2.1-1: SIP BYE from the UE

Derivation Path: TS 24.229 [16], Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22]	22
Method	"BYE"		THE O SECT [EE]	
Request-URI	same URI as the SS	Contact URI of the		
	has sent earlier in the Contact header of a	recipient of the BYE		
	message within the same dialog			
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
sent-protocol	"SIP/2.0/UDP"			UDP
	"SIP/2.0/TCP"			TCP
sent-by	same value as in INVITE message			
sent-by				MT_CALL
host	IP address or FQDN	Either the UE's IP address or its home domain name		
port	protected server port of the UE	as assigned during registration		
via-branch	Value starting with 'z9hG4bK'			
Route			RFC 3261 [22]	
route-param list	URIs of the Record- Route header sent to the UE in the response which has established the dialog, in reverse			
	Order URIs of the Record- Route header sent to			MT_CALL
From	the UE in the INVITE		RFC 3261 [22]	
addr-spec	Same URI of the UE as	Local URI of the dialog	KFC 3201 [22]	
addi-spec	used earlier in the dialog	(from the UE's point of view)		
tag	Same tag of the UE as used earlier in the dialog	Local tag of the dialog ID (from the UE's point of view)		
То	a.a.o.g	1	RFC 3261 [22]	
addr-spec	Same URI of the SS as used earlier in the dialogURI	Remote URI of the dialog (from the UE's point of view)	111 0 0201 [22]	
tag	Same tag of the SS as used earlier in the dialog	Remote tag of the dialog ID (from the UE's point of view)		
Call-ID	a.a.og	Four or view)	RFC 3261 [22]	
callid	same value as in INVITE message		0 0201 [22]	
CSeq	HAVIIL HIESSAYE		RFC 3261 [22]	
value	value of CSeq sent by		1150 3201 [22]	
varuo	the endpoint within its previous request in the same dialog but			
	increased by one			
method	"BYE"		DE0	
Require			RFC 3261 [22] RFC 3329 [53]	
option-tag	"sec-agree"			
Proxy-Require			RFC 3261 [22] RFC 3329 [53]	
option-tag	"sec-agree"			
Security-Verify			RFC 3329 [53]	
sec-mechanism	same value as Security -Server header sent by SS during registration			

Max-Forwards			RFC 3261[22]
value	any allowed value	Non-zero value	
P-Access-Network-Info			RFC 7315 [52] RFC 7913 [51]
access-net-spec	Access network technology and, if applicable, the cell ID		
Content-Length	if present		RFC 3261 [22]
value	"0"	No message body included	

5.5.2.2.2 SIP BYE from the SS

Table 5.5.2.2.2-1: SIP BYE from the SS

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]	
Route	Not present		RFC 3261 [22]	
From			RFC 3261 [22]	
addr-spec	Same URI of the SS as used earlier in the dialog	Remote URI of the dialog (from the UE's point of view)		
tag	Same tag of the SS as used earlier in the dialog	Remote tag of the dialog (from the UE's point of view)		
То			RFC 3261 [22]	
addr-spec	Same URI of the UE as used earlier in the dialog	Local URI of the dialog (from the UE's point of view)		
tag	Same tag of the UE as used earlier in the dialog	Local tag of the dialog (from the UE's point of view)		
Call-ID			RFC 3261 [22]	
callid	same value as in INVITE message			
CSeq			RFC 3261 [22]	
value	value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one			
method	"BYE"		DE0 053 //257	
Max-Forwards		<u> </u>	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 0.01 [22]	

5.5.2.3 SIP CANCEL

This message is sent by the SS.

Table 5.5.2.3-1: SIP CANCEL

Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22]	
Method	"CANCEL"			
Request-URI	same value as in the INVITE being cancelled			
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
via-parm	same value as in the INVITE being cancelled			
From			RFC 3261 [22]	
addr-spec	same value as in the INVITE being cancelled			
tag	same value as in the INVITE being cancelled			
То			RFC 3261 [22]	
addr-spec	same value as in the INVITE being cancelled			
Call-ID			RFC 3261 [22]	
Callid	same value as in the INVITE being cancelled			
CSeq			RFC 3261 [22]	
value	same value as in the INVITE being cancelled			
Method	"CANCEL"			
Content-Length			RFC 3261 [22]	
value	"0"	No message body included		

5.5.2.4 SIP INFO

This message is sent by the SS.

Table 5.5.2.4-1: SIP INFO

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
Method	"INFO"			
Request-URI	px_MCPTT_Client_A_I			
	D			
	px_MCVideo_Client_A			MCVIDEO
	_ID			
	px_MCData_Client_A_I			MCDATA
	D			
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
			RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"			
sent-by	any allowed value	IP address or FQDN		
·		and protected server		
		port of the UE		
via-branch	any allowed value	Value starting with		
		'z9hG4bK'		
From			RFC 3261 [22]	
addr-spec	px_MCPTT_Client_A_I			
	D			
	px_MCVideo_Client_A			MCVIDEO
	ID			
	px_MCData_Client_A_I			MCDATA
	D			
tag	"1"			
То			RFC 3261 [22]	
			RFC 5031 [54]	
addr-spec	tsc_MCPTT_PublicSer			
от трет	viceId_A			
	tsc_MCVideo_PublicSe			MCVIDEO
	rviceId_A			
	tsc_MCData_PublicSer			MCDATA
	viceId_A			
Call-ID	_		RFC 3261 [22]	
Callid	same value as in the			
	INVITE			
CSeq			RFC 3261 [22]	
value	value of CSeq sent by			
	the SS within its			
	previous request in the			
	same dialog but			
	increased by one			
Method	"INFO"			
Max-Forwards			RFC 3261 [22]	
value	"70"	The recommended		
		initial value is 70 in		
		RFC 3261.		
		Editor's Note: to be		
		changed to realistic		
		value taking into		
		account number of		
		hops		
Content-Length		,	RFC 3261 [22]	
value	length of message			
-	body			
Message Body	any allowed value			
	arry anovica value	I	l	l

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	, clause A.2.1.4.7, A.2.2.4.7 Value/remark	Comment	Reference	Condition
Request-Line	Valuo, oman	Common	RFC 3261 [22] RFC 5031 [54]	Condition
Method	"INVITE"		10 3031 [34]	
Request-URI	tsc_MCPTT_PublicServ iceId_A	The public service identity identifying the participating MCPTT function serving the MCPTT user		MCPTT
	tsc_MCVideo_PublicSe rviceId_A	The public service identity identifying the participating MCVideo function serving the MCVideo user		MCVIDEO
	tsc_MCData_PublicSer viceId_A	The public service identity identifying the participating MCData function serving the MCData user		MCDATA
Request-URI	same URI as the SS has sent earlier in the Contact header of a message within the same dialog	Contact URI of the recipient of the BYE		re_INVITE
SIP-Version Via	"SIP/2.0"		RFC 3261 [22]	
			RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP" "SIP/2.0/TCP"	UE accesses the server via UDP UE accesses the server		UDP TCP
	SIP/2.0/TCP	via TCP		TCP
sent-by				
host	IP address or FQDN	Either the UE's IP address or its home domain name		
port	protected server port of the UE	as assigned during registration		
via-branch	Value starting with 'z9hG4bK'			
Route			RFC 3261 [22]	
addr-spec[1]	SIP URI			
user-info and host	P-CSCF address of the SS	P-CSCF address as assigned to the UE via NAS signalling or P- CSCF discovery		
port	protected server port of the SS	as assigned during registration		
uri-parameters	"Ir"			
addr-spec[2] user-info and host	SIP URI "scscf.3gpp.org"	same value as in the Service-Route header field of the 200 OK response to REGISTER		
port	not present			
uri-parameters	"lr"			
route-param list	URIs of the Record- Route header sent to the UE in the response which has established the dialog, in reverse order URIs of the Record- Route header sent to		RFC 3261 [22]	re_INVITE MT_CALL
	the UE in the INVITE			

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				
user-info and host	Default public user id			
	(px_MCX_SIP_PublicU			
	serId_A_1)			
port	not present			
tag	any value		DEC 2004 (201	15 D (177
From	0 1151 (4 115	11151 (4 5 1	RFC 3261 [22]	re_INVITE
addr-spec	Same URI of the UE as used earlier in the	Local URI of the dialog		
	dialog	(from the UE's point of view)		
tag	Same tag of the UE as	Local tag of the dialog		
iag	used earlier in the	ID (from the UE's point		
	dialog	of view)		
То	a.a.og		RFC 3261 [22]	
			RFC 5031 [54]	
addr-spec				
user-info and host	Same URI as Request-			
	URI			
port	not present			
tag	not present			
То			RFC 3261 [22]	re_INVITE
addr-spec	Same URI of the SS as	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 2264 [22]	
callid	any allowed value		RFC 3261 [22]	
callid	same value as in	+		re_INVITE
Calliu	INVITE creating the			IE_INVITE
	dialog			
CSeq	dialog		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"		DE0 1000 1000	
Session-Expires	 		RFC 4028 [30]	
delta-seconds	any allowed value		DE0 0004 500	
Require			RFC 3261 [22]	
			RFC 3312 [56]	
ontion-tag	"sec-agree"		RFC 3329 [53]	
option-tag Proxy-Require	Sec-agree	+	RFC 3261 [22]	
rioxy-kequire			RFC 3261 [22]	
option-tag	"sec-agree"		111 0 0020 [00]	
Security-Verify	000 49100		RFC 3329 [53]	
Cooding voing			0 0020 [00]	
sec-mechanism	same value as Security			
 	-Server header sent by			
	SS during registration			
Contact			RFC 3261 [22	
			RFC 3840 [33]	

Derivation Path: TS 24.229 [16],			-	
Information Element	Value/remark	Comment	Reference	Condition
addr-spec user-info and host	SIP URI IP address or FQDN			
port	protected server port of	as assigned during		
P 011	UE	registration		
feature-param	"+g.3gpp.mcptt"	This media feature tag		MCPTT
		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)		
	". a 2ann movideo"	communication.		MCVIDEO
	"+g.3gpp.mcvideo"	This media feature tag when used in a SIP		INICAIDEO
		request or a SIP		
		response indicates that		
		the function sending		
		the SIP message		
		supports Mission Critical Video		
		(MCVideo)		
		communication.		
	"+g.3gpp.mcdata.sds"	This media feature tag		MCDATA_
		when used in a SIP		SDS
		request or a SIP		
		response indicates that		
		the function sending the SIP message		
		supports mission critical		
		data (MCData)		
		service.communication.		
	"+g.3gpp.mcdata.fd"	This media feature tag		MCDATA_
		when used in a SIP request or a SIP		FD
		response indicates that		
		the function sending		
		the SIP message		
		supports mission critical		
		data (MCData) service.communication.		
feature-param	"+g.3gpp.icsi-	This URN indicates that		MCPTT
Total o param	ref=urn:urn-7:3gpp-	the device has the		
	service.ims.icsi.mcptt"	capabilities to support		
		the mission critical push		
		to talk (MCPTT) service.		
	"+g.3gpp.icsi-	This URN indicates that		MCVIDEO
	ref=urn:urn-7:3gpp-	the device has the		
	service.ims.icsi.mcvide	capabilities to support		
	о"	the Mission Critical		
		Video (MCVideo)		
	"+g.3gpp.icsi-	communication. This URN indicates that		MCDATA_
	ref=urn:urn-7:3gpp-	the device has the		SDS
	service.ims.icsi.mcdata.	capabilities to support		
	sds"	the mission critical data		
		(MCData) service.		1
	"+g.3gpp.icsi-	This URN indicates that		MCDATA_
	ref=urn:urn-7:3gpp- service.ims.icsi.mcdata.	the device has the capabilities to support		FD
	fd"	the mission critical data		
		(MCData) service.		

Derivation Path: TS 24.229 [16], Information Element	Value/remark	Comment	Reference	Condition
feature-param	"audio"	This feature tag	Reference	MCPTT
roataro param	addio	indicates that the		OR
		device supports audio		MCVIDEO
		as a streaming media		
		type.		
feature-param	"video"	This feature tag		MCVIDEO
		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		
May Famuerda		type.	DEC 0004 [00]	
Max-Forwards		Nian and color	RFC 3261 [22]	
value	any allowed value	Non-zero value	DEO 7045 [50]	
P-Access-Network-Info	A	ALITO	RFC 7315 [52]	
access-net-specs	Access network	AUTO		
	technology and, if			
Accept	applicable, the cell ID		RFC 3261 [22]	
	"appliection/ad="		KFU 3201 [22]	
media-range[1]	"application/sdp" "application/vnd.3gpp.			MCPTT
media-range[2]	mcptt-info+xml"			IVICETI
	application/vnd.3gpp.m			MCVIDEO
	cvideo-info+xml			INICAIDEO
	"application/vnd.3gpp.			MCDATA
	mcdata-info+xml"			IVICUATA
P-Preferred-Service	IIIOGGIG-IIIIOTAIIII		RFC 6050 [31]	
Service-ID	"urn:urn-7:3gpp-		11 0 0000 [01]	MCPTT
Service-ID	service.ims.icsi.mcptt"			14101 11
	"urn:urn-7:3gpp-			MCVIDEO
	service.ims.icsi.mcvide			I WOUNDED
	0"			
	"urn:urn-7:3gpp-			MCDATA_
	service.ims.icsi.mcdata.			SDS
	sds"			
	"urn:urn-7:3gpp-			MCDATA
	service.ims.icsi.mcdata.			FD
	fd"			
P-Preferred-Identity	if present		RFC 3325 [32]	
PPreferredID-value	same URI as in From-		• 1	
	header			
Accept-Contact			RFC 3841 [29]	
ac-value[1]				
feature-param	"+g.3gpp.icsi-			MCPTT
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcvide			
	0"			
	"+g.3gpp.icsi-			MCDATA_
	ref=urn:urn-7:3gpp-			SDS
	rei=um.um-7.5gpp-	i e		
	service.ims.icsi.mcdata.			
	service.ims.icsi.mcdata. sds"			
	service.ims.icsi.mcdata. sds" "+g.3gpp.icsi-			MCDATA_
	service.ims.icsi.mcdata. sds" "+g.3gpp.icsi- ref=urn:urn-7:3gpp-			MCDATA_ FD
	service.ims.icsi.mcdata. sds" "+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata.			
	service.ims.icsi.mcdata. sds" "+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. fd"			
req-param	service.ims.icsi.mcdata. sds" "+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. fd" "require"			
req-param explicit-param ac-value[2]	service.ims.icsi.mcdata. sds" "+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. fd"			

Derivation Path: TS 24.229 [16] Information Element		Comment	Deference	Conditio-
Information Element	Value/remark	Comment	Reference	Condition
	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA_
				SDS
	"+g.3gpp.mcdata.fd"			MCDATA_
				FD
req-param	"require"			
explicit-param	"explicit"			
Priv-Answer-Mode	not present			
Answer-Mode	not present		RFC 5373 [34]	re_INVITE
Answer-Mode			RFC 5373 [34]	
answer-mode-value	"Auto"			
answer-mode-value	"Manual"			MANUAL
Resource-Priority			RFC 4412 [40]	EMERGEN
,			RFC 7134 [57]	CY-CALL
			RFC 8101 [45]	or
			10 0 10 1 [40]	IMMPERIL
				-CALL
rvelue				EMERGEN
r-value				CY-CALL
nomonness	value of the areassure -	An configured in Table		CT-CALL
namespace	value of the <resource-< td=""><td>As configured in Table</td><td></td><td></td></resource-<>	As configured in Table		
	priority-namespace>	5.5.8.4-1 for MCPTT		
	element contained in	and in Table 5.5.8.8-1		
	the <emergency-< td=""><td>for MCVIdeo</td><td></td><td></td></emergency-<>	for MCVIdeo		
	resource-priority>			
	element contained in			
	the <onnetwork></onnetwork>			
	element of the MCX			
	service configuration			
	documents			
r-priority	value of the <resource-< td=""><td>As configured in Table</td><td></td><td></td></resource-<>	As configured in Table		
1	priority-priority>	5.5.8.4-1 for MCPTT		
	element contained in	and in Table 5.5.8.8-1		
	the <emergency-< td=""><td>for MCVIdeo</td><td></td><td></td></emergency-<>	for MCVIdeo		
	resource-priority>	.515 1 1455		
	element contained in			
	the <onnetwork></onnetwork>			
	element of the MCX			
	service configuration			
r-value	document			IMMPERIL
i-value				-CALL
namespace	value of the <resource-< td=""><td>As configured in Table</td><td></td><td></td></resource-<>	As configured in Table		
	priority-namespace>	5.5.8.4-1 for MCPTT		
	element contained in	and in Table 5.5.8.8-1		
	the <imminent-peril-< td=""><td>for MCVIdeo</td><td></td><td></td></imminent-peril-<>	for MCVIdeo		
		TOT IVIC VIGEO		
	resource-priority> element contained in			
	the <onnetwork></onnetwork>			
	element of the MCX			
	service configuration			
	documents			
r-priority	value of the <resource-< td=""><td>As configured in Table</td><td></td><td></td></resource-<>	As configured in Table		
	priority-priority>	5.5.8.4-1 for MCPTT		
	element contained in	and in Table 5.5.8.8-1		
	the <imminent-peril-< td=""><td>for MCVIdeo</td><td></td><td></td></imminent-peril-<>	for MCVIdeo		
	resource-priority>			
	element contained in			
	the <onnetwork></onnetwork>			
	element of the MCX			
	service configuration			1
	dogument			
Contont Type	document		DEC 5604 [50]	
Content-Type media-type	document "multipart/mixed"		RFC 5621 [58]	

Information Element	, clause A.2.1.4.7, A.2.2.4.7 Value/remark	Comment	Reference	Condition
Content-Length	present in case of TCP		RFC 3261 [22]	
•	and when there is a		, ,	
	message body			
	(otherwise optional)			
value	any value	length of message-		
	-	body		
Message-body			RFC 3261 [22]	
MIME body part		SDP message		
MIME-part-headers				
Content-Type	"application/sdp"		RFC 4566 [27]	
MIME-part-body	SDP Message as			MCPTT
, ,	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			WODATA
	5.5.3.1.1-3			
MIME body part	0.0.0.1.1 0	MCPTT		
MINIC Dody part		Info/MCVideo/MCData		
MIME-part-headers		IIIIO/IIIO VIGEO/IIIO Data		
Content-Type	"application/und 2gpp	+		MCPTT
Content-Type	"application/vnd.3gpp. mcptt-info+xml"			MCPTT
				MCVIDEO
	"application/vnd.3gpp.			MCAIDEC
	mcvideo-info+xml"			MODATA
	"application/vnd.3gpp.			MCDATA
0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	mcdata-info+xml"	1151 11 117	TO 04 070 (0)	
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		
NAINAE is set to set in	MODIT lefe	signature MIME body	TO 04 070 [0]	MODTT
MIME-part-body	MCPTT-Info as		TS 24.379 [9]	MCPTT
	described in Table		clause F.1	
	5.5.3.2.1-1		=0.01.001.001	
	MCVideo-Info as		TS 24.281 [86]	MCVIDEC
	described in Table		clause F.1	
	5.5.3.2.1-2			
	MCData-Info as		TS 24.282 [87]	MCDATA
	described in Table		clause D.1	
NAINAE I. I.	5.5.3.2.1-3		DE0 5000 1051	DDI) (* T-
MIME body part		Resource list	RFC 5366 [35]	PRIVATE-
				CALL OR
NAINAE ()		<u> </u>		MCD_1to
MIME-part-headers	Hamaka C. /	-		
Content-Type	"application/resource-			
	lists+xml"	1	=0 0.1.5=== ===	
Content-ID	any value	Unique URL identifying	TS 24.379 [9]	
		the Resource-lists XML	clause 6.6.3.1	
		MIME body; used as		
		reference in the		
		signature MIME body		
MIME-part-body	As described in Table			MCPTT
	5.5.3.3.1-1			
	As described in Table			MCVIDEC
	5.5.3.3.1-2			
	As described in Table			MCDATA
	5.5.3.3.1-3	1	1	1

Derivation Path: TS 24.229 [16]				
Information Element	Value/remark	Comment	Reference	Condition
MIME body part		Location info		(EMERGE NCY-CALL AND ALERT_IN D) OR LOCATIO N-INFO
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.		MCPTT
	"application/vnd.3gpp. mcvideo-location- info+xml"	This MIME part shall be included if the MCVideo-Info 'alert-ind' element sent in the MCVideo-Info is set to true.		MCVIDEO
Content-ID	any value	Unique URL identifying the Location-info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Location-info as described in Table 5.5.3.4.1-1		TS 24.379 [9] clause F.3	MCPTT
	Location-info as described in Table 5.5.3.4.1-2		TS 24.281 [86] clause F.3	MCVIDEO
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-1		TS 24.379 [9]	

Call establishment with manual commencement mode A one-to-one MCData call
A one-to-one MCData call
SDS message or SDS disposition notification
FD message or FD disposition notification
INVITE within a dialog
MCPTT emergency alert is required as specified for the test case or automatically initiated by the client for an emergency call (in case of condition EMERGENCY-CALL when pc_MCX_EmergencyIndWithAlertInd=true); ⇒ <alert-ind> is set to true in the mcptt-info.</alert-ind>

5.5.2.5.2 SIP INVITE from the SS

Table 5.5.2.5.2-1: SIP INVITE from the SS

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Request-Line	Value/Terriark	Comment	RFC 3261 [22]	Condition
rioquoet =iiio			RFC 5031 [54]	
Method	"INVITE"			
Request-URI	SIP URI of the UE's			
	contact address as			
	provided in the Contact-			
	header of the			
B (1181	REGISTER message	0 ()		1 N // T F
Request-URI	same URI as the UE has sent earlier in the	Contact URI of the UE		re_INVITE
	Contact header of a			
	response within the			
	same dialog			
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
			RFC 3581 [55]	
sent-protocol[1]	"SIP/2.0/TCP"		•	
sent-by[1]		Address of the P-CSCF		
		that communicates with		
		the called party		
host	P-CSCF address of the	P-CSCF address as		
	SS	assigned to the UE via		
		NAS signalling or P-		
	waste steel comics went of	CSCF discovery		
port	protected server port of the SS	as assigned during registration		
via-branch[1]	Value assigned by the	registration		
via-branch[1]	SS starting with			
	'z9hG4bK'			
sent-protocol[2]	"SIP/2.0/UDP"			
sent-by[2]		Address of the other		
,		endpoint (the caller)		
host	Host name of the SIP			
	URI being used in the			
	From header			
port	Same port number as	Caller's port number		
	in Contact-header			
via-branch[2]	Value assigned by the			
	SS starting with 'z9hG4bK'			
Record-Route	25110-4513	Record-Route	RFC 3261 [22]	
Rodora Rodio		corresponding to the	111 0 0201 [22]	
		Via header		
addr-spec[1]	SIP URI	SIP URI corresponding		
		to first entry of Via		
		header		
user-info and host	P-CSCF address of the	P-CSCF address as		
	SS	assigned to the UE via		
		NAS signalling or P-		
nort	protected comics post of	CSCF discovery		
port	protected server port of the SS	as assigned during registration		
uri-parameters	"Ir"	regiotiation		
addr-spec[2]	SIP URI			
user-info and host	"term@scscf1.3gpp.org			
200 4114 11000	"			
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	1	1	İ

Derivation Path: TS 24.229 [16],		0	Defense	0 !!!!
Information Element	Value/remark	Comment	Reference	Condition
uri-parameters	"Ir"		DEC 2004 (201	1510/175
Record-Route	same as in the 180,		RFC 3261 [22]	re_INVITE
	183 or 200 response			AND
	sent to the UE during			MO_CALL
	MO call establishment in reverse order			
From	in reverse order		RFC 3261 [22]	
addr-spec			KFC 3201 [22]	
user-info and host	tsc_MCPTT_PublicServ	SIP URI of the calling		MCPTT
user-inio and nost	iceld A	UE		IVICT TT
	10014_71			
	tsc_MCVideo_PublicSe	SIP URI of the calling		MCVIDEO
	rviceId_A	UE		
	tsc_MCData_PublicSer	SIP URI of the calling		MCDATA
	viceId_A	UE		
port	not present			
tag	Value assigned by the			
_	SS			
From			RFC 3261 [22]	re_INVITE
addr-spec	Same URI of the SS as	Remote URI of the		
	used earlier in the	dialog (from the UE's		
	dialog	point of view)		
tag	Same tag of the SS as	Remote tag of the		
	used earlier in the	dialog (from the UE's		
	dialog	point of view)		
То			RFC 3261 [22]	
			RFC 5031 [54]	
addr-spec	1407, 015 5 11111	5 ();		
user-info and host	px_MCX_SIP_PublicUs	Default public user ID		
	erld_A_1	(IMPU) as stored in the		
port	not procent	UICC		
port tag	not present not present			
To	Hot present		RFC 3261 [22]	re_INVITE
addr-spec	Same URI of the UE as	Local URI of the dialog	Ki C 3201 [22]	IC_INVIIL
addi spec	used earlier in the	(from the UE's point of		
	dialog	view)		
tag	Same tag of the UE as	Local tag of the dialog		
9	used earlier in the	(from the UE's point of		
	dialog	view)		
Call-ID			RFC 3261 [22]	
callid	Value assigned by the			
	SS			
Call-ID			RFC 3261 [22]	re_INVITE
callid	same value as in			
	INVITE creating the			
	dialog			
CSeq			RFC 3261 [22]	
value	Value assigned by the			
	SS			
value	value of CSeq sent by			re_INVITE
	the endpoint within its			
	previous request in the			
	same dialog but increased by one			
method	"INVITE"			
Supported	HNVIIL		RFC 3261 [22]	
option-tag	"100rel"	This option tag	111 0 3201 [22]	
οριιστιτας	100161	indicates that the UA		
		can send or receive		
		reliable provisional		
		. Judoto proviotoliai	Í.	I
option-tag	"timer"	responses.		
option-tag option-tag	"timer" "tdialog"			

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
P-Called-Party-ID			RFC 7315 [52]	
called-pty-id-spec	Same public user ID as			
Section Evalues	used in the To-header		DEC 4000 [00]	
Session-Expires generic-param	"1800"	The recommended	RFC 4028 [30]	
уепенс-рагатт	1800	initial value is 1800 in RFC 4028 [30].		
P-Early-Media			RFC 5009 [60]	
em-parm	"inactive"			
Require			RFC 3261 [22] RFC 3312 [56] RFC 3329 [53]	
option-tag	"sec-agree"			
Proxy-Require			RFC 3261 [22] RFC 3329 [53]	
option-tag	"sec-agree"			
P-Asserted-Identity			RFC 3325 [32]	
addr-spec				
user-info and host	same URI as in From- header			
port	not present		DE0 0551 155	ļ
Contact	OID US:		RFC 3261 [22] RFC 3840 [33]	
addr-spec	SIP URI			
user-info and host	tsc_MCPTT_SessionId			MCPTT
	tsc_MCVideo_SessionI			MCVIDEO
	tsc_MCData_SessionId			MCDATA
port	Value assigned by the SS			
feature-param	"+g.3gpp.mcptt"	This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Push To Talk (MCPTT) communication.	RFC 3840 [33] clause 9	MCPTT
	"+g.3gpp.mcvideo"	This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Video (MCVideo) communication.	RFC 3840 [33] clause 9	MCVIDEO
	"+g.3gpp.mcdata.sds"	This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Data (MCData) communication.	RFC 3840 [33] clause 9	MCDATA_ SDS

Derivation Path: TS 24.229 [16], o	clause A.2.1.4.7, A.2.2.4.7			
Information Element	Value/remark	Comment	Reference	Condition
	"+g.3gpp.mcdata.fd"	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)	RFC 3840 [33] clause 9	MCDATA_ FD
feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcptt"	communication. This URN indicates that the device has the capabilities to support the mission critical push to talk (MCPTT) service.	RFC 3840 [33] clause 9	MCPTT
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o"	This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.	RFC 3840 [33] clause 9	MCVIDEO
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"	This URN indicates that the device has the capabilities to support the mission critical data (MCData) SDS service.	RFC 3840 [33] clause 9	MCDATA_ SDS
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. fd"	This URN indicates that the device has the capabilities to support the mission critical data (MCData) FD service.	RFC 3840 [33] clause 9	MCDATA_ FD
feature-param	"audio"	This feature tag indicates that the device supports audio as a streaming media type.	RFC 3840 [33] clause 10.1	MCPTT OR MCVIDEO
feature-param	"video"	This feature tag indicates that the device supports video as a streaming media type.		MCVIDEO
feature-param	"text"	This feature tag indicates that the device supports text as a streaming media type.		MCDATA
feature-param	"isfocus"			
value	"68"	The recommended initial value is 70 in RFC 3261 [22]. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UE	RFC 3261 [22]	
Accept			RFC 3261 [22]	
media-range[1] media-range[2]	"application/sdp " "application/vnd.3gpp. mcptt-info+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-info+xml" "application/vnd.3gpp.			MCVIDEO MCDATA
Accept-Contact	mcdata-info+xml"		RFC 3841 [29]	

Derivation Path: TS 24.229 [16]	, clause A.2.1.4.7, A.2.2.4.7			
Information Element	Value/remark	Comment	Reference	Condition
ac-value[1]				
feature-param	"+g.3gpp.icsi-			MCPTT
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcvide			
	0"			MODATA
	"+g.3gpp.icsi-			MCDATA_ SDS
	ref=urn:urn-7:3gpp- service.ims.icsi.mcdata.			303
	sds"			
	"+g.3gpp.icsi-			MCDATA_
	ref=urn:urn-7:3gpp-			FD
	service.ims.icsi.mcdata.			'
	fd"			
req-param	"require"			
explicit-param	"explicit"			
ac-value[2]				
feature-param	"+g.3gpp.mcptt"			MCPTT
	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"			MCDATA_
	, 3, - 3			SDS
	"+g.3gpp.mcdata.fd"			MCDATA_
				FD
req-param	"require"			
explicit-param	"explicit"			
Answer-Mode	not present		RFC 5373 [34]	re_INVITE
			TS 24.379 [9]	OR FIRST-
			clause	TO-
			6.3.2.2.6.3	ANSWER
Answer-Mode			RFC 5373 [34]	
answer-mode-value	"Auto"			
answer-mode-value	"Manual"			MANUAL
Priv-Answer-Mode				FIRST-TO-
an according to the control of the c	UNA III			ANSWER
answer-mode-value	"Manual"		DEC 5004 [50]	
Content-Type	"multipart/mixed"		RFC 5621 [58]	
media-type Content-Length	munipari/mixed		RFC 3261 [22]	
Value	length of message-		RFC 3201 [22]	
value	body			
Message-body	body		RFC 3261 [22]	
MIME body part		SDP message	1(1 0 3201 [22]	
MIME-part-headers		OD: moodage		
MIME-Content-Type	"application/sdp"			
MIME-part-body	SDP Message as		RFC 4566 [27]	MCPTT
wiiwiz part body	described in Table		14. 0 1000 [27]	1010111
	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		MCPTT/MCVideo/MCD		
		ata Info		1
MIME-part-headers				1
MIME-Content-Type	"application/vnd.3gpp.			MCPTT
	mcptt-info+xml"			
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml"			1405.47:
	"application/vnd.3gpp.			MCDATA
	mcdata-info+xml"		1	

Information Element	Value/remark	Comment	Reference	Condition
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			MCPTT
	MCVideo-Info as described in Table 5.5.3.2.2-2			MCVIDEC
	As described in Table 5.5.3.2.2-3			MCDATA
MIME body part		Location info		LOCATIO N-INFO
MIME-part-headers				
MIME-Content-Type	"application/vnd.3gpp. mcptt-location- info+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-location- info+xml"			MCVIDEO
Content-ID	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the Location-info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Location-info as described in Table 5.5.3.4.2-1		TS 24.379 [9] clause F.3	MCPTT
	Location-info as described in Table 5.5.3.4.2-2		TS 24.281 [86] clause F.3	MCVIDEC
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-2		TS 24.379 [9]	

Condition	Explanation
MANUAL	Call establishment with manual commencement mode
re_INVITE	INVITE within a dialog
MCD_1to1	A one-to-one MCData call
MCDATA_SDS	SDS message or SDS disposition notification
MCDATA_FD	FD message or FD disposition notification
For further conditions see table 5.5.1-1	

5.5.2.6 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

Request-Line Method TMESSAGE* RFC 5281 [22] RFC 5031 [54] Request-URI Sts. MCPTT_PublicServ iceld_A MCPTT inction MCPTT inct	Derivation Path: TS 24.229 [16], (a		
Method	Information Element	Value/remark	Comment	Reference	Condition
Semest-URI Iso MCPTT_PublicServ The public service McPTT Meinty identifying the originating participating McPTT User Iso_MCVideo_PublicSer Viceld_A McVIDE-	Request-Line				
iceId_A identify identifying the originating participating MCPTT function serving the MCPTT user tsc_MCVideo_PublicSe riceId_A itsc_MCData_PublicSer riceIdentity identifying the originating participating MCData function serving the MCData user Interest itsc_MCData_PublicSer riceIdentity identifying the originating participating MCData function serving the MCData user Interest itsc_MCData_PublicSer riceIdentity identifying the originating participating MCData function serving the MCData user Interest itsc_MCData_PublicSer riceIdentity identifying the originating participating MCData function serving the MCData user Interest identify identifying the originating participating MCData function serving the MCData user Interest identify identifying the originating participating MCData function serving the MCData function serving the MCData function serving the MCData user Interest identify identifying the originating participating MCData function serving the MCData user Interest identify identifying the originating participating MCData function serving the viceId A isc_MCPTT_PublicServ riceId A isc_MCPTT_PublicSer					
rviceld_A Identity identifying the originating participating McVideo function serving the McVideo user	Request-URI	iceld_A	identity identifying the originating participating MCPTT function serving the MCPTT user		
viceld_A identity identitying the originating participating MCData function serving the MCData user LOCATIC N_REPO T			identity identifying the originating participating MCVideo function serving the MCVideo user		MCVIDEO
In the Asserted-Identity header field of the SIP MESSAGE for location reporting configuration SIP-Version "SIP/2.0" RFC 3261 [22] RFC 3581 [55] Sent-protocol "SIP/2.0/UDP" TCP TCP Sent-by TCP Sent-b			identity identifying the originating participating MCData function serving the MCData		MCDATA
Via		in the Asserted-Identity header field of the SIP MESSAGE for location reporting configuration			LOCATIO N_REPOR T
sent-protocol "SIP/2.0/IDP" "SIP/2.0/TCP" sent-by host IP address or FQDN protected server port of the UE via-branch Value starting with		"SIP/2.0"			
"SIP/2.0/TCP" sent-by host IP address or FQDN Either the UE's IP address or its home domain name port protected server port of the UE via-branch Value starting with 'z9hG4bK' From addr-spec user-info and host Default public user id (px_MCX_SIP_PublicU serId_A_1) port not present tag any allowed value To user-info and host Either the UE's IP address or its home domain name as assigned during registration RFC 3261 [22] The URI of the UE RFC 3261 [22] RFC 5031 [54] RFC 3261 [22] RFC 5031 [54] Addr-spec user-info and host Itsc_MCPTT_PublicServ icied A tsc_MCPTT_PublicServ icied A tsc_MCOtata_PublicSer viceld A tsc_MCData_PublicSer viceld_A port not present tag not present tag not present tag RFC 3261 [22] Call-ID callid any allowed value RFC 3261 [22] value any allowed value RFC 3261 [22]					
host IP address or FQDN Either the UE's IP address or its home domain name port protected server port of the UE via-branch Value starting with 'z9hG4bK' From Addr-spec User-info and host Default public user id (px_MCX_SIP_PublicU serId_A_1) port not present tag any allowed value To RFC 3261 [22] addr-spec User-info and host ServiceId_A tsc_MCPTT_PublicServ iceId_A tsc_MCVideo_PublicServ viceId_A tsc_MCData_PublicSer viceId_A tag not present tag RFC 3261 [22] The URI of the SS MCPTT MCVIDEO MCVIDEO MCVIDEO MCVIDEO The URI of the SS MCVIDEO MCVIDEO MCVIDEO The URI of the SS MCVIDEO MCVIDEO MCVIDEO MCVIDEO The URI of the SS MCVIDEO MCVIDEO MCVIDEO MCVIDEO MCVIDEO The URI of the SS MCVIDEO MC	•				
port protected server port of the UE sarsigned during registration protected server port of the UE protected protected server port of the UE protected pro					
The UE registration via-branch via-b	host	IP address or FQDN	address or its home		
Tro	port	the UE			
addr-spec Default public user id (px_MCX_SIP_PublicU serId_A_1)					
user-info and host Default public user id (px_MCX_SIP_PublicU serId_A_1) port not present tag any allowed value To RFC 3261 [22] RFC 5031 [54] addr-spec user-info and host tsc_MCPTT_PublicServ iceld_A tsc_MCVideo_PublicSe rviceld_A tsc_MCData_PublicSer viceld_A tsc_MCData_PublicSer viceld_A not present tag not present tag RFC 3261 [22] RFC 5031 [54] MCPTT Interpretation				RFC 3261 [22]	
To		(px_MCX_SIP_PublicU	The URI of the UE		
To	port				
Addr-spec Section Se					
user-info and host tsc_MCPTT_PublicServ iceld_A tsc_MCVideo_PublicSe rviceld_A tsc_MCData_PublicSer viceld_A port tag not present tag Call-ID callid any allowed value MESSAGE" MCPTT The URI of the SS MCVIDEO MCDATA The URI of the SS MCDATA MCDA					
tsc_MCVideo_PublicSe		iceld_A	The URI of the SS		MCPTT
tsc_MCData_PublicSer		tsc_MCVideo_PublicSe rviceId A	The URI of the SS		MCVIDEO
tag not present Call-ID RFC 3261 [22] callid any allowed value Cseq RFC 3261 [22] value any allowed value method "MESSAGE" Max-Forwards RFC 3261 [22] value any allowed value Non-zero value		viceId_A	The URI of the SS		MCDATA
Call-ID RFC 3261 [22] callid any allowed value Cseq RFC 3261 [22] value any allowed value method "MESSAGE" Max-Forwards RFC 3261 [22] value any allowed value Non-zero value	port				
callid any allowed value Cseq RFC 3261 [22] value any allowed value method "MESSAGE" Max-Forwards RFC 3261 [22] value any allowed value Non-zero value		not present		RFC 3261 [22]	
Cseq RFC 3261 [22] value any allowed value method "MESSAGE" Max-Forwards RFC 3261 [22] value any allowed value Non-zero value		any allowed value			
method "MESSAGE" Max-Forwards RFC 3261 [22] value any allowed value Non-zero value	Cseq			RFC 3261 [22]	
Max-ForwardsRFC 3261 [22]valueany allowed valueNon-zero value					
value any allowed value Non-zero value		"MESSAGE"			
			N	RFC 3261 [22]	
P-Access-Network-Info RFC 7315 [52]		any allowed value	Non-zero value	DEC 7045 [50]	

access-net-spec	Access network technology and, if applicable, the cell ID			
Route	same as specified for INVITE sent by the UE in Table 5.5.2.5.1-1		RFC 3261 [22]	
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-			MCPTT MCVIDEO
	ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o"			WICVIDEO
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata			MCDATA
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			MCDATA_ SDS
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. fd"			MCDATA_ FD
req-param	"require"			
explicit-param	"explicit"			
ac-value[2]				MCDATA_ SDS, MCDATA_ FD
feature-param	"+g.3gpp.mcdata.sds"			MCDATA_ SDS
	"+g.3gpp.mcdata.fd"			MCDATA_ FD
req-param	"require"			
explicit-param	"explicit"		D=0 /- //	
P-Preferred-Service			RFC 6050 [31]	
Service-ID	"urn:urn-7:3gpp- service.ims.icsi.mcptt"			MCPTT
	"urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO
	"urn:urn-7:3gpp- service.ims.icsi.mcdata			MCDATA
	"urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			MCDATA_ SDS
	"urn:urn-7:3gpp- service.ims.icsi.mcdata. fd"			MCDATA_ FD
P-Preferred-Identity	if present		RFC 3325 [32]	
PPreferredID-value	same URI as in From- header			
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"			
Content-Length	present in case of TCP and when there is a message body (otherwise optional)		RFC 3261 [22]	
value	any value	length of message- body		
Message-body			RFC 3261 [22]	

MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-headers				
MIME-Content-Type	"application/vnd.3gpp. mcptt-info+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-info+xml"			MCVIDEO
	"application/vnd.3gpp. mcdata-info+xml"			MCDATA
Content-ID	any value	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	MCPTT-Info as described in Table 5.5.3.2.1-1		TS 24.379 [9] clause F.1	MCPTT
	MCVideo-Info as described in Table 5.5.3.2.1-2 MCData-Info as		TS 24.281 [86] clause F.1	MCVIDEO MCDATA
	described in Table 5.5.3.2.1-3			WICDATA
MIME body part		Affiliation-Command		AFFILIATI ON
MIME-part-headers				110===
MIME-Content-Type	"application/vnd.3gpp. mcptt-affiliation- command+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-affiliation- command+xml"			MCVIDEO
	"application/vnd.3gpp. mcdata-affiliation- command+xml"			MCDATA
Content-ID	any value	Unique URL identifying the affiliation-command XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	MCPTT-Affiliation- Command as described in Table 5.5.3.7-1		TS 24.379 [9] clause F.4	MCPTT
	MCVideo-Affiliation- Command as described in Table 5.5.3.7-2		TS 24.281 [86] clause F.4	MCVIDEO
	MCData-Affiliation- Command as described in Table 5.5.3.7-3		TS 24.282 [87] clause D.3	MCDATA
MIME body part		Resource lists	RFC 5366 [35]	RESOURC E_LISTS
MIME-part-headers				
MIME-Content-Type	"application/resource- lists+xml"			
Content-ID	any value	Unique URL identifying the Resource-lists XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Resource-lists as described in Table 5.5.3.3.1-1			MCPTT
	Resource-lists as described in Table 5.5.3.3.1-2			MCVIDEO

	Resource-lists as described in Table 5.5.3.3.1-3			MCDATA
MIME body part		Location info	TS 24.379 [9] clause F.3	LOCATIO N-INFO, LOCATIO N_REPOR T
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.		MCPTT
	"application/vnd.3gpp. mcvideo-location- info+xml"			MCVIDEO
	"application/vnd.3gpp. mcdata-location- info+xml"			MCDATA
Content-ID	any value	Unique URL identifying the Location-info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Location-info as described in Table 5.5.3.4.1-1			MCPTT
	Location-info as described in Table 5.5.3.4.1-2			MCVIDEO
	Location-info as described in Table 5.5.3.4.1-3			MCDATA
MIME body part		MIKEY message		MIKEY
MIME-part-headers				
Content-Type	"application/mikey"			
MIME-part-body	As described in Table 5.5.9.1-2A	MIKEY message, containing the PSK	TS 33.180 [30] TS 24.282 [87]	
MIME body part		MCData Data signalling message		MCDATA_ SIGNALLI NG
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcdata-signalling"			
MIME-part-body	SIGNALLING_PAYLOA D as described in Table 5.5.3.8.1-1		TS 24.282 [87]	
MIME body part		MCData Data message		MCDATA_ PAYLOAD
MIME-part-headers				ļ
Content-Type	application/vnd.3gpp.m cdata-payload			
MIME-part-body	DATA_PAYLOAD as described in Table 5.5.3.9.1-1		TS 24.282 [87]	
MIME body part		Signature		1
MIME-part-headers				ļ
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-1		TS 24.379 [9]	

Condition	Explanation
RESOURCE_LISTS	Message-body contains Resource lists
LOCATION_REPORT	Message-body contains location information report according to TS 24.379 [2] clause 13.3.4.2
MIKEY	Message-body contains MIKEY message (e.g. for MCData 1-to-1 communication)
MCDATA_SIGNALLING	Message-body contains MCData Data signalling message
MCDATA_PAYLOAD	Message-body contains MCData Data message (DATA PAYLOAD)
MCDATA_SDS	SDS message or SDS disposition notification
MCDATA_FD	FD message or FD disposition notification
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], o	lause A.2.1.4.7a, A.2.2.4.7	a		
Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22]	
	#A4500 A 0.5#		RFC 5031 [54]	
Method	"MESSAGE"	THE MOVING DUNING		
Request-URI	Public user id associated to the MC	px_MCX_SIP_PublicUs		
	service id	erld_A_1 (in general)		
SIP-Version	"SIP/2.0"			
Via	OII 72.0		RFC 3261 [22]	
Via			RFC 3581 [55]	
sent-protocol[1]	"SIP/2.0/TCP"		• • • • • • • • • • • • • • • • • •	
sent-by[1]		Address of the P-CSCF		
		that communicates with		
		the called party		
host	P-CSCF address of the	P-CSCF address as		
	SS	assigned to the UE via		
		NAS signalling or P-		
		CSCF discovery		
port	protected server port of	as assigned during		
via branch[1]	the SS Value assigned by the	registration		
via-branch[1]	SS starting with			
	'z9hG4bK'			
sent-protocol[2]	"SIP/2.0/UDP"			
sent-by[2]	5/1 /Z.0/0D1			
host	"scscf.3gpp.org"			
port	Value assigned by the	Caller's port number		
	SS	per manual		
via-branch[2]	Value assigned by the			
	SS starting with			
	'z9hG4bK'			
sent-protocol[3]	"SIP/2.0/UDP"			
sent-by[3]				
host	host name of the MC			
	server			
port via-branch[3]	not present Value assigned by the			
via-branch[3]	SS starting with			
	'z9hG4bK'			
From	20110 1011		RFC 3261 [22]	
addr-spec				
user-info and host	tsc_MCPTT_PublicServ			MCPTT
	iceld A			
	tsc_MCVideo_PublicSe			MCVIDEO
	rviceId_A			
	tsc_MCData_PublicSer			MCDATA
	viceId_A			
port	not present			
tag	Value assigned by the			
То	SS		RFC 3261 [22]	
			RFC 5261 [22]	
addr-spec			5 5551 [57]	
user-info and host	same URI as used as			
	Request URI			
port	not present			
tag	not present			
Call-ID			RFC 3261 [22]	
callid	Value assigned by the			
	SS			
Cseq			RFC 3261 [22]	
value	Value assigned by the			
	SS			
method	"MESSAGE"		DE0 0004 500	
Max-Forwards			RFC 3261 [22]	

Derivation Path: TS 24.229 [16]				
Information Element	Value/remark	Comment	Reference	Condition
value	"67"	The recommended initial value is 70 in RFC 3261. Assuming 3 hops as		
		according to the Via header this results in a value of 67 in the		
		message sent to the UE		
P-Asserted-Service		OL.	RFC 6050 [31]	MCDATA_ SDS, MCDATA_ FD
Service-ID	"urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			MCDATA_ SDS
	"urn:urn-7:3gpp- service.ims.icsi.mcdata. fd"			MCDATA_ FD
P-Asserted-Service			RFC 6050 [31]	AFFILIATI ON, LOCATIO N_CONFI G
Service-ID	"urn:urn-7:3gpp- service.ims.icsi.mcptt"			MCPTT
	"urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO
	"urn:urn-7:3gpp- service.ims.icsi.mcdata			MCDATA
Accept-Contact			RFC 3841 [29]	
ac-value[1]				
feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcptt"			MCPTT
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata			MCDATA
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			MCDATA_ SDS
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. fd"			MCDATA_ FD
req-param	"require"			
explicit-param	"explicit"			400557
ac-value[2]				ACCEPT- CONTACT -WITH- MEDIA- FEATURE-
feature-param	"+g.3gpp.mcptt"			TAG MCPTT
. come o param	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata"			MCDATA
req-param	"require"			

Derivation Path: TS 24.229 [16]				
Information Element	Value/remark	Comment	Reference	Condition
explicit-param	"explicit"			1405174
ac-value[2]				MCDATA_ SDS,
				MCDATA_
				FD
feature-param	"+g.3gpp.mcdata.sds"			MCDATA_
rodiaro param	· g.egppeaata.eae			SDS
	"+g.3gpp.mcdata.fd"			MCDATA_
	0 011			FD
req-param	"require"			
explicit-param	"explicit"			
P-Asserted-Identity			RFC 3325 [32]	MCDATA_
				SDS,
				MCDATA_
				FD
name-addr	px_MCX_SIP_PublicUs	The public user identity		
	erld_B	of the originating		
D. Assented Identity		MCData user	DEC 2005 [00]	LOCATIO
P-Asserted-Identity			RFC 3325 [32]	LOCATIO
				N_CONFI G
name-addr	tsc_MCPTT_PublicServ	LIDI of the porticipating		MCPTT
name-auul	iceld_PF_A	URI of the participating MCPTT function which		IVICETI
	iceiu_FF_A	configures the location		
		reporting at the UE		
	tsc_MCVideo_PublicSe	URI of the participating		MCVIDEO
	rviceId_PF_A	MCVideo function		WOVIDEO
	TVICEIU_I I _/\	which configures the		
		location reporting at the		
		UE		
	tsc_MCData_PublicSer	URI of the participating		MCDATA
	viceld_PF_A	MCData function which		
		configures the location		
		reporting at the UE		
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		
NAINAE a sat basedons		ata Info		
MIME-part-headers	Hamplication / wad Ones			MODIT
MIME-Content-Type	"application/vnd.3gpp.			MCPTT
	mcptt-info+xml"			MCVIDEO
	"application/vnd.3gpp. mcvideo-info+xml"			INICVIDEO
	"application/vnd.3gpp.			MCDATA
	mcdata-info+xml"			IVICDATA
Content-ID	Unique id in format of a	Unique URL identifying	TS 24.379 [9]	
Content-ID	Message-ID assigned	the	clause 6.6.3.1	
	by the SS	MCPTT/MCVideo/MCD	014430 0.0.0.1	
	by the cc	ata Info XML MIME		
		body; used as		
		reference in the		
		signature MIME body		
MIME-part-body	MCPTT-Info as	,	TS 24.379 [9]	MCPTT
•	described in Table		clause F.1	
	5.5.3.2.2-1			
			TS 24.281 [86]	MCVIDEO
	MCVideo-Info as			
	MCVideo-Info as described in Table		clause F.1	
	described in Table			MCDATA
	described in Table 5.5.3.2.2-2		clause F.1	MCDATA

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
MIME body part	Value/Terriark	Affiliation-Command	Reference	AFFILIATI
				ON
MIME-part-headers				
MIME-Content-Type	"application/vnd.3gpp. mcptt-affiliation-			MCPTT
	command+xml"			
	"application/vnd.3gpp. mcvideo-affiliation- command+xml"			MCVIDEO
	"vnd.3gpp.mcdata-			MCDATA
	affiliation- command+xml"			
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	TS 24.379 [9] clause 6.6.3.1	
MINAT want bank	MCPTT-Affiliation-	signature MIME body	TC 04 070 [0]	MCPTT
MIME-part-body	Command as described		TS 24.379 [9] clause F.4	MCPTT
	in Table 5.5.3.7-1 MCVideo-Affiliation-		TS 24.281 [86]	MCVIDEO
	Command as described in Table 5.5.3.7-2		clause F.4	WCVIDEO
	MCData-Affiliation-		TS 24.282 [87]	MCDATA
	Command as described in Table 5.5.3.7-3		clause D.3	
MIME body part		Resource lists	RFC 5366 [35]	RESOURC E_LISTS
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	o.g		MCPTT
	Resource-lists as described in Table 5.5.3.3.2-2			MCVIDEO
	Resource-lists as described in Table 5.5.3.3.2-3			MCDATA
MIME body part		Location info		LOCATIO N-INFO, LOCATIO N_CONFI G
MIME-part-headers				
MIME-Content-Type	"application/vnd.3gpp. mcptt-location- info+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-location- info+xml"			MCVIDEO
	"application/vnd.3gpp. mcdata-location- info+xml"			MCDATA
Content-ID	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the Location-info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	

Derivation Path: TS 24.229 [16]				
Information Element	Value/remark	Comment	Reference	Condition
MIME-part-body	Location-info as described in Table 5.5.3.4.2-1		TS 24.379 [9] clause F.3	MCPTT
	Location-info as described in Table 5.5.3.4.2-2		TS 24.281 [86] clause F.3	MCVIDEO
	Location-info as described in Table 5.5.3.4.2-3		TS 24.282 [87] clause D.3	MCDATA
MIME body part		MIKEY message		MIKEY
MIME-part-headers				
Content-Type	"application/mikey"			
MIME-part-body	As described in Table 5.5.9.1-2	MIKEY message, containing the PSK	TS 33.180 [30] TS 24.282 [87]	
MIME body part		MCData Data signalling message		MCDATA_ SIGNALLI NG
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcdata-signalling"			
MIME-part-body	SIGNALLING PAYLOAD as described in Table 5.5.3.8.2-1		TS 24.282 [87]	
MIME body part		MCData Data message		MCDATA_ PAYLOAD
MIME-part-headers				
Content-Type	application/vnd.3gpp.m cdata-payload			
MIME-part-body	DATA_PAYLOAD as described in Table 5.5.3.9.1-2		TS 24.282 [87]	
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-2		TS 24.379 [9]	

Condition	Explanation
RESOURCE_LISTS	Message-body contains Resource lists
LOCATION_CONFIG	Message-body contains location reporting configuration according to TS 24.379 [2] clause 13.2.2
MIKEY	Message-body contains MIKEY message (e.g. for MCData 1-to-1 communication)
MCDATA_SIGNALLING	Message-body contains MCData Data signalling message
MCDATA_PAYLOAD	Message-body contains MCData Data message (DATA PAYLOAD)
MCDATA_SDS	SDS message or SDS disposition notification
MCDATA_FD	FD message or FD disposition notification
ACCEPT-CONTACT-WITH-MEDIA-	Accept-Contact header field contains media feature tag
FEATURE-TAG	("+g.3gpp.mcptt", "+g.3gpp.mcvideo" or "+g.3gpp.mcdata")
For further conditions see table 5.5.1-1	

5.5.2.8 SIP NOTIFY

This message is sent by the SS.

Table 5.5.2.8-1: SIP NOTIFY

Derivation Path: TS 24.229 [16]		_		
Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22]	
Method	"NOTIFY"			
Request-URI	same URI as the UE			
	has provided earlier in			
	the Contact header of			
	the SUBSCRIBE			
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
sent-protocol[1]	"SIP/2.0/TCP"			
sent-by[1]				
host	P-CSCF address of the	P-CSCF address as		
	SS	assigned to the UE via NAS signalling or P-		
		CSCF discovery		
port	protected server port of the SS			
via-branch[1]	Value assigned by the			
	SS starting with 'z9hG4bK'			
sent-protocol[2]	"SIP/2.0/UDP"			
sent-by[2]	0,2.0,001			
host	"scscf.3gpp.org"			
port	not present			
via-branch[2]	Value assigned by the			
via-brancii[2]	SS starting with			
sent-protocol[3]	"SIP/2.0/UDP"			
sent-by[3]				
host	host name of the MC			
11031	server			
	tsc_MCX_CMS_Hostna			CONFIG
	me			CONTIG
	tsc_MCX_GMS_Hostn			GROUPC
	ame			ONFIG
nort				UNFIG
port	not present			
via-branch[3]	Value assigned by the SS starting with 'z9hG4bK'			
From	20110 1511		RFC 3261 [22]	
addr-spec	same URI as received	Remote URI of the	111 0 0201 [22]	
addi-spec	in the To header of the	dialog (from the UE's		
	SUBSCRIBE message	point of view)		
tag	same tag as in the To-	Remote tag of the		
way	header of the response	dialog (from the UE's		
	which has established	point of view)		
	the dialog	point or viour)		
То	the dialog		RFC 3261 [22]	
addr-spec	same URI as received	Local URI of the dialog	111 0 0201 [22]	
auur-spec	in the From header of the SUBSCRIBE	(from the UE's point of view)		
	message			
tag	same value as received in From tag of the	Local tag of the dialog (from the UE's point of		
	SUBSCRIBE message	view)		
Call-ID			RFC 3261 [22]	
callid	same as value received in SUBSCRIBE			
0	message		DE0 000 : ****	
Cseq			RFC 3261 [22]	
value	value of CSeq sent by			
	the SS within its			
	previous request in the			
	same dialog but			
	increased by one			
method	"NOTIFY"			

Derivation Path: TS 24.229 [16]				
Information Element	Value/remark	Comment	Reference	Condition
Contact			RFC 3261 [22]	
addr-spec				
user-info and host	Same URI as used as Contact-URI in the 200 (OK) for the SUBSCRIBE message			
port	not present			
Event			RFC 6665 [39] RFC 3842 [61]	
event-type	"presence"			PRESENC E-EVENT
	"xcap-diff"			CONFIG. GROUPC ONFIG
	"poc-settings"			POC- SETTINGS -EVENT
Max-Forwards			RFC 3261 [22]	
value	"67"	The recommended initial value is 70 in RFC 3261. Assuming 3 hops as according to the Via header this results in a value of 67 in the message sent to the UE		
Subscription-State			RFC 6665 [39]	
substate-value	"active"			
expires	"7200"			
Content-Type			RFC 3261 [22] RFC 3842 [61]	
media-type	"multipart/mixed"		550 000 / 100	
Content-Length			RFC 3261 [22]	
value	length of message- body		DE0 0004 [00]	
Message-body		DIDE	RFC 3261 [22]	PDEOENIO
MIME body part		PIDF		PRESENC E-EVENT
MIME-part-headers	lle police tien /pielf			
Content-Type Content-ID	"application/pidf+xml" Unique id in format of a Message-ID	Unique URL identifying the PIDF XML	TS 24.379 [9] clause 6.6.	
	assigned by the SS	MIME body; used as reference in the signature MIME body	3.1	
MIME-part-body	PIDF as described in Table 5.5.3.5.2-1		TS 24.379 [9] clause 9.3.1	MCPTT
	PIDF as described in Table 5.5.3.5.2-2		TS 24.281 [86] clause 8.3.1	MCVIDEO
	PIDF as described in Table 5.5.3.5.2-3		TS 24.282 [87] clause 8.4.1	MCDATA
MIME body part		xcap-diff		CONFIG, GROUPC ONFIG
MIME-part-headers				
Content-Type	"application/xcap- diff+xml"			
Content-ID	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the xcap-diff XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	

Information Element	Value/remark	Comment	Reference	Condition
MIME-part-body	xcap-diff document as described in Table 5.5.3.12-1			CONFIG
	xcap-diff document as described in Table 5.5.3.12-2			GROUPC ONFIG
MIME body part		PoC-Settings		POC- SETTINGS -EVENT
MIME-part-headers				
Content-Type	"application/poc- settings+xml"		RFC 4354 [103]	
Content-ID	Unique id in format of a Message-ID assigned by the SS	Unique URL identifying the PoC-Settings XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	PoC-Settings document as described in Table 5.5.3.11.2-1			
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-2		TS 24.379 [9]	

5.5.2.9 SIP OPTIONS

Editor's note: It shall be specified who is sending the message.

Table 5.5.2.9-1: SIP OPTIONS

Derivation Path: TS 24.229 [16]	clause A.2.1.4.9, A2.2.4.9	Camma::1	Deference	Condition
Information Element	Value/remark	Comment	Reference	Condition
Request-Line Method	"OPTIONS"			
Request-Disposition	px_MCPTT_Client_A_I			
	D			
	px_MCVideo_Client_A			MCVIDEO
	_ID px_MCData_Client_A_I			MCDATA
	D			WICDATA
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22]	
aget protocol	"SIP/2.0/UDP"		RFC 3581 [55]	
sent-protocol sent-by	any allowed value	IP address or FQDN		
oon 2y		and protected server port of the UE		
via-branch	any allowed value	Value starting with 'z9hG4bK'		
From		20110 1011	RFC 3261 [22]	
addr-spec	px_MCPTT_Client_A_I			
	D			
	px_MCVideo_Client_A _ID			MCVIDEO
	px_MCData_Client_A_I			MCDATA
	D			
tag	"1"			
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec	tsc_MCPTT_PublicSer		KFC 5031 [54]	
addi opoo	viceId_A			
	tsc_MCVideo_PublicSe rviceId_A			MCVIDEO
	tsc_MCData_PublicSer viceId_A			MCDATA
Call-ID			RFC 3261 [22]	
Callid	same value as in the			
000	INVITE		DEC 2004 [00]	
CSeq value	value of CSeq sent by		RFC 3261 [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_I D)			
	IP address or FQDN (px_MCVideo_Client_A ID)			MCVIDEO
	IP address or FQDN (px_MCData_Client_A_			MCDATA
feature-naram	ID) "+g.3gpp.mcptt"	This media feature tag		
feature-param	+д.эдрр.шерш	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.		

		included - end of SIP message		
value	"0"	No message body		
Content-Length	•		RFC 3261 [22]	
value	any allowed value	Non-zero value		
Max-Forwards			RFC 3261 [22]	
media-range	"application/sdp"			
Accept		-717		
feature-param	"text"	This feature tag indicates that the device supports text as a streaming media type.		MCDATA
		indicates that the device supports video as a streaming media type.		
feature-param feature-param	"audio"	This feature tag indicates that the device supports audio as a streaming media type. This feature tag		MCPTT OR 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
	"+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
feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcptt"	This URN indicates that the device has the capabilities to support the mission critical push to talk (MCPTT) service.		
	"+g.3gpp.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
	"+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

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	6] clause A.2.1.4.10, A2.2.4.10 Value/remark	Comment	Reference	Condition
Status-Line	value/reiliai k	Comment	RFC 3261 [22]	Condition
Method	"PRACK"		RFC 3201 [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	OII 72.0		RFC 3261 [22]	
sent-protocol	"SIP/2.0/UDP"		10 0 0 0 0 1 [22]	UDP
Sent-protocol	"SIP/2.0/TCP"			TCP
sent-by	same value as in			TOP
Sent-by	INVITE message			
via-branch	Value starting with			
via-brancii	'z9hG4bK'			
Route	291104610		RFC 3261 [22]	
	URIs of the Record-		KFC 3201 [22]	
route-param list	Route header sent to			
	the UE in the response which has established			
	the dialog, in reverse			
From	order		DEC 2264 [22]	
From	nomo valuo as is the	Local LIDL of the distant	RFC 3261 [22]	<u> </u>
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		550	
Call-ID			RFC 3261 [22]	
callid	same value as in			
	INVITE message			
CSeq			RFC 3261 [22]	
value	value of CSeq sent by			
	the endpoint within its			
	previous request in the			
	same dialog but			
	increased by one			
method	"PRACK"			
Max-Forwards			RFC 3261 [22]	
value	any allowed value	Non-zero value		
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			
P-Access-Network-Info			RFC 7315 [52]	
access-net-spec	Access network			
r	technology and, if			
	applicable, the cell ID			
Content-Length	if present		RFC 3261 [22]	
value	"0"	No message body		
		included		
	<u> </u>		1	1

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"			
Max-Forwards			RFC 3261 [22]	
value	"68"	The recommended initial value is 70 in RFC 3261. Assuming 2 hops as according to the Via header this results in a value of 68 in the message sent to the UE		
RAck			RFC 3261 [22]	
response-num	same value as in RSeq header of the reliable response			
cseq-num	same value as in CSeq of reliable response			
method	same value as in CSeq of reliable response			
Content-Length			RFC 3261 [22]	
value	"0"	No message body included		

5.5.2.11 SIP PUBLISH

This message is sent by the UE.

Table 5.5.2.11-1: SIP PUBLISH

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Request-Line	value/reillark	Comment	RFC 3261 [22] RFC 5031 [54]	Condition
Method	"PUBLISH"		KFC 5031 [54]	
Request-URI	tsc_MCPTT_PublicSer viceId_A	The public service identity identifying the originating participating MCPTT function serving the MCPTT user		MCPTT
	tsc_MCVideo_PublicSe rviceId_A	The public service identity identifying the originating participating MCVideo function serving the MCVideo user		MCVIDEO
	tsc_MCData_PublicSer viceId_A	The public service identity identifying the originating participating MCData function serving the MCData user		MCDATA
SIP-Version	"SIP/2.0"		DE0 0004 (00)	
Route	CID LID!		RFC 3261 [22]	
addr-spec[1] user-info and host	P-CSCF address of the SS	P-CSCF address as assigned to the UE via NAS signalling or P- CSCF discovery		
port	protected server port of the SS	as assigned during registration		
uri-parameters	"Ir"			
addr-spec[2]	SIP URI			
user-info and host port	"scscf.3gpp.org" not present			
uri-parameters	"Ir"			
Via	"		RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP" "SIP/2.0/TCP"			UDP TCP
sent-by				
user-info and host	IP address or FQDN	Either the UE's IP address or its home domain name		
port	protected server port of the UE	as assigned during registration		
via-branch	Value starting with 'z9hG4bK'			
From			RFC 3261 [22]	
addr-spec user-info and host	Default public user id (px_MCX_SIP_PublicU serId_A_1)			
port	not present			
tag	any value			
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec	anno LIDI : !			
user-info and host	same URI as used as Request URI			
port	not present			
tag Expires	not present		RFC 3261 [22]	
delta-seconds	"4294967295"		RFC 3903 [43]	

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Require	value/remark	Comment	RFC 3261 [22]	Condition
Require			RFC 3261 [22] RFC 3329 [53]	
ontion tog	"sec-agree"		KFC 3329 [33]	
option-tag Proxy-Require	sec-agree		DEC 2004 [20]	
Proxy-Require			RFC 3261 [22]	
antian tag	"aaa aaraa"		RFC 3329 [53]	
option-tag	"sec-agree"		DEC 0000 [50]	
Security-Verify	1 0 "		RFC 3329 [53]	
sec-mechanism	same value as Security			
	-Server header sent by			
Casa	SS during registration		DEC 0004 [00]	
Cseq			RFC 3261 [22]	
value	any allowed value			
method	"PUBLISH"		550	
Call-ID			RFC 3261 [22]	
callid	any allowed value			
Max-Forwards			RFC 3261 [22]	
value	any allowed value			
P-Access-Network-Info			RFC 7315 [52]	
			RFC 7913 [51]	
access-net-spec	Access network			
	technology and, if			
	applicable, the cell ID			
Event			RFC 3903 [43]	
event-type	"presence"			PRESENC
				E-EVENT
	"poc-settings"			POC-
				SETTINGS
				-EVENT
P-Preferred-Service			RFC 6050 [31]	
Service-ID	"urn:urn-7:3gpp-		TS 24.379 [9]	MCPTT
	service.ims.icsi.mcptt"		clause 7.2.1A	
	"urn:urn-7:3gpp-		TS 24.281 [86]	MCVIDEO
	service.ims.icsi.mcvide		clause 7.2.1A	
	О"			
	"urn:urn-7:3gpp-		TS 24.282 [87]	MCDATA
	service.ims.icsi.mcdata		clause 7.2.1A	
	"			
Accept			RFC 3261 [22]	PRESENC
				E-EVENT
media-range	"application/pidf+xml"			
port	not present			
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"			
Content-Length	present in case of TCP		RFC 3261 [22]	
-	and when there is a			
	message body			
	(otherwise			
	optional)length of			
	message-body			
value	any value			
Message-body			RFC 3261 [22]	
MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-headers				
Content-Type	"application/vnd.3gpp.			MCPTT
	mcptt-info+xml"			
	"application/vnd.3gpp.			MCVIDEO
	mcvideo-info+xml"			
	"application/vnd.3gpp.			MCDATA

Information Element	Value/remark	Comment	Reference	Condition
Content-ID	any value	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	MCPTT-Info as described in Table 5.5.3.2.1-1		TS 24.379 [9] clause F.1	MCPTT
	MCVideo-Info as described in Table 5.5.3.2.1-2		TS 24.281 [86] clause F.1	MCVIDEO
	MCData-Info as described in Table 5.5.3.2.1-3		TS 24.282 [87] clause D.1	MCDATA
MIME body part		PIDF		PRESENCE-EVENT
MIME-part-headers				
Content-Type	"application/pidf+xml"			
MIME-part-body	PIDF as described in Table 5.5.3.5.1-1		TS 24.379 [9] clause 9.3.1	MCPTT
	PIDF as described in Table 5.5.3.5.1-2		TS 24.281 [86] clause 8.3.1	MCVIDEO
	PIDF as described in Table 5.5.3.5.1-3		TS 24.282 [87] clause 8.3.1	MCDATA
MIME body part		MIKEY		SERVICE AUTH
MIME-part-headers				
Content-Type	"application/mikey"		RFC 3830 [24]	
MIME-part-body	MIKEY message as described in Table 5.5.9.1-1	MIKEY message, containing the CSK	TS 33.180 [94]	
MIME body part		PoC-Settings		POC- 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 5.5.3.11.1-1		TS 24.379 [9]	
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-1		TS 24.379 [9]	

5.5.2.12 SIP REFER

This message is sent by the UE outside of a dialog.

Table 5.5.2.12-1: SIP REFER

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Request-Line	v aiue/i eiilai k	Comment		Condition
request-Line			RFC 3261 [22]	
Method	"REFER"		RFC 5031 [54]	
Request-URI	tsc_MCX_SessionID_B	session identity of the		
·		pre-established session		
SIP-Version	"SIP/2.0"			
Via			RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"		• •	UDP
•	"SIP/2.0/TCP"			TCP
sent-by				
host	IP address or FQDN	Either the UE's IP address or its home domain name		
port	protected server port of the UE			
via-branch	Value starting with 'z9hG4bK'			
Route	200 10.1		RFC 3261 [22]	
addr-spec[1]	SIP URI		0 0201 [22]	
user-info and host	P-CSCF address of the SS	P-CSCF address as assigned to the UE via NAS signalling or P- CSCF discovery		
port	protected server port of the SS	as assigned during registration		
uri-parameters	"Ir"			
addr-spec[2]	SIP URI			
user-info and host	"scscf.3gpp.org"			
port	not present			
uri-parameters	"Ir"			
From			RFC 3261 [22]	
addr-spec				
user-info and host	Default public user id (px_MCX_SIP_PublicU serId_A_1)			
port	not present			
tag	any allowed value			
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec				
user-info and host	Same URI as used in the INVITE creating the pre-established session			
port	not present			
tag	not present		DEC 0004 [00]	
Call-ID	and allered to t		RFC 3261 [22]	
callid	any allowed value		DEC 2004 [00]	
CSeq	ony ollowed velve		RFC 3261 [22]	
value	any allowed value			
method	"REFER"		DEC 2004 [22]	
Supported			RFC 3261 [22] RFC 6442 [62] RFC 4488 [36]	
option-tag	"norefersub"			
Refer-Sub			RFC 4488 [36]	
refer-sub-value	"false"			
Target-Dialog			RFC 4538 [37]	
callid	Callid of the pre- established session	Callid as used by the UE in the INVITE for establishment of the pre-established session		

Derivation Path: TS 24.229 [16] c				
Information Element	Value/remark	Comment	Reference	Condition
Require			RFC 3261 [22] RFC 3312 [56] RFC 3329 [53]	
option-tag	"sec-agree"		10 0020 [00]	
option-tag	"multiple-refer"			
Proxy-Require			RFC 3261 [22]	
, , , , , , , , , , , , , , , , , , , ,			RFC 3329 [53]	
option-tag	"sec-agree"			
Security-Verify			RFC 3329 [53]	
sec-mechanism	same value as Security -Server header sent by SS during registration			
Contact	3 3		RFC 3261 [22 RFC 3840 [33]	
addr-spec	SIP URI			
user-info and host	IP address or FQDN			
feature-param	"+g.3gpp.mcptt"	This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Push To Talk (MCPTT) communication.		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"	This URN indicates that the device has the capabilities to support the mission critical push to talk (MCPTT) service.		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

Information Element	clause A.2.1.4.11, A.2.2.4.11 Value/remark	Comment	Reference	Condition
feature-param	"audio"	This feature tag	I/GIGIGIICG	MCPTT
leature-param	audio	indicates that the		OR
		device supports audio		MCVIDEO
		as a streaming media		IVICVIDEO
		type.		
feature-param	"video"	This feature tag		MCVIDEO
reature-param	video	indicates that the		INICAIDEO
		device supports video		
		as a streaming media		
facture name	"text"	type. This feature tag		MCDATA
feature-param	text	indicates that the		MCDATA
		device supports text as		
		a streaming media		
Defea Te		type.	DEC 2545 [20]	
Refer-To	o Contest ID ("sid")		RFC 3515 [38]	
addr-spec	a Content-ID ("cid")			
	Uniform Resource			
	Locator (URL) as			
	specified in IETF RFC			
	2392 that points to an			
	application/resource-			
	lists+xml MIME body as			
	specified in IETF RFC			
D.C. T.	5366		DE0 0545 [00]	METHOD
Refer-To			RFC 3515 [38]	METHOD- BYE
addr-spec				BYE
user-info and host	tsc_MCX_SessionID_B	The session identity of		
user-inio and nost	ISC_INICA_SessionID_B	the pre-established		
		session to leave.		
uri parametera		session to leave.		
uri-parameters id[1]	mathad			
	method "BYE"			
value[1] Max-Forwards	BYE		DEO 0004 [00]	
			RFC 3261 [22]	
value	any allowed value	Non-zero value	DE0 7045 (50)	
P-Access-Network-Info			RFC 7315 [52]	
access-net-specs	Access network			
	technology and, if			
	applicable, the cell ID		55000000	
P-Preferred-Service			RFC 6050 [31]	
Service-ID	"urn:urn-7:3gpp-			MCPTT
	service.ims.icsi.mcptt"			
	"urn:urn-7:3gpp-			MCVIDEO
	service.ims.icsi.mcvide			
	о"			
	"urn:urn-7:3gpp-			MCDATA
	service.ims.icsi.mcdata.			
	sds"			
P-Preferred-Identity	If present		RFC 3325 [32]	
-	· .		' '	
PPreferredID-value	same URI as in From-			
	header			
Resource-Priority			RFC 4412 [40]	EMERGEN
-			RFC 7134 [57]	CY-CALL
			RFC 8101 [45]	AND
			TS 24.379 [9]	(GROUP-
			clause	CALL OR
			6.2.8.1.15	PRIVATE-
				CALL)

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
namespace	value of the <resource-< td=""><td>As configured in Table</td><td>TS 24.484 [14]</td><td>Condition</td></resource-<>	As configured in Table	TS 24.484 [14]	Condition
Паттезрасе	priority-namespace>	5.5.8.4-1 for MCPTT	10 24.404 [14]	
	element contained in	and in Table 5.5.8.8-1		
	the <emergency-< td=""><td>for MCVIdeo</td><td></td><td></td></emergency-<>	for MCVIdeo		
	resource-priority>			
	element contained in			
	the <onnetwork></onnetwork>			
	element of the MCX service configuration			
	documents			
r-priority	value of the <resource-< td=""><td>As configured in Table</td><td>TS 24.484 [14]</td><td></td></resource-<>	As configured in Table	TS 24.484 [14]	
. p	priority-priority>	5.5.8.4-1 for MCPTT		
	element contained in	and in Table 5.5.8.8-1		
	the <emergency-< td=""><td>for MCVIdeo</td><td></td><td></td></emergency-<>	for MCVIdeo		
	resource-priority>			
	element contained in			
	the <onnetwork> element of the MCX</onnetwork>			
	service configuration			
	document			
Resource-Priority			RFC 4412 [40]	IMMPERIL
			RFC 7134 [57]	-CALL
			RFC 8101 [45]	AND
			TS 24.379 [9]	(GROUP-
			clause 6.2.8.1.15	CALL OR PRIVATE-
			0.2.0.1.13	CALL)
r-value				- · · /
namespace	value of the <resource-< td=""><td>As configured in Table</td><td>TS 24.484 [14]</td><td></td></resource-<>	As configured in Table	TS 24.484 [14]	
	priority-namespace>	5.5.8.4-1 for MCPTT		
	element contained in	and in Table 5.5.8.8-1		
	the <imminent-peril- resource-priority></imminent-peril- 	for MCVIdeo		
	element contained in			
	the <onnetwork></onnetwork>			
	element of the MCX			
	service configuration			
	documents			
r-priority	value of the <resource-< td=""><td>As configured in Table</td><td>TS 24.484 [14]</td><td></td></resource-<>	As configured in Table	TS 24.484 [14]	
	priority-priority>	5.5.8.4-1 for MCPTT		
	element contained in the <imminent-peril-< td=""><td>and in Table 5.5.8.8-1 for MCVIdeo</td><td></td><td></td></imminent-peril-<>	and in Table 5.5.8.8-1 for MCVIdeo		
	resource-priority>	IOI IVIO VIUGO		
	element contained in			
	the <onnetwork></onnetwork>			
	element of the MCX			
	service configuration			
Content-Type	document not present			METHOD-
	Hot prosent			BYE
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"		DE0 0004 7007	
Content-Length	present in case of TCP		RFC 3261 [22]	
	and when there is a message body			
	(otherwise optional)			
Value	any value	length of message-		
	not present	body		METHOD-
Message-body	not proofit			BYE
Message-body		December 18st	RFC 3261 [22]	
MIME body part MIME-part-headers		Resource list	RFC 5366 [35]	
IVIIIVIE-DAH-HEAGEIS			1	
Content-Type	"application/resource-			

Information Element	Value/remark	Comment	Reference	Condition
Content-ID	same value as the cid URL in the Refer-To header field	Unique URL identifying the Resource-lists XML MIME body; used as reference in the signature MIME body too	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Resource-lists as described in Table 5.5.3.3.1-1 with condition PRE-ESTABLISH and the uri attribute of the single <entry> element extended with the headers of Table 5.5.2.12-2</entry>			MCPTT
	Resource-lists as described in Table 5.5.3.3.1-2			MCVIDEC
	Resource-lists as described in Table 5.5.3.3.1-3			MCDATA
MIME body part		Location info		LOCATIO N-INFO
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-location- info+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-location- info+xml"			MCVIDEC
Content-ID	any value	Unique URL identifying the Location-info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	Location-info as described in Table 5.5.3.4.1-1		TS 24.379 [9] clause F.3	MCPTT
	Location-info as described in Table 5.5.3.4.1-2		TS 24.281 [86] clause F.3	MCVIDEO
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-1		TS 24.379 [9]	

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

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

Derivation Path: TS 24.379 [9] clause 10.1.1.2.2.1, 10.1.2.2.2.1, 11.1.1.2.2.1, 11.1.6.2.2.1 Editor's note: references for MCVIDEO and MCDATA to be added Information Value/remark Comment Reference Condition **Element** Unique URL identifying the Content-ID any value TS 24.379 [9] MCPTT/MCVideo/MCData clause 6.6.3.1 Info XML MIME body; used as reference in the signature MIME body MCPTT-Info as described in MIME-part-TS 24.379 [9] MCPTT body Table 5.5.3.2.1-1 clause F.1 MCVideo-Info as described in TS 24.281 [86] **MCVIDEO** Table 5.5.3.2.1-2 clause F.1 MCData-Info as described in TS 24.282 [87] MCDATA Table 5.5.3.2.1-3 clause D.1 MIME body Location info (MCPTT OR MCVIDEO) AND part ALLOW-LOCATION-INFO MIME-part-<u>hea</u>ders Content-"application/vnd.3gpp.mcptt-MCPTT location-info+xml" Type "application/vnd.3gpp.mcvideo-MCVIDEO location-info+xml" Content-ID any value Unique URL identifying the TS 24.379 [9] Location-info XML MIME clause 6.6.3.1 body; used as reference in the signature MIME body TS 24.379 [9] MIME-part-Location-info as described in **MCPTT** Table 5.5.3.4.1-1 clause F.3 body TS 24.281 [86] Location-info as described in **MCVIDEO** Table 5.5.3.4.1-2 clause F.3 MIME body Signature part MIME-partheaders Content-"application/vnd.3gpp.mcptt-TS 24.379 [9] Type signed+xml" Signatures for XML MIME MIME-part-TS 24.379 [9] bodies as described in Table body 5.5.13.1-1

Condition	Explanation
MANUAL	Call establishment with manual commencement mode
FORCE	force of automatic commencement mode at the invited MCPTT client
	is requested by the MCPTT user
ALLOW-LOCATION-INFO	Implicit floor control is requested AND <allow-location-info-when-talking> element of the <ruleset> element of the MCPTT user profile document set to "true" in TS 36.579-1 [2] Table 5.5.8.3-1</ruleset></allow-location-info-when-talking>
For further conditions see table 5.5.1-1	

5.5.2.13 SIP REGISTER

This message is sent by the UE.

Table 5.5.2.13-1: SIP REGISTER

Derivation Path: TS 24.229 [16]			Deference	Conditio-
Information Element	Value/remark	Comment	Reference	Condition
Request-Line Method	"REGISTER"		RFC 3261 [22]	
Request-URI	SIP URI of the home	Depending on the UE		
Request-ORI	domain name	configuration the UE		
	(px_MCX_SIP_HomeD	may know the home		
	omain_A) if available at the UE or derived from	domain name of the SIP core (e.g. when		
	the IMSI otherwise	there is an ISIM) or the		
	the hvist otherwise	UE needs to derive it		
		from the IMSI as		
		according to		
		23.003 [69] clause 13.2		
		(e.g. when there is a		
		USIM only)		
SIP-Version	"SIP/2.0"			
Route	Not present		RFC 3261 [22]	
Via			RFC 3261 [22]	
	"OLD/O O/LIDD"	LIE LIDD to	RFC 3581 [55]	LIDD
sent-protocol	"SIP/2.0/UDP"	UE uses UDP for registration		UDP
	"SIP/2.0/TCP	UE uses TCP for		TCP
	311 /2:0/101	registration		101
sent-by		. 59.50.0001		1
host	IP address or FQDN			
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 'z9hG4bK'			
From	231104511		RFC 3261 [22]	
addr-spec			141 0 0201 [22]	
user-info and host	same value as in the			
	initial REGISTER Default public user id	Depending on the LIE		SIP_REGI
	(px_MCX_SIP_PublicU	Depending on the UE 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.		11/12
	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		
		only)		1
port	not present	Orny)		
tag	any value			
То				
addr-spec	same value as in From-			
	header			
tag	Not present			
Contact	OID LID!		RFC 3261 [22]	
addr-spec	SIP URI			1
user-info and host	IP address or FQDN			CID DEC
port	any value if present			SIP_REGI STER_INI
				TIAL
	protected server port of			11/1
	the UE			
feature-param	"+g.3gpp.mcptt"			MCPTT

	"+g.3gpp.mcvideo"	This media feature tag when used in a SIP request or a SIP response indicates that the function sending the SIP message supports Mission Critical Video (MCVideo) communication.		MCVIDEO
feature-param	g.3gpp.mcdata.sds	SDS is supported	TS 24.282 [87] clause 7.2.1	MCDATA AND pc_MCDat a_SDS
feature-param	g.3gpp.mcdata.fd	FD is supported	TS 24.282 [87] clause 7.2.1	MCDATA AND pc_MCDat a_FD
feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcptt"			MCPTT
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o"	This URN indicates that the device has the capabilities to support the mission critical video (MCVideo) service.		MCVIDEO
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata	This URN indicates that the device has the capabilities to support the mission critical data (MCData) service.		MCDATA
feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"	SDS is supported	TS 24.282 [87] clause 7.2.1	MCDATA AND pc_MCDat a_SDS
feature-param	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcdata. fd"	FD is supported	TS 24.282 [87] clause 7.2.1	MCDATA AND pc_MCDat a FD
feature-param	"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	"expires=600000" if present			
Expires	Present if no expires parameter in Contact header		RFC 3261 [22] RFC 3903 [43]	
value	"600000"			
Require			RFC 3261 [22] RFC 3329 [53]	
option-tag Proxy-Require	"sec-agree"		RFC 3261 [22] RFC 3329 [53]	
option-tag Supported	"sec-agree"		RFC 3261 [22] RFC 6442 [62] RFC 4488 [36]	

ontion tog	"path"	T	I	I
option-tag	"timer"			
option-tag Cseq	итег		DEC 2004 [00]	
•			RFC 3261 [22]	010 0501
value	any allowed value			SIP_REGI
				STER_INI
				TIAL
	value sent by the UE in			
	previous REGISTER			
	incremented by one			
method	"REGISTER"			
Call-ID			RFC 3261 [22]	
callid	any value		•	
Security-Client			RFC 7315 [52]	
mechanism-name	"ipsec-3gpp"		141 0 7 0 10 [02]	
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			
	protected server port			
port-s			DEC 2220 [52]	CID DECL
Security-Verify	Not present		RFC 3329 [53]	SIP_REGI
				STER_INI
				TIAL
Security-Verify			RFC 3329 [53]	
sec-mechanism	same value as Security			
	Server header sent by SS			
Authorization			RFC	SIP_REGI
			2617 [72],	STER_INI
			RFC 3310 [96]	TIAL
username	Private user id	Depending on the UE	111 0 00 10 [00]	117 (2
ascinanie	(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	nn	Empty string		
digest-uri	same SIP-URI as used			
algoot all	as Request-URI			
opaque				
opaque	any value if present			
qop		İ	1	
cnonce	any value if present			
	any value if present			
nc	any value if present any value if present			
	any value if present any value if present any value if present			
nc	any value if present any value if present	Empty string		
nc algorithm	any value if present any value if present any value if present	Empty string	RFC	
nc algorithm response	any value if present any value if present any value if present	Empty string	RFC 2617 [72].	
nc algorithm response	any value if present any value if present any value if present	Empty string	2617 [72],	
nc algorithm response Authorization	any value if present any value if present any value if present ""	Empty string		
nc algorithm response	any value if present any value if present any value if present "" same value as for	Empty string	2617 [72],	
nc algorithm response Authorization	any value if present any value if present any value if present "" same value as for condition	Empty string	2617 [72],	
nc algorithm response Authorization	any value if present any value if present any value if present "" same value as for	Empty string	2617 [72],	

		T	I	
realm	same value as received in the realm directive in			
	the WWW Authenticate			
	header sent by SS			
nonce	same value as in			
Herios	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"	value Stidil De I		
response	Digest response	calculated by the client		
response	Digest response	according to RFC 2617		
Max-Forwards		according to 1th C 2017	RFC 3261 [22]	
value	any allowed value	Non-zero value	14. 0 0201 [22]	
P-Access-Network-Info	any anomou rando		RFC 7315 [52]	
access-net-specs	Access network			
•	technology and, if			
	applicable, the cell ID			
Content-Type			RFC 5621 [58]	SERVICE_ AUTH
media-type	"multipart/mixed"			
Content-Length	present in case of TCP and when there is a message body		RFC 3261 [22]	
value	(otherwise optional) any value	length of the message		
Message-body		body	RFC 3261 [22]	SERVICE_
MIME body part		MCPTT/MCVideo/MCD ata Info		AUTH
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-info+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-info+xml"			MCVIDEO
	"application/vnd.3gpp. mcdata-info+xml"			MCDATA
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	organicate minima body	TS 24.379 [9] clause F.1	MCPTT
	5.5.3.2.1-1		Clause F. I	
	MCVideo-Info as		TS 24.281 [86]	MCVIDEO
	described in Table 5.5.3.2.1-2		clause F.1	

	MCData-Info as described in Table 5.5.3.2.1-3		TS 24.282 [87] clause D.1	MCDATA
MIME body part		MIKEY		
MIME-part-headers				
Content-Type	"application/mikey"		RFC 3830 [24]	
MIME-part-body	MIKEY message as described in Table 5.5.9.1-1	MIKEY message, containing the CSK	TS 33.180 [94]	
MIME body part		Signature		
MIME-part-headers				
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]	
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-1		TS 24.379 [9]	

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

5.5.2.14 SIP SUBSCRIBE

This message is sent by the UE.

Table 5.5.2.14-1: SIP SUBSCRIBE

Information Element	Value/remark	Comment	Reference	Condition
Request-Line			RFC 3261 [22] RFC 5031 [54]	
Method	"SUBSCRIBE"		1(1 0 3031 [34]	
Request-URI	tsc_MCPTT_PublicSer viceId_A	The public service identity identifying the originating participating MCPTT function serving the MCPTT user		MCPTT
	tsc_MCVideo_PublicSe rviceId_A	The public service identity identifying the originating participating MCVideo function serving the MCVideo user		MCVIDEC
	tsc_MCData_PublicSer viceId_A	The public service identity identifying the originating participating MCData function serving the MCData user		MCDATA
	"sip:" & tsc_MCX_CMS_Hostna me	SIP URI of the CMS's domain name: public service identity (PSI) for performing subscription proxy function of the CMS	TS 24.484 [14] clause 6.3.13.	CONFIG
	"sip:" & tsc_MCX_GMSURI	public service identity (PSI) for performing subscription proxy function of the GMS as configured in the <gms-uri> element of the initial UE configuration</gms-uri>	TS 24.481 [11] clause 6.3.13. 2.1	GROUPC ONFIG
	same URI as the SS has sent earlier in the Contact header of a message within the same dialog	Contact URI of the recipient of the previous 200 OK		re_SUBSO RIBE
SIP-Version	"SIP/2.0"			
Route			RFC 3261 [22]	
addr-spec[1] user-info and host	SIP URI P-CSCF address of the SS	P-CSCF address as assigned to the UE via NAS signalling or P- CSCF discovery		
port	protected server port of the SS	as assigned during registration		
uri-parameters	"Ir"			
addr-spec[2] user-info and host	SIP URI "scscf.3gpp.org"			
port	not present			
uri-parameters	"Ir"			
Route			RFC 3261 [22]	re_SUBS0 RIBE
route-param list	URIs of the Record- Route header sent to the UE in the response which has established the dialog, in reverse order			
Via	oluei		RFC 3261 [22] RFC 3581 [55]	
sent-protocol	"SIP/2.0/UDP"	 	1(1 0 0001 [00]	UDP

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
	"SIP/2.0/TCP"	30		TCP
sent-by	311 / 2 10/ 1 0 1			
host	IP address or FQDN	Either the UE's IP address or its home		
		domain name		
port	protected server port of the UE	as assigned during registration		
via-branch	value starting with 'z9hG4bK'			
From			RFC 3261 [22]	
addr-spec				
user-info and host	Default public user id (px_MCX_SIP_PublicU serId_A_1)			
port	not present			
tag	any value			
From			RFC 3261 [22]	re_SUBSC RIBE
addr-spec	Same URI of the UE as used earlier in the dialog	Local URI of the dialog (from the UE's point of view)		
tag	Same tag of the UE as used earlier in the dialog	Local tag of the dialog ID (from the UE's point of view)		
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec				
user-info and host	same URI as used as Request URI			
port	not present			
tag	not present			
То			RFC 3261 [22]	re_SUBSC RIBE
addr-spec	Same URI of the SS as used earlier in the dialogURI	Remote URI of the dialog (from the UE's point of view)		
tag	Same tag of the SS as used earlier in the dialog	Remote tag of the dialog ID (from the UE's point of view)		
Contact			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.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcptt"	Mandatory media feature tag according to TS 24.481 [11] clause 6.3.13.2.1 and TS 24.484 [14] clause 6.3.13.2.2		CONFIG OR GROUPC ONFIG
feature-param	any (further) feature tags if present	In addition to mandatory feature tags (if any) the UE may provide further feature tags which are not checked		
Expires			RFC 3261 [22] RFC 3903 [43]	
value	any value			
Require			RFC 3261 [22] RFC 3329 [53]	
option-tag	"sec-agree"		5 5525 [55]	
Proxy-Require	333 S.J. 33		RFC 3261 [22] RFC 3329 [53]	
option-tag	"sec-agree"			

Derivation Path: TS 24.229 [16]			Deferre	0
Information Element	Value/remark	Comment	Reference	Condition
Security-Verify			RFC 3329 [53]	
sec-mechanism	same value as Security			
	-Server header sent by			
	SS during registration		DE0 0004 (00)	
Cseq			RFC 3261 [22]	
value	any allowed value			011000
	value of CSeq sent by			re_SUBSC
	the endpoint within its			RIBE
	previous request in the			
	same dialog but			
	increased by one			
method	"SUBSCRIBE"		DE0 0004 (00)	
Call-ID			RFC 3261 [22]	
callid	any allowed value			011500
	same value as in			re_SUBSC
	SUBSCRIBE creating			RIBE
	the dialog			
Max-Forwards			RFC 3261 [22]	
value	any allowed value	Non-zero value	DE0 == := := :=	
P-Access-Network-Info			RFC 7315 [52]	
			RFC 7913 [51]	
access-net-spec	Access network	Access network		
	technology and, if	technology and, if		
	applicable, the cell ID	applicable, the cell ID	550 (
Event			RFC 6665 [39]	
event-type	"presence"			
	"xcap-diff"			CONFIG
				GROUPC
				ONFIG
	"poc-settings"			POC-
				SETTINGS
				-EVENT
Accept			RFC 3261 [22]	
media-range	"application/pidf+xml"			0011510
	"application/xcap-			CONFIG,
	diff+xml"			GROUPC
	" ' '			ONFIG
	"application/poc-			POC-
	settings+xml"			SETTINGS
D. Durafarra d. Carraia a			DE0 0050 [04]	-EVENT
P-Preferred-Service			RFC 6050 [31]	MODET
Service-ID	"urn:urn-7:3gpp-			MCPTT
	service.ims.icsi.mcptt"			OR
				CONFIG
				OR
				GROUPC
	"urn:urn 7:2ann			ONFIG MCVIDEO
	"urn:urn-7:3gpp- service.ims.icsi.mcvide			INICAIDEO
	o"			
	"urn:urn-7:3gpp-			MCDATA
	service.ims.icsi.mcdata			IVICDATA
	"			
Content-Type			RFC 5621 [58]	
media-type	"multipart/mixed"		0 0021 [00]	
Content-Length	present in case of TCP		RFC 3261 [22]	
Comonic Longin	and when there is a		111 0 0201 [22]	
	message body			
	(otherwise optional)			
	any value	length of message-		
value		1 1511UIII UI 111622UU-	İ	1
value	ariy value			
	any value	body	RFC 3261 [22]	
value Message-body MIME body part	any value		RFC 3261 [22]	

Content-ID MIME-part-body MIME body part MIME-part-headers Content-Type	"application/vnd.3gpp. mcptt-info+xml" "application/vnd.3gpp. mcvideo-info+xml" "application/vnd.3gpp. mcdata-info+xml" any value MCPTT-Info as described in Table 5.5.3.2.1-1 MCVideo-Info as described in Table 5.5.3.2.1-2 MCData-Info as described in Table 5.5.3.2.1-3	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 TS 24.281 [86] clause F.1 TS 24.282 [87] clause D.1	MCPTT OR CONFIG OR GROUPC ONFIG MCVIDEO MCDATA MCPTT OR CONFIG OR GROUPC ONFIG MCVIDEO MCDATA
Content-Type Content-ID Content-ID MIME-part-body MIME body part MIME-part-headers Content-Type	"application/vnd.3gpp. mcvideo-info+xml" "application/vnd.3gpp. mcdata-info+xml" any value MCPTT-Info as described in Table 5.5.3.2.1-1 MCVideo-Info as described in Table 5.5.3.2.1-2 MCData-Info as described in Table	the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause F.1 TS 24.281 [86] clause F.1 TS 24.282 [87]	OR CONFIG OR GROUPC ONFIG MCVIDEC MCDATA MCPTT OR CONFIG OR GROUPC ONFIG MCVIDEC
Content-ID MIME-part-body MIME body part MIME-part-headers Content-Type	mcvideo-info+xml" "application/vnd.3gpp. mcdata-info+xml" any value MCPTT-Info as described in Table 5.5.3.2.1-1 MCVideo-Info as described in Table 5.5.3.2.1-2 MCData-Info as described in Table	the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause F.1 TS 24.281 [86] clause F.1 TS 24.282 [87]	MCDATA MCPTT OR CONFIG OR GROUPC ONFIG MCVIDEO
Content-ID MIME-part-body MIME body part MIME-part-headers Content-Type	mcdata-info+xml" any value MCPTT-Info as described in Table 5.5.3.2.1-1 MCVideo-Info as described in Table 5.5.3.2.1-2 MCData-Info as described in Table	the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause F.1 TS 24.281 [86] clause F.1 TS 24.282 [87]	MCPTT OR CONFIG OR GROUPC ONFIG MCVIDEC
MIME-part-body I I I I I I I I I I I I I	MCPTT-Info as described in Table 5.5.3.2.1-1 MCVideo-Info as described in Table 5.5.3.2.1-2 MCData-Info as described in Table	the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause F.1 TS 24.281 [86] clause F.1 TS 24.282 [87]	OR CONFIG OR GROUPC ONFIG MCVIDEC
MIME body part MIME-part-headers Content-Type	MCVideo-Info as described in Table 5.5.3.2.1-2 MCData-Info as described in Table 5.5.3.2.1-2		TS 24.281 [86] clause F.1 TS 24.282 [87]	OR CONFIG OR GROUPC ONFIG MCVIDEC
MIME body part MIME-part-headers Content-Type	described in Table 5.5.3.2.1-2 MCData-Info as described in Table		clause F.1 TS 24.282 [87]	
MIME body part MIME-part-headers Content-Type	described in Table	OMBLE SUSSE		MCDATA
MIME-part-headers Content-Type		OIMBLE ST. TES	i .	
Content-Type 1		SIMPLE-FILTER		PRESEN E-EVENT
	"application/simple- filter+xml"			
Content-ID	any value	Unique URL identifying the SIMPLE-FILTER XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
	SIMPLE-FILTER as described in Table 5.5.3.6-1		TS 24.379 [9] clause 9.3.2 TS 24.281 [86] clause 8.3.2 TS 24.282 [87] clause 8.4.2	
MIME body part		Resource-lists		CONFIG, GROUPC ONFIG
MIME-part-headers				
	"application/resource- lists+xml"			
	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	
	Resource-lists as described in Table 5.5.3.3.1A-1			
MIME body part		MIKEY	RFC 3830 [24]	CONFIG, GROUPO ONFIG
MIME-part-headers Content-Type	"application/mikey"			

Derivation Path: TS 24.229 [16] clause A.2.1.4.13, A.2.2.4.13					
Information Element	Value/remark	Comment	Reference	Condition	
MIME-part-body	MIKEY message as described in Table 5.5.9.1-1	MIKEY message, containing the CSK	TS 33.180 [94]		
MIME body part		Signature			
MIME-part-headers					
Content-Type	"application/vnd.3gpp. mcptt-signed+xml"		TS 24.379 [9]		
MIME-part-body	Signatures for XML MIME bodies as described in Table 5.5.13.1-1		TS 24.379 [9]		

Condition	Explanation
re_SUBSCRIBE	SUBSCRIBE within a dialog
For further conditions see table 5.5.1-1	

5.5.2.15 SIP UPDATE

5.5.2.15.1 SIP UPDATE from the UE

Table 5.5.2.15.1-1: SIP UPDATE from the UE

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

		_		T
	Contact header with the same Contact URI and the same mandatory feature parameters as			MT_CALL
	in the response for the INVITE creating the dialog			
CSeq	alalog		RFC 3261 [22]	
value	value of CSeq sent by the UE within its previous request in the same dialog but increased by one		• • • • • • • • • • • • • • • • • •	
method	"UPDATE"			
Require			RFC 3261 [22] RFC 3329 [53]	
option-tag	"sec-agree"			
Proxy-Require			RFC 3261 [22] RFC 3329 [53]	
option-tag	"sec-agree"			
Security-Verify			RFC 3329 [53]	
sec-mechanism	same value as Security -Server header sent by SS during registration			
Max-Forwards			RFC 3261 [22]	
value	any allowed value	Non-zero value		
P-Access-Network-Info			RFC 7315 [52] RFC 7913 [51]	
access-net-spec	Access network technology and, if applicable, the cell ID			
Content-Type			RFC 5621 [58]	
media-type	"application/sdp"			
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]	
SDP Message	SDP Message as described in Table 5.5.3.1.1-1			
	SDP Message as described in Table 5.5.3.1.1-2			MCVIDEO
	SDP Message as described in Table 5.5.3.1.1-3			MCDATA

5.5.2.15.2 SIP UPDATE from the SS

Table 5.5.2.15.2-1: SIP UPDATE from the SS

Derivation Path: TS 24.229 [16] Information Element	Value/remark	Comment	Reference	Condition
Request-Line	Varao, roman	Common	RFC 3261 [22] RFC 5031 [54]	Containon
Method	"UPDATE"			
Request-URI	same URI as the UE has sent earlier in the Contact header of a response within the same dialog	Contact URI of the UE ("callee")		
SIP-Version	'SIP/2.0"			
Via	same as specified for INVITE sent by the SS in Table 5.5.2.5.2-1		RFC 3261 [22] RFC 3581 [55]	MO_CALL
Via	same as in INVITE but with updated via-branches		RFC 3261 [22] RFC 3581 [55]	MT_CALL
From			RFC 3261 [22]	
addr-spec	Same URI of the SS as used earlier in the dialog	Remote URI of the dialog (from the UE's point of view)		
tag	Same tag of the SS as used earlier in the dialog	Remote tag of the dialog (from the UE's point of view)		
То			RFC 3261 [22] RFC 5031 [54]	
addr-spec	Same URI of the UE as used earlier in the dialog	Local URI of the dialog (from the UE's point of view)		
tag	Same tag of the UE as used earlier in the dialog	Local tag of the dialog (from the UE's point of view)		
Call-ID			RFC 3261 [22]	
callid	Same value as used in the INVITE initiating the dialog			
Contact	same as in the response for the INVITE creating the dialog		RFC 3261 [22]	MO_CALL
	same as in the INVITE creating the dialog			MT_CALL
CSeq			RFC 3261 [22]	
value	value of CSeq sent by the endpoint within its previous request in the same dialog but increased by one			
method	"UPDATE"			
Max-Forwards value	"68"	The recommended initial value is 70 in RFC 3261 [22]. Assuming 2 hops as	RFC 3261 [22]	
		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	SDP Message as described in Table 5.5.3.1.1-2		
	SDP Message as described in Table 5.5.3.1.2-2		MCVIDEO
	SDP Message as described in Table 5.5.3.1.2-3		MCDATA

5.5.2.16 SIP 1xx

5.5.2.16.1 SIP 100 (Trying)

This message is sent by the UE or the SS.

Table 5.5.2.16.1-1: SIP 100 (Trying)

Derivation Path: RFC 3261 [22]		1 -		
Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"100"			
Reason-Phrase	"Trying"			
Via				
via-parm	same value as received in INVITE message			
From				
addr-spec	same value as received in INVITE message			
tag	same value as received in INVITE message			
То				
addr-spec	same value as received in INVITE message			
Call-ID	<u> </u>			
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	Commont	Doference	Condition
Status-Line	Value/remark	Comment	Reference	Condition
	#OLD /O. O.I.			
SIP-Version	"SIP/2.0"			
Status-Code	"180"			
Reason-Phrase	"Ringing"		DEC 0004 [00]	
Record-Route			RFC 3261 [22]	
rec-route	same as received in INVITE message			
Via	same as received in INVITE message		RFC 3261 [22] RFC 3581 [55]	
Require			• •	100rel
option-tag	"100rel"			
From				
addr-spec	same value as received in INVITE message			
tag	same value as received in INVITE message			
То				
addr-spec	same value as received in INVITE message			
tag	same value as received in the INVITE message or any value if missing in the INVITE message.			
Contact	in the inverse medeage.			
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"	registration		MCPTT
rodiaro param	"+g.3gpp.mcvideo"			MCVIDEO
feature-param	"+g.3gpp.icsi-ref= urn:urn-7:3gpp- service.ims.icsi.mcptt"			MCPTT
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO
feature-param	"audio"			MCPTT OR MCVideo
feature-param	"video"			MCVIDEO
Supported				
option-tag	"norefersub"			
Rseq			RFC 3262 [97]	100rel
response-num	previous RSeq number sent in the same direction incremented by one			
Call-ID				
callid	same value as received in INVITE message			
CSeq				
value	same value as received in INVITE message			
Content-Length	if present			
value	"0"	No message body included		

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

5.5.2.16.2.2 SIP 180 (Ringing) from the SS

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

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"180"			
Reason-Phrase	"Ringing"			
Record-Route	same as spefied for the SIP 200 (OK) from the SS in table 5.5.2.17.1.2-1 with condition INVITE-RSP		RFC 3261 [22]	
Via	same as received in the INVITE message		RFC 3261 [22] RFC 3581 [55]	
Require	•		• •	100rel
option-tag	"100rel"			
From				
addr-spec	same value as in the request			
tag	same value as in the request			
То				
addr-spec	same value as in the request			
tag	same value as in the request or To-tag assigned by the SS if missing in the request			
Contact				
addr-spec				
user-info and host	tsc_MCPTT_SessionId tsc_MCVideo_SessionI d			MCPTT MCVIDEO
port	not present			
feature-param	"+g.3gpp.mcptt" "+g.3gpp.mcvideo"			MCPTT MCVIDEO
feature-param	"+g.3gpp.icsi-ref= urn:urn-7:3gpp- service.ims.icsi.mcptt"			MCPTT
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO
feature-param	"audio"			MCPTT OR MCVIDEO
feature-param	"video"	This feature tag indicates that the device supports video as a streaming media type.		MCVIDEO
feature-param	"isfocus"			
Supported				
option-tag	"norefersub"			
Rseq	-		RFC 3262 [97]	100rel

Derivation Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
response-num	previous RSeq number sent in the same direction incremented by one; arbitrarily selected if there is no previous RSeq number			
Call-ID				
callid	same value as received in INVITE message			
CSeq				
value	same value as received in INVITE message			
Content-Length				
value	"0"	No message body included		

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

5.5.2.16.3 SIP 183 (Session Progress)

5.5.2.16.3.1 SIP 183 (Session Progress) from the UE

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

Derivation Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"183"			
Reason-Phrase	"Session progress"			
Record-Route			RFC 3261 [22]	
rec-route	same as received in		1	
	INVITE message			
Via	same as received in		RFC 3261 [22]	
	INVITE message		RFC 3581 [55]	
Require				100rel
option-tag	"100rel"			
From				
addr-spec	same value as received			
·	in INVITE message			
tag	same value as received			
ŭ	in INVITE message			
То	<u> </u>			
addr-spec	same value as received			
•	in INVITE message			
tag	same value as received			
Č	in the INVITE message			
	or any value if missing			
	in the INVITE message.			
Contact	<u> </u>			
addr-spec	SIP URI			
user-info and host	IP address or FQDN			
port	protected server port of	as assigned during		
1	UE	registration		
feature-param	"+g.3gpp.mcptt"			MCPTT
·	"+g.3gpp.mcvideo"			MCVIDEO
feature-param	"+g.3gpp.icsi-ref=			MCPTT
•	urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcvide			
	о"			
feature-param	"audio"			MCPTT
				OR
				MCVideo
feature-param	"video"			MCVIDEO
Supported				
option-tag	"norefersub"			
Rseq				100rel
response-num	previous RSeq number			
·	sent in the same			
	direction incremented			
	by one			
Call-ID				
callid	same value as received			
	in INVITE message			
CSeq				
value	same value as received			
	in INVITE message			
P-Answer-State	if present			
value	"unconfirmed"			
		·	DEC 0004 [00]	I
Content-Length	if present		RFC 3261 [22]	
Content-Length value	if present "0"	No message body included	RFC 3261 [22]	

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				
SIP-Version	"SIP/2.0"			
Status-Code	"183"			
Reason-Phrase	"Session progress"			
Record-Route	same as specified for the SIP 200 (OK) from the SS in table 5.5.2.17.1.2-1 with condition INVITE-RSP		RFC 3261 [22]	
Via	same as received in the INVITE message		RFC 3261 [22] RFC 3581 [55]	
Require				100rel
option-tag	"100rel"			
From				
addr-spec	same value as in the request			
tag	same value as in the request			
То				
addr-spec	same value as in the request			
tag	same value as in the request or To-tag assigned by the SS if missing in the request			
Contact				
addr-spec				
user-info and host	tsc_MCPTT_SessionId tsc_MCVideo_SessionI d			MCPTT MCVIDEO

port	not present			
feature-param	"+g.3gpp.mcptt"			MCPTT
·	"+g.3gpp.mcvideo"			MCVIDEO
feature-param	"+g.3gpp.icsi-ref=			MCPTT
	urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-			
	service.ims.icsi.mcvide			
	О"			
feature-param	"audio"			MCPTT
				OR
				MCVIDEO
feature-param	"video"	This feature tag		MCVIDEO
		indicates that the		
		device supports video as a streaming media		
feature-param	"isfocus"	type.		
Supported	isiocus			
option-tag	"norefersub"			
Rseq	Hererere			100rel
response-num	previous RSeq number			100101
respense main	sent in the same			
	direction incremented			
	by one; arbitrarily			
	selected if there is no			
	previous RSeq number			
Call-ID	·			
callid	same value as received			
	in INVITE message			
CSeq				
value	same value as received			
	in INVITE message			
P-Answer-State				
value	"unconfirmed"			
P-Asserted-Identity			RFC 3325 [32]	
addr-spec				
user-info and host	tsc_MCPTT_PublicServ			MCPTT
	iceld_A			110) (15.5.5
	tsc_MCVideo_PublicSe			MCVIDEO
	rviceId_A			
port	not present		DE0 0004 (555)	
Content-Length	101	<u> </u>	RFC 3261 [22]	
value	"0"	No message body		
		included		

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

5.5.2.17 SIP 2xx

5.5.2.17.1 SIP 200 (OK)

5.5.2.17.1.1 SIP 200 (OK) from the UE

Table 5.5.2.17.1.1-1: SIP 200 (OK) from the UE

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Status-Line	- alaon onlan	Johnnone		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]	IND CITE
Record-Route			RFC 3261 [22]	INVITE- RSP
rec-route	same as received in the request			
From	•			
addr-spec	Same value as			
•	received in the request			
tag	same value as received			
3	in the request			
То	•			
addr-spec	same value as received in the request			
tag	same value as received			
9	in the request or any			
	value if missing in the			
	request.			
Contact				INVITE- RSP
user-info and host	IP address or FQDN			
port	protected server port of	as assigned during		
port	UE	registration		
feature-param	"+g.3gpp.mcptt"	Ĭ .		MCPTT
•	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"		TS 24.282 [87]	MCDATA_
			clause 9.2.3.2.4	SDS
	"+g.3gpp.mcdata.fd"		TS 24.282 [87] clause	MCDATA_ FD
			10.2.5.2.4	MODET
feature-param	"+g.3gpp.icsi-ref=			MCPTT
	urn:urn- 7:3gpp-			
	service.ims.icsi.mcptt"			MCVIDEO
	"+g.3gpp.icsi- ref=urn:urn-7:3gpp-			MCAIDEO
	service.ims.icsi.mcvide			
	o"			
	"+g.3gpp.icsi-		TS 24.282 [87]	MCDATA_
	ref=urn:urn-7:3gpp-		clause	SDS
	service.ims.icsi.mcdata.		9.2.3.2.4	000
	sds"		0.2.0.2.7	
	"+g.3gpp.icsi-		TS 24.282 [87]	MCDATA_
	ref=urn:urn-7:3gpp-		clause	FD
	service.ims.icsi.mcdata.		10.2.5.2.4	
	fd"			
feature-param	"audio"			MCPTT
•				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"			

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Session-Expires	Value/Terriarik	Comment	Reference	INVITE- RSP
delta-seconds	Same value as session expires header in SIP		RFC 4028 [30] TS 24.229 [16]	IXOI
	INVITE "uas"		cl.5.1.4.1	
refresher Content-Type	"uas"		RFC 5621 [58]	INVITE-
			KFC 3021 [30]	RSP
value Content-Length	"multipart/mixed" present in case of TCP		RFC 3261 [22]	
Content-Length	and when there is a message body (otherwise optional)		RFC 3261 [22]	
value	any value	length of message- body		
P-Answer-State	If present		RFC 4964 [118] TS 24.379 [9] clause 6.2.3.1.2	INVITE- RSP AND GROUP- CALL
answer-type	"confirmed"			
Message-body	not present		RFC 3261 [22]	
Message-body			RFC 3261 [22]	INVITE- RSP
MIME body part		SDP message		
MIME-part-header	"application/ad="		DEC 4560 [07]	
MIME-Content-Type	"application/sdp" SDP message as		RFC 4566 [27]	MCPTT
MIME-part-body	described in Table 5.5.3.1.1-1			MCPTT
	SDP message as described in Table 5.5.3.1.1-2			MCVIDEO
	SDP message as described in Table 5.5.3.1.1-3			MCDATA
MIME body part		MCPTT/MCVideo/MCD ata Info		
MIME-part-header				
MIME-Content-Type	"application/vnd.3gpp. mcptt-info+xml"			MCPTT
	"application/vnd.3gpp. mcvideo-info+xml"			MCVIDEO
	"application/vnd.3gpp. mcdata-info+xml"			MCDATA
Content-ID	any value	Unique URL identifying the MCPTT/MCVideo/MCD ata Info XML MIME body; used as reference in the signature MIME body	TS 24.379 [9] clause 6.6.3.1	
MIME-part-body	MCPTT-Info as described in Table 5.5.3.2.1-1		TS 24.379 [9] clause F.1	MCPTT
	MCVideo-Info as described in Table 5.5.3.2.1-2		TS 24.281 [86] clause F.1	MCVIDEO
	MCData-Info as described in Table 5.5.3.2.1-3		TS 24.282 [87] clause D.1	MCDATA
MIME body part		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
MCDATA_SDS	INVITE for SDS communication
MCDATA_FD	INVITE for FD communication

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]				T =
Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"200"			
Reason-Phrase	"OK"			
Via	same as received in the request		RFC 3261 [22] RFC 3581 [55]	
Record-Route			RFC 3261 [22]	INVITE- RSP
addr-spec[1]	SIP URI			
user-info and host	pcscf.other.com			
port	not present			
uri-parameters	"lr"			
addr-spec[2]	SIP URI			
user-info and host	scscf.other.com			
port	not present			
uri-parameters	"Ir"			
addr-spec[3]	SIP URI			
user-info and host	orig@scscf.3gpp.org			
port	not present			
uri-parameters	"Ir"			
addr-spec[4] user-info and host	SIP URI	D 000E - 44		
user-into and nost	same address as sent by the UE in the first entry of the Route header of the INVITE	P-CSCF address		
port	not present			
uri-parameters	"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		
port	not present			
uri-parameters	"Ir"			
From				
addr-spec	same value as in the request			
tag	same value as in the request			
То				
addr-spec	same value as in the request			
tag	same value as in the request or To-tag assigned by the SS if missing in the request			
Expires			RFC 3261 [22] RFC 3903 [43]	SUBSCRI BE-RSP, PUBLISH- RSP
value	same value as in the request			
Contact				REGISTE R-RSP
addr-spec	same value as received in the REGISTER			
feature-param	"+g.3gpp.mcptt"			MCPTT
feature-param	"+g.3gpp.mcvideo"			MCVIDEO
feature-param	"+g.3gpp.mcdata.sds"			MCDATA
feature-param	"+g.3gpp.mcdata.fd"			MCDATA
expires	"600000"			<u> </u>

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Contact	value/i ciliai k	Comment	iverer enice	SUBSCRI
Johnson				BE-RSP
addr-spec				_
user-info and host	Same URI as used as			
	Request-URI of the			
	SUBSCRIBE message			
port	not present			
Contact				INVITE-
				RSP
addr-spec				
user-info and host	tsc_MCPTT_SessionId			MCPTT
	tsc_MCVideo_SessionI			MCVIDEO
	d			
 	tsc_MCData_SessionId			MCDATA
port	not present			
feature-param	"+g.3gpp.mcptt"			MCPTT
	"+g.3gpp.mcvideo"			MCVIDEO
	"+g.3gpp.mcdata.sds"		TS 24.282 [87]	MCDATA_
			clause	SDS
	"La 2app modete fell		9.2.3.2.4	MODATA
	"+g.3gpp.mcdata.fd"		TS 24.282 [87]	MCDATA_
			clause 10.2.5.2.4	FD
footure perem	"+g.3gpp.icsi-ref=		10.2.5.2.4	MCPTT
feature-param	urn:urn- 7:3gpp-			IVICETT
	service.ims.icsi.mcptt"			
	"+g.3gpp.icsi-			MCVIDEO
	ref=urn:urn-7:3gpp-			WOVIDEO
	service.ims.icsi.mcvide			
	0"			
	"+g.3gpp.icsi-		TS 24.282 [87]	MCDATA_
	ref=urn:urn-7:3gpp-		clause	SDS
	service.ims.icsi.mcdata.		9.2.3.2.4	020
	sds"			
	"+g.3gpp.icsi-		TS 24.282 [87]	MCDATA_
	ref=urn:urn-7:3gpp-		clause	FD
	service.ims.icsi.mcdata.		10.2.5.2.4	
	fd"			
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			
Damina	in the request			15.0 //==
Require				INVITE-
ontion to a	"time o r"			RSP
option-tag	"timer"			INIVITE
Session-Expires				INVITE- RSP
generic-param	"3600"			NOF
refresher	"uac"			
Supported	uac			INVITE-
oupported .				RSP
option-tag	"tdialog"			INUF
	"norefersub"			
ontion tog			i	1
option-tag				
option-tag	"explicitsub"			
			RFC 4488 [36]	REFER-

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
		Comment	Reference	Condition
refer-sub-value	"false"		DE0 7045 (50)	DECLOTE
P-Associated-URI			RFC 7315 [52]	REGISTE R-RSP
addr-spec[1]	SIP URI			
host	px_MCX_SIP_PublicUs erld_A_1			
port	not present			
Service-Route			RFC 3261 [22]	REGISTE R-RSP
addr-spec[1]	SIP URI			
host	scscf.3gpp.org			_
port	not present			
uri-parameters	"Ir"			
SIP-ETag			RFC 3903 [43]	PUBLISH- RSP
entity-tag	unique value arbitrarily selected by the SS			
Content-Type			RFC 4566 [27]	INVITE- RSP
media-type	"application/sdp"			
Content-Length			RFC 3261 [22]	
value	length of message- body			
Message-body			RFC 3261 [22]	INVITE- RSP
SDP message	SDP message as described in Table 5.5.3.1.2-1			MCPTT
	SDP message as described in Table 5.5.3.1.2-2			MCVIDEO
	SDP message as described in Table 5.5.3.1.2-3			MCDATA

Condition	Explanation
REGISTER-RSP	200 OK is the response to a SIP REGISTER
INVITE-RSP	200 OK is the response to a SIP INVITE
SUBSCRIBE-RSP	200 OK is the response to a SIP SUBSCRIBE
PUBLISH-RSP	200 OK is the response to a SIP PUBLISH
REFER-RSP	200 OK is the response to a SIP REFER

5.5.2.17.2 SIP 202 (Accepted)

Table 5.5.2.17.2-1: SIP 202 (Accepted)

Derivation Path: RFC 2616 [26]	Value/remark	Comment	Reference	Condition
Status-Line			RFC 3261 [22]	
SIP-Version	"SIP/2.0"		1 0 020 1 [22]	
Status-Code	"202"			
Reason-Phrase	"Accepted"			
Via	same value as received in request		RFC 3261 [22]	
From			RFC 3261 [22]	
addr-spec	same value as received in request			
tag	same value as received in request			
То			RFC 3261 [22]	
addr-spec	same value as received in request			
tag	same value as in the request or To-tag assigned by the SS if missing in the request			
Call-ID			RFC 3261 [22]	
callid	same value as received in request			
CSeq	·		RFC 3261 [22]	
value	same value as received in request			
Content-Length			RFC 3261 [22]	
value	"0"		, ,	

5.5.2.18 SIP 3xx

5.5.2.18.1 SIP 302 (Moved Temporarily)

Table 5.5.2.18.1-1: SIP 302 (Moved Temporarily)

"SIP/2.0"			
1100011			
"302"			
"Moved Temporarily"			
		RFC 3261 [22]	
"0"	No message body		
	, ,		"0" RFC 3261 [22] No message body included - end of SIP

Editor's note: Table 5.5.2.18.1-1 needs to be reviewed

5.5.2.19 SIP 4xx

5.5.2.19.1 SIP 403 (Forbidden)

This message is sent by the SS.

Table 5.5.2.19.1-1: SIP 403 (Forbidden)

Delivery Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
Status-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"403"			
Reason-Phrase	"Forbidden"			
Via	same as received in the request			
From	·			
addr-spec	same value as in the request			
tag	same value as in the request			
То				
addr-spec	same value as in the request			
tag	same value as in the request or To-tag assigned by the SS if missing in the request			
Call-ID				
callid	same value as in the request			
CSeq	,			
value	same value as in the request			
Warning			RFC 3261 [22]	
warn-code[1]	"100"			
warn-agent[1]		name or pseudonym of the server adding the Warning header		
pseudonym	"MCX Server"			
warn-text[1]	"function not allowed due to" <detailed reason></detailed 			
Content-Length			RFC 3261 [22]	
value	"0"			

5.5.2.19.2 SIP 404 (Not Found)

Table 5.5.2.19.2-1: SIP 404 (Not Found)

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

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

5.5.2.19.3 SIP 423 (Interval Too Brief)

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

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

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

5.5.2.19.4 SIP 480 (Temporarily unavailable)

This message is sent by the UE.

Table 5.5.2.19.4-1: SIP 480 (Temporarily unavailable)

Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"480"			
Reason-Phrase	"Temporarily Unavailable"			
Via	same as received in request message		RFC 3261 [22] RFC 3581 [55]	
From	·			
addr-spec	same value as received in INVITE message			
tag	same value as received in request message			
То				
addr-spec	same value as received in request message			
tag	same value as received in the INVITE or any value if missing in the INVITE.			
Warning			RFC 3261 [22]	
warn-code[1]	"399"			
warn-agent[1]	any value			
warn-text[1]	"110 user declined the call invitation"			
Call-ID	same value as received in request message			
CSeq	same value as received in request message			
Content Length	if present			
value	"0"	No message body included		

5.5.2.19.5 SIP 486 (Busy Here)

Table 5.5.2.19.5-1: SIP 486 (Busy Here)

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

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

5.5.2.19.6 SIP 488 (Not Acceptable Here)

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

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

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

5.5.2.19.7 SIP 401 (Unauthorized)

Table 5.5.2.19.7-1: SIP 401 (Unauthorized)

Derivation Path: RFC 3261 [22] Information Element	Value/remark	Comment	Reference	Condition
Status-Line			RFC 3261 [22]	
SIP-Version	"SIP/2.0"			
Status-Code	"401"			
Reason-Phrase	"Unauthorized"			
Via	Same value as		RFC 3261 [22]	
	received in the			
	REGISTER message			
То			RFC 3261 [22]	
addr-spec	Same value as			
	received in the			
toa	REGISTER message To-tag assigned by the			
tag	SS			
From	Same value as		RFC 3261 [22]	
	received in the		111 0 0201 [22]	
	REGISTER message			
Call-ID	Same value as		RFC 3261 [22]	
	received in the		, ,	
	REGISTER message			
CSeq	Same value as		RFC 3261 [22]	
	received in the			
	REGISTER message			
WWW-Authenticate			RFC 2617 [72]	
	MOV D : N		RFC 3310 [96]	
Realm	px_MCX_DomainName			
al a a rith m	_Organization_A "AKAv1-MD5"			
algorithm qop-value	"auth"			
nonce	Base 64 encoding of			
Honce	RAND and AUTN			
opaque	arbitrary value (to be			
	returned by the UE in			
	subsequent			
	REGISTER)			
Security-Server	,		RFC 3329 [50]	
mechanism-name	"ipsec-3gpp"			
algorithm[1]	px_lpSecAlgorithm			
	(hmac-md5-96 or			
	hmac-sha-1-96)			
spi-c[1]	SPI number of the			
	inbound SA at the			
: -[4]	protected client port			
spi-s[1]	SPI number of the			
	inbound SA at the			
port-c[1]	protected server port protected client port of			
Port of 1	SS			
port-s[1]	protected server port of			
i f - 1	SS			
Encrypt-algorithm[1]	des-ede3-cbc or aes-			
	cbc			
q[1]	"0.9"			
mechanism-name[2]	"Ipsec-3gpp"			
algorithm[2]	Algorithm not selected			
	by px_lpSecAlgorithm			
	(hmac-sha-1-96 or			
: -101	hmac-md5-96)			
spi-c[2]	SPI number of the			
	inbound SA at the			
spi-s[2]	protected client port SPI number of the			
ομι-ο[Δ]	inbound SA at the			
	protected server port			
port-c[2]	protected client port of			
i	SS			

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

5.5.2.19.8 SIP 487 (Request Terminated)

Table 5.5.2.19.8-1: SIP 486 (Request Terminated)

Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"487"			
Reason-Phrase	"Request Terminated"			
Content-Length			RFC 3261 [22]	
value	"0"	No message body included - end of SIP message		

5.5.2.20 SIP 5xx

5.5.2.20.1 SIP 500 (Server Internal Error)

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

Derivation Path: RFC 3261 [22]					
Information Element	Value/remark	Comment	Reference	Condition	
Request-Line					
SIP-Version	"SIP/2.0"				
Status-Code	"500"				
Reason-Phrase	"Server Internal Error"				
Content-Length			RFC 3261 [22]		
value	"0"	No message body included - end of SIP			
		message			

Editor's note: Table 5.5.2.20.1-1 needs to be reviewed

5.5.2.21 SIP 6xx

5.5.2.21.1 SIP 606 (Not Acceptable)

Table 5.5.2.21.1-1: SIP 606 (Not Acceptable)

Derivation Path: RFC 3261 [22]				
Information Element	Value/remark	Comment	Reference	Condition
Request-Line				
SIP-Version	"SIP/2.0"			
Status-Code	"606"			
Reason-Phrase	"Not Acceptable"			
Content-Length			RFC 3261 [22]	
value	"0"	No message body included - end of SIP message		

Editor's note: Table 5.5.2.21.1-1 needs to be reviewed

5.5.3 Default SDP message and other information elements

5.5.3.1 SDP Message

5.5.3.1.0 Common conditions for SDP Message

The following conditions apply throughout clause 5.5.3.1:

Table 5.5.3.1.0-1: Conditions

Condition	Explanation
INITIAL_SDP_OFFER	SDP message is an initial offer
SDP_OFFER	SDP message is an offer;
	INITIAL_SDP_OFFER implies SDP_OFFER, i.e. when a test
	case or test procedure specifies INITIAL_SDP_OFFER then
	SDP_OFFER shall be applied too, even when not explicitly
	specified.
SDP_ANSWER	SDP message is an Answer
FIRST_SDP_FROM_UE	First SDP message sent by the UE within the session;
	FIRST_SDP_FROM_UE shall be applied implicitly for an SDP
	message sent by the UE when the SDP message is the first
	SDP message sent by the UE for a session.
	⇒ In general FIRST_SDP_FROM_UE does not need to be
	specified for a specific message content.
FIRST_SDP_FROM_SS	First SDP message sent by the SS within the session;
	FIRST_SDP_FROM_SS shall be applied implicitly for an SDP
	message sent by the SS when the SDP message is the first
	SDP message sent by the UE for a session.
	\Rightarrow In general FIRST_SDP_FROM_SS does not need to be
	specified for a specific message content; nevertheless
	FIRST_SDP_FROM_SS may be specified for a specific
	message content when the SDP message is for a new session
MADULOIT ODANIT DEGLIEGTED	(e.g. when a new dialog replaces a pre-established session)
IMPLICIT_GRANT_REQUESTED	An implicit grant is requested by the user
IMPLICIT_FLOOR_GRANTED	An implicit grant shall be granted by the SS
PRE_ESTABLISHED_SESSION	SDP message during establishment or modification of a pre- established session
	NOTE: The condition shall be applied for all SDP messages of
	preestablished session test cases and it is not explicitly
	mentioned in specific message content for these test cases
WITHOUT_FLOORCONTROL	SDP message for MCPTT call without floor control:
WITHOUT_I EGGINGONTINGE	In general when this condition is applied for an on-demand call
	the SDP message does not contain a media description for
	media plane control at all, whereas for call establishment using
	pre-established session the SDP message still contains a
	media description for media plane control but without any floor
	control related fmtp attributes (see TS 24.380 [10] clauses
	14.2.6 and 14.3.7).
WITHOUT_TRANSMISSIONCONTROL	SDP message for MCVideo call without transmission control
	Editor's note:
	In contrast to MCPTT there is no "mc_no_floor_ctrl" (or similar)
WITHOUT OF OUR ITY	fmtp parameter for MCVideo yet.
WITHOUT_SECURITY	In case of private call: SDP message shall not contain any
WITH CECUDITY	"a=key-mgmt" attribute for end-to-end security
WITH_SECURITY	End-to-end security to be applied independent from other conditions like PRIVATE-CALL, SDP_OFFER (e.g. for first-to-
	answer call)
SDS_SESSION	SDP message for establishment of an SDS session according
000_0000014	to TS 24.282 [87] clause 9.2.4.
	10 10 2 1.202 [01] Olduso 0.2.7.

5.5.3.1.1 SDP Message from the UE

- MCPTT

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

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
Session description:				
Protocol Version	"0"	v= line		
Origin	Same o=line as in the previous SDP message sent by the UE except that sess-version is incremented by one	o= line		
Origin	morement by the	o= line		FIRST_SD P_FROM_ UE
username	any allowed value			02
sess-id	any allowed value	A numeric string such that the tuple of <username>, <sess- id="">, <nettype>, <addrtype>, and <unicast-address> forms a globally unique identifier for the session</unicast-address></addrtype></nettype></sess-></username>		
sess-version	any allowed value			
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address			
unicast-address	IP address of the UE	IP address assigned at initial registration		
Session Name	at least one UTF-8- encoded character, or if no name is given, a single empty space	s= line		
Connection Data	not required if included in all media	c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address			
connection-address	IP address of the UE			
Bandwidth		b= line		
"AS"	any allowed value		TS 26.114 [64] Table K.6	
Time description				
Timing	"0"	t= line		
start-time	"0" "0"			
stop-time Session attribute	present only if there is no key-mgmt media attribute in the media description for audio	a= line attribute = key-mgmt (NOTE 2)		WITH_SE CURITY OR (PRIVATE- CALL AND SDP_OFF ER AND NOT WITHOUT _SECURIT Y)
key-mgmt			TS 24.379 [9] clause 6.2.1	,
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2A for condition MCPTT		RFC 4567 [44]	
Session attribute	optional (NOTE 3)	a=line attribute="ice-lite"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
ice-lite				-
Media description[1]		Media description for audio		
media description		m= line media = audio	RFC 4867 [59]	
media	"audio"			
port	any allowed value	The transport port to which the media stream is sent		
proto	"RTP/SAVP"			
fmt	any allowed value(s)	Indicating RTP payload type numbers		
media title	"speech"	i= line		
Connection Data	present if session description does not contain a c=line; optional otherwise	c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address"			
connection-address	IP address of the UE			
Bandwidth		b= line		
"AS"	any allowed value		TS 26.114 [64] Table K.6	
"RS"	any allowed value if present		RFC 3556 [113]	
"RR"	any allowed value if present		RFC 3556 [113]	
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	same value as format parameter of the "fmtp" attribute			
encoding name	"AMR-WB"			
clock rate	16000		RFC 4867 [59] clause 8.3	
encoding parameter	"1" if present	Channel number		
media attribute		a= line attribute = fmtp		
fmtp	"fmtp"			
format	a value given in fmt in the audio media description			
format specific parameters		Parameters of WB- AMR codec NOTE: In addition to the parameters below the UE may provide further parameters		
mode-change-capability	"2"	To be able to interoperate fully with gateways to circuit switched networks	RFC 4867 [59] clause 8.2	
max-red	"0"	No redundancy will be used	RFC 4867 [59] clause 8.2	
media attribute		a= line attribute =ptime		
ptime	any allowed value	packet time		
media attribute		a= line attribute =maxptime		
maxptime	any allowed value	maximum packet time		

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
media attribute	optional	a= line	Reference	Condition
media attribute	ориона	attribute =sendrecv		
		Indicates send and		
		receive mode being		
a andra av		Attribute has no value		
sendrecv media attribute	and or adverd attribute	Attribute has no value	RFC 5576	
media attribute	one or several attribute	a=line		
	lines if present	attribute=ssrc	[116]	
SSTC				
ssrc-id	any allowed value but			
	all the same if there is			
	more than one ssrc			
44.9	attribute for audio			
attribute	any source attribute			
	according to RFC 5576			
	[116]			
	(NOTE 1)			
media attribute		a=line	RFC 5245	PRE_EST
		attribute="candidate"	[115]	ABLISHED
				_SESSION
candidate		candidate for RTP		
foundation	any value			
component-id	1	according to RFC 5245		
		[115] clause 4.1.1.1		
transport	"UDP"			
priority	any value			
connection-address	same IP address as in	default candidate		
	speech media's c= line			
	or in the session's c=			
	line if the speech media			
	does not have a c= line			
port	same port number as in			
ροιτ	the m= line for speech			
cand-type	"host"			
media attribute	11000	a=line	RFC 5245	PRE_EST
media attribute		attribute="candidate"	[115]	ABLISHED
		attribute= carididate	[110]	SESSION
candidate		candidate for RTCP		_32331011
foundation	any value	candidate for KTCI		
		according to DEC 5245		
component-id	2	according to RFC 5245		
	" 100"	[115] clause 4.1.1.1		
transport	"UDP"		1	1
priority	any value			<u> </u>
connection-address	same IP address as in	default candidate		
	speech media's c= line			
	or in the session's c=			
	line if the speech media			
	does not have a c= line			
port	same port number as in			
	the m= line for speech			
	incremented by 1			
cand-type	"host"			
media attribute	present only if there is	a= line		WITH_SE
	no key-mgmt attribute	attribute = key-mgmt		CURITY
	at session level			OR
	_			(PRIVATE
				CALL AND
				SDP_OFF
				ER AND
				NOT
				WITHOUT
				_SECURIT
				_OLOGICIT
	i .	ļ	1	''
key-mgmt			TS 24.379 [9]	

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2A for condition MCPTT		RFC 4567 [44]	Not
Media description[2]		Media description for media control		NOT WITHOUT _FLOORC ONTROL OR PRE_EST ABLISHED _SESSION
media description		m= line media = application SDP media-level section for a media- control entity (NOTE 2)		
media	"application"	(NOTE 2)		
port	any allowed value	The port for the media- control entity		
proto	"udp"			
fmt	"MCPTT"			
Connection Data	present if session description does not contain a c=line; optional otherwise	c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address"			
connection-address	IP address of the UE			
media attribute		a= line attribute = fmtp		
fmtp	"MODITI"			
format format specific parameters	"MCPTT"			SDP_OFF ER AND NOT WITHOUT _FLOORC ONTROL
mc_queueing	not present present	Parameter has no value	TS 24.380 [10] clause 14.2.2	pc_MCPTT _FloorReq uestQueue ing
mc_priority	any allowed value	Any integer value in the range of 1255	TS 24.380 [10] clause 14.2.3	
mc_granted	not present present	Parameter has no value	TS 24.380 [10] clause 14.2.4	INITIAL_S DP_OFFE R
mc_implicit_request	not present present	Parameter has no value	TS 24.380 [10] clause 14.2.5	IMPLICIT_ GRANT_R EQUESTE D

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
	not present	According to TS 24.380	Reference	Condition
mc_ssrc	not present	[10] there is no		
		"mc_ssrc" in an SDP		
		offer but the client may		
		use the "a=ssrc"		
		attribute to indicate the		
		Audio SSRC it would		
		like to use		
mc_no_floor_ctrl	not present	into to doo		
mc_floor_ssrc	any value if present	Rel-18		
format specific parameters				SDP_ANS
				WER AND
				NOT
				WITHOUT
				_FLOORC
				ONTROL
mc_queueing	not present			
	present	Parameter has no	TS 24.380 [10]	pc_MCPTT
		value	clause 14.3.2	_FloorReq
				uestQueue
ma priority	same value as in the		TC 24 200 [40]	ing
mc_priority	offer		TS 24.380 [10] clause 14.3.3	
mc_granted	not present		Clause 14.5.5	
mc_implicit_request	not present			
mc_ssrc	not present			
mc_no_floor_ctrl	not present			
mc_floor_ssrc	any value if present	Rel-18		
format specific parameters	any value ii present	1101 10		WITHOUT
romat opcome parameters				_FLOORC
				ONTROL
mc_queueing	not present			
mc_priority	not present			
mc_granted	not present			
mc_implicit_request	not present			
mc_ssrc	not present			
mc_no_floor_ctrl	present	Parameter has no	TS 24.380 [10]	
		value	clauses 14.2.6	
			and 14.3.7	
mc_floor_ssrc	any value if present	Rel-18	DE0 5045	DDE FOT
media attribute		a=line attribute="candidate"	RFC 5245	PRE_EST
		attribute= candidate	[115]	ABLISHED _SESSION
candidate		candidate for Media		_3E331011
cardidate		Control messages		
foundation	any value	Control messages		
component-id	1	according to RFC 5245		
		[115] clause 4.1.1.1		
transport	"UDP"			
priority	any value			
connection-address	same IP address as in	default candidate		
	application media's c=			
	line or in the session's			
	c= line if the application			
	media does not have a			
t	c= line			
port	same port number as in			
	the m= line for			
	application	1	1	
cand-type	"host"			

Derivation	n Path: RFC 4566 [27]				
Info	rmation Element	Value/remark	Comment	Reference	Condition
NOTE 1: If "ssrc" media attributes are included, then at least one "ssrc=" line shall contain a "cname" source attribute according to RFC 5576 [116] clause 6.1.					urce attribute
	NOTE 2: Even though there is no clarity in core specs it is assumed that a key-mgmt attribute at session level does not affect the media control security, i.e. the key-mgmt attribute is not applicable for the "application" media description for which still the CSK is used as security key. This is in contrast to RFC 4566 [27] clause 5 saying "In general, session-level values are the default for all media unless overridden by an equivalent media-level value."				ation" media clause 5 quivalent
NOTE 3:		as lite implementation acco nevertheless this is not a te			

- MCVideo

Table 5.5.3.1.1-2: SDP Message from the UE for MCVideo

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
Session description:				
Protocol Version	"0"	v= line		
Origin	Same o=line as in the previous SDP message sent by the UE except that sess-version is incremented by one	o= line		
Origin		o= line		FIRST_SD P_FROM_ UE
username	any allowed value			OL .
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" depending on IP address			
unicast-address	IP address of the UE	IP address assigned at initial registration		
Session Name	at least one UTF-8- encoded character, or if no name is given, a single empty space	s= line		
Connection Data	not required if included in all media	c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address			
connection-address	IP address of the UE			
Bandwidth		b= line		
"AS"	any allowed value			
Time description				
Timing		t= line		
start-time	"0"			
stop-time Session attribute	present only if there is no key-mgmt media attribute in the media descriptions for audio and video	a= line attribute = key-mgmt (NOTE 2)		WITH_SE CURITY OR (PRIVATE CALL ANI SDP_OFF ER AND NOT WITHOUT _SECURITY
key-mgmt			TS 24.379 [9] clause 6.2.1	,
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2A for condition MCVIDEO		RFC 4567 [44]	
Session attribute	optional (NOTE 3)	a=line attribute="ice-lite"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
ice-lite	Valuo, i oma k	00	11010101100	- Containion
Media description[1]		Media description for audio		
media description		m= line media = audio	RFC 4867 [59]	
media	"audio"	modia – dadio		
port	any allowed value	The transport port to which the media stream is sent		
proto	"RTP/SAVP"	10 00111		
fmt	any allowed value(s)	Indicating RTP payload type numbers		
media title	"audio component of MCVideo"	i= line		
Connection Data	present if session description does not contain a c=line; optional otherwise	c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address"			
connection-address	IP address of the UE			
Bandwidth		b= line		-
"AS"	any allowed value			
"RS"	any allowed value if present		RFC 3556 [113]	
"RR"	any allowed value if present		RFC 3556 [113]	
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	same value as format parameter of the "fmtp" attribute			
encoding name	"AMR-WB"			
clock rate	16000		RFC 4867 [59] clause 8.3	
encoding parameter	"1" if present	Channel number		
media attribute		a= line attribute = fmtp		
fmtp	"fmtp"			
format	a value given in fmt in the audio media description			
format specific parameters		Parameters of WB- AMR codec NOTE: In addition to the parameters below the UE may provide further parameters		
mode-change-capability	"2"	To be able to interoperate fully with gateways to circuit switched networks	RFC 4867 [59] clause 8.2	
max-red	"0"	No redundancy will be used	RFC 4867 [59] clause 8.2	
media attribute		a= line attribute =ptime	-	
ptime	any allowed value	packet time		
media attribute		a= line attribute =maxptime		
maxptime	any allowed value	maximum packet time		

Information Element	Value/remark	Comment	Reference	Condition
media attribute	optional	a= line attribute =sendrecv Indicates send and receive mode being		
aandraay		activated Attribute has no value		
sendrecv media attribute	one or several attribute	a=line	RFC 5576	
SSIC	lines if present	attribute=ssrc	[116]	
ssrc-id	any allowed value but all the same if there is more than one ssrc attribute for audio			
attribute	any source attribute according to RFC 5576 [116] (NOTE 1)			
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHEI _SESSIO
candidate		candidate for RTP		_525010
foundation	any value			
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			
priority connection-address	any value same IP address as in audio media's c= line or in the session's c= line if the audio media does	default candidate		
port	not have a c= line same port number as in the m= line for audio			
cand-type	"host"			
media attribute	nost	a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHE _SESSIO
candidate		candidate for RTCP		_
foundation	any value			
component-id	2	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			
priority connection-address	any value same IP address as in audio media's c= line or in the session's c= line if the audio media does not have a c= line	default candidate		
port	same port number as in the m= line for audio incremented by 1			
cand-type	"host"			
media attribute	present only if there is no key-mgmt attribute at session level	a= line attribute = key-mgmt		WITH_SE CURITY OR (PRIVATE CALL AN SDP_OFI ER AND NOT WITHOU' _SECURI
key-mgmt			TS 24.281 [86] clause 6.2.1	''

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2A for condition MCVIDEO (NOTE 4)		RFC 4567 [44]	
Media description[2]		Media description for video		
media description		m= line media = video SDP media-level section for a media- transmission control entity		
media	"video"	entity		
port	any allowed value	The port for the media- transmission control entity		
proto	"RTP/SAVPF" or "RTP/SAVP"			
fmt	any allowed value(s)			
media title	"video component of MCVideo"	i= line		
Connection Data	present if session description does not contain a c=line; optional otherwise	c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address"			
connection-address	IP address of the UE			
Bandwidth		b= line		
"AS"	any allowed value			
"RS"	any allowed value if present		RFC 3556 [113]	
"RR"	any allowed value if present		RFC 3556 [113]	
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	same value as format parameter of the "fmtp" attribute			
encoding name	"H264"		DEC 4967 [50]	
clock rate media attribute	90000	a Ba	RFC 4867 [59] clause 8.3	
		a= line attribute = fmtp		
fmtp	"fmtp"			
format	a value given in fmt in the audio media description			
format specific parameters		Parameters of H264 codec NOTE: In addition to the parameters below the UE may provide further parameters	RFC 6184 [129]	
profile-level-id	any allowed value			
packetization-mode	0			SDP_ANS WER

Derivation Path: RFC 4566 [27]					
Information Element	Value/remark	Comment	Reference	Condition	
media attribute	present if proto="RTP/AVP" in the m=line	a= line attribute = tcap	RFC 5939 [128] TS 26.114 [64]	SDP_OFF ER	
			clause 6.2.1a.2		
tcap					
trpr-cap-num	1				
proto-list	RTP/AVPF				
media attribute	present if proto="RTP/AVP" in the m=line	a= line attribute = pcfg	RFC 5939 [128] TS 26.114 [64] clause 6.2.1a.2	SDP_OFF ER	
pcfg					
config-number	1				
pot-cfg-list	t=1				
media attribute	one or several attribute lines if present	a=line attribute=ssrc	RFC 5576 [116]		
ssrc					
ssrc-id	any allowed value but all the same if there is more than one ssrc attribute for video				
attribute	any source attribute according to RFC 5576 [116] (NOTE 1)				
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION	
candidate		candidate for RTP			
foundation	any value				
component-id	1	according to RFC 5245 [115] clause 4.1.1.1			
transport	"UDP"				
priority	any value				
connection-address	same IP address as in video media's c= line or in the session's c= line if the video media does not have a c= line	default candidate			
port	same port number as in the m= line for video				
cand-type	"host"				
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION	
candidate		candidate for RTCP			
foundation	any value				
component-id	2	according to RFC 5245 [115] clause 4.1.1.1			
transport	"UDP"				
priority	any value				
connection-address	same IP address as in video media's c= line or in the session's c= line if the video media does not have a c= line	default candidate			
port	same port number as in the m= line for video incremented by 1				
cand-type	"host"				
	•	•		ē	

Information Element	Value/remark	Comment	Reference	Condition
media attribute	present only if there is no key-mgmt attribute at session level	a= line attribute = key-mgmt		WITH_SE CURITY OR
				(PRIVATE- CALL AND SDP_OFF ER AND
				NOT WITHOUT _SECURIT Y)
key-mgmt			TS 24.281 [86] clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2A for condition MCVIDEO (NOTE 4)		RFC 4567 [44]	
Media description[3]		Media description for media control		NOT WITHOUT _TRANSMI SSIONCO NTROL OR PRE_EST ABLISHED _SESSION
media description		m= line media = application SDP media-level section for a media- control entity		
		(NOTE 2)		
media	"application"		TS 24.581 [88] clause 12	
port	any allowed value	The port for the media- control entity		
proto	"udp"			
fmt	"MCVideo"			
Connection Data	present if session description does not contain a c=line; optional otherwise	c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address"			
connection-address	IP address of the UE			
media attribute		a= line attribute = fmtp		
fmtp			TS 24.581 [88] clause 12, clause 14	
format	"MCVideo"			
format specific parameters				SDP_OFF ER AND NOT WITHOUT _TRANSM SSIONCO NTROL
mc_queueing	not present	1		

Information Element	Value/remark	Comment	Reference	Conditio
	present	Parameter has no value.	TS 24.581 [88] clause 14.2.2	pc_MCVideo_TransissionRedestQueue
mc_priority	any allowed value if present	Any integer value in the range of 1255 Shall be present when priority other than the default priority is required	TS 24.581 [88] clause 14.2.3	
mc_reception_priority	any allowed value if present	Any integer value in the range of 0255 Shall be present when priority other than the default reception priority is required	TS 24.581 [88] clause 14.2.6	
mc_granted	not present			
	present	Parameter has no value	TS 24.581 [88] clause 14.2.4	INITIAL_S DP_OFFI R
mc_implicit_request	not present			
	present	Parameter has no value	TS 24.581 [88] clause 14.2.5	IMPLICIT GRANT_ EQUEST D
mc_audio_ssrc	not present	Rel-18		
mc_video_ssrc	not present	Rel-18		
mc_transmission_ssrc	any value if present	Rel-18		
format specific parameters				SDP_AN WER AN NOT WITHOU _TRANS SSIONCO NTROL
mc_queueing	not present			
	present	Parameter has no value	TS 24.581 [88] clause 14.3.2	pc_MCVi eo_Trans issionRed estQueud ng
mc_priority	same value as in the SDP offer if present, not present otherwise		TS 24.581 [88] clause 14.3.3	
mc_reception_priority	same value as in the SDP offer if present, not present otherwise		TS 24.581 [88] clause 14.3.6	
mc_granted	not present			
mc_implicit_request	not present			
mc_audio_ssrc	not present	Rel-18		
mc_video_ssrc	not present	Rel-18		
mc_transmission_ssrc nedia attribute	any value if present	Rel-18 a=line	RFC 5245	PRE_ES
and distant		attribute="candidate"	[115]	ABLISHE _SESSIC
candidate		candidate for Transmission Control Messages		
foundation	any value			
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			
priority	any value			

Derivation Path: RFC 4566 [27]					
Information Element	Value/remark	Comment	Reference	Condition	
connection-address	same IP address as in application media's c= line or in the session's c= line if the application media does not have a c= line	default candidate			
port	same port number as in the m= line for application				
cand-type	"host"				

- NOTE 1: If "ssrc" media attributes are included, then at least one "ssrc=" line shall contain a "cname" source attribute according to RFC 5576 [116] clause 6.1.
- NOTE 2: Even though there is no clarity in core specs it is assumed that a key-mgmt attribute at session level does not affect the media control security, i.e. the key-mgmt attribute is not applicable for the "application" media description for which still the CSK is used as security key. This is in contrast to RFC 4566 [27] clause 5 saying "In general, session-level values are the default for all media unless overridden by an equivalent media-level value."
- NOTE 3: If the UE is configured as lite implementation according to RFC 5245 [115], it shall include "a=ice-lite" session-level attribute; nevertheless this is not a test requirement unless specified otherwise in a test case.
- NOTE 4: If present the a=key-mgmt attributes for audio and video carry the same keys.

- 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:	Valuo/i cinari	Common	Reference	Condition
Protocol Version	"0"	v= line		
Origin	Same o=line as in the	o= line		
3	previous SDP message			
	sent by the UE except			
	that sess-version is			
	incremented by one			
Origin		o= line		FIRST_SD P_FROM_ UE
username	any allowed value			
sess-id	any allowed value	A numeric string such that the tuple of <username>, <sess- id="">, <nettype>, <addrtype>, and <unicast-address> forms a globally unique identifier for the</unicast-address></addrtype></nettype></sess-></username>		
age version	any allowed value	session.		
sess-version	any allowed value			
nettype	"IN" "IP4" or "IP6"			
Addrtype	depending on IP address"			
unicast-address	IP address of the UE	IP address assigned at		
		initial registration		
Session Name	at least one UTF-8- encoded character, or if no name is given, a	s= line		
	single empty space			
Connection Data	not required if included in all media	c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address"			
connection-address	IP address of the UE			
Session attribute	optional (NOTE 1)	a=line attribute="ice-lite"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION
ice-lite				
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Session attribute	present only if there is no key-mgmt media attribute in the media description for data	a= line attribute = key-mgmt		SDP_OFF ER AND MCD_1to1
key-mgmt	,		TS 24.379 [9] clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2A for condition MCDATA		RFC 4567 [44]	
Media description[1]		Media description for data		
media description		m= line media = message	RFC 4867 [59] TS 24.282 [87]	
media	"message"			
port	any allowed value	The transport port to which the media stream is sent		

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Conditio
proto	"TCP/MSRP"			
fmt	(i*))			
Connection Data	present if session description does not contain a c=line;	c= line		
	optional otherwise			
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address"			
connection-address	IP address of the UE			
media attribute		a= line attribute = sendonly		SDP_OF ER AND NOT SDS_SES
sendonly		No parameters associated with this line		
media attribute		a= line attribute = recvonly		SDP_AN: WER AN: NOT SDS_SES
recvonly		No parameters associated with this line		
media attribute		a= line		SDS_SE
sendrecv		No parameters		SION
media attribute		associated with this line a= line attribute = path		
path	MSRP URI according to RFC 4975 [120] clause 6 and 9	attribute containing its own MSRP URI. An example: msrp://mcdata.example .com:7654/abcde1; tcp	TS 24.282 [87]	
scheme	"msrp"	100111111111111111111111111111111111111		
authority			RFC 3986 [123] clause 3.2	
userinfo	any value if present			
host	any allowed value	domain name or IP address of the UE		
port	same value as in the media line if present	port at which the UE may be connected to for MSRP; mandatory when hostname is an IP address		
session id	any allowed value if present			
transport	"tcp"	mandatory for MSRP according to RFC 4975 [120] clause 6		
URI-parameter	not present			
media attribute		a= line attribute = accept-types	RFC 4975 [120]	
accept-types				
format-entry[1]	"application/vnd.3gpp. mcdata-signalling"			
format-entry[2]	"application/vnd.3gpp. mcdata-payload"			MCDATA SDS
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_ESTABLISHE

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Conditio
candidate		candidate for TCP/MSRP		
foundation	any value			
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		
transport	"TCP/MSRP"			
priority	any value			
connection-address	same IP address as in media's c= line or in the session's c= line if the media does not have a c= line	default candidate		
port	same port number as in the m= line			
cand-type	"host"			
media attribute		a= line attribute = setup	RFC 4145 [119]	
setup	"actpass"			SDP_OF ER
	"active" or "passive"			SDP_AN WER
media attribute		a= line attribute = file-transfer- id	RFC 5547 [124]	MCDATA FD
file-transfer-id	any allowed value		RFC 5547 [124] clause 8.2.1	SDP_OF ER
	same value as in the sdp offer		RFC 5547 [124] clause 8.2.2	SDP_AN WER
media attribute		a= line attribute = file-selector	RFC 5547 [124]	MCDATA FD
file-selector				SDP_OF ER
selector[1]				
filename	any allowed value	e.g. "TestFile.txt"		
filesize	size of the file to be transferred			
filetype	any allowed value	e.g. "text/plain"		
hash				
algorithm	"sha-1"			
value	hash value of the file to be transferred			000 41
file-selector	same value as in the sdp offer	a Baa	DE0.55.17	SDP_AN WER
media attribute		a= line attribute = file-date	RFC 5547 [124]	MCDATA FD AND SDP_OF ER
file-date	at least one setweeth			
date-param	at least one entry with an allowed value			055.5
media attribute	present only if there is no key-mgmt attribute at session level	a= line attribute = key-mgmt		SDP_OF ER AND MCD_1to
key-mgmt			TS 24.379 [9] clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2A for condition MCDATA		RFC 4567 [44]	

NOTE 1: If the UE is configured as lite implementation according to RFC 5245 [115], it shall include "a=ice-lite" session-level attribute; nevertheless this is not a test requirement unless specified otherwise in a test case.

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		Commont	Deference	Condition
Information Element	Value/remark	Comment	Reference	Condition
Session description:	"0"	Da		
Protocol Version Origin	Same o=line as in the	v= line o= line		
Origin	previous SDP message	o= line		
	sent by the SS except			
	that sess-version is			
	incremented by one			
Origin	incremented by one	o= line		FIRST_SDP
Origini		0= line		_FROM_SS
username	"_"	"-" indicating the		
docinamo		concept of user IDs not		
		being supported		
sess-id	"11111111"	A numeric string such		
0000 10		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	"11111111"			
nettype	"IN"			
Addrtype	"IP4" or "IP6"	This depends on the		
31 -	depending on IP	unicast address of the		
	address"	UE		
unicast-address	IP address of the SS			
Session Name	п п	s= line		
		single empty space		
		indicating no session		
		name		
Bandwidth		b= line		
"AS"	38		TS 26.114 [64]	
			Table K.6	
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Session attribute		a=line	RFC 5245	PRE_ESTA
		attribute="ice-lite"	[115]	BLISHED_S
				ESSION
ice-lite				
Media description[1]		Media description for		
		audio		
media description		m= line	RFC 4867 [59]	
1.		media = audio		
media	"audio"	T	DE0 0005 1005	
port	port number assigned	The transport port to	RFC 6335 [63]	
	by the SS (even integer)	which the media	clause 6	
	"DTD (O A) (D"	stream is sent		
proto	"RTP/SAVP"	DTD/OAV/D		INUTIAL OF
fmt	"99"	RTP/SAVP payload		INITIAL_SD
		type for AMR-WB is		P_OFFER
	value for AMR-WB as	dynamic		
media title	used in initial offer "speech"	i= line		
Connection Data	specui	c= line		
	"IN"	0= III I C		
nettype Addrtype	"IP4" or "IP6"	This donands on the		
Addrtype		This depends on the connection address		
	depending on IP address"	connection address		
connection-address	IP address of the SS			
Bandwidth	ii addiess di tile 33	b= line		
Danuwidili		D- III IC	I .	1

Information Element	Value/remark	Comment	Reference	Conditio
"AS"	38		TS 26.114 [64] Table K.6	
"RS"	0		RFC 3556 [113]	
"RR"	2000		RFC 3556 [113]	
media attribute		a= line attribute = rtpmap	[1.0]	
rtpmap	"rtpmap"	1971104		
payload type	"99"			INITIAL_S P_OFFER
	value for AMR-WB as used in initial offer			
encoding name	"AMR-WB"			
clock rate	16000		RFC 4867 [59] clause 8.3	
encoding parameter	"1"	Channel number		
media attribute		a= line attribute = fmtp		
fmtp				
format	"99"			INITIAL_S P_OFFER
	value for AMR-WB as used in initial offer			
format specific parameters		Parameters of WB- AMR codec		
mode-change-capability	"2"	To be able to interoperate fully with gateways to circuit switched networks	RFC 4867 [59] clause 8.2	
max-red	"0"	No redundancy will be used	RFC 4867 [59] clause 8.2	
media attribute		a= line attribute =ptime		
ptime	"20"	packet time		
media attribute		a= line attribute =maxptime		
maxptime	"240"	maximum packet time		
media attribute		a= line attribute = key-mgmt		WITH_SE URITY OF (PRIVATE CALL AND SDP_OFF R AND NO WITHOUT SECURIT
key-mgmt			TS 24.379 [9] clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2 for condition MCPTT		RFC 4567 [44]	
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST BLISHED_ ESSION
candidate		candidate for RTP		
foundation	1234	arbitrarily selected		
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		

Derivation Path: RFC 4566 [27]	Value/remark	Comment	Deference	Condition
Information Element	2130706431	Comment RFC 5245 [115] clause	Reference	Condition
priority	2130706431	4.2:		
		2 ²⁴ * 126 +		
		2 ⁸ * 65535 +		
		256 - component id		
connection-address	IP address of the SS	default candidate		
	(same IP address as in			
	the c=line for speech)			
port	same port number as in			
	the m= line for speech			
cand-type	"host"			
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_ESTA BLISHED_S ESSION
candidate		candidate for RTCP		
foundation	1234	same as for RTP		
component-id	2	according to RFC 5245		
		[115] clause 4.1.1.1		
transport	"UDP"	DE0 50 15 11 155 1		
priority	2130706430	RFC 5245 [115] clause		
		4.2: 2 ²⁴ * 126 +		
		2 ⁸ * 65535 +		
		256 - component id		
connection-address	IP address of the SS	default candidate		
conficetion address	(same IP address as in	default carididate		
	the c=line for speech)			
port	same port number as in			
•	the m= line for speech			
	incremented by 1			
cand-type	"host"			
Media description[2]		Media description for media control		NOT WITHOUT_ FLOORCON TROL OR PRE_ESTA BLISHED_S ESSION
media description		m= line		
-		media = application		
		SDP media-level		
		section for a media		
modia	"application"	control entity		+
media	"application"	The part for the madia		+
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 control entity		
proto	"udp"			
fmt	"MCPTT"			
Connection Data		c= line		<u> </u>
nettype	"IN"	This decreeds 0		1
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"			

Information Element	Value/remark	Comment	Reference	Conditio
format specific parameters				SDP_OFF R AND NO WITHOUT FLOORCO TROL
mc_queueing	present	Parameter has no value	TS 24.380 [10] clause 14.2.2	
mc_priority	"3"	"3" is the value of the <user-priority> element for user A in the MCPTT Group Configuration (Table 5.5.7.1-1)</user-priority>	TS 24.380 [10] clause 14.2.3	
mc_granted	not present	,		
mc_implicit_request	not present			
mc_ssrc	not present			
mc_no_floor_ctrl	not present			
mc_floor_ssrc	not present	Rel-18		
format specific parameters				SDP_ANS ER AND NOT WITHOUT FLOORCO TROL
mc_queueing	present if included in the offer	Parameter has no value	TS 24.380 [10] clause 14.3.2	
mc_priority	if a value is provided in the offer: "3" or the value provided in the offer, whichever is the lower value; otherwise not present	"3" is the value of the <user-priority> element for user A in the MCPTT Group Configuration (Table 5.5.7.1-1) NOTE: <num-levels-priority-hierarchy> has a value of 10 for onnetwork i.e. it is greater than 3</num-levels-priority-hierarchy></user-priority>	TS 24.380 [10] clause 14.3.3	
mc_granted	not present	<u> </u>		
	present	Parameter has no value	TS 24.380 [10] clause 14.3.4	IMPLICIT LOOR_GI NTED
mc_implicit_request	not present			
	present	Parameter has no value	TS 24.380 [10] clause 14.3.5	IMPLICIT RANT_RE UESTED
mc_ssrc	not present Audio SSRC of the client as defined in clause 5.5.6.1		TS 24.380 [10] clause 14.3.6	IMPLICIT RANT_RE UESTED
mc_no_floor_ctrl	not present			
mc_floor_ssrc format specific parameters	not present	Rel-18		WITHOUT FLOORCE TROL
mc_queueing	not present			
mc_priority	not present			
mc_granted	not present			
mc_implicit_request	not present			
mc_ssrc	not present			
mc_no_floor_ctrl	present	Parameter has no value	TS 24.380 [10] clause 14.3.7	
mc_floor_ssrc	not present	Rel-18		
nedia attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST BLISHED ESSION

Derivation Path: RFC 4566 [27]					
Information Element	Value/remark	Comment	Reference	Condition	
candidate		candidate for Media Control messages			
foundation	4321	arbitrarily selected; different than for RTP/RTCP			
component-id	1	according to RFC 5245 [115] clause 4.1.1.1			
transport	"UDP"				
priority	2130706431	RFC 5245 [115] clause 4.2: 2 ²⁴ * 126 + 2 ⁸ * 65535 + 256 - component id			
connection-address	IP address of the SS (same IP address as in the c=line for media control)	default candidate			
port	same port number as in the m= line for application				
cand-type	"host"				

- 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	"O"	v= line		
Origin	Same o=line as in the	o= line		
	previous SDP message sent by the SS except			
	that sess-version is			
	incremented by one			
Origin		o= line		FIRST_SD
				P_FROM_
				SS
username	"_"	"-" indicating the		
		concept of user IDs not		
		being supported		
sess-id	"11111111"	A numeric string such		
		that the tuple of		
		<username>, <sess- id>, <nettype>,</nettype></sess- </username>		
		<addrtype>, and</addrtype>		
		<unicast-address></unicast-address>		
		forms a globally unique		
		identifier for the		
		session.		
sess-version	"11111111"			
nettype	"IN"			
Addrtype	"IP4" or "IP6"	This depends on the		
	depending on IP	unicast address of the		
	address	UE		
unicast-address	IP address of the SS			
Session Name	" "	s= line		
		single empty space indicating no session		
		name		
Bandwidth		b= line		
"AS"	352	D= line		
Time description	002			
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Session attribute		a=line	RFC 5245	PRE_EST
		attribute="ice-lite"	[115]	ABLISHED
				_SESSION
ice-lite				
Media description[1]		Media description for		
P. L. L. L. C.		audio	DE0 4007 (50)	
media description		m= line	RFC 4867 [59]	
modia	"audio"	media = audio		
media port	port number assigned	The transport port to	RFC 6335 [63]	
ροιτ	by the SS (even	which the media stream	clause 6	
	integer)	is sent	3,4450 0	
proto	"RTP/SAVP"	.5 5511		
fmt	"99"	RTP/SAVP payload		INITIAL_S
		type for AMR-WB is		DP_OFFE
		dynamic		R
	value for AMR-WB as			
	used in initial offer			
media title	"audio component of	i= line		
	MCVideo"			
Connection Data	HIA III	c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6"	This depends on the		
	depending on IP	connection address		
	address			
connection address				
connection-address Bandwidth	IP address of the SS	b= line		

Derivation Path: RFC 4566 [27] Information Element	Valuatramaris	Comment	Doforonce	Condition
"AS"	Value/remark	Comment	Reference	Condition
"RS"	0		RFC 3556	
No			[113]	
"RR"	2000		RFC 3556	
			[113]	
media attribute		a= line		
		attribute = rtpmap		
rtpmap	"rtpmap" "99"			INUTIAL
payload type				INITIAL_S DP_OFFE R
	value for AMR-WB as			
encoding name	used in initial offer "AMR-WB"			
clock rate	16000	+	RFC 4867 [59]	
CIOCK TALE	10000		clause 8.3	
encoding parameter	"1"	Channel number	2.2230 0.0	
media attribute		a= line attribute = fmtp		
fmtp				
format	"99"			INITIAL_S DP_OFFE R
	value for AMR-WB as used in initial offer			
format specific parameters		Parameters of WB- AMR codec		
mode-change-capability	"2"	To be able to interoperate fully with gateways to circuit switched networks	RFC 4867 [59] clause 8.2	
max-red	"0"	No redundancy will be used	RFC 4867 [59] clause 8.2	
media attribute		a= line attribute =ptime	0.00000.2	
ptime	"20"	packet time		
media attribute	20	a= line		
		attribute =maxptime		
maxptime	"240"	maximum packet time		
media attribute		a= line attribute = key-mgmt		WITH_SE CURITY OR (PRIVATE- CALL AND SDP_OFF ER AND NOT WITHOUT _SECURIT Y)
key-mgmt			TS 24.281 [86] clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2 for condition MCVIDEO		RFC 4567 [44]	
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION
candidate		candidate for RTP		
foundation	1234	arbitrarily selected		
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
priority	2130706431	RFC 5245 [115] clause	ROTOTOTIO	Jonation
phonty	2130700431	4.2:		
		2 ²⁴ * 126 +		
		2 ⁸ * 65535 +		
		256 - component id		
connection-address	IP address of the SS	default candidate		
	(same IP address as in			
	the c=line for audio)			
port	same port number as in			
·	the m= line for audio			
cand-type	"host"			
media attribute		a=line	RFC 5245	PRE_EST
		attribute="candidate"	[115]	ABLISHED
			• •	_SESSION
candidate		candidate for RTCP		
foundation	1234	same as for RTP		
component-id	2	according to RFC 5245		
•		[115] clause 4.1.1.1		
transport	"UDP"	-		
priority	2130706430	RFC 5245 [115] clause		
•		4.2:		
		2 ²⁴ * 126 +		
		2 ⁸ * 65535 +		
		256 - component id		
connection-address	IP address of the SS	default candidate		
	(same IP address as in			
	the c=line for audio)			
port	same port number as in			
·	the m= line for audio			
	incremented by 1			
cand-type	"host"			
Media description[2]		Media description for		
		video		
media description		m= line		
-		media = video		
		SDP media-level		
		section for a media-		
		transmission control		
		entity		
media	"video"			
port	port number of the	The port for the media-		
	audio stream	transmission control		
	incremented by 2	entity		
	(resulting in even			
	integer)			
proto	"RTP/SAVPF"			
fmt	"100"			INITIAL_S
				DP_OFFE
				R
	value for H264 as used			
	in initial offer			
media title	"video component of	i= line		
	MCVideo"	,,		-
Connection Data		c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6"			
	depending on IP			
	address			
connection-address	IP address of the SS			
Bandwidth		b= line		
"AS"	315			
"RS"	0		RFC 3556	
NO	•		[113]	

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Conditio
"RR"	2500		RFC 3556 [113]	
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"100"			INITIAL_S DP_OFFE R
	value for H264 as used in initial offer			
encoding name	"H264"		DE0 0404	
clock rate	90000		RFC 6184 [129]	
media attribute		a= line attribute = fmtp		
fmtp				
format	"100"			INITIAL_S DP_OFFE R
	value for H264 as used in initial offer			
format specific parameters		Parameters the H264 codec	RFC 6184 [129]	SDP_OFF
packetization-mode	"0"			
profile-level-id	"42e00c"			
sprop-parameter-sets	"J0LgDJWgUH6Af1A=, KM46gA=="			
format specific parameters	same parameters and values as sent by the UE in the corresponding SDP offer	Parameters the H264 codec		SDP_ANS WER
media attribute	6.10.	a= line attribute = rtcp-fb	RFC 4585 [130]	SDP_OFI ER
rtcp-fb				
rtcp-fb-pt	"*"			
rtcp-fb-val	"trr-int 5000"		550 /505	
media attribute		a= line attribute = rtcp-fb	RFC 4585 [130]	SDP_OFI ER
rtcp-fb	11*11			
rtcp-fb-pt				
rtcp-fb-val media attribute	"nack"	a= line	RFC 4585	SDP_OF
rtcp-fb		attribute = rtcp-fb	[130]	ER
rtcp-fb-pt	11*11			
rtcp-fb-val	"nack pli"			
media attribute		a= line attribute = rtcp-fb	RFC 4585 [130]	SDP_OF
rtcp-fb			[]	
rtcp-fb-pt	"*"			
rtcp-fb-val	"ccm fir"			
media attribute		a= line attribute = rtcp-fb	RFC 4585 [130]	SDP_OFI ER
rtcp-fb				
rtcp-fb-pt	"*"			
rtcp-fb-val media attribute	"ccm tmmbr" present if there have been a=tcap and a=pcfg attributes in the corresponding SDP offer	a= line attribute = acfg	RFC 5939 [128] TS 26.114 [64] clause 6.2.1a.3	SDP_AN WER
acfg	-			
config-number	1	<u> </u>		

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
sel-cfg-list	"t=1"	Johnnont	1.GIGIGIOG	Jonation
media attribute	(-1	a= line attribute = key-mgmt		WITH_SE CURITY OR
				(PRIVATE- CALL AND SDP_OFF ER AND NOT
				WITHOUT _SECURIT Y)
key-mgmt			TS 24.281 [86] clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2 for condition MCVIDEO		RFC 4567 [44]	
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION
candidate		candidate for RTP		_
foundation	2345	arbitrarily selected; different than audio		
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			
priority	2130706431	RFC 5245 [115] clause 4.2: 2 ²⁴ * 126 + 2 ⁸ * 65535 + 256 - component id		
connection-address	IP address of the SS (same IP address as in the c=line for video)	default candidate		
port	same port number as in the m= line for video			
cand-type	"host"			
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHEI _SESSIOI
candidate		candidate for RTCP		
foundation	22345	same as for RTP		
component-id	2	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"	DE0 5045 [445]		
priority	2130706430	RFC 5245 [115] clause 4.2: 2 ²⁴ * 126 + 2 ⁸ * 65535 + 256 - component id		
connection-address	IP address of the SS (same IP address as in the c=line for video)	default candidate		
port	same port number as in the m= line for video incremented by 1			

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
Media description[3]	Valuo/iomant	Media description for media control	Rolerones	NOT WITHOUT _TRANSMI SSIONCO NTROL OR PRE_EST ABLISHED _SESSION
media description		m= line media = application SDP media-level section for a media control entity		
media	"application"			
port	port number assigned by the SS being different than the port number of the audio and video channels (RTP) and their associated control channels (RTCP)"	The port for the media control entity		
proto	"udp"			
fmt	"MCVideo"			
Connection Data		c= line		
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address	This depends on the connection address		
connection-address	IP address of the SS			
media attribute		a= line attribute = fmtp		
fmtp				
format	"MCVideo"			
format specific parameters				SDP_OFF ER AND NOT WITHOUT _TRANSMI SSIONCO NTROL
mc_queueing	present	Parameter has no value	TS 24.581 [88] clause 14.2.2	
mc_priority	"5"	Any integer value in the range of 1255	TS 24.581 [88] clause 14.2.3	
mc_granted	not present			
mc_implicit_request	not present			
mc_reception_priority	not present			
mc_audio_ssrc	not present	Rel-18		
mc_video_ssrc	not present	Rel-18		
mc_transmission_ssrc	not present	Rel-18		
format specific parameters				SDP_ANS WER AND NOT WITHOUT _TRANSMI SSIONCO NTROL
mc_queueing	present if included in	Parameter has no	TS 24.581 [88]	
··	the offer	value	clause 14.3.2	
	i e e e e e e e e e e e e e e e e e e e	i e e e e e e e e e e e e e e e e e e e		•

Information Element	Value/remark	Comment	Reference	Condition
mc_priority	if a value is provided in the offer: "3" or the	"3" is the value of the <user-priority> element</user-priority>	TS 24.581 [88] clause 14.3.3	
	value provided in the	for user A in the	Clause 14.3.3	
	offer, whichever is the	MCVideo Group		
	lower value;	Configuration (Table		
	otherwise not present	5.5.7.2-1)		
mc_granted	not present	5.5.7.2-1)		
mc_granted	present	Parameter has no	TS 24.581 [88]	IMPLICIT_
	present	value	clause 14.3.4	FLOOR_G RANTED
mc_implicit_request	not present			
	present	Parameter has no value	TS 24.581 [88] clause 14.3.5	IMPLICIT_ GRANT_R EQUESTE D
mc_reception_priority	same value as in the		TS 24.581 [88]	
, _,	SDP offer if present,		clause 14.3.6	
	not present otherwise			
mc_audio_ssrc	not present	Rel-18		
mc_video_ssrc	not present	Rel-18		
mc_transmission_ssrc	not present	Rel-18		
nedia attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHED SESSION
candidate		candidate for Media		
		Control messages		
foundation	4321	arbitrarily selected; different than for RTP/RTCP (audio,		
		video)		
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		
transport	"UDP"			
priority	2130706431	RFC 5245 [115] clause 4.2:		
		2 ²⁴ * 126 + 2 ⁸ * 65535 +		
	IP address of the SS	256 - component id		
connection-address	(same IP address as in the c=line for media	default candidate		
	I CONTROLL			•
port	control) same port number as in the m= line for application			

- 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:				
Protocol Version	"0"	v= line		
Origin	Same o=line as in the previous SDP message sent by the SS except that sess-version is incremented by one	o= line		
Origin	moremented by the	o= line		FIRST_SD P_FROM_ SS
username	"_"	"-" indicating the concept of user IDs not		00
		being supported		
sess-id	"11111111"	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	"11111111"			
nettype	"IN"			
Addrtype	"IP4" or "IP6" depending on IP address			
unicast-address	IP address of the SS			
Session Name	" "	s= line		
Time description				
Timing	l lou	t= line		
start-time	"0" "0"			
stop-time Session attribute		a=line attribute="ice-lite"	RFC 5245 [115]	PRE_EST ABLISHED SESSION
ice-lite				_
Media description[1]		Media description for data		
media description		m= line media = message	RFC 4867 [59] TS 24.282 [87]	
media	"message"	The tree of the		
port	port number assigned by the SS	The transport port to which the media stream is sent		
proto	"TCP/MSRP"			
fmt	"*"			
Connection Data	HIA III	c= line		
nettype Addrtype	"IN" "IP4" or "IP6" depending on IP address			
connection-address	IP address of the SS			
media attribute		a= line attribute = sendonly		SDP_OFF ER AND NOT SDS_SES SION
sendonly		No parameters associated with this line		
media attribute		a= line attribute = recvonly		SDP_ANS WER AND NOT SDS_SES SION

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
recvonly		No parameters associated with this line		
media attribute		a= line		SDS_SES
sendrecv		Attribute = sendrecv No parameters		SION
media attribute		associated with this line a= line		
	MODELIE	attribute = path	TO 04 000 [07]	
path	MSRP URI according to RFC 4975 [120] clause 6 and 9		TS 24.282 [87]	
scheme	"msrp"			
authority			RFC 3986 [123] clause 3.2	
userinfo	not present		-	
host	IP address of the SS			
port	same value as in the media line			
session id	assigned by the SS			
transport	"tcp"			
URI-parameter media attribute	not present	a= line	RFC 4975	
		a= line attribute = accept-types	[120]	
accept-types				
format-entry[1]	"application/vnd.3gpp. mcdata-signalling"			
format-entry[2]	"application/vnd.3gpp. mcdata-payload"			MCDATA SDS
media attribute		a= line attribute = setup	RFC 4145 [119]	
setup	"actpass"			SDP_OFI
	"passive"			SDP_ANS WER
media attribute		a= line attribute = file-transfer- id	RFC 5547 [124]	MCDATA FD
file-transfer-id	value assigned by the SS	randomly chosen globally unique identification (RFC 5547 [124])		SDP_OFI ER
	same value as in the sdp offer			SDP_AN WER
media attribute		a= line attribute = file-selector	RFC 5547 [124]	MCDATA FD
file-selector				SDP_OFI ER
selector[1]				
filename	name of the file to be transferred	e.g. "TestFile.txt"		
filesize	size of the file to be transferred			
filetype	type of the file to be transferred	e.g. "text/plain"		
hash				
algorithm	"sha-1"			
value	hash value of the file to be transferred			
file-selector	same value as in the sdp offer			SDP_ANS WER
media attribute		a= line attribute = file-date	RFC 5547 [124]	MCDATA FD AND SDP_OFI ER

Information Element	Value/remark	Comment	Reference	Condition
file-date				
date-param[1]				
type	"creation"			
date-time	date and time when the file has been created	e.g. "Mon, 20 Dec 2021 15:01:31 +0100"	RFC 5322 [109]	
media attribute		a= line attribute = key-mgmt		SDP_OFF ER AND MCD_1to1
key-mgmt			TS 24.379 [9] clause 6.2.1	
mikey	MIKEY-SAKKE I_MESSAGE as specified in Table 5.5.9.1-2 for condition MCDATA		RFC 4567 [44]	
media attribute		a=line attribute="candidate"	RFC 5245 [115]	PRE_EST ABLISHED _SESSION
candidate		candidate for TCP/MSRP		
foundation	1234	arbitrarily selected		
component-id	1	according to RFC 5245 [115] clause 4.1.1.1		
transport	"TCP/MSRP"			
priority	2130706431	RFC 5245 [115] clause 4.2: 224 * 126 + 28 * 65535 + 256 - component id		
connection-address	IP address of the SS (same IP address as in the c=line)	default candidate		
port	same port number as in the m= line			
cand-type	"host"			

5.5.3.1.3 SDP Message from the UE - Off-network

- MCPTT

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

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
Session description:	value/leillaik	Comment	iveteteting.	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		
		value		
mc_implicit_request	present	Parameter has no		
media attribute		value		
		a= line		
		attribute = key-mgmt		
key-mgmt	AUGEN CARRE			-
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:	Value/Terrial K	Comment	Reference	Condition
Protocol Version	"0"	v= line		
Origin	0	o= line		
	11_11	o= line		
username	=			
sess-id	any allowed value	A numeric string such		
		that the tuple of		
		<username>, <sess-< td=""><td></td><td></td></sess-<></username>		
		id>, <nettype>,</nettype>		
		<addrtype>, and</addrtype>		
		<unicast-address></unicast-address>		
		forms a globally unique identifier for the		
		session.		
sess-version	any allowed value	Session.		
	"IN"			
nettype	"IP4"	"IP4" or "IP6"		
addrtype		IP4 OF IP6		
unicast-address	px_MCVideo_IP_Conn			
Consign Name	ectionAddressAll	a line		
Session Name		s= line		
Connection Data		c= line		
nettype	"IN"			
addrtype	"IP4"	"IP4" or "IP6"		
connection-address	px_MCVideo_IP_Conn	Set to the multicast IP		
	ectionAddressAll	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"	i i		
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	i ii present	a= line		
modia atti ibute		attribute = fmtp		
fmtp	"fmtp"	attribute – Imp		
format	the value given in fmt in			1
Tomat	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		

Derivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
media attribute	Valuoyioinain	a= line	11010101100	Containen
		attribute =ptime		
ptime	any allowed value	packet time		
media attribute		a= line		
		attribute =maxptime		
maxptime	any allowed value	maximum packet time		
media description		m= line media = video		
		SDP media-level		
		section for a media-		
		transmission control		
		entity		
media	"video"			
port	any allowed value	The port for the media-		
		transmission control entity		
proto	"udp"	User Datagram		
		Protocol. With UDP,		
		computer applications		
		can send messages to other hosts on		
		an Internet Protocol		
		(IP) network. Time-		
		sensitive applications		
		often use UDP because		
		dropping packets is		
		preferable to waiting for packets delayed due		
		to retransmission,		
		which may not be an		
		option in a real-time		
		system.		
fmt	"MCVideo"			
Connection Data		c= line Included if the media		
		plane control channel		
		uses a different IP		
		address than other		
		media described in the		
		SDP		
nettype	"IN" "IP4"			
addrtype connection-address	px_MCVideo_IP_Conn			
	ectionAddressApp			
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	ш			
encoding name	"H.264"			
clock rate			RFC 4867 [59] clause 8.3	
encoding parameter	"" if present	Channel number		
media attribute		a= line		
		attribute = fmtp	TO 0 / TO 1	
fmtp			TS 24.581 [88]	
			clause 12, clause 14	
format	"MCVideo"		ciause 14	
format specific parameters	1110 11300			

erivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
mc_queueing	optional	Parameter has no	TS 24.581 [88]	Jonation
mo_quouemg	optional	value.	clause 12,	
		Shall include the	clause 14	
		"mc_queueing" fmtp	0.0000	
		attribute in SDP offers		
		when queueing of		
		Transmission request is		
		supported.		
mc_priority	not present	Any integer value in the	TS 24.581 [88]	
mo_phonty	or	range of 1255	clause 12,	
	any allowed value	Shall include the	clause 14	
	arry anowed value	"mc_priority" fmtp	oladoo 11	
		attribute when a		
		transmission priority		
		different than the		
		default priority is		
ma recention priority	not present	required.	TC 24 F04 [00]	
mc_reception_priority	not present	Any integer value in the	TS 24.581 [88]	
	or	range of 0255	clause 12,	
	any allowed value	Ob all in about 1	clause 14	
		Shall include the		
		"mc_reception_priority"		
		fmtp attribute when a		
		reception priority		
		different than the		
		default reception		
		priority is required.		
mc_granted	present	Parameter has no	TS 24.581 [88]	
		value	clause 12,	
		Shall include the	clause 14	
		"mc_granted" fmtp_		
		attribute in the SDP		
		offer of an initial SIP		
		INVITE request when it		
		is acceptable for the		
		MCVideo client to		
		receive a granted		
		indication in the SIP		
		200 (OK) response to		
		an initial INVITE		
		request.		
mc_implicit_request	present	Parameter has no	TS 24.581 [88]	
		value	clause 12,	
		Shall include the	clause 14	
		"mc_implicit_request"		
		fmtp attribute when a		
		SIP request shall be		
		interpreted as an		
		implicit Transmission		
		request. If not explicitly		
		stated in procedures in		
		the present document		
		or in procedures in		
		TS 24.281 [2] that the		
		"mc_implicit_request"		
		fmtp attribute shall be		
		included, the decision		
		to include the		
		"mc_implicit_request"		
		fmtp attribute or not, is		
		an implementation		
		option.		
			i e	
nedia attribute		a= line attribute = key-mgmt		PRIVATE- CALL

Information Element	Value/remark	Comment	Reference	Condition
key-mgmt		Key Management	TS 24.281 [86]	
		attribute field in the	clause 6.2.1	
		media and session		
		level.		
mikey	MIKEY-SAKKE	MIKEY carries the	RFC 4567 [44]	
•	I_MESSAGE as	security parameters		
	specified in Table	needed for		
	6.1.1.1.3.3-3	setting up the security		
		protocol. It is a protocol		
		designed for		
		government and		
		relevant enterprises to		
		enable secure, cross-		
		platform multimedia		
		communications.		
media description		m= line		
modia accompancii		media = application		
media	"application"	initial application		
port	any allowed value	Set to a port number for		
port	any anowed value	media-floor control		
		entity of the MCVideo		
		group		
proto	"udp"	9.000		
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/Terriark	Comment	Reference	Condition
Protocol Version	"0"	v= line		+
Origin	0	o= line		
	и_и	0= line		+
username sess-id	"12345678"	A numeric string such		+
sess-iu	12343076	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.		
ages version	"12345678"	session.		
sess-version	"IN"			
nettype	"IP4"			
addrtype				
unicast-address	px_MCPTT_IP_Connec tionAddressAll			
Session Name	"_"	s= line		
Connection Data		c= line		
nettype	"IN"			
addrtype	"IP4"	"IP4" or "IP6"		
connection-address	px_MCPTT_IP_Connec	Set to the multicast IP		
	tionAddressAll	address of the MCPTT		
		group		
Bandwidth		b= line		
bwtype	"AS:"	bwtype:bandwidth		
bandwidth	any allowed value			
Time description				
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Media descriptions				
media description		m= line		
		media = audio		
media	"audio"			
port	"49152"	Set to a port number for		
		MCPTT speech of the		
		MCPTT group		
proto	"RTP/AVP"			
fmt	"99"	Indicating RTP payload type numbers		
media title	"speech"	i= line		
media attribute	эросон	a= line		
modia atti ibate		attribute = rtpmap		
rtpmap	"rtpmap"	attioned - reprince		1
payload type	"99"			
encoding name	"AMR-WB"			1
clock rate	16000			
encoding parameter	"1" if present	Channel number		
media attribute	p. 000/10	a= line		
odia dili Ibato		attribute = fmtp		
fmtp	"fmtp"			
format	"99"			
format specific parameters		Parameters of WB-		
mode-change-capability	"2"	AMR codec To be able to		
	4			
		interoperate fully with		
		gateways to circuit switched networks		
may rod	"0"			
max-red	U	No redundancy will be used		
media attribute	<u> </u>	a= line		
		attribute =ptime		

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

- 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></unicast-address></addrtype></nettype></sess-></username>		
		forms a globally unique identifier for the session.		
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"		1
connection-address	px_MCVideo_IP_Conn ectionAddressAll	Set to the multicast IP address of the MCVideo group		
Bandwidth		b= line		
bwtype	"AS:"	bwtype:bandwidth		
bandwidth	any allowed value			
Time description	,			
Timing		t= line		
start-time	"0"			
stop-time	"0"			
Media descriptions				
media description		m= line media = audio		
media	"audio"			
port	"49152"	Set to a port number for MCVideo speech of the MCVideo group		
proto	"RTP/AVP"			
fmt	"99"	Indicating RTP payload type numbers		
media title	"speech"	i= line		
media attribute		a= line attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	"99"			
encoding name	"AMR-WB"			
clock rate	16000			
encoding parameter media attribute	"1" if present	Channel number 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 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 = video		
		SDP media-level		
		section for a media-		
		transmission control		
		entity		
media	"video"			
port	any allowed value	The port for the media-		
		transmission control		
		entity		
proto	"udp"	User Datagram		
		Protocol. With UDP,		
		computer applications		
		can send messages to		
		other hosts on an Internet Protocol		
		(IP) network. Time-		
		sensitive applications often use UDP because		
		dropping packets is		
		preferable to waiting for		
		packets delayed due		
		to retransmission,		
		which may not be an		
		option in a real-time		
		system.		
fmt	"MCVideo"	oyotom.		
Connection Data		c= line		
		Included if the media		
		plane control channel		
		uses a different IP		
		address than other		
		media described in the		
		SDP		
nettype	"IN"			
addrtype	"IP4"			
connection-address	px_MCVideo_IP_Conn			
	ectionAddressApp			
media attribute		a= line		
		attribute = rtpmap		
rtpmap	"rtpmap"			
payload type	""			
encoding name	"H.264"			
clock rate			RFC 4867 [59]	
			clause 8.3	
encoding parameter	"" if present	Channel number		
media attribute		a= line		
		attribute = fmtp		
fmtp			TS 24.581 [88]	
			clause 12,	
			clause 14	
format	"MCVideo"			
format specific parameters				

rivation Path: RFC 4566 [27] Information Element	Value/remark	Comment	Reference	Condition
mc_queueing	optional	Parameter has no	TS 24.581 [88]	
.		value.	clause 12,	
		Shall include the	clause 14	
		"mc_queueing" fmtp		
		attribute in SDP offers		
		when queueing of		
		Transmission request is		
		supported.		
mc_priority	not present	Any integer value in the	TS 24.581 [88]	
	or	range of 1255	clause 12,	
	any allowed value	Shall include the	clause 14	
		"mc_priority" fmtp		
		attribute when a		
		transmission priority different than the		
		default priority is		
me reception priority	not present	required.	TS 24.581 [88]	
mc_reception_priority	not present or	Any integer value in the	15 24.581 [88] clause 12,	
	any allowed value	range of 0255	clause 12,	
	any anowed value	Shall include the	ciaust 14	
		"mc_reception_priority"		
		fmtp attribute when a		
		reception priority		
		different than the		
		default reception		
		priority is required.		
mc_granted	present	Parameter has no	TS 24.581 [88]	
<u>-</u> 3	1	value	clause 12,	
		Shall include the	clause 14	
		"mc_granted" fmtp		
		attribute in the SDP		
		offer of an initial SIP		
		INVITE request when it		
		is acceptable for the		
		MCVideo client to		
		receive a granted		
		indication in the SIP		
		200 (OK) response to		
		an initial INVITE		
		request.		
mc_implicit_request	present	Parameter has no	TS 24.581 [88]	
		value	clause 12,	
		Shall include the	clause 14	
		"mc_implicit_request"		
		fmtp attribute when a		
		SIP request shall be		
		interpreted as an		
		implicit Transmission		
		request. If not explicitly		
		stated in procedures in		
		the present document or in procedures in		
		TS 24.281 [2] that the		
		"mc_implicit_request"		
		fmtp attribute shall be		
		included, the decision		
		to include the		
		"mc_implicit_request"		
		fmtp attribute or not, is		
		an implementation		
		option.		
		a= line		PRIVATE-
edia attribute				

Information Element	Value/remark	Comment	Reference	Condition
key-mgmt		Key Management	TS 24.281 [86]	
		attribute field in the	clause 6.2.1	
		media and session		
		level.		
mikey	MIKEY-SAKKE	MIKEY carries the	RFC 4567 [44]	
•	I_MESSAGE as	security parameters		
	specified in Table	needed for		
	6.1.1.1.3.3-3	setting up the security		
		protocol. It is a protocol		
		designed for		
		government and		
		relevant enterprises to		
		enable secure, cross-		
		platform multimedia		
		communications.		
media description		m= line		
media description		media = application		
media	"application"	media = application		
	"49153"	Cat to a part number for		
port	49153	Set to a port number for		
		media-floor control		
		entity of the MCVideo		
	<u> </u>	group		
proto	"udp"			
fmt	"MCVideo"	- Pa		
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			
- 3	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	lause F.1.2			
Information Element	Value/remark	Comment	Reference	Condition
mcpttinfo				
mcptt-Params	not nuce out			
mcptt-access-token	not present Encrypted (NOTE 2) <mcptt-access-token> with mcpttString set to access token as assigned to the UE in the Token Response</mcptt-access-token>	The access token is opaque to the MCPTT client	TS 33.180 [94] , clause B.4 RFC 6749 [77]	CONFIG, GROUPC ONFIG
session-type	not present			
	"prearranged"			GROUP- CALL AND INVITE_R EFER
	"private"			PRIVATE- CALL AND INVITE_R EFER
	"chat"			CHAT- GROUP- CALL AND INVITE_R EFER
	"first-to-answer"			FIRST-TO- ANSWER AND INVITE_R EFER
mcptt-request-uri	not present			
mopa request un	Encrypted (NOTE 2) <mcptt-request-uri> with mcpttURI set to px_MCPTT_Group_A_I D</mcptt-request-uri>	The URI of the group		(GROUP- CALL OR CHAT- GROUP- CALL) AND INVITE_R EFER
	not present or encrypted (NOTE 2) <mcptt-request-uri> with mcpttURI set to px_MCPTT_ID_User_B</mcptt-request-uri>	The URI of the invited MCPTT Client		PRIVATE- CALL 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 not present or encrypted (NOTE 2) <mcptt-called-party-id> with mcpttURI set to px_MCPTT_ID_User_A</mcptt-called-party-id>			INVITE- RSP
mcptt-calling-group-id	not present			
required	not present			

Derivation Path: TS 24.379 [9] of				
Information Element	Value/remark	Comment	Reference	Condition
emergency-ind	not present or encrypted (NOTE 2) <emergency-ind> with mcpttBoolean set to "false"</emergency-ind>			
	Encrypted (NOTE 2) <emergency-ind> with mcpttBoolean set to "true"</emergency-ind>			EMERGEN CY-CALL AND INVITE_R EFER
alert-ind	not present or encrypted (NOTE 2) <alert-ind> with mcpttBoolean set to "false"</alert-ind>			
	Encrypted (NOTE 2) <alert-ind> with mcpttBoolean set to pc_MCX_EmergencyIn dWithAlertInd</alert-ind>			EMERGEN CY-CALL AND INVITE_R EFER
imminentperil-ind	not present or encrypted (NOTE 2) <imminentperil-ind> with mcpttBoolean set to "false"</imminentperil-ind>			
	Encrypted (NOTE 2) < imminentperil -ind> with mcpttBoolean set to "true"			IMMPERIL -CALL AND INVITE_R EFER
broadcast-ind	not present or "false" "true"			BROADCA ST-CALL
mc-org	not present			
floor-state	not present			
associated-group-id	not present			
	px_MCPTT_Group_A_I D if mcptt-request-uri contains a temporary group identity; otherwise, not present	if the <mcptt-request- uri> element contains a group identity then this element can include an MCPTT group ID associated with the group identity in the <mcptt-request-uri> element. E.g. if the <mcptt-request-uri> element contains a temporary group identity (TGI), then the <associated-group-id> element can contain the constituent MCPTT group ID</associated-group-id></mcptt-request-uri></mcptt-request-uri></mcptt-request- 	TS 24.379 [9] clause F.1.3	GROUP- CALL
originated-by	not present			
MKFC-GKTPs	not present			
mcptt-client-id	not present			

Derivation Path: TS 24.379 [9] of				
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>	The UUID URN of the MCPTT Client	RFC 4122 [106] TS 24.379 [9] clause 4.10	(GROUP- CALL OR CHAT- GROUP- CALL OR EMERGEN CY-CALL OR IMMPERIL -CALL) AND INVITE_R EFER
	not present or encrypted (NOTE 2) <mcptt-client-id> with mcpttString set to valid UUID URN (NOTE 1)</mcptt-client-id>			(PRIVATE- CALL OR FIRST-TO- ANSWER) AND INVITE_R EFER
	not present or encrypted (NOTE 2) <mcptt-client-id> with mcpttString set to valid UUID URN (NOTE 1)</mcptt-client-id>	in general mcptt-client- id is not mandatory (e.g. for SIP SUBSCRIBE)	RFC 4122 [106] TS 24.379 [9] clause 4.10	CONFIG, GROUPC ONFIG
	encrypted (NOTE 2) <mcptt-client-id> with mcpttString set to valid UUID URN (NOTE 1)</mcptt-client-id>	mcptt-client-id is mandatory in the SIP REGISTER or SIP PUBLISH for service authorisation according to TS 24.379 [9] clauses 7.2.1 and 7.2.2	RFC 4122 [106] TS 24.379 [9] clause 4.10	CONFIG AND REGISTE R_PUBLIS H
	encrypted (NOTE 2) <mcptt-client-id> with mcpttString set to valid UUID URN (NOTE 1)</mcptt-client-id>	mcptt-client-id is mandatory in SIP PUBLISH for MCPTT service settings only, according to TS 24.379 [9] clause 7.2.3	RFC 4122 [106] TS 24.379 [9] clause 4.10	POC- SETTINGS -EVENT
alert-ind-rcvd	not present			
anyExt	not present		TS 24.379 [9], clause F.1.3	
anyExt		anyExt shall not contain any further elements than listed below unless specified otherwise in the specific message content of a test case	TS 24.379 [9], clause F.1.3	FUNCTIO NAL_ALIA S
functional-alias-URI	encrypted (NOTE 2) <functional-alias-uri> with mcpttURI set to px_MCPTT_ID_FA_A</functional-alias-uri>	set to the value of the functional alias that is used together with the "mcptt-calling-user-id"		

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:XXXXXXXXXYYYY-ZZZZ-yyyy-zzzzzzzzzz" according to RFC 4122 [106]

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

Condition	Explanation
REGISTER_PUBLISH	MCPTT-Info in SIP REGISTER or SIP PUBLISH request for service
	authorisation
INVITE_REFER	MCPTT-Info in SIP INVITE or SIP REFER request for call
	establishment
INVITE-RSP	MCPTT-Info in SIP response to a SIP INVITE
	NOTE: INVITE-RSP is inherited from the SIP response, i.e. it shall be
	considered as true whenever set for the SIP response
FUNCTIONAL_ALIAS	An active Functional Alias is used
For further conditions see table 5.5.1-1	

Table 5.5.3.2.1-1A: Encrypted MCPTT info parameter sent by the UE

Derivation Path: TS 24.379 [9] clauses F.1.2, F.1.3						
Information Element	Value/remark	Comment	Reference	Condition		
type attribute	"Encrypted"					
EncryptedData	EncryptedData as described in Table 5.5.13.2-1 containing encrypted element content of the mcptt parameter					

- MCVideo

Table 5.5.3.2.1-2: MCVideo-Info from the UE

Information Element	Value/remark	Comment	Reference	Condition
mcvideoinfo				
mcvideo-Params				
mcvideo-access-token	not present			
	Encrypted (NOTE 2) <mcvideo-access- token=""> with mcvideoString set to access token as assigned to the UE in the Token Response</mcvideo-access->	The access token is opaque to the MCVideo client	TS 33.180 [94], clause B.4 RFC 6749 [77]	CONFIG GROUPCO NFIG
session-type	not present			
J.	"prearranged"			GROUP- CALL AND INVITE_RE FER
	"private"			PRIVATE- CALL AND INVITE_RI FER
	"chat"			CHAT- GROUP- CALL AND INVITE_RE FER
mcvideo-request-uri	not present			
mcviaeo-request-un	Encrypted (NOTE 2) <mcvideo-request-uri> with mcvideoURI set to px_MCVideo_Group_A _ID</mcvideo-request-uri>	The URI of the group		(GROUP- CALL OR CHAT- GROUP- CALL) ANI INVITE_RI

	T		
	not present or Encrypted (NOTE 2) <mcvideo-request-uri> with mcvideoURI set to px_MCVideo_User_B_I D</mcvideo-request-uri>	The URI of the invited MCVideo Client	PRIVATE- CALL AND INVITE_RE FER
	Encrypted (NOTE 2) <mcvideo-request-uri> with mcvideoURI set to px_MCVideo_User_A_I D</mcvideo-request-uri>		POC- SETTINGS -EVENT
mcvideo-calling-user-id	not present or Encrypted (NOTE 2) <mcvideo-request-uri> with mcvideoURI set to px_MCVideo_ID_User_ A</mcvideo-request-uri>		
	not present		CONFIG, GROUPCO NFIG, POC- SETTINGS -EVENT
mcvideo-called-party-id	not present not present or Encrypted (NOTE 2) <mcvideo-request-uri> with mcvideoURI set to px_MCVideo_ID_User_ A</mcvideo-request-uri>		INVITE- RSP
mcvideo-calling-group-id	not present		
required	not present		
emergency-ind	not present or encrypted (NOTE 2) <emergency-ind> with mcvideoBoolean set to "false"</emergency-ind>		
	encrypted (NOTE 2) <emergency-ind> with mcvideoBoolean set to true</emergency-ind>		EMERGEN CY-CALL AND INVITE- REFER
alert-ind	not present or encrypted (NOTE 2) <alert-ind> with mcvideoBoolean set to "false"</alert-ind>		
	encrypted (NOTE 2) <alert-ind> with mcvideoBoolean set to pc_MCX_EmergencyIn dWithAlertInd</alert-ind>		EMERGEN CY-CALL AND INVITE_RE FER
imminentperil-ind	not present or encrypted (NOTE 2) <imminentperil-ind> with mcvideoBoolean set to "false"</imminentperil-ind>		
	encrypted (NOTE 2) <imminentperil-ind> with mcvideoBoolean set to true</imminentperil-ind>		IMMPERIL- CALL AND INVITE- REFER
broadcast-ind	not present or "false" "true"		BROADCA ST-CALL
mc-org	not present		
associated-group-id	not present		

	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
originated-by	not present			
MKFC-GKTPs mcvideo-client-id	not present			
movideo-client-id	not present encrypted (NOTE 2) < mcvideo-client-id> with mcvideoString set to valid UUID URN (NOTE 1)	The UUID URN of the MCVIDEO Client	RFC 4122 [106] TS 24.281 [86] clause 4.9	(GROUP- CALL OR CHAT- GROUP- CALL OR
				EMERGEN CY-CALL OR
				IMMPERIL- CALL) AND INVITE_RE FER
	not present or encrypted (NOTE 2) < mcvideo-client-id> with mcvideoString set to valid UUID URN (NOTE 1)			PRIVATE- CALL AND INVITE_RE FER
	not present or encrypted (NOTE 2) < mcvideo-client-id> with mcvideoString set to valid UUID URN (NOTE 1)	in general mcvideo- client-id is not mandatory (e.g. for SIP SUBSCRIBE)	RFC 4122 [106] TS 24.281 [86] clause 4.9	CONFIG, GROUPCO NFIG
	encrypted (NOTE 2) < mcvideo-client-id> with mcvideoString set to valid UUID URN (NOTE 1)	mcvideo-client-id is mandatory in the SIP REGISTER or SIP PUBLISH for service authorisation according to TS 24.281 [86] clauses 7.2.1 and 7.2.2	RFC 4122 [106] TS 24.281 [86] clause 4.9	CONFIG AND REGISTER _PUBLISH
	encrypted (NOTE 2) < mcvideo-client-id> with mcvideoString set to valid UUID URN (NOTE 1)	mcvideo-client-id is mandatory in SIP PUBLISH for MCVideo service settings only, according to TS 24.281 [86] clause 7.2.3	RFC 4122 [106] TS 24.281 [86] clause 4.9	POC- SETTINGS -EVENT
alert-ind-rcvd	not present		TO 04 00: ***	
anyExt	not present		TS 24.281 [86] clause F.1.3	

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

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

NOTE 2: Encrypted element as described in Table 5.5.3.2.1-2A

Condition	Explanation
REGISTER_PUBLISH	MCVideo-Info in SIP REGISTER or SIP PUBLISH request for service
	authorisation
INVITE_REFER	MCVideo-Info in SIP INVITE or SIP REFER request for call
	establishment
INVITE-RSP	MCVideo-Info in SIP response to a SIP INVITE
For further conditions see table 5.5.1-1	

Table 5.5.3.2.1-2A: Encrypted MCVideo info parameter sent by the UE

Derivation Path: TS 24.281 [86] clauses F.1.2, F.1.3						
Information Element	Value/remark	Comment	Reference	Condition		
type attribute	"Encrypted"					
EncryptedData	EncryptedData as described in Table 5.5.13.2-1 containing encrypted element content of the mcvideo parameter					

- MCData

Table 5.5.3.2.1-3: MCData-Info from the UE

Derivation Path: TS 24.282 [87], 0				
Information Element	Value/remark	Comment	Reference	Condition
mcdata-info				
mcdata-Params				
mcdata-access-token	not present		TO 00 400 [04]	CONTIO
	Encrypted (NOTE 2)	The access token is	TS 33.180 [94] , clause B.4	CONFIG GROUPC
	<mcdata-access- token> with</mcdata-access- 	opaque to the MCData client	RFC 6749 [77]	ONFIG
	mcdataString set to	Client	KFC 6/49 [//]	UNFIG
	access token as			
	assigned to the UE in			
	the Token Response			
request-type	not present			
	"one-to-one-sds"			MCD_1to1
	"group-sds"			MCD_grp
mcdata-request-uri	not present			
	Encrypted (NOTE 2)			MCD_grp
	<mcdata-request-uri></mcdata-request-uri>			
	with mcdataURI set to			
	px_MCData_Group_A_ ID			
	Encrypted (NOTE 2)			POC-
	<pre><mcdata-request-uri></mcdata-request-uri></pre>			SETTINGS
	with mcdataURI set to			-EVENT
	px_MCData_Group_A_			
	ID			
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	not present			
	Encrypted (NOTE 2)			MCD_grp
	<mcdata-client-id> with</mcdata-client-id>			
	mcdataString set to valid UUID URN			
	(NOTE 1)			
	Encrypted (NOTE 2)			CONFIG
	<mcdata-client-id> with</mcdata-client-id>			AND
	mcdataString set to			PUBLISH
	valid UUID URN			
	(NOTE 1)			
	not present or	in general mcdata-		(CONFIG
	encrypted (NOTE 2)	client-id is not		OR
	<mcdata-client-id> with mcdataString set to</mcdata-client-id>	mandatory (e.g. for SIP SUBSCRIBE)		GROUPC ONFIG)
	valid UUID URN	SUBSCRIBE)		AND NOT
	(NOTE 1)			REGISTE
	(1.0.12.1)			R (NOTE
				3)
	Encrypted (NOTE 2)	mcdata-client-id is	RFC	POC-
	<mcdata-client-id> with</mcdata-client-id>	mandatory in SIP	4122 [106]	SETTINGS
	mcdataString set to	PUBLISH for MCData		-EVENT
	valid UUID URN	service settings only,		
	(NOTE 1)	according to		
		TS 24.282 [87] clause 7.2.3		
mcdata-controller-psi	not present	514450 1.2.0		
anyExt	not present			
anyExt		anyExt shall not contain		PRE_EST
-		any further elements		ABLISHED
		than listed below		_SESSION
		unless specified		OR
		otherwise in the		FUNCTIO
	į	specific message	İ	NAL_ALIA
		content of a test case		S

pre-established-session-ind	"true"	TS 24.282 [87], Clause	PRE_EST
		18.3.2.1	ABLISHED
			_SESSION
functional-alias-URI	encrypted (NOTE 2)	set to the value of the	FUNCTIO
	<functional-alias-uri></functional-alias-uri>	functional alias that is	NAL_ALIA
	with mcdataURI set to	used together with the	S
	px_MCData_ID_FA_A	"mcdata-calling-user-id"	

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

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

- to be all the same UUID URN in subsequent messages.

NOTE 2: Encrypted element as described in Table 5.5.3.2.1-3A

NOTE 3: In contrast to MCPTT and MCVideo for MCData TS 24.282 [87] clause 7.2.1 does not specify the client-id to be included in the REGISTER request.

Condition	Explanation
MCD_1to1	A one-to-one MCData call
MCD_grp	A goup MCData call
REGISTER	MCData-Info in SIP REGISTER request for service authorisation
PUBLISH	MCData-Info in SIP PUBLISH request for service authorisation
PRE_ESTABLISHED_SESSION	A pre-established sessions is being established
FUNCTIONAL_ALIAS	An active Functional Alias is used
For further conditions see table 5.5.1-1	

Table 5.5.3.2.1-3A: Encrypted MCData info parameter sent by the UE

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

5.5.3.2.2 MCS Info Lists from the SS

- MCPTT

Table 5.5.3.2.2-1: MCPTT-Info from the SS

Information Element	Value/remark	Comment	Reference	Conditio
ncpttinfo				
mcptt-Params				
mcptt-access-token	not present			
session-type	not present			
	"prearranged"			GROUP- CALL
	"private"			PRIVATE CALL
	"chat"			CHAT- GROUP- CALL
	"first-to-answer"			FIRST-TO ANSWER
mcptt-request-uri	Encrypted (NOTE 1) <mcptt-request-uri> with mcpttURI set to px_MCPTT_ID_User_A</mcptt-request-uri>	The URI of the called user		
mcptt-calling-user-id	Encrypted (NOTE 1) <mcptt-calling-user-id> with mcpttURI set to px_MCPTT_ID_User_B</mcptt-calling-user-id>	The URI of the calling user		
mcptt-called-party-id	not present			
mcptt-calling-group-id	not present			
	Encrypted (NOTE 1) <mcpt+calling-group- id=""> with mcpttURI set to px_MCPTT_Group_A_I D</mcpt+calling-group->	The URI of the group		GROUP- CALL OF CHAT- GROUP- CALL
required	not present			
emergency-ind	not present Encrypted (NOTE 1) <emergency-ind> with mcpttBoolean set to "true"</emergency-ind>			EMERGE CY-CALL
alert-ind	not present			
	Encrypted (NOTE 1) <alert-ind> with mcpttBoolean set to "false"</alert-ind>			EMERGE CY-CALL
imminentperil-ind	not present			
	Encrypted (NOTE 1) <imminentperil-ind> with mcpttBoolean set to "true"</imminentperil-ind>			IMMPER -CALL
broadcast-ind	not present			
	"true"			BROADO ST-CALL
mc-org	not present			
floor-state	not present			
associated-group-id	not present			
originated-by	not present			
MKFC-GKTPs	not present			
mcptt-client-id	not present			
alert-ind-rcvd	not present		1	
anyExt	not present		TS 24.379 [9], clause F.1.3	

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

Derivation Path: TS 24.379 [9] clauses F.1.2, F.1.3				
Information Element	Value/remark	Comment	Reference	Condition
type attribute	"Encrypted"			
EncryptedData	EncryptedData as described in Table 5.5.13.2-2 containing encrypted element content of the mcptt parameter			

- MCVideo

Table 5.5.3.2.2-2: MCVideo-Info from the SS

Information Element	Value/remark	Comment	Reference	Condition
mcvideoinfo				
mcvideo-Params				
mcvideo-access-token	not present			
session-type	not present			
36331011-1946	"prearranged"			GROUP- CALL
	"private"			PRIVATE- CALL
	"chat"			CHAT- GROUP- CALL
mcvideo-request-uri	Encrypted (NOTE 1) <mcvideo-request-uri> with mcvideoURI set to px_MCVideo_ID_User_ A</mcvideo-request-uri>	The URI of the called user		
mcvideo-calling-user-id	Encrypted (NOTE 1) <mcvideo-calling-user- id=""> with mcvideoURI set to px_MCVideo_ID_User_ B</mcvideo-calling-user->	The URI of the calling user		
mcvideo-called-party-id	not present			
mcvideo-calling-group-id	not present			
monace caming group is	Encrypted (NOTE 1) <mcvideo-calling- group-id=""> with mcvideoURI set to px_MCVideo_Group_A ID</mcvideo-calling->	The URI of the group		GROUP- CALL OR CHAT- GROUP- CALL
required	not present			
emergency-ind	Encrypted (NOTE 1) <emergency-ind> with mcvideoBoolean set to "false"</emergency-ind>			
	Encrypted (NOTE 1) <emergency-ind> with mcvideoBoolean set to "true"</emergency-ind>			EMERGEN CY-CALL
alert-ind	not present Encrypted (NOTE 1) <alert-ind> with mcvideoBoolean set to "false"</alert-ind>			EMERGEN CY-CALL

Derivation Path: TS 24.281 [86] Clause F.1.2					
Information Element	Value/remark	Comment	Reference	Condition	
	Encrypted (NOTE 1) <imminentperil-ind> with mcvideoBoolean set to "true"</imminentperil-ind>			IMMPERIL -CALL	
broadcast-ind	not present "true"			BROADCA ST-CALL	
mc-org"	not present				
associated-group-id	not present				
originated-by	not present				
MKFC-GKTPs	not present				
mcvideo-client-id	not present				
alert-ind-rcvd	not present				
anyExt	not present		TS 24.281 [86] clause F.1.3		
NOTE 1: Encrypted element as	NOTE 1: Encrypted element as described in Table 5.5.3.2.2-2A				

Table 5.5.3.2.2-2A: Encrypted MCVideo info parameter sent by the SS

Derivation Path: TS 24.281 [86] clauses F.1.2, F.1.3				
Information Element	Value/remark	Comment	Reference	Condition
type attribute	"Encrypted"			
EncryptedData	EncryptedData as described in Table 5.5.13.2-2 containing encrypted element content of the mcvideo parameter			

Table 5.5.3.2.2-3: MCData-Info from the SS

Information Element	Value/remark	Comment	Reference	Condition
mcdata-info				
mcdata-Params				
mcdata-access-token	not present			
request-type	not present			
	"one-to-one-sds"			MCD_1to1
	"group-sds"			MCD_grp
mcdata-request-uri	Encrypted (NOTE 1) <mcdata-request-uri> with mcdataURI set to px_MCData_ID_User_ A</mcdata-request-uri>			
mcdata-calling-user-id	Encrypted (NOTE 1) <mcdata-calling-user- id=""> with mcdataURI set to px_MCData_ID_User_ B</mcdata-calling-user->			
mcdata-called-party-id	not present			
mcdata-calling-group-id	not present			
	Encrypted (NOTE 1) <mcdata-calling-group- id=""> with mcdataURI set to px_MCData_Group_A_ ID</mcdata-calling-group->			MCD_grp
alert-ind	not present			
originated-by	not present			
mcdata-client-id	not present			
	Encrypted (NOTE 1) <mcdata-client-id> with mcdataString set to px_MCX_Client_B_ID</mcdata-client-id>			MCD_grp
mcdata-controller-psi	not present			
anyExt	not present			

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

Table 5.5.3.2.2-3A: Encrypted MCData info parameter sent by the SS

Derivation Path: TS 24.282 [87] clauses D.1.2, D.1.3				
Information Element	Value/remark	Comment	Reference	Condition
type attribute	"Encrypted"			
EncryptedData	EncryptedData as described in Table 5.5.13.232 containing encrypted element content of the mcdata parameter			

5.5.3.3 Resource-lists

5.5.3.3.1 Resource-lists from the UE for call control

- MCPTT

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

Derivation Path: RFC 5366 [35] Information Element	Value/remark	Comment	Reference	Condition
resource-lists	encrypted (NOTE 1)			
list[1]	encrypted (NOTE 1)			
name attribute	Not present			
display-name	Not present			
entry[1]	NOTE 1, 2			
uri attribute	px_MCPTT_ID_User_B	The MCPTT ID of the invited user		
	SIP-URI with px_MCPTT_Group_A_I D (NOTE 3) extended with SIP URI header fields as specified for the SIP REFER message	SIP-URI: prearranged MCPTT group identity or chat group identity extended with header fields		PRE- ESTABLIS H AND (GROUP- CALL OR CHAT- GROUP- CALL)
	SIP-URI with px_MCPTT_ID_User_B (NOTE 3) extended with SIP URI header fields as specified for the SIP REFER message	SIP-URI: MCPTT ID of the called user extended with header fields		PRE- ESTABLIS H AND (PRIVATE- CALL OR FIRST-TO- ANSWER)
display-name	not present			
entry[2]	NOTE 1, 2			FIRST-TO- ANSWER
uri attribute	px_MCPTT_ID_User_C			
display-name	not present			
entry[2]	NOTE 1, 2			PRE- ESTABLIS H AND FIRST-TO- ANSWER
uri attribute	SIP-URI with px_MCPTT_ID_User_C (NOTE 3) extended with SIP URI header fields as specified for the SIP REFER message	SIP-URI: MCPTT ID of the called user extended with header fields		
display-name	not present			

NOTE 1: XML encryption may be done by

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

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

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

NOTE 2: When a resource-lists document contains more than one entry, the entries may be in any order

NOTE 3: TS 23.179 [8] specifies MCPTT ID and MCPTT group ID (clause 8.1.3.1) to be a URIs but does not mandate them to be a SIP URIs; nevertheless according to TS 24.379 [9] (clauses 10.1.1.2.2.1,

10.1.2.2.2.1) the URI in the uri attribute of the resource-lists' <entry> element needs to be a SIP URI.

Condition	Explanation
PRE-ESTABLISH	Call establishment using a pre-established session
For further conditions see table 5.5.1-1	

MCVideo

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

Information Element	Value/remark	Comment	Reference	Condition
resource-lists	encrypted (NOTE 1)			
list[1]	encrypted (NOTE 1)			
name attribute	Not present			
display-name	Not present			
entry[1]	NOTE 1, 2			
uri attribute	px_MCVideo_ID_User_	The MCVideo ID of the		
	В	invited user		
display-name	Not present			

NOTE 1: XML encryption may be done by

- element content encryption of the root element <resource-lists> as described in Table 5.5.13.2-1
- element content encryption of (each) < list> element as described in Table 5.5.13.2-1
- attribute URI encryption of the entry's uri attribute as described in Table 5.5.13.3-1
- NOTE 2: When a resource-lists document contains more than one entry, the entries may be in any order.

MCData

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

Derivation Path: RFC 5366 [35] /	Derivation Path: RFC 5366 [35] / RFC 4826 [83]			
Information Element	Value/remark	Comment	Reference	Condition
resource-lists	encrypted (NOTE 1)			
list	encrypted (NOTE 1)			
name attribute	Not present			
display-name	Not present			
entry[1]	NOTE 1, 2			
uri attribute	px_MCData_ID_User_ B	The MCData ID of the target MCData user		
	SIP-URI with px_MCData_Group_A_ ID (NOTE 3) extended with SIP URI header fields as specified for the SIP REFER message	SIP-URI: prearranged MCData group identity with header fields		PRE- ESTABLIS H AND MCD_grp
	SIP-URI with px_MCData_ID_User_ B (NOTE 3) extended with SIP URI header fields as specified for the SIP REFER message	SIP-URI: MCData ID of the called user extended with header fields		PRE- ESTABLIS H AND MCD_1to1
display-name	not present			

NOTE 1: XML encryption may be done by

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

NOTE 2: When a resource-lists document contains more than one entry, the entries may be in any order.

NOTE 3: According to TS 24.282 [87] (clauses 9.2.5.2.1.1, 9.2.5.3.1.1) the URI in the uri attribute of the resource-lists' <entry> element needs to be a SIP URI.

Condition	Explanation
PRE-ESTABLISH	Call establishment using a pre-established session
MCD_1to1	A one-to-one MCData call
MCD_grp	A group MCData call
For further conditions see table 5.5.1-1	

5.5.3.3.1A Resource-lists from the UE for initial configuration

Table 5.5.3.3.1A-1: Resource-lists from the UE for initial configuration

Information Element	Value/remark	Comment	Reference	Conditio
esource-lists	encrypted (NOTE 1)		TS 24.481 [11]	
			TS 24.484 [14]	
list[1]	encrypted (NOTE 1)			
name attribute	not present			
display-name	Not present			
entry[1]	NOTE 1, 2		TS 24.484 [14]	CONFIG
uri attribute	AUID-ue-config & "/users/" & XUID & "/" & MCSUEID & "/" AUID-ue-config & "/users/" & XUID & "/"	UE Configuration document (NOTE 3) Editor's note: It is not clear in the core specs whether both options		
		are allowed or only one of both; if the UE is allowed not to include the MCSUEID, it is not clear where the MC server gets it from		
display-name	Not present			
entry[2]	NOTE 1, 2		TS 24.484 [14]	CONFIG
uri attribute	AUID-user-profile & "/users/" & XUID & "/"	UE User Profile document (NOTE 3)		
display-name	Not present			
entry[3]	NOTE 1, 2		TS 24.484 [14]	CONFIG
uri attribute	AUID-service-config & "/global/service-config.xml"	UE Service Configuration document (NOTE 3)		
display-name	Not present			
entry[1]	NOTE 1, 2		TS 24.484 [14]	GROUPO ONFIG
uri attribute	"org.openmobileallianc e.groups/global/byGrou pID/" & Group-ID	UE Group Configuration document		
display-name	Not present			
entry[2]	NOTE 1, 2		TS 24.481 [11]	GROUPO ONFIG AND GROUPM Y
uri attribute	Doc-Sel_T & "~~" & Node-Sel	MCPTT-GKTP document (NOTE 3)		
display-name	Not present			
entry[1]	NOTE 1, 2		TS 24.481 [11]	GROUPK Y AND NOT GROUPC ONFIG
uri attribute	Doc-Sel & "~~" & Node- Sel	MCPTT-GKTP document (NOTE 3)		

NOTE 1: XML encryption may be done by

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

NOTE 2: When a resource-lists document contains more than one entry, the entries may be in any order.

NOTE 3: The terms AUID-ue-config, AUID-user-profile, AUID-service-config, XUID, Group-ID, Doc-Sel, Node-Sel and MCSUEID are defined in table 5.5.3.3.1A-2.

Table 5.5.3.3.1A-2: Terms used in Resource-lists' URIs

Term	Value	Condition
AUID-ue-config	"org.3gpp.mcptt.ue-config"	MCPTT
	"org.3gpp.mcvideo.ue-config"	MCVideo
	"org.3gpp.mcdata.ue-config"	MCData
AUID-user-profile	"org.3gpp.mcptt.user-profile"	MCPTT
	"org.3gpp.mcvideo.user-profile"	MCVideo
	"org.3gpp.mcdata.user-profile"	MCData
AUID-service-config	"org.3gpp.mcptt.service-config"	MCPTT
	"org.3gpp.mcvideo.service-config"	MCVideo
	"org.3gpp.mcdata.service-config"	MCData
XUID	"sip:" & px_MCPTT_ID_User_A	MCPTT
	"sip:" & px_MCVideo_ID_User_A	MCVideo
	"sip:" & px_MCData_ID_User_A	MCData
Group-ID	px_MCPTT_Group_A_ID	MCPTT
	px_MCVideo_Group_A_ID	MCVideo
	px_MCData_Group_A_ID	MCData
Doc-Sel	"org.3gpp.MCPTT-GKTP/global/byGroupID/" & Group-ID & "/"	
Node-Sel	"/group/list-service/mgktp:GKTPs?xmlns(mgktp=urn:3gpp:ns:mcpttGKTP:1.0)"	
MCSUEID	Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8)	

5.5.3.3.2 Resource-lists from the SS

- MCPTT

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

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

- MCVideo

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

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

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[1]				
uri attribute	px_MCData_ID_User_ A	The MCData ID of the invited user		
display name	not present			

5.5.3.4 Location-info

5.5.3.4.1 Location-info (Report from the UE)

- MCPTT

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

Derivation Path: TS 24.379 [9] of Information Element	Value/remark	Comment	Reference	Condition
ocation-info				
Report				
ReportID attribute	not present	Attribute is used to		
		return the value in the		
		<requestid> attribute</requestid>		
		in the <request></request>		
		element. Only present		
		in response to a		
		Location-Info Request.		
ReportType attribute	"Emergency"	Required		
		The <reporttype></reporttype>		
		attribute has two values		
		"Emergency" and		
		"NonEmergency" used		
		to inform whether the		
		client is sending the		
		report in an emergency		
		situation or not.		
TriggerID	not present	An element which can		
		occur multiple times.		
		Contains the value of		
		the <triggerid></triggerid>		
		attribute associated		
		with a trigger that has		
		fired. Only present if a		
		trigger is the cause of		
		the Location-info		
Command anation		Report.		
CurrentLocation		A mandatory element that contains the		
		location information		
CurrentServingEcgi	Encrypted (NOTE 2)	This is optional		
CurrentServingEcgi	<pre><currentservingecgi></currentservingecgi></pre>	depending on the		
	with any content if	configuration sent by		
	present	the SS		
NeighbouringEcgi	Encrypted (NOTE 2)	This is optional		
140igi100ainig=0gi	<neighbouringecgi></neighbouringecgi>	depending on the		
	with any content if	configuration sent by		
	present	the SS		
MbmsSald	Encrypted (NOTE 2)	This is optional		
	<pre><mbmssald> with any</mbmssald></pre>	depending on the		
	content if present	configuration sent by		
	process	the SS		
MbsfnArea	Encrypted (NOTE 2)	This is optional		
	<pre><mbsfnarea> with any</mbsfnarea></pre>	depending on the		
	content if present	configuration sent by		
	, , , , ,	the SS		
CurrentCoordinate	if present	This is optional		
		depending on the		
		configuration sent by		
		the SS		
longitude	Encrypted (NOTE 1)			
-	<longitude> with any</longitude>			
	content			
latitude	Encrypted (NOTE 1)			
	<latitude> with any</latitude>			
	content			

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

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

Derivation Path: TS 24.379 [9] c	ause F.3.2 (tCoordinateType)		
Information Element	Value/remark	Comment	Reference	Condition
type attribute	"Encrypted"			
EncryptedData	EncryptedData as described in Table 5.5.13.2-1 containing encrypted element content of the sub- element of <currentcoordinate></currentcoordinate>			

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

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

MCVideo

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

Information Element	Value/remark	Comment	Reference	Condition
ocation-info				
Report				
ReportID attribute	not present	Attribute is used to		
•	·	return the value in the		
		<requestid> attribute</requestid>		
		in the <request></request>		
		element. Only present		
		in response to a		
		Location-Info Request.		
ReportType attribute	"Emergency"	Required		
		The <reporttype></reporttype>		
		attribute has two values		
		"Emergency" and		
		"NonEmergency" used		
		to inform whether the		
		client is sending the		
		report in an emergency		
		situation or not.		
TriggerID	not present	An element which can		
		occur multiple times.		
		Contains the value of		
		the <triggerid></triggerid>		
		attribute associated		
		with a trigger that has		
		fired. Only present if a		
		trigger is the cause of		
		the Location-info		
		Report.		
CurrentLocation		A mandatory element		
		that contains the		
	E (L(NIOTE 0)	location information		
CurrentServingEcgi	Encrypted (NOTE 2)	This is optional		
	<currentservingecgi></currentservingecgi>	depending on the		
	with any content if	configuration sent by		
NI simble source of a si	present (NOTE 0)	the SS		
NeighbouringEcgi	Encrypted (NOTE 2)	This is optional		
	<neighbouringecgi> with any content if</neighbouringecgi>	depending on the		
	,	configuration sent by		
MbmsSald	present	the SS		
MINITISSAIU	Encrypted (NOTE 2) < MbmsSald> with any	This is optional depending on the		
	content if present	configuration sent by		
	content ii present	the SS		
MbsfnArea	Encrypted (NOTE 2)	This is optional		
MDSITIATEA	<pre><mbsfnarea> with any</mbsfnarea></pre>	depending on the		
	content if present	configuration sent by		
	Content ii present	the SS		
CurrentCoordinate	if present	This is optional		
Carronicociamato	ii procent	depending on the		
		configuration sent by		
		the SS		
longitude	Encrypted (NOTE 1)			
	<pre><longitude> with any</longitude></pre>			
	content			
latitude	Encrypted (NOTE 1)	†		1
iditidao	<latitude> with any</latitude>			
	content			1

NOTE 1: Encrypted sub-element of <CurrentCoordinate> as described in Table 5.5.3.4.1-28

NOTE 2: Encrypted sub-element of <CurrentLocation> as described in Table 5.5.3.4.1-28

Table 5.5.3.4.1-2A: Encrypted sub-element of <CurrentCoordinate> sent by the UE

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

Table 5.5.3.4.1-2B: Encrypted sub-element of <CurrentLocation> sent by the UE

Derivation Path: TS 24.281 [86] of	lause F.3.2 (tCurrentLocation	onType)		
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 subelement of <currentlocation></currentlocation>			

Table 5.5.3.4.1-3: Location-info (Report from the UE) for MCData

Information Element	Value/remark	Comment	Reference	Condition
ocation-info				
Report				
ReportID attribute	not present	Attribute is used to		
•	·	return the value in the		
		<requestid> attribute</requestid>		
		in the <request></request>		
		element. Only present		
		in response to a		
		Location-Info Request.		
ReportType attribute	"Emergency"	Required		
		The <reporttype></reporttype>		
		attribute has two values		
		"Emergency" and		
		"NonEmergency" used		
		to inform whether the		
		client is sending the		
		report in an emergency		
		situation or not.		
TriggerID	not present	An element which can		
		occur multiple times.		
		Contains the value of		
		the <triggerid></triggerid>		
		attribute associated		
		with a trigger that has		
		fired. Only present if a		
		trigger is the cause of		
		the Location-info		
		Report.		
CurrentLocation		A mandatory element		
		that contains the		
		location information		
CurrentServingEcgi	Encrypted (NOTE 2)	This is optional		
	<currentservingecgi></currentservingecgi>	depending on the		
	with any content if	configuration sent by		
	present	the SS		
NeighbouringEcgi	Encrypted (NOTE 2)	This is optional		
	<neighbouringecgi></neighbouringecgi>	depending on the		
	with any content if	configuration sent by		
	present	the SS		
MbmsSald	Encrypted (NOTE 2)	This is optional		
	<mbmssald> with any</mbmssald>	depending on the		
	content if present	configuration sent by		
		the SS		1
MbsfnArea	Encrypted (NOTE 2)	This is optional		
	<mbsfnarea> with any</mbsfnarea>	depending on the		
	content if present	configuration sent by		
		the SS		
CurrentCoordinate	if present	This is optional		
		depending on the		
		configuration sent by		
		the SS		1
longitude	Encrypted (NOTE 1)			
	longitude> with any			
	content			
latitude	Encrypted (NOTE 1)			_
	<latitude> with any</latitude>			
	content			

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

Table 5.5.3.4.1-3A: Encrypted sub-element of <CurrentCoordinate> sent by the UE

Derivation Path: TS 24.282 [87] clause d.4.2 (tCoordinateType)				
Information Element	Value/remark	Comment	Reference	Condition
type attribute	"Encrypted"			
EncryptedData	EncryptedData as described in Table 5.5.13.2-1 containing encrypted element content of the sub- element of <currentcoordinate></currentcoordinate>			

Table 5.5.3.4.1-3B: Encrypted sub-element of <CurrentLocation> sent by the UE

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

5.5.3.4.2 Location-info (Configuration sent by the SS)

- MCPTT

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

Derivation Path: TS 24.379 [9] cla	Value/remark	Comment	Reference	Condition
location-info	Valadifoliarik	Comment	11010101100	Gondinon
Configuration				
ConfigScope	"Full"	The MCPTT Client		
		shall replace any		
		previous configuration.		
NonEmergencyLocationInformat ion				
ServingEcgi	present	An optional element		
		specifying that the		
		serving E-UTRAN Cell		
		Global Identity (ECGI)		
N. H E.		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		+
MIDITISOUIU	present	specifying that the		1
		serving MBMS Service		
		Area Id needs to be		
		reported;		
MbsfnArea	present	An optional element		
		specifying that the		
		MBSFN area ld needs		
		to be reported;		
GeographicalCoordinate	present	An optional element		
		specifying that the		
		geographical		
		coordinate specified in clause 6.1 in 3GPP		
		TS 23.032 [65] needs		
		to be reported		
minimumIntervalLength	"10"	A mandatory element		
3.		specifying the minimum		
		time the MCPTT client		
		needs to wait between		
		sending location		
		reports. The value is		
		given in seconds		
EmergencyLocationInformation"		An antimal plans of		
ServingEcgi	present	An optional element specifying that the		
		serving E-UTRAN Cell		
		Global Identity (ECGI)		
		needs to be reported		
NeighbouringEcgi	present	An optional element		1
		that can occur multiple		
		times, specifying that		
		neighbouring ECGIs		
		need to be reported		1
MbmsSald	present	An optional element		
		specifying that the		
		serving MBMS Service Area Id needs to be		
		reported;		
MbsfnArea	present	An optional element		+
Ινιμοπιλίτσα	Pieseiii	specifying that the		
		MBSFN area Id needs		1
		to be reported;		1

Derivation Path: TS 24.379 [9] cla	Value/remark	Comment	Reference	Condition
GeographicalCoordinate	present	An optional element	Kelelelice	Condition
GeographicalCoordinate	present	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			
anyExt		mandatory for Rel-15 and above		
EmergencyTriggeringCriteria			-	
CellChange	not present			
TrackingAreaChange	not present			
PlmnChange	not present			
MbmsSaChange	not present			
MbsfnAreaChange	not present			
PeriodicReport	not present			
TravelledDistance	not present			
McpttSignallingEvent	not present			
GeographicalAreaChange				
AnyAreaChange	not present			
EnterSpecificAreaType	not present			
ExitSpecificAreaType	not present			

- MCVideo

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

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

Derivation Path: TS 24.281 [86] of Information Element	Value/remark	Comment	Reference	Condition
GeographicalCoordinate	present	An optional element specifying that the geographical coordinate specified in clause 6.1 in 3GPP TS 23.032 [65] needs to be reported		
minimumIntervalLength	"5"	A mandatory element specifying the minimum time the MCVideo client needs to wait between sending location reports. The value is given in seconds		
TriggeringCriteria				
CellChange	not present			
TrackingAreaChange	not present			
PlmnChange	not present			
MbmsSaChange	not present			
MbsfnAreaChange	not present			
PeriodicReport	not present			
TravelledDistance	not present			
McvideoSignallingEvent	not present			
GeographicalAreaChange				
AnyAreaChange	not present		·	
EnterSpecificAreaType	not present			
ExitSpecificAreaType	not present			

- MCData

Table 5.5.3.4.2-3: Location-info (Configuration sent by the SS) for MCData

Derivation Path: TS 24.281 [86] c	Value/remark	Comment	Reference	Condition
location-info	Value/Tellial K	Comment	Kelelelice	Condition
Configuration				
ConfigScope	"Full"	The MCData Client		
		shall replace any		
		previous configuration.		
NonEmergencyLocationInformat ion				
ServingEcgi	present	An optional element		
		specifying that the		
		serving E-UTRAN Cell		
		Global Identity (ECGI) needs to be reported		
NeighbouringEcgi	present	An optional element		
NeighboahingLogi	prosont	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		
WibsitiAtea	present	specifying that the		
		MBSFN area Id needs		
		to be reported;		
GeographicalCoordinate	present	An optional element		
		specifying that the		
		geographical		
		coordinate specified in		
		clause 6.1 in 3GPP TS 23.032 [65] needs		
		to be reported		
minimumIntervalLength	"10"	A mandatory element		
		specifying the minimum		
		time the MCData client		
		needs to wait between		
		sending location		
		reports. The value is		
		given in seconds		
EmergencyLocationInformation"				
ServingEcgi	present	An optional element		
		specifying that the		
		serving E-UTRAN Cell		
		Global Identity (ECGI) needs to be reported		
NeighbouringEcgi	present	An optional element		+
Neighbouiligeogl	present	that can occur multiple		
		times, specifying that		
		neighbouring ECGIs		
		need to be reported		1
MbmsSald	present	An optional element		
		specifying that the		
		serving MBMS Service Area Id needs to be		
		reported;		
MbsfnArea	present	An optional element		1
boilin trou	p.000/it	specifying that the		
		MBSFN area Id needs		1
		to be reported;		

Derivation Path: TS 24.281 [86] Information Element	Value/remark	Comment	Reference	Condition
GeographicalCoordinate	present	An optional element specifying that the geographical coordinate specified in clause 6.1 in 3GPP TS 23.032 [65] needs to be reported		
minimumIntervalLength	"5"	A mandatory element specifying the minimum time the MCData client needs to wait between sending location reports. The value is given in seconds		
TriggeringCriteria				
CellChange	not present			
TrackingAreaChange	not present			
PlmnChange	not present			
MbmsSaChange	not present			
MbsfnAreaChange	not present			
PeriodicReport	not present			
TravelledDistance	not present			
McdataSignallingEvent	not present			
GeographicalAreaChange				
AnyAreaChange	not present			
EnterSpecificAreaType	not present			
ExitSpecificAreaType	not present			

5.5.3.4.3 Location-info (Request sent by the SS)

- MCPTT

Table 5.5.3.4.3-1: Location-info (Request sent by the SS) for MCPTT

Derivation Path: TS 24.379 [9] clause F.3				
Information Element	Value/remark	Comment	Reference	Condition
location-info				
Request				
RequestID	"1"	The RequestID that the		
		MCPTT Client will		
		reference in the Report		

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			

Table 5.5.3.4.3-3: Location-info (Request sent by the SS) for MCData

Derivation Path: TS 24.282 [87] clause D.4				
Information Element	Value/remark	Comment	Reference	Condition
location-info				
Request				
RequestID	"1"	The RequestID that the		
		MCData Client will		
		reference in the Report		

5.5.3.4.4 Location-info (Report from the SS)

- MCPTT

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

Information Element	Value/remark	Comment	Reference	Condition
location-info				
Report				
ReportID attribute	not present			
ReportType attribute	"Emergency"			
TriggerID	not present			
CurrentLocation				
CurrentServingEcgi	not present			
NeighbouringEcgi	not present			
MbmsSald	not present			
MbsfnArea	not present			
CurrentCoordinate				
longitude	Encrypted (NOTE 1) <longitude> with content as specified by the test case</longitude>			
latitude	Encrypted (NOTE 1) <latitude> with content as specified by the test case</latitude>			

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

Information Element	Value/remark	Comment	Reference	Condition
type attribute	"Encrypted"			
EncryptedData	EncryptedData as described in Table 5.5.13.2-2 containing encrypted element content of the sub- element of <currentcoordinate></currentcoordinate>			

MCVideo

Table 5.5.3.4.4-2: Location-info (Report from the SS) for MCVideo

Derivation Path: TS 24.281 [86] Information Element	Value/remark	Comment	Reference	Condition
location-info				
Report				
ReportID attribute	not present			
ReportType attribute	"Emergency"			
TriggerID	not present			
CurrentLocation				
CurrentServingEcgi	not present			
NeighbouringEcgi	not present			
MbmsSald	not present			
MbsfnArea	not present			
CurrentCoordinate				
longitude	Encrypted (NOTE 1) <longitude> with content as specified by the test case</longitude>			
latitude	Encrypted (NOTE 1) <latitude> with content as specified by the test case</latitude>			

Table 5.5.3.4.4-2A: Encrypted sub-element of <CurrentCoordinate> sent by the SS

Information Element	Value/remark	Comment	Reference	Condition
type attribute	"Encrypted"			
EncryptedData	EncryptedData as described in Table 5.5.13.2-2 containing encrypted element content of the sub- element of <currentcoordinate></currentcoordinate>			

Table 5.5.3.4.4-3: Location-info (Report from the SS) for MCData

Derivation Path: TS 24.282 [87] Information Element	Value/remark	Comment	Reference	Condition
location-info				
Report				
ReportID attribute	not present			
ReportType attribute	"Emergency"			
TriggerID	not present			
CurrentLocation				
CurrentServingEcgi	not present			
NeighbouringEcgi	not present			
MbmsSald	not present			
MbsfnArea	not present			
CurrentCoordinate				
longitude	Encrypted (NOTE 1) <longitude> with content as specified by the test case</longitude>			
latitude	Encrypted (NOTE 1) <latitude> with content as specified by the test case</latitude>			

Table 5.5.3.4.4-3A: Encrypted sub-element of <CurrentCoordinate> sent by the SS

Derivation Path: 24.282 [87] clau Information Element	Value/remark	Comment	Reference	Condition
type attribute	"Encrypted"			
EncryptedData	EncryptedData as described in Table 5.5.13.2-2 containing encrypted element content of the sub- element of <currentcoordinate></currentcoordinate>			

5.5.3.5 PIDF

5.5.3.5.1 PIDF from the UE

- MCPTT

Table 5.5.3.5.1-1: PIDF for MCPTT from the UE

Information Element	Value/remark	Comment	Reference	Condition
presence			RFC 3863	
			[114]	
entity attribute	Encrypted URI (NOTE			
	1) with value set to			
	px_MCPTT_ID_User_A			
tuple				
id attribute	Encrypted URI (NOTE			
	1) with value set to the			
	mcptt-client-id as			
	provided by the UE at			
	registration			
status				
affiliation		MCPTT extension	TS 24.379 [9]	AFFILIAT
			clause 9.3.1	ON
group	Encrypted URI (NOTE			
	1) with value set to			
	px_MCPTT_Group_A_I			
P	D			
client	not present			
status	not present			
expires	not present	MODIT	TO 04 070 (0)	FUNCTIO
functionalAlias		MCPTT extension	TS 24.379 [9]	FUNCTIO
			Table 9A.3.1.2-1	NAL_ALIA S_STATU
			9A.3.1.2-1	S_STATU S_CHANC
				5_CHAING
functionalAliasID attribute	Encrypted URI (NOTE			_
ranotional, maorb attributo	1) with value set to			
	px_MCPTT_ID_FA_A			
user attribute	not present			
status attribute	not present			
expires attribute	not present			
contact	not present			
note	not present			
timestamp	not present			
note	not present			
p-id	any allowed value if		TS 24.379 [9]	AFFILIAT
	present		clause 9.3.1	ON
p-id-fa	Any allowed value	a globally unique value	TS 24.379 [9]	FUNCTIO
		set to an identifier of a	clause	NAL_ALIA
		SIP PUBLISH request	9A.2.1.2	S_STATU
				S_CHANG
				E

 Condition
 Explanation

 FUNCTIONAL_ALIAS_STATUS_CHANGE
 PIDF sent by the UE in request for functional alias status change

 For further conditions see table 5.5.1-1

MCVideo

Table 5.5.3.5.1-2: PIDF for MCVideo from the UE

Information Element	Value/remark	Comment	Reference	Condition
presence			RFC 3863 [114]	
entity attribute	Encrypted URI (NOTE 1) with value set to px_MCVideo_ID_User_ A			
tuple				
id attribute	Encrypted URI (NOTE 1) with value set to the mcptt-client-id as provided by the UE at registration			
status				
affiliation			TS 24.281 [86] clause 8.3.1	AFFILIATI ON
group	Encrypted URI (NOTE 1) with value set to px_MCVideo_Group_A _ID			
client	not present			
status	not present			
expires	not present			
p-id	any allowed value if present			AFFILIATI ON

MCData

Table 5.5.3.5.1-3: PIDF for MCData from the UE

Derivation Path: RFC 3863 [114] Information Element	Value/remark	Comment	Reference	Condition
presence			RFC 3863 [114]	
entity attribute	Encrypted URI (NOTE 1) with value set to px_MCData_ID_User_ A		[114]	
tuple				
id attribute	Encrypted URI (NOTE 1) with value set to the mcptt-client-id as provided by the UE at registration			
status				
affiliation			TS 24.282 [87] clause 8.4.1	AFFILIATI ON
group	Encrypted URI (NOTE 1) with value set to px_MCDATA_Group_A _ID			
client	not present			
status	not present			
expires	not present			
functionalAlias		MCData extension	TS 24.282 [87] Table 22.3.1.2-1	FUNCTIO NAL_ALIA S_STATU S_CHANG E
functionalAliasID attribute	Encrypted URI (NOTE 1) with value set to px_MCData_ID_FA_A			
user attribute	not present			
status attribute	not present			
expires attribute	not present			
p-id	any allowed value or same value as sent in SIP PUBLISH	set to an identifier of a SIP PUBLISH request		AFFILIATI ON
p-id-fa	Any allowed value	a globally unique value set to an identifier of a SIP PUBLISH request	TS 24.282 [87] clause 22.2.1.2	FUNCTIO NAL_ALIA S_STATU S_CHANG E

5.5.3.5.2 PIDF from the SS

- MCPTT

Table 5.5.3.5.2-1: PIDF for MCPTT from the SS

Value/remark	Comment	Reference	Condition
		RFC 3863	
		[114]	
px_MCPTT_ID_User_A			
registration			
	MCDTT automolog	TC 04 070 [0]	AFFILIATI
	MICPLL extension	15 24.379 [9]	ON
Energeted LIBI (NOTE		Clause 9.3.1	ON
ļ -			
not present			
	MCPTT extension	TS 24.379 [9]	FUNCTIO
		Table	NAL_ALIA
		9A.3.1.2-1	S_ACTIVA
			TED
Encrypted URI (NOTE			
1			
 			
not present			AFFILIATI ON
same value as received		TS 24.379 [9]	NOTIFY_F
in the SIP PUBLISH		clause	OR_PUBL
message		9A.2.2.2.5	SH
	Encrypted URI (NOTE 1) with value set to px_MCPTT_ID_User_A Encrypted URI (NOTE 1) with value set to the mcptt-client-id as provided by the UE at registration Encrypted URI (NOTE 1) with value set to px_MCPTT_Group_A_I D not present "affiliating" not present "activated" not present "activated" not present	Encrypted URI (NOTE 1) with value set to px_MCPTT_ID_User_A Encrypted URI (NOTE 1) with value set to the mcptt-client-id as provided by the UE at registration MCPTT extension Encrypted URI (NOTE 1) with value set to px_MCPTT_Group_A_I D not present "affiliating" not present MCPTT extension Encrypted URI (NOTE 1) with value set to px_MCPTT_ID_FA_A not present "activated" not present	Encrypted URI (NOTE 1) with value set to px_MCPTT_ID_User_A Encrypted URI (NOTE 1) with value set to the mcptt-client-id as provided by the UE at registration MCPTT extension TS 24.379 [9] clause 9.3.1 Encrypted URI (NOTE 1) with value set to px_MCPTT_Group_A_I D not present "affiliating" not present MCPTT extension TS 24.379 [9] Table 9A.3.1.2-1 Encrypted URI (NOTE 1) with value set to px_MCPTT_ID_FA_A not present "activated" not present

Condition	Explanation
FUNCTIONAL_ALIAS_ACTIVATED	PIDF sent by the SS in notification for functional alias getting activated
NOTIFY_FOR_PUBLISH	PIDF sent by the SS in notification associated with a previous SIP
	PUBLISH message sent by the UE
For further conditions see table 5.5.1-1	

MCVideo

Table 5.5.3.5.2-2: PIDF for MCVideo from the SS

Information Element	Value/remark	Comment	Reference	Condition
presence			RFC 3863 [114]	
entity attribute	Encrypted URI (NOTE 1) with value set to px_MCVideo_ID_User_ A			
tuple				
id attribute	Encrypted URI (NOTE 1) with value set to the mcptt-client-id as provided by the UE at registration			
status				
affiliation			TS 24.281 [86] clause 8.3.1	AFFILIATI ON
group	Encrypted URI (NOTE 1) with value set to px_MCVideo_Group_A _ID			
client	not present			
status	"affiliating"			
expires	not present			
p-id	not present			AFFILIATI ON

MCData

Table 5.5.3.5.2-3: PIDF for MCData from the SS

Information Element	Value/remark	Comment	Reference	Condition
presence			RFC 3863	
			[114]	
entity attribute	Encrypted URI (NOTE 1) with value set to px_MCDATA_ID_User _A			
tuple				
id attribute	Encrypted URI (NOTE 1) with value set to the mcptt-client-id as provided by the UE at registration			
status				
affiliation			TS 24.282 [87] clause 8.4.1	AFFILIATI ON
group	px_MCDATA_Group_A		ciause 6.4.1	ON
client	not present			
status	"affiliating"			
expires	not present			
functionalAlias		MCData extension	TS 24.282 [87] Table 22.3.1.2-1	FUNCTIO NAL_ALIA S_ACTIVA TED
functionalAliasID attribute	Encrypted URI (NOTE 1) with value set to px_MCData_ID_FA_A			
user attribute	not present			
status attribute	"activated"			
expires attribute	not present			
p-id	not present			AFFILIATI ON
p-id-fa	same value as received in the SIP PUBLISH message		TS 24.282 [87] clause 22.2.2.5	NOTIFY_F OR_PUBL SH

Condition	Explanation
FUNCTIONAL_ALIAS_ACTIVATED	PIDF sent by the SS in notification for functional alias getting activated
NOTIFY_FOR_PUBLISH	PIDF sent by the SS in notification associated with a previous SIP PUBLISH message sent by the UE
For further conditions see table 5.5.1-1	

5.5.3.6 SIMPLE-FILTER

Table 5.5.3.6-1: SIMPLE-FILTER

Derivation Path: RFC 4661 [48] Information Element	Value/remark	Comment	Reference	Condition
filter-set				
ns-bindings		TS 24.379 [9] clause 9.3.2.2 requires two separate ns- binding elements		
ns-binding urn [1]				
prefix	"pidf"			
urn	"urn:ietf:params:xml:ns: pidf"			
ns-binding urn [2]				MCPTT
prefix	"mcpttPI10"			
urn	"urn:3gpp:ns:mcpttPres Info:1.0"			
ns-binding urn [2]				MCVIDEO
prefix	"mcvideoPI10"			
urn	"urn:3gpp:ns:mcvideoP resInfo:1.0"			
ns-binding urn [2]				MCDATA
prefix	"mcdataPI10"			
urn	"urn:3gpp:ns:mcdataPr esInfo:1.0"			
filter[1]				
id attribute	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 [9] clause 9.3.2.2		
domain attribute	Not present	According to TS 24.379 [9] clause 9.3.2.2		
remove attribute	false if present	'false' per default		
enabled attribute	true if present	'true' per default		
what			RFC 4661 [48]	PER- CLIENT
include[1]				
type	xpath if present	"xpath" per default		
base	"//presence/tuple[@id=" & client id (NOTE 1) & "]" Editor's Note: FFS whether and how this element should be encrypted	contains the value, according to IETF RFC 4661 [48], set to concatenation of the '//presence/tuple[@id="' string, the MCX client ID, and the "']' string		
what	Спотургой	ib, and the j string	RFC 4661 [48]	PER- GROUP
include[1]				
type	xpath if present	"xpath" per default		
base	"//pidf:presence/pidf:ad ditionalData/@pidf:grou pCallOngoing"		TS 24.379 [9] clause 9.3.2.2	
trigger	Not present			

Condition	Explanation
PER-CLIENT	Per-client restrictions of presence event package notification information according to TS 24.379 [9] clause 9.3.2.2
PER-GROUP	Per-group restrictions of presence event package notification information according to TS 24.379 [9] clause 9.3.2.2

Table 5.5.3.6-2: Void

Table 5.5.3.6-3: Void

5.5.3.7 AFFILIATION-COMMAND

- MCPTT

Table 5.5.3.7-1: MCPTT-AFFILIATION-COMMAND for MCPTT

Derivation Path: TS 24.379 [9] clause F.4					
Information Element	Value/remark	Comment	Reference	Condition	
command-list					
affiliate					
group[1]	px_MCPTT_Group_A_I	MCPTT group name			
	D	-			
de-affiliate	not present				

MCVideo

Table 5.5.3.7-2: MCVideo-AFFILIATION-COMMAND for MCVideo

Derivation Path: TS 24.281 [86] clause F.4					
Information Element	Value/remark	Comment	Reference	Condition	
command-list					
affiliate					
group[1]	px_MCVideo_Group_A _ID	MCVideo group name			
de-affiliate	not present				

- MCData

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

Derivation Path: TS 24.282 [87] clause D.3					
Information Element	Value/remark	Comment	Reference	Condition	
command-list					
affiliate					
group[1]	px_MCData_Group_A_ ID	MCData group name			
de-affiliate	not present				

5.5.3.8 MCData Data signalling messages

The MCData Data signalling messages specified in this clause are protected according to TS 33.180 clause 8.5.4, i.e. a MCData Data signalling message is contained in the protected payload of a MCData Protected Payload Message according to clause 5.5.3.10 with condition PROTECTED_MESSAGE and CSK.

The following conditions apply throughout clause 5.5.3.8:

Table 5.5.3.8-1: Conditions

Condition	Explanation
DELIVERED	Disposition request/notification type DELIVERED
READ	Disposition request/notification type READ
DELIVERED_READ	Disposition request/notification type DELIVERED AND READ
FD_ACCEPTED	Disposition notification type FILE DOWNLOAD REQUEST ACCEPTED
FD_REJECTED	Disposition notification type FILE DOWNLOAD REQUEST REJECTED
FD_COMPLETED	Disposition notification type FILE DOWNLOAD COMPLETED
FD_DEFERRED	Disposition notification type FILE DOWNLOAD DEFERRED
FD_HTTP	FD Message for FD using using HTTP
FD_MSRP	FD Message for FD using media plane

5.5.3.8.1 SDS SIGNALLING PAYLOAD message from the UE

Table 5.5.3.8.1-1: SDS SIGNALLING PAYLOAD message from the UE

Derivation Path: TS 24.282 [87]	clause 15.1.2			
Information Element	Value/remark	Comment	Reference	Condition
SDS signalling payload	'00000001'B	SDS SIGNALLING	TS 24.282 [87]	
message identity		PAYLOAD	clause 15.2.2	
Date and time	Any allowed value	The Date and time	TS 24.282 [87]	
		value is an unsigned	clause 15.2.8	
		integer containing UTC		
		time of the time when a		
		message was sent, in		
		seconds since midnight		
		UTC of January 1,		
		1970 (not counting leap seconds).		
Conversation ID	Any allowed value	The Conversation ID	TC 04 000 [07]	
Conversation ID	Any allowed value	contains a number	TS 24.282 [87] clause 15.2.9	
		uniquely identifying the	Clause 15.2.9	
		conversation. The		
		value is a universally		
		unique identifier.		
Message ID	Any allowed value	The Message ID	TS 24.282 [87]	
3 - 1 - 3 -	,	contains a number	clause 15.2.10	
		uniquely identifying a		
		message. The value is		
		a universally unique		
		identifier		
InReplyTo message ID	Not present		TS 24.282 [87]	
			clause 15.2.11	
Application ID	Not present		TS 24.282 [87]	
			clause 15.2.7	
SDS disposition request type	'0001'B		TS 24.282 [87]	DELIVERE
	10010		clause 15.2.3	D
	'0010'B			READ
	'0011'B			DELIVERE
E () E () E	<u> </u>		TO 04 000 for	D_READ
Extended application ID	Not present		TS 24.282 [87]	
Hearlastics	A my allaws division "		clause 15.2.24	
User location	Any allowed value if		TS 24.282 [87]	
Sender MCData user ID	present		clause 15.2.25 TS 24.282 [87]	
Sender MCData user ID	Not present		clause 15.2.15	
Application metadata container	Any allowed value if	Rel-17	TS 24.282 [87]	
Application metadata container	present	Nei-17	clause 15.2.28	
	T hieseiii		Clause 13.2.20	

5.5.3.8.2 SDS SIGNALLING PAYLOAD message from the SS

Table 5.5.3.8.2-1: SDS SIGNALLING PAYLOAD message from the SS

Derivation Path: TS 24.282 [87] of	lause 15.1.2			
Information Element	Value/remark	Comment	Reference	Condition
SDS signalling payload	'00000001'B	SDS SIGNALLING	TS 24.282 [87]	
message identity		PAYLOAD	clause 15.2.2	
Date and time	The current date and	The Date and time	TS 24.282 [87]	
	time	value is an unsigned	clause 15.2.8	
		integer containing UTC		
		time of the time when a		
		message was sent, in		
		seconds since midnight		
		UTC of January 1,		
		1970 (not counting leap		
Conversation ID	1010101010101010101	seconds). The Conversation ID	TC 04 000 [07]	
Conversation iD	'010101010101010101 0101010101010101'O	contains a number	TS 24.282 [87]	
	010101010101010	uniquely identifying the	Clause 15.2.9	
		conversation. The		
		value is a universally		
		unique identifier.		
Message ID	'010101010101010101	The Message ID	TS 24.282 [87]	
3 - 1 - 3 - 3	01010101010101'O	contains a number	clause 15.2.10	
		uniquely identifying a		
		message. The value is		
		a universally unique		
		identifier		
InReplyTo message ID	Not present		TS 24.282 [87]	
			clause 15.2.11	
Application ID	Not present		TS 24.282 [87]	
	1000115		clause 15.2.7	5-1 11 /-5-
SDS disposition request type	'0001'B		TS 24.282 [87]	DELIVERE
	1004010		clause 15.2.3	D
	'0010'B			READ
	'0011'B			DELIVERE
Extended application ID	Not present		TC 04 000 [07]	D_READ
Extended application ID	Not present		TS 24.282 [87] clause 15.2.24	
User location	Not present		TS 24.282 [87]	
USEI IOCALIOTI	Not present		clause 15.2.25	
Sender MCData user ID	Not present		TS 24.282 [87]	
Gender MCData user ID	Not present		clause 15.2.15	
Application metadata container	Not present	Rel-17	TS 24.282 [87]	
Application metadata containe	Not present		clause 15.2.28	
			010000 10.2.20	<u> </u>

5.5.3.8.3 SDS NOTIFICATION message from the UE

Table 5.5.3.8.3-1: SDS NOTIFICATION message from the UE

Derivation Path: TS 24.282 [87] cl	ause 15.1.5			
Information Element	Value/remark	Comment	Reference	Condition
SDS notification message	'00000101'B	SDS NOTIFICATION	TS 24.282 [87]	
identity			clause 15.2.2	
SDS disposition notification type	'00000010'B		TS 24.282 [87]	DELIVERE
			clause 15.2.5	D
	'00000011'B			READ
	'00000100'B			DELIVERE
				D_READ
Date and time	Any allowed value	The Date and time	TS 24.282 [87]	
		value is an unsigned	clause 15.2.8	
		integer containing UTC		
		time of the time when a		
		message was sent, in		
		seconds since midnight		
		UTC of January 1,		
		1970 (not counting leap		
		seconds).		
Conversation ID	Same value as in the	The Conversation ID	TS 24.282 [87]	
	corresponding SDS	contains a number	clause 15.2.9	
	SIGNALLING	uniquely identifying the		
	PAYLOAD sent to the	conversation. The		
	UE	value is a universally		
		unique identifier.		
Message ID	Same value as in the	The Message ID	TS 24.282 [87]	
	corresponding SDS	contains a number	clause 15.2.10	
	SIGNALLING	uniquely identifying a		
	PAYLOAD sent to the	message. The value is		
	UE	a universally unique		
		identifier		
Application ID	Not present		TS 24.282 [87]	
			clause 15.2.7	
Extended application ID	Not present		TS 24.282 [87]	
			clause 15.2.24	
Sender MCData user ID	Not present		TS 24.282 [87]	
			clause 15.2.15	

5.5.3.8.4 SDS NOTIFICATION message from the SS

Table 5.5.3.8.4-1: SDS NOTIFICATION message from the SS

Derivation Path: TS 24.282 [87] clause 15.1.5				
Information Element	Value/remark	Comment	Reference	Condition
SDS notification message identity	'00000101'B	SDS NOTIFICATION	TS 24.282 [87] clause 15.2.2	
SDS disposition notification type	'00000010'B		TS 24.282 [87] clause 15.2.5	DELIVERE D
	'00000011'B			READ
	'00000100'B			DELIVERE D_READ
Date and time	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	Same value as in the corresponding SDS SIGNALLING PAYLOAD received from the UE	The Conversation ID contains a number uniquely identifying the conversation. The value is a universally unique identifier.	TS 24.282 [87] clause 15.2.9	
Message ID	Same value as in the corresponding SDS SIGNALLING PAYLOAD received from the UE	The Message ID contains a number uniquely identifying a message. The value is a universally unique identifier	TS 24.282 [87] clause 15.2.10	
Application ID	Not present		TS 24.282 [87] clause 15.2.7	
Extended application ID	Not present		TS 24.282 [87] clause 15.2.24	
Sender MCData user ID	Not present		TS 24.282 [87] clause 15.2.15	

5.5.3.8.5 FD SIGNALLING PAYLOAD message from the UE

Table 5.5.3.8.5-1: FD SIGNALLING PAYLOAD message from the UE

Derivation Path: TS 24.282 [87] c	lause 15.1.2			
Information Element	Value/remark	Comment	Reference	Condition
FD signalling payload message	'00000010'B	FD SIGNALLING	TS 24.282 [87]	
identity		PAYLOAD	clause 15.2.2	
Date and time	Any allowed value	The Date and time	TS 24.282 [87]	
		value is an unsigned	clause 15.2.8	
		integer containing UTC		
		time of the time when a		
		message was sent, in		
		seconds since midnight		
		UTC of January 1,		
		1970 (not counting leap seconds).		
Conversation ID	Any allowed value	The Conversation ID	TS 24.282 [87]	
Conversation ID	Any allowed value	contains a number	clause 15.2.9	
		uniquely identifying the	ciause 15.2.9	
		conversation. The		
		value is a universally		
		unique identifier.		
Message ID	Any allowed value	The Message ID	TS 24.282 [87]	
	in it is a second tales	contains a number	clause 15.2.10	
		uniquely identifying a	0.0000 10.2110	
		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	clause 15.2.16	
	IOOOAID	download		ED MCDD
	'0001'B	MANDATORY DOWNLOAD		FD_MSRP
Payload		DOWNLOAD	TS 24.282 [87]	FD_HTTP
i ayidad			clause 15.2.13	ווו ביי וווור
Length of Payload contents	Length of the payload		5,0000 10.2.10	
	contents			
Payload content type	"00000100"	FILEURL		
Payload contents	same URL as assigned			
,	by the SS in the HTTP			
	201 (Created) response			
	to the HTTP POST			
	request			
Metadata	if present	Metadata is optional	TS 24.282 [87]	FD_HTTP
			clause 15.2.17	
file-selector	Any allowed value			
file-date	Any allowed value			
file-availability	Any allowed value			
Extended application ID	Not present		TS 24.282 [87]	
			clause 15.2.24	

5.5.3.8.6 FD SIGNALLING PAYLOAD message from the SS

Table 5.5.3.8.6-1: FD SIGNALLING PAYLOAD message from the SS

Derivation Path: TS 24.282 [87] c	lause 15.1.2			
Information Element	Value/remark	Comment	Reference	Condition
FD signalling payload message identity	'00000010'B	FD SIGNALLING PAYLOAD	TS 24.282 [87] clause 15.2.2	
Date and time	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	'010101010101010101 01010101010101'O	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	'010101010101010101 01010101010101'O	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'B	FILE DOWNLOAD COMPLETED UPDATE	TS 24.282 [87] clause 15.2.4	
Mandatory download	Not present	Not present indicates a Non-Mandatory download	TS 24.282 [87] clause 15.2.16	
	'0001'B	MANDATORY DOWNLOAD		FD_MSRP
Length of Payload contents	Length of the payload contents			
Payload content type	"00000100"	FILEURL		
Payload contents	tsc_MCData_MSF_URI & "/" & sub-path	URL identifying the location of the stored file; sub-path is arbitrarily selected by the SS and shall be different for every file upload of a test case		
Metadata		NOTE 1	TS 24.282 [87] clause 15.2.17	FD_HTTP
file-selector			RFC 5547 [124]	
filename	name of the file	e.g. "TestFile.txt"		
filesize	size of the file			
type	type of the file	e.g. "text/plain"		
hash				
algorithm	"sha-1" hash value of the file			
value file-date	nasn value of the file		RFC 5547 [124]	
date-param[1]				
type	"creation"			
date-time	date and time when the file has been created	e.g. "Mon, 20 Dec 2021 15:01:31 +0100"	RFC 5322 [109]	
file-availability	Date and time until which the file is available	e.g. "Fri, 30 Dec 2050 23:59:59 +0100"	TS 24.282 [87] table 15.2.17-1	

file-description	"Test file"	TS 24.282 [87]		
		table 15.2.17-1		
Extended application ID	Not present	TS 24.282 [87]		
		clause 15.2.24		
Sender MCData user ID	Not present	TS 24.282 [87]		
		clause 15.2.15		
NOTE 1: file-selector, file-date, file-availability and file-description are concatenated using CRLF (carriage-return/line-				
feed) as separator	-			

5.5.3.8.7 FD NOTIFICATION message from the UE

Table 5.5.3.8.7-1: FD NOTIFICATION message from the UE

Derivation Path: TS 24.282 [87] cl	Derivation Path: TS 24.282 [87] clause 15.1.6				
Information Element	Value/remark	Comment	Reference	Condition	
FD notification message identity	'00000110'B	FD NOTIFICATION	TS 24.282 [87]		
			clause 15.2.2		
FD disposition notification type	'00000001'B		TS 24.282 [87]	FD_ACCE	
			clause 15.2.6	PTED	
	'00000010'B			FD_REJE	
	1222221112			CTED	
	'00000011'B			FD_COMP	
	'00000100'B			LETED	
	00000100B			FD_DEFE RRED	
Date and time	Any allowed value	The Date and time	TS 24.282 [87]	KKED	
Date and time	Any allowed value	value is an unsigned	clause 15.2.8		
		integer containing UTC	ciause 15.2.0		
		time of the time when a			
		message was sent, in			
		seconds since midnight			
		UTC of January 1,			
		1970 (not counting leap			
		seconds).			
Conversation ID	Same value as in the	The Conversation ID	TS 24.282 [87]		
	corresponding FD	contains a number	clause 15.2.9		
	SIGNALLING	uniquely identifying the			
	PAYLOAD sent to the	conversation. The			
	UE	value is a universally			
		unique identifier.			
Message ID	Same value as in the	The Message ID	TS 24.282 [87]		
	corresponding FD	contains a number	clause 15.2.10		
	SIGNALLING	uniquely identifying a			
	PAYLOAD sent to the	message. The value is			
	UE	a universally unique			
		identifier			
Application ID	Not present		TS 24.282 [87]		
F	N		clause 15.2.7		
Extended application ID	Not present		TS 24.282 [87]		
0 1 100 1	N		clause 15.2.24		
Sender MCData user ID	Not present		TS 24.282 [87]		
			clause 15.2.15		

5.5.3.8.8 FD NOTIFICATION message from the SS

Table 5.5.3.8.8-1: FD NOTIFICATION message from the SS

Derivation Path: TS 24.282 [87] clause 15.1.6				
Information Element	Value/remark	Comment	Reference	Condition
FD notification message identity	'00000110'B	FD NOTIFICATION	TS 24.282 [87]	
			clause 15.2.2	
FD disposition notification type	'00000001'B		TS 24.282 [87]	FD_ACCE
			clause 15.2.6	PTED
	'00000010'B			FD_REJE CTED
	'00000011'B			FD_COMP LETED
	'00000100'B			FD_DEFE RRED
Date and time	The current date and 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	INCE
Conversation ID	Same value as in the corresponding FD SIGNALLING PAYLOAD received from the UE	The Conversation ID contains a number uniquely identifying the conversation. The value is a universally unique identifier.	TS 24.282 [87] clause 15.2.9	
Message ID	Same value as in the corresponding FD SIGNALLING PAYLOAD received from the UE	The Message ID contains a number uniquely identifying a message. The value is a universally unique identifier	TS 24.282 [87] clause 15.2.10	
Application ID	Not present		TS 24.282 [87] clause 15.2.7	
Extended application ID	Not present		TS 24.282 [87]	
Sender MCData user ID	Not present		Clause 15.2.24 TS 24.282 [87] clause 15.2.15	

5.5.3.8.9 SDS OFF-NETWORK MESSAGE message from the UE

Table 5.5.3.8.9-1: SDS OFF-NETWORK MESSAGE message from the UE

Derivation Path: TS 24.282 [87] table 15.1.7.1-1				
Information Element	Value/remark	Comment	Reference	Condition
Date and time	Any allowed value	The Date and time value is an unsigned integer containing UTC time of the time when a message was sent, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).	TS 24.282 [87] clause 15.2.8	
Number of payloads	1	1 payload	TS 24.282 [87] clause 15.2.12	
Conversation ID	Any allowed value	The Conversation ID contains a number uniquely identifying the conversation. The value is a universally unique identifier.	TS 24.282 [87] clause 15.2.9	
Message ID	Any allowed value	The Message ID contains a number uniquely identifying a message. The value is a universally unique identifier	TS 24.282 [87] clause 15.2.10	
Sender MCData user ID	px_MCData_ID_User_ A			
InReplyTo message ID	Not present		TS 24.282 [87] clause 15.2.11	
Application ID	Not present		TS 24.282 [87] clause 15.2.7	
SDS disposition request type	'0001'B		TS 24.282 [87] clause 15.2.3	DELIVERE D
	'0010'B			READ
	'0011'B			DELIVERE D_READ
Security parameters	MCData Protected Payload Message as described in Table 5.5.3.10-1 with condition PROTECTED_PAYLO AD containing the Payload as described in Table 5.5.3.8.9-2	MCData Protected Payload Message	TS 33.180 [94]	MCD_1to1
MCData group ID	px_MCData_Group_A_ ID		TS 24.282 [87] clause 15.2.14	MCD_grp
Recipient MCData user ID	px_MCData_ID_User_ B			MCD_1to1
Payload	Payload as described in Table 5.5.3.8.9-3		TS 24.282 [87] clause 15.2.13	MCD_grp
Extended application ID	Not present		TS 24.282 [87] clause 15.2.24	

Condition	Explanation
MCD_1to1	A one-to-one MCData call
MCD_grp	A group MCData call
For further conditions see table 5.5.3.8-1	

Table 5.5.3.8.9-2: Payload contained in the Security parameters

Derivation Path: TS 24.282 [87] clause 15.2.13				
Field	Value/remark	Comment	Reference	Condition
Payload IEI	'78'O		TS 24.282 [87]	
			clause 15.1.4	
Length of Payload	length of the content			
Payload content type	'00000001'B	TEXT		
Payload data	any allowed value	The data payload Example: "abcdEFGH"		

Table 5.5.3.8.9-3: DATA PAYLOAD message for group communication from the UE

Derivation Path: TS 24.282 [87] clause 15.1.4				
Information Element	Value/remark	Comment	Reference	Condition
Data payload message identity	'00000011'B	Data payload	TS 24.282 [87]	
			clause 15.2.2	
Number of payloads	1	1 payload	TS 24.282 [87]	
			clause 15.2.12	
Payload			TS 24.282 [87]	
			clause 15.2.13	
Payload IEI	'78'O			
Length of Payload	length of the content			
Payload content type	'00000001'B	TEXT		
Payload data	any allowed value	The data payload		
-	_	Example: "abcdEFGH"		

5.5.3.8.10 SDS OFF-NETWORK MESSAGE message from the SS

Table 5.5.3.8.10-1: SDS OFF-NETWORK MESSAGE message from the SS

Derivation Path: TS 24.282 [87]				
Information Element	Value/remark	Comment	Reference	Condition
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	
Number of payloads	1	1 payload	TS 24.282 [87] clause 15.2.12	
Conversation ID	'010101010101010101 0101010101010101'O	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	'010101010101010101 0101010101010101'O	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	
Sender MCData user ID	px_MCData_ID_User_ B			
InReplyTo message ID	Not present		TS 24.282 [87] clause 15.2.11	
Application ID	Not present		TS 24.282 [87] clause 15.2.7	
SDS disposition request type	'0001'B		TS 24.282 [87] clause 15.2.3	DELIVERE D
	'0010'B			READ
	'0011'B			DELIVERE D_READ
Security parameters	MCData Protected Payload Message as described in Table 5.5.3.10-2 with condition PROTECTED_PAYLO AD containing the Payload as described in Table 5.5.3.8.10-2	MCData Protected Payload Message	TS 33.180 [94]	MCD_1to1
MCData group ID	px_MCData_Group_A_ ID		TS 24.282 [87] clause 15.2.14	MCD_grp
Recipient MCData user ID	px_MCData_ID_User_ A			MCD_1to1
Payload	Payload as described in Table 5.5.3.8.10-3		TS 24.282 [87] clause 15.2.13	MCD_grp
Extended application ID	Not present		TS 24.282 [87] clause 15.2.24	

Condition	Explanation
MCD_1to1	A one-to-one MCData call
MCD_grp	A group MCData call
For further conditions see table 5.5.3.8-1	

Table 5.5.3.8.10-2: Payload contained in the Security parameters and Payload

Derivation Path: TS 24.282 [87] clause 15.2.13				
Field	Value/remark	Comment	Reference	Condition
Payload IEI	'78'O		TS 24.282 [87]	
			clause 15.1.4	
Length of Payload	length of the content			
Payload content type	'00000001'B	TEXT		
Payload data	"Test"	The data payload		

Table 5.5.3.8.10-3: DATA PAYLOAD message for group communication from the SS

Derivation Path: TS 24.282 [87] clause 15.1.4				
Information Element	Value/remark	Comment	Reference	Condition
Data payload message identity	'00000011'B	Data payload	TS 24.282 [87]	
			clause 15.2.2	
Number of payloads	1	1 payload	TS 24.282 [87]	
			clause 15.2.12	
Payload			TS 24.282 [87]	
			clause 15.2.13	
Payload IEI	'78'O			
Length of Payload	length of the content			
Payload content type	'0000001'B	TEXT		
Payload data	"Test"	The data payload		

5.5.3.8.11 SDS OFF-NETWORK NOTIFICATION message from the UE

Table 5.5.3.8.11-1: SDS OFF-NETWORK message from the UE

Derivation Path: TS 24.282 [87] ta	ble 15 1 8 4-1			
Information Element	Value/remark	Comment	Reference	Condition
SDS disposition notification type	'00000010'B		TS 24.282 [87]	DELIVERE
			clause 15.2.5	D
	'00000011'B			READ
	'00000100'B			DELIVERE
				D_READ
Date and time	Any allowed value	The Date and time	TS 24.282 [87]	
		value is an unsigned	clause 15.2.8	
		integer containing UTC		
		time of the time when a		
		message was sent, in seconds since midnight		
		UTC of January 1,		
		1970 (not counting leap		
		seconds).		
Conversation ID	Same value as in the	The Conversation ID	TS 24.282 [87]	
	corresponding SDS	contains a number	clause 15.2.9	
	OFF-NETWORK	uniquely identifying the		
	MESSAGE sent to the	conversation. The		
	UE	value is a universally		
		unique identifier.		
Message ID	Same value as in the	The Message ID	TS 24.282 [87]	
	corresponding SDS	contains a number	clause 15.2.10	
	OFF-NETWORK	uniquely identifying a		
	MESSAGE sent to the UE	message. The value is		
	UE	a universally unique identifier		
Sender MCData user ID	px_MCData_ID_User_	identillel		
Gender Modala user id	A			
Application ID	Not present			
Extended application ID	Not present			

5.5.3.8.12 SDS OFF-NETWORK NOTIFICATION message from the SS

Table 5.5.3.8.12-1: SDS OFF-NETWORK message from the SS

Derivation Path: TS 24.282 [87] ta	ble 15.1.8.4-1			
Information Element	Value/remark	Comment	Reference	Condition
SDS disposition notification type	'00000010'B		TS 24.282 [87] clause 15.2.5	DELIVERE D
	'00000011'B			READ
	'00000100'B			DELIVERE D_READ
Date and time	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	Same value as in the corresponding SDS OFF-NETWORK MESSAGE received from the UE	The Conversation ID contains a number uniquely identifying the conversation. The value is a universally unique identifier.	TS 24.282 [87] clause 15.2.9	
Message ID	Same value as in the corresponding SDS OFF-NETWORK MESSAGE received from the UE	The Message ID contains a number uniquely identifying a message. The value is a universally unique identifier	TS 24.282 [87] clause 15.2.10	
Sender MCData user ID	px_MCData_ID_User_ B		_	
Application ID	Not present			
Extended application ID	Not present			

5.5.3.9 MCData Data Payload

5.5.3.9.1 MCData Data Payload for group communication

The MCData Data Payload messages for group communication specified in this clause are protected according to TS 33.180 clause 8.5.4, i.e. a MCData Data Payload message is contained in the protected payload of a MCData Protected Payload Message according to clause 5.5.3.10 with condition PROTECTED_MESSAGE and GMK.

Table 5.5.3.9.1-1: DATA PAYLOAD message for group communication from the UE

Derivation Path: TS 24.282 [87] clause 15.1.4				
Information Element	Value/remark	Comment	Reference	Condition
Data payload message identity	'00000011'B	Data payload	TS 24.282 [87]	
		. ,	clause 15.2.2	
Number of payloads	1	1 payload	TS 24.282 [87]	
			clause 15.2.12	
Payload			TS 24.282 [87]	
•			clause 15.2.13	
Payload IEI	'78'O			
Length of Payload	length of the content			
Payload content type	'00000001'B	TEXT		
Payload data	any allowed value	The data payload Example: "abcdEEGH"		

Table 5.5.3.9.1-2: DATA PAYLOAD message for group communication from the SS

Derivation Path: TS 24.282 [87] clause 15.1.4				
Information Element	Value/remark	Comment	Reference	Condition
Data payload message identity	'00000011'B	Data payload	TS 24.282 [87]	
			clause 15.2.2	
Number of payloads	1	1 payload	TS 24.282 [87]	
			clause 15.2.12	
Payload			TS 24.282 [87]	MCD_grp
			clause 15.2.13	
Payload IEI	'78'O			
Length of Payload	length of the content			
Payload content type	'00000001'B	TEXT		
Payload data	"Test"	The data payload		

5.5.3.9.2 MCData Data Payload for one-to-one communication

Table 5.5.3.9.2-1: DATA PAYLOAD message for one-to-one communication from the UE

Information Element	Value/remark	Comment	Reference	Condition
Data payload message identity	'00000011'B	Data payload	TS 24.282 [87]	
			clause 15.2.2	
Number of payloads	1	1 payload	TS 24.282 [87]	
			clause 15.2.12	
Security parameters and	MCData Protected	MCData Protected	TS 33.180 [94]	
Payload	Payload Message as	Payload Message		
	described in Table			
	5.5.3.10-1 with			
	condition			
	PROTECTED_PAYLO			
	AD containing the			
	Payload as described			
	in Table 5.5.3.9.2-1A			

Table 5.5.3.9.2-1A: Payload contained in the Security parameters and Payload

Derivation Path: TS 24.282 [87] clause 15.2.13				
Field	Value/remark	Comment	Reference	Condition
Payload IEI	'78'O		TS 24.282 [87]	
•			clause 15.1.4	
Length of Payload	length of the content			
Payload content type	'00000001'B	TEXT		
Payload data	any allowed value	The data payload		
-	-	Example: "abcdEFGH"		

Table 5.5.3.9.2-2: DATA PAYLOAD message for one-to-one communication from the SS

Derivation Path: TS 24.282 [87] c	Derivation Path: TS 24.282 [87] clause 15.1.4					
Information Element	Value/remark	Comment	Reference	Condition		
Data payload message identity	'00000011'B	Data payload	TS 24.282 [87]			
		·	clause 15.2.2			
Number of payloads	1	1 payload	TS 24.282 [87]			
			clause 15.2.12			
Security parameters and Payload	MCData Protected Payload Message as described in Table 5.5.3.10-2 with condition PROTECTED_PAYLO AD containing the Payload as described in Table 5.5.3.9.2-2A	MCData Protected Payload Message	TS 33.180 [94]			

Table 5.5.3.9.2-2A: Payload contained in the Security parameters and Payload

Derivation Path: TS 24.282 [87] clause 15.2.13				
Field	Value/remark	Comment	Reference	Condition
Payload IEI	'78'O		TS 24.282 [87]	
-			clause 15.1.4	
Length of Payload	length of the content			
Payload content type	'00000001'B	TEXT		
Payload data	"Test"	The data payload		

MCData Protected Payload Message 5.5.3.10

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

Derivation Path: TS 33.180 [94]	clause 8.5.4			
Information Element	Value/remark	Comment	Reference	Condition
Message Type	Same message type as in the MCData message contained as Payload but with bit 7 set to '1'B			PROTECT ED_MESS AGE
	'01??????'B	NOTE: TS 33.180 [94] does not specify any message type		PROTECT ED_FILE
	'01111010B	'7A'O; ĬEI	TS 24.282 [87] clause 15.1.4	PROTECT ED_PAYL OAD
Date and Time	Any allowed value	Date and Time of creation of protected payload message		
Payload ID	Any allowed value	The identifier for the payload.		
Payload sequence number	Any allowed value	The sequence number of the protected payload.		
Payload Algorithm	'01'O	DP_AES_128_GCM		
Signalling algorithm	not present			
IV	Any allowed value	Initialisation vector (or nonce) for message. Length depends on the algorithm and key used. 128 bits or 256 bits depending on the algorithm.		
DPPK-ID	PCK-ID			PROTECT ED_PAYL OAD, PCK
	GMK-ID			GMK
	CSK-ID			CSK
Payload		Protected Payload (Ciphertext)	TS 24.282 [87] clause 15.2.13	
Payload IEI	'78'O	Value as used in MCData messages in TS 24.282 [87]		
Length of Payload contents	length of the content			
Payload content type	'02'O	BINARY		
Payload contents	Encrypted MCData message (NOTE 1)			PROTECT ED_MESS AGE
	Encrypted file or portion of file			PROTECT ED_FILE
	Encrypted Payload(s) of the unprotected DATA PAYLOAD message (NOTE 2)			PROTECT ED_PAYL OAD
NOTE 1: The whole message		ssage type)	1	1

NOTE 1: The whole message is encrypted (including its message type)

NOTE 2: The whole payload(s) are encrypted (including their IEI and length); in general there is only one payload

Condition	Explanation
PROTECTED_MESSAGE	The MCData Protected Payload message contains a whole encrypted
	MCData message
PROTECTED_FILE	The MCData Protected Payload message contains encrypted binary
	data representing a file or portion of a file
PROTECTED_PAYLOAD	The MCData Protected Payload message contains the Payload IE(S)
	of the MCData DATA PAYLOAD message
PCK	Encryption uses PCK
GMK	Encryption uses GMK
CSK	Encryption uses CSK

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

Derivation Path: TS 33.180 [94] Information Element	Value/remark	Comment	Reference	Condition
Message Type	Same message type as	Comment	Veletelice	PROTECT
wessage Type	in the MCData			ED_MESS
	message contained as			AGE
	Payload but with bit 7			AGL
	set to '1'B			
	'01000011'B	'43'O; same as for		PROTECT
	0.00001.2	protected DATA		ED_FILE
		PAYLOAD		_
	'01111010B	'7A'O; IEI	TS 24.282 [87]	PROTECT
			clause 15.1.4	ED_PAYL
				OAD
Date and Time	The current date and	Date and Time of		
	time	creation of protected		
		payload message		
Payload ID	"1"	The identifier for the		
		payload.		
Payload sequence number	"1"	The sequence number		
		of the protected		
Davids and Alays with ma	10410	payload.		
Payload Algorithm	'01'O	DP_AES_128_GCM		
Signalling algorithm IV	not present 'DCB9085150B3CF21E	Initialization ventor (or		
IV	2F7DF5B542C25C2'O	Initialisation vector (or nonce) for message.		
	2F7DF3B342C23C2O	Length depends on the		
		algorithm and key		
		used.		
		128 bits or 256 bits		
		depending on the		
		algorithm.		
DPPK-ID	PCK-ID			PROTECT
				ED_PAYL
				OAD, PCK
	GMK-ID			GMK
	CSK-ID			CSK
Payload		Protected Payload	TS 24.282 [87]	
		(Ciphertext)	clause 15.2.13	
Payload IEI	'78'O	Value as used in		
		MCData messages in		
Longth of Douland contacts	longth of the centent	TS 24.282 [87]		
Length of Payload contents	length of the content	BINARY		
Payload content type		DINAKT		PROTECT
Payload contents	Encrypted MCData message (NOTE 1)			ED_MESS
	message (NOTE I)			AGE
	Encrypted field or			PROTECT
	portion of file			ED_FILE
	Encrypted Payload(s)			PROTECT
	of the unprotected			ED_PAYL
	DATA PAYLOAD			OAD
	message (NOTE 2)			
NOTE 1: The whole message i	s encrypted (including its me	ssage type)	1	
	are encrypted (including the		al there is only one	navload

Condition	Explanation
PROTECTED_MESSAGE	The MCData Protected Payload message contains a whole encrypted
	MCData message
PROTECTED_FILE	The MCData Protected Payload message contains encrypted binary
	data representing a file or portion of a file
PROTECTED_PAYLOAD	The MCData Protected Payload message contains the Payload IE(S)
	of the MCData DATA PAYLOAD message
PCK	Encryption uses PCK
GMK	Encryption uses GMK
CSK	Encryption uses CSK

5.5.3.11 PoC Settings

5.5.3.11.1 PoC Settings from the UE

Table 5.5.3.11.1-1: PoC Settings from the UE

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

Condition Explanation	
MANUAL	Manual answer mode
AUTOMATIC	Automatic answer mode

5.5.3.11.2 PoC Settings from the SS

Table 5.5.3.11.2-1: PoC Settings from the SS

Information Element	Value/remark	Comment	Reference	Condition
poc-settings				
entity [1]				
id-attribute	"PoC-Settings-1"	unique identifier of the EPA (Event Publication Agent) Editor's note: to be clarified whether there are requirements for the id	RFC 4354 [103]	
isb-settings				
incoming-session-barring	"false"			
am-settings			RFC 4354 [103]	
answer-mode				
	"manual"			MANUAL
	"automatic"			AUTOMAT IC
ipab-settings				
incoming-personal-alert- barring	"false"			
sss-settings				
simultaneous-sessions- support	"true"			
selected-user-profile-index			TS 24.379 [9] clause 7.4.1	
user-profile-index	same value the user- profile-index in the user profile in Table 5.5.8.3- 1			

Condition	Explanation
MANUAL	Manual answer mode
AUTOMATIC	Automatic answer mode

5.5.3.12 Xcap-diff documents

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

Derivation Path: RFC 5874 [1 Information Element	Value/remark	Comment	Reference	Condition
		Comment	Reference	Condition
xcap-diff xcap-root attribute	encrypted (NOTE 5) tsc_MCX_CMSXCAPR ootURI	same URI as <cms- XCAP-root-URI> element of the initial UE configuration</cms- 		
document[1]				
sel attribute	AUID1 & "/users/" & XUID & "/" & MCSUEID & "/" & UE-Config "	NOTE 1a, 2, 2A, 3		
new-etag	arbitrary value			
previous-etag	same as new-etag			
document[2]				
sel attribute	AUID2 & "/users/" & XUID & "/" & User- Profile	NOTE 1b, 2, 2B		
new-etag	arbitrary value (different than for document[1])			
previous-etag	same as new-etag			
document[3]				
sel attribute	AUID3 & "/global/service- config.xml"	NOTE 1c		
new-etag	arbitrary value (different than for document[1] and [2])			
previous-etag NOTE 1a: AUID1 = "org.3	same as new-etag gpp.mcptt.ue-config" for Condit			
AUID1 = "org.3 AUID1 = "org.3 AUID1 = "org.3 NOTE 1b: AUID2 = "org.3 AUID2 = "org.3 AUID2 = "org.3 AUID2 = "org.3 AUID3 = "org.3 AUID3 = "org.3 AUID3 = "org.3 AUID3 = "org.3 AUID3 = "sip:" XUID = "sip:" XUID = "sip:" VUE-Config = "mcoticute" UE-Config = "mcoticute" UE-C	gpp.mcvideo.ue-config" for Congpp.mcdata.ue-config" for Congpp.mcdata.ue-config" for Congpp.mcptt.user-profile" for Congpp.mcvideo.user-profile" for Cogpp.mcdata.user-profile" for Cogpp.mcptt.service-config" for Cogpp.mcvideo.service-config" for gpp.mcdata.service-config" for px_MCPTT_ID_User_A for Compy.mcVideo_ID_User_A for Compy.mcVideo_ID_User_A for Compy.mcVideo_ID_User_A for Compy.mcVideo_ID_User_A for Compy.mcVideo_ID_User_A for Compy.mcVideo_ID_User_A for Compy.mcVideo_ID_ID_ID_ID_ID_ID_ID_ID_ID_ID_ID_ID_ID_	adition MCVideo dition MCData dition MCPTT ondition MCData dition MCData ondition MCPTT Condition MCPTT Condition MCData ondition MCPTT Condition MCPTT Condition MCPTT Condition MCVideo Condition MCVideo Condition MCVideo Condition MCVideo Condition MCData dition MCPTT Condition MCPTT Condition MCVideo ndition MCVideo ndition MCVideo ndition MCVideo ndition MCVideo ndition MCData ex & ".xml" for Condition MC ndex & ".xml" for Condition MC ndex & ".xml" for Condition MC	MCVideo (NOTE	
NOTE 3: MCSUEID = Instar NOTE 4: profile-index is the	cdata-user-profile-" & profile-ind nce id of the UE (derived from the same as in the user-profile-inde root element <xcap-diff> (not in</xcap-diff>	ne IMEI according to 23.003 ex attribute of the correspor	3 [69] clause 13.8 nding document)

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

Derivation Path: RFC 5854 [107 Information Element	Value/remark	Comment	Deference	Condition
		Comment	Reference	Condition
xcap-diff	encrypted (NOTE 1)	1151 0140		
xcap-root	tsc_MCX_GMSXCAPR	same URI as <gms-< td=""><td></td><td></td></gms-<>		
	ootURI	XCAP-root-URI>		
		element of the initial UE		
		configuration		0.501150
document[1]				GROUPC
				ONFIG
sel attribute	"org.openmobileallianc	NOTE 2		
	e.groups/global/byGrou			
	pID/" & Group-ID			
new-etag	arbitrary value for first	NOTE 5		
	notification,			
	'incremented' value			
	otherwise (NOTE 4)			
previous-etag	same as new-etag for	NOTE 5		
	first notification, same			
	as <new-etag> of</new-etag>			
	previous notification			
	otherwise			
element[1]				GROUPKE
				Υ
sel attribute	"org.3gpp.MCPTT-	NOTE 2, 3		
	GKTP/global/byGroupl			
	D/" & Group-ID & "/~~"			
	& Node-Sel			
GKTPs	group key transport			
	payloads (GKTP)			
	document as described			
	in Table 5.5.3.14-1			
NOTE 1: The content of the ro	ot element <xcap-diff> (not in</xcap-diff>	ncluding the xcap-root attribu	ute) is encrypted	as described
in Table 5.5.13.2-2			• ••	
NOTE 2: Group-ID = px_MCF	PTT_Group_A_ID for Conditi	on MCPTT		
	/ideo_Group_A_ID for Cor			
a ' 'a-				

Group-ID = px_MCData_Group_A_ID for Condition MCData

NOTE 3: Node-Sel = "/group/list-service/mgktp:GKTPs?xmlns(mgktp=urn:3gpp:ns:mcpttGKTP:1.0)"

5.5.3.13 Void

5.5.3.14 MCS group key transport payloads (GKTP) document

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

Derivation Path: TS 24.481 [11] clause 7.7				
Information Element	Value/remark	Comment	Reference	Condition
GKTP s				
GMK-GKTPs				
GKTP[1]	MIKEY message as described in Table 5.5.9.1-3	MIKEY message, containing the GMK	TS 33.180 [94]	
id attribute	arbitrary value	unique charstring assigned by the SS		

5.5.3.15 Conference-info

Table 5.5.3.15-1: Conference-info from the SS

Derivation Path: RFC 4575 [127		Commercial	Defension	Condition
Information Element	Value/remark	Comment	Reference	Condition
conference-info	Francisco de LIDI (NOTE	The LIDI of the amount		MODIT
entity attribute	Encrypted URI (NOTE	The URI of the group		MCPTT
	1) with value set to px_MCPTT_Group_A_I			
	1			
	D Energy to d LIDI (NOTE			MOVIDEO
	Encrypted URI (NOTE			MCVIDEO
	1) with value set to px_MCVideo_Group_A			
	1 . – . – . –			
state attribute	_ID			
state attribute	not present			-
version attribute	not present			
conference-description	not present			
host-info	not present			
conference-state	not present			
users				
user [1]				
entity attribute	Encrypted URI (NOTE			MCPTT
	1) with value set to			
	px_MCPTT_ID_User_A			
	Encrypted URI (NOTE			MCVIDEO
	1) with value set to			
	px_MCVideo_ID_User_			
	A			
state attribute	not present			
display-text	not present			
associated-aors	not present			
roles	not present			
languages	not present			
cascaded-focus	not present			
endpoint				
entity attribute	px_MCX_SIP_PublicUs	Contact URI of the	RFC 4575	
	erld_A_1	participant	[127] clause	
			5.7	
status attribute	not present			
display-text	not present			
referred	not present			
status	connected			
joining-method	not present			
joining-info	not present			
disconnection-method	not present			
disconnection-info	not present			
media	not present			
call-info	not present			
user [2]				
entity attribute	Encrypted URI (NOTE			MCPTT
•	1) with value set to			
	px_MCPTT_ID_User_B			
	Encrypted URI (NOTE			MCVIDEO
	1) with value set to			
	px_MCVideo_ID_User_			
	B			
state attribute	not present			
display-text	not present			
associated-aors	not present			
roles	not present			
languages	not present			
cascaded-focus	not present			
endpoint				
	px_MCX_SIP_PublicUs	Contact URI of the	RFC 4575	
entity attribute		participant	[127] clause	
entity attribute	erld B			
entity attribute	erld_B	participant		
		participant	5.7	
status attribute status attribute display-text	erld_B not present not present	раниорані		

status	connected			
joining-method	not present			
joining-info	not present			
disconnection-method	not present			
disconnection-info	not present			
media	not present			
call-info	not present			
user [3]				
entity attribute	Encrypted URI (NOTE 1) with value set to px_MCPTT_ID_User_C			MCPTT
	Encrypted URI (NOTE 1) with value set to px_MCVideo_ID_User_ C			MCVIDEO
state attribute	not present			
display-text	not present			
associated-aors	not present			
roles	not present			
languages	not present			
cascaded-focus	not present			
endpoint				
entity attribute	px_MCX_SIP_PublicUs erld_C	Contact URI of the participant	RFC 4575 [127] clause 5.7	
status attribute	not present			
display-text	not present			
referred	not present			
status	connected			
joining-method	not present			
joining-info	not present			
disconnection-method	not present			
disconnection-info	not present			
media	not present			
call-info	not present			
sidebars-by-ref	not present			
sidebars-by-val	not present			
NOTE 1: Encrypted attribute a	as described in Table 5.5.13.3	-1		

5.5.3.16 MCS-Regroup

5.5.3.16.1 Common conditions for MCS-Regroup

The following conditions apply throughout clause 5.5.3.16:

Table 5.5.3.16.1-1: Conditions

Condition	Explanation
GROUP_REGROUP	Creating a group regroup using preconfigured group
USER_REGROUP	Creating a user regroup using preconfigured group
REMOVE	Remove a user or group regroup using a preconfigured group

5.5.3.16.2 MCS-Regroup from the UE

- MCPTT

Table 5.5.3.16.2-1: MCPTT-Regroup from the UE

Derivation Path: TS 24.379 [9] clause F.7.2				
Information Element	Value/remark	Comment	Reference	Condition
mcpttregroup				
mcpttregroup-Params				
preconfig-group-id	Encrypted (NOTE 1)			
preconfigured-group	not present			
	px_MCPTT_Group_A_I	The URI of a group to		GROUP_R
	D	be used as the configuration of the group regroup		EGROUP, USER_RE GROUP
mcptt-regroup-uri	Encrypted (NOTE 2)	J. 1 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		
mcptt-regroup-uri	px_MCPTT_Group_T_I	The URI of the group		
	D	regroup		
groups-for-regroup	not present			
groups-for-regroup	Encrypted (NOTE 3)			GROUP_R EGROUP
group [1]	px_MCPTT_Group_A_I D	The URI of a group to regroup		
group [2]	px_MCPTT_Group_B_I	The URI of a group to		
	D	regroup		
users-for-regroup	not present			
users-for-regroup	Encrypted (NOTE 4)			USER_RE GROUP
user [1]	px_MCPTT_ID_User_A			
user [2]	px_MCPTT_ID_User_B			
user [3]	px_MCPTT_ID_User_D			
regroup-action	"create"			
	"remove"			REMOVE

- NOTE 1: Element content encryption either of element preconfig-group-id> or of its sub-element preconfigured-group> (if present) as described in Table 5.5.13.2-1
- NOTE 2: Element content encryption either of element <mcptt-regroup-uri> or of its sub-element <mcptt-regroup-uri> as described in Table 5.5.13.2-1
- NOTE 3: Element content encryption either of element <groups-for-regroup> or of each of its sub-elements <group> as described in Table 5.5.13.2-1
- NOTE 4: Element content encryption either of element <users-for-regroup> or of each of its sub-elements <user> as described in Table 5.5.13.2-1

5.5.3.16.3 MCS-Regroup from the SS

- MCPTT

Table 5.5.3.16.3-1: MCPTT-Regroup from the SS

Derivation Path: TS 24.379 [9] clause F.7.2				
Information Element	Value/remark	Comment	Reference	Condition
mcpttregroup				
mcpttregroup-Params				
preconfig-group-id				
preconfig-group-id	Encrypted (NOTE 1)			
preconfigured-group	not present			
	px_MCPTT_Group_A_I D	The URI of a group to be used as the configuration of the group regroup		GROUP_R EGROUP, USER_RE GROUP
mcptt-regroup-uri	Encrypted (NOTE 2)			
mcptt-regroup-uri	px_MCPTT_Group_T_I D	The URI of the group regroup		
groups-for-regroup	not present			
groups-for-regroup	Encrypted (NOTE 3)			GROUP_R EGROUP
group [1]	px_MCPTT_Group_A_I D	The URI of a group to regroup		
group [2]	px_MCPTT_Group_B_I D	The URI of a group to regroup		
users-for-regroup	not present			
users-for-regroup	Encrypted (NOTE 4)			USER_RE GROUP
user [1]	px_MCPTT_ID_User_A			
user [2]	px_MCPTT_ID_User_B			
user [3]	px_MCPTT_ID_User_D			
regroup-action	"create"			
	"remove"			REMOVE

- NOTE 1: Element content encryption of element preconfig-group-id>'s sub-element preconfigured-group> (if present) as described in Table 5.5.13.2-2
- NOTE 2: Element content encryption of element <mcptt-regroup-uri>'s sub-element <mcptt-regroup-uri> as described in Table 5.5.13.2-2
- NOTE 3: Element content encryption of each of element <groups-for-regroup>'s sub-elements <group> as described in Table 5.5.13.2-2
- NOTE 4: Element content encryption of each of element <users-for-regroup>'s sub-elements <user> as described in Table 5.5.13.2-2

5.5.4 Default HTTP message and other information elements

5.5.4.1 General

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

The following conditions apply throughout clause 5.5:

Table 5.5.4.1-1: Conditions

Condition	Explanation
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AUTH	Message/IE sent only as part of an MCX UE authentication
UEINITIALCONFIG	Message/IE sent only as part of an MCX UE initial configuration
USERAUTH	Message/IE sent only as part of an MCX UE user authentication
UECONFIG	Message/IE sent only as part of an MCX UE configuration
UEUSERPROF	Message/IE sent only as part of an MCX UE User profile configuration
	Message/IE sent only as part of an MCX UE service configuration
GROUPCONFIG	Message/IE sent only as part of an MCX group configuration
	Message/IE sent only in temporary group creation scenario
TOKEN	Message/IE sent only as part of an MCX token exchange
	Message/IE sent only as part of an MCX KMS initialisation
	Message/IE sent only as part of an MCX KMS key exchange
FD_HTTP	Message/IE sent only as part of MCData signalling for FD using HTTP

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	Value/Terrial K	Comment	Reference	Condition
Method	"GET"			
Request-URI	OE1			
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/" & XUI & ue- config-docname	points to UE Configuration document (NOTE 1a, 2, 3, 5)	TS 24.484 [14]	UECONFI G
	tsc_MCX_CMSXCAPR ootURI & "/" & AUID2 & "/users/" & XUID & ""/" & user-profile-docname	points to UE User Profile document (NOTE 1b, 2, 4)	TS 24.484 [14]	UEUSERP ROF
	tsc_MCX_CMSXCAPR ootURI & "/" & AUID3 & "/global/service- config.xml"	points to UE Service Configuration document (NOTE 1c, 2)	TS 24.484 [14]	UESERVC ONFIG
	tsc_MCX_GMSXCAPR ootURI & "/" & "org.openmobileallianc e.groups/global/byGrou pID/" & group-id	points to group configuration document (NOTE 6)	TS 24.481 [11]	GROUPC ONFIG
	URI as contained in the payload of the FD SIGNALLING PAYLOAD indication the file upload			FD_HTTP
query	As described in Table 5.5.4.10.1-1		TS 33.180 [94]	AUTH
HTTP-Version	"HTTP/1.1"			
Cache-Control			RFC 2616 [26]	
cache-directive	"no-cache"			
Authorization			RFC 2617 [72]	UECONFI G UEUSERP ROF UESERVC ONFIG GROUPC ONFIG FD_HTTP
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 = "org.3gpp.mcvideo.ue-config" for Condition MCVIDEO AUID1 = "org.3gpp.mcvideo.ue-config" for Condition MCDATA NOTE 1b: AUID2 = "org.3gpp.mcvideo.user-profile" for Condition MCPTT AUID2 = "org.3gpp.mcvideo.user-profile" for Condition MCVIDEO AUID2 = "org.3gpp.mcvideo.user-profile" for Condition MCDATA NOTE 1c: AUID3 = "org.3gpp.mcvideo.service-config" for Condition MCPTT AUID3 = "org.3gpp.mcvideo.service-config" for Condition MCVIDEO AUID3 = "org.3gpp.mcvideo.service-config" for Condition MCVIDEO AUID3 = "org.3gpp.mcdata.service-config" for Condition MCDATA 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_MCVideo_ID_User_A for Condition MCDATA NOTE 3: MCSUEID = Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8) NOTE 4: user-profile-docname= "mcptt-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO			
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 = "org.3gpp.mcdata.user-profile" for Condition MCDATA NOTE 1c: AUID3 = "org.3gpp.mcptt.service-config" for Condition MCVIDEO AUID3 = "org.3gpp.mcvideo.service-config" for Condition MCVIDEO AUID3 = "org.3gpp.mcvideo.service-config" for Condition MCDATA NOTE 2: XUID = "sip:" & px_MCPTT_ID_User_A for Condition MCVIDEO XUID = "sip:" & px_MCPTT_ID_User_A for Condition MCVIDEO XUID = "sip:" & px_MCData_ID_User_A for Condition MCVIDEO XUID = "sip:" & px_MCData_ID_User_A for Condition MCVIDEO XUID = "sip:" & px_MCData_ID_User_A for Condition MCVIDEO XUID = "sip:" & profile-docname = "mcptt-user-profile-" & profile-index & ".xml" for Condition MCPTT user-profile-docname = "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-docname = "mcdata-user-profile-" & profile-index & ".xml" for Condition MCDATA with profile-index being the same as in the <user-profile-index> attribute of the corresponding document NOTE 5: ue-config-docname = "mcptt-ue-configuration.xml" for Condition MCPTT ue-config-docname = "mcvideo-ue-configuration.xml" for Condition MCVIDEO</user-profile-index>	NOTE 1a	: AUID1	
NOTE 1b: AUID2 = "org.3gpp.mcptt.user-profile" for Condition MCPTT AUID2 = "org.3gpp.mcvideo.user-profile" for Condition MCVIDEO AUID2 = "org.3gpp.mcdata.user-profile" for Condition MCDATA NOTE 1c: AUID3 = "org.3gpp.mcptt.service-config" for Condition MCPTT AUID3 = "org.3gpp.mcvideo.service-config" for Condition MCVIDEO AUID3 = "org.3gpp.mcdata.service-config" for Condition MCDATA 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: MCSUEID = Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8) NOTE 4: user-profile-docname= "mcptt-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCDATA with profile-index being the same as in the <user-profile-index> attribute of the corresponding document NOTE 5: ue-config-docname = "mcptt-ue-configuration.xml" for Condition MCVIDEO user-profile-docname = "mcptt-ue-configuration.xml" for Condition MCVIDEO</user-profile-index>		AUID1	
AUID2 = "org.3gpp.mcvideo.user-profile" for Condition MCVIDEO AUID2 = "org.3gpp.mcdata.user-profile" for Condition MCDATA NOTE 1c: AUID3 = "org.3gpp.mcptt.service-config" for Condition MCPTT AUID3 = "org.3gpp.mcvideo.service-config" for Condition MCVIDEO AUID3 = "org.3gpp.mcdata.service-config" for Condition MCDATA 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: MCSUEID = Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8) NOTE 4: user-profile-docname= "mcptt-user-profile-" & profile-index & ".xml" for Condition MCPTT user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-docname= "mcdata-user-profile-" & profile-index > attribute of the corresponding document NOTE 5: ue-config-docname = "mcptt-ue-configuration.xml" for Condition MCVIDEO ue-config-docname = "mcvideo-ue-configuration.xml" for Condition MCVIDEO		AUID1	
AUID2 = "org.3gpp.mcdata.user-profile" for Condition MCDATA NOTE 1c: AUID3 = "org.3gpp.mcptt.service-config" for Condition MCPTT AUID3 = "org.3gpp.mcvideo.service-config" for Condition MCVIDEO AUID3 = "org.3gpp.mcdata.service-config" for Condition MCDATA 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: MCSUEID = Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8) NOTE 4: user-profile-docname= "mcptt-user-profile-" & profile-index & ".xml" for Condition MCPTT user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-index being the same as in the <user-profile-index> attribute of the corresponding document NOTE 5: ue-config-docname = "mcptt-ue-configuration.xml" for Condition MCVIDEO user-config-docname = "mcvideo-ue-configuration.xml" for Condition MCVIDEO</user-profile-index>	NOTE 1b	: AUID2	
NOTE 1c: AUID3 = "org.3gpp.mcptt.service-config" for Condition MCPTT AUID3 = "org.3gpp.mcvideo.service-config" for Condition MCVIDEO AUID3 = "org.3gpp.mcdata.service-config" for Condition MCDATA 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: MCSUEID = Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8) NOTE 4: user-profile-docname= "mcptt-user-profile-" & profile-index & ".xml" for Condition MCPTT user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-index being the same as in the <user-profile-index> attribute of the corresponding document NOTE 5: ue-config-docname = "mcptt-ue-configuration.xml" for Condition MCVIDEO user-config-docname = "mcvideo-ue-configuration.xml" for Condition MCVIDEO</user-profile-index>		AUID2	
AUID3 = "org.3gpp.mcvideo.service-config" for Condition MCVIDEO AUID3 = "org.3gpp.mcdata.service-config" for Condition MCDATA 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: MCSUEID = Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8) NOTE 4: user-profile-docname= "mcptt-user-profile-" & profile-index & ".xml" for Condition MCPTT user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-docname= "mcdata-user-profile-" & profile-index & ".xml" for Condition MCDATA with profile-index being the same as in the <user-profile-index> attribute of the corresponding document NOTE 5: ue-config-docname = "mcptt-ue-configuration.xml" for Condition MCVIDEO ue-config-docname = "mcvideo-ue-configuration.xml" for Condition MCVIDEO</user-profile-index>		AUID2	
AUID3 = "org.3gpp.mcdata.service-config" for Condition MCDATA 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: MCSUEID = Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8) NOTE 4: user-profile-docname= "mcptt-user-profile-" & profile-index & ".xml" for Condition MCPTT user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-docname= "mcdata-user-profile-" & profile-index & ".xml" for Condition MCDATA with profile-index being the same as in the <user-profile-index> attribute of the corresponding document NOTE 5: ue-config-docname = "mcptt-ue-configuration.xml" for Condition MCVIDEO</user-profile-index>	NOTE 10	: 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: MCSUEID = Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8) NOTE 4: user-profile-docname= "mcptt-user-profile-" & profile-index & ".xml" for Condition MCPTT		AUID3	
XUID = "sip:" & px_MCVideo_ID_User_A for Condition MCVIDEO XUID = "sip:" & px_MCData_ID_User_A for Condition MCDATA NOTE 3: MCSUEID = Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8) NOTE 4: user-profile-docname= "mcptt-user-profile-" & profile-index & ".xml" for Condition MCPTT		AUID3	
XUID = "sip:" & px_MCData_ID_User_A for Condition MCDATA NOTE 3: MCSUEID = Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8) NOTE 4: user-profile-docname= "mcptt-user-profile-" & profile-index & ".xml" for Condition MCPTT	NOTE 2:	XUID	
NOTE 3: MCSUEID = Instance id of the UE (derived from the IMEI according to 23.003 [69] clause 13.8) NOTE 4: user-profile-docname= "mcptt-user-profile-" & profile-index & ".xml" for Condition MCPTT user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-docname= "mcdata-user-profile-" & profile-index & ".xml" for Condition MCDATA with profile-index being the same as in the <user-profile-index> attribute of the corresponding document NOTE 5: ue-config-docname = "mcptt-ue-configuration.xml" for Condition MCPTT ue-config-docname = "mcvideo-ue-configuration.xml" for Condition MCVIDEO</user-profile-index>		XUID	
NOTE 4: user-profile-docname= "mcptt-user-profile-" & profile-index & ".xml" for Condition MCPTT		_	
user-profile-docname= "mcvideo-user-profile-" & profile-index & ".xml" for Condition MCVIDEO user-profile-docname= "mcdata-user-profile-" & profile-index & ".xml" for Condition MCDATA with profile-index being the same as in the <user-profile-index> attribute of the corresponding document NOTE 5: ue-config-docname = "mcptt-ue-configuration.xml" for Condition MCPTT ue-config-docname = "mcvideo-ue-configuration.xml" for Condition MCVIDEO</user-profile-index>			
user-profile-docname= "mcdata-user-profile-" & profile-index & ".xml" for Condition MCDATA with profile-index being the same as in the <user-profile-index> attribute of the corresponding document NOTE 5: ue-config-docname = "mcptt-ue-configuration.xml" for Condition MCPTT ue-config-docname = "mcvideo-ue-configuration.xml" for Condition MCVIDEO</user-profile-index>	NOTE 4:	user-prof	ile-docname= "mcptt-user-profile-" & profile-index & ".xml" for Condition MCPTT
with profile-index being the same as in the <user-profile-index> attribute of the corresponding document NOTE 5: ue-config-docname = "mcptt-ue-configuration.xml" for Condition MCPTT ue-config-docname = "mcvideo-ue-configuration.xml" for Condition MCVIDEO</user-profile-index>			
NOTE 5: ue-config-docname = "mcptt-ue-configuration.xml" for Condition MCPTT ue-config-docname = "mcptt-ue-configuration.xml" for Condition MCVIDEO		user-prof	ile-docname= "mcdata-user-profile-" & profile-index & ".xml" for Condition MCDATA
ue-config-docname = "mcvideo-ue-configuration.xml" for Condition MCVIDEO			
	NOTE 5:		
			-docname = "mcdata-ue-configuration.xml" for Condition MCDATA
NOTE 6: group-id = $px_MCPTT_Group_A_ID$ for Condition MCPTT	NOTE 6:		
group-id = px_MCVideo_Group_A_ID for Condition MCVIDEO			
group-id = px_MCData_Group_A_ID for Condition MCDATA		group-id	= px_MCData_Group_A_ID for Condition MCDATA

5.5.4.3 POST

Table 5.5.4.3-1: HTTP POST

Derivation Path: RFC 2616 [26]				
Information Element	Value/remark	Comment	Reference	Condition
Status-Line	"DOCT"			
Method	"POST"			
Request-URI uri	too MCV IdMC outh	points to the	TC 22 400 [04]	AUTH
un	tsc_MCX_IdMS_auth_ UriPath	Authorisation endpoint of the IdM Server	TS 33.180 [94]	
	tsc_MCX_IdMS_userau th_UriPath	points to the endpoint verifying the user authentication; same URI as provided to the UE in the action attribute of the HTML login form	TS 33.180 [94] HTML 4.01 Specification [105]	USERAUT H
	tsc_MCX_IdMS_token_ UriPath	points to the Token endpoint of the IdM Server	TS 33.180 [94]	TOKEN
	tsc_MCX_KMS_Client ReqUrl_init	"KMS Initialize" request according to TS 33.180 [94] D.2.3	TS 33.180 [94]	KMSINIT
	tsc_MCX_KMS_Client ReqUrl	"KMS KeyProvision" request according to TS 33.180 [94] D.2.4	TS 33.180 [94]	KMSKEY
	tsc_MCX_GMSXCAPR ootURI & "/" & "org.openmobileallianc e.groups/users/" & px_MCX_GroupCreatio nXUI & "/" & temporary- group-id	Points to the temporary group configuration document to be created (NOTE 1)	TS 24.481[11] clause 6.3.14.2	TEMPGRO UP
UTTD V	tsc_MCData_MSF_URI	The absolute URI identifying the resource on a media storage function	TS 24.282 [87], clause 10.2.2.1	FD_HTTP
HTTP-Version	"HTTP/1.1"		550 0040 000	
Cache-Control	<u> </u>		RFC 2616 [26]	
cache-directive	"no-cache"		DEC 0047 [70]	LANGUNUT
Authorization			RFC 2617 [72]	KMSINIT, KMSKEY, TEMPGRO UP, FD_HTTP
authentication-scheme	"Bearer"		RFC 6750 [104]	
b64token	Access token as assigned to the UE by Token Response		RFC 6750 [104]	
Host				FD_HTTP
host	tsc_MCData_MSF_Hos tname	hostname identifying the media storage function	TS 24.282 [87], clause 10.2.2.1	
port	not present			
Content-Type				AUTH, USERAUT H, TOKEN
media-type	"application/x-www- form-urlencoded"			
Content-Type		present in case of KMS request security		(KMSINIT OR KMSKEY) AND pc_MCX_K MS_Reque stSecurity
media-type	"application/xml"		RFC 7303 [112]	

Content-Type				TEMPGRO
media-type	"application/vnd.3gpp.G MOP+xml"			UP
Content-Type	WOI TAIIII			FD_HTTP
media-type	"multipart/mixed"		TS 24.282 [87], clause 10.2.2.1	
Message-body				AUTH
Authentication Request	As described in Table 5.5.4.10.1-1			
Message-body			HTML 4.01 Specification [105]	USERAUT H
user	px_MCX_User_A_user name			
password	px_MCX_User_A_pass word			
Message-body				TOKEN
Token request	As described in Table 5.5.4.10.3-1			
Message-body		present in case of KMS request security		(KMSINIT OR KMSKEY) AND pc_MCX_K MS_Reque stSecurity
Signed KMS Request	As described in Table 5.5.4.10.9-1			
Message-body				TEMPGRO UP
Temporary Group Creation Document"	As described in Table 5.5.7.4-2			
Message-body				FD_HTTP
MIME body part		MCData-Info		
MIME-part-headers				
MIME-Content-Type	"application/vnd.3gpp. mcdata-info+xml"			
MIME-part-body	MCData-Info described in Table 5.5.3.2.1-3			
MIME body part		File content	TS 24.282 [87] clause 10.2.2.1	
MIME-part-headers				
MIME-Content-Type	"application/octet- stream"			
MIME-part-body	binary data representing the file			
temporary-group-id =	px_MCPTT_Group_T_ID f px_MCVideo_Group_T_ID px_MCData_Group_T_ID	for Condition MCVIDEO		

5.5.4.4 PUT

Table 5.5.4.4-1: HTTP PUT

Information Element	Value/remark	Comment	Reference	Condition
Request-line				
Method	"PUT"			
Request-URI	tsc_MCX_GMSXCAPR ootURI & "/" & "org.openmobileallianc e.groups/users/" & px_MCX_GroupCreatio nXUI & "/" & document name (NOTE 1)	XCAP URI in users tree where the XUI is set to a group creation XUI configuration parameter	TS 24.481 [11] clause 6.3.2.2.1	GROUPC REATE
Cache-Control	<u> </u>		RFC 2616 [26]	
cache-directive	"no-cache"			
Authorization		TS 24.482 [12] A.2.3: Expected by the server to validate and identify the client	RFC 2617 [72]	
authentication-scheme	"Bearer"		RFC 6750 [104]	
b64token	Access token as assigned to the UE by Token Response		RFC 6750 [104]	
Content-Type				GROUPC REATE
media-type	application/vnd.oma.po c.groups+xml			
Message-body				GROUPC REATE
Group Creation Document	As described in Table 5.5.7.4-1			

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

5.5.4.5 DELETE

Table 5.5.4.5-1: HTTP DELETE

Derivation Path: RFC 2616 [26]				
Information Element	Value/remark	Comment	Reference	Condition
Request-line				
Method	"DELETE"			
Request-URI	tsc_MCX_GMSXCAPR ootURI & "/" & "org.openmobileallianc e.groups/users/" & px_MCX_GroupCreatio nXUI & "/" & temporary- group-id	Points to the group configuration document (NOTE 1)	TS 24.481 [11]	TEMPGRO UP
Cache-Control			RFC 2616 [26]	
cache-directive	"no-cache"			
Authorization		TS 24.482 [12] A.2.3: Expected by the server to validate and identify the client	RFC 2617 [72]	
authentication-scheme	"Bearer"		RFC 6750 [104]	
b64token	Access token as assigned to the UE by Token Response		RFC 6750 [104]	
temporary-group-id =	px_MCPTT_Group_T_ID foptions px_MCVideo_Group_T_ID foptions px_MCData_Group_T_ID foptions	for Condition MCVIDEO		

5.5.4.6 HTTP 200 (OK)

Table 5.5.4.6-1: HTTP 200 (OK)

Derivation Path: RFC 2616 [26] Information Element	Value/remark	Comment	Reference	Condition
Status-Line	- sido, i dilidi N		. 10.0.0.0	22.12.11011
HTTP-Version	"HTTP/1.1"			
Status-Code	"200"			
Reason-Phrase	"OK"			
Cache-Control			RFC 2616 [26]	
cache-directive	"no-store"			
ETag			RFC 2616 [26]	
entity-tag	Any value as selected by the SS			UEINITIAL CONFIG, UECONFI G, UEUSERP ROF, UESERVC ONFIG,
				GROUPC ONFIG; TEMPGRO UP
Pragma			RFC 2616 [26]	
pragma-directive	"no-cache"			
Content-Length				
value	length of message- body			
Content-Type				TOKEN
media-type	"application/json;charse t=UTF-8"		TS 33.180 [94]	
Content-Type				KMSINIT
media-type	"application/xml"		TS 33.180 [94]	
Content-Type				KMSKEY
media-type	"application/xml"		TS 33.180 [94]	
Content-Type				UEINITIAL CONFIG
media-type	"application/vnd.3gpp. mcptt-ue-init- config+xml"		TS 24.484 [14]	
Content-Type				UECONFI G
media-type	"application/vnd.3gpp. mcptt-ue-config+xml"		TS 24.484 [14]	MCPTT
	"application/vnd.3gpp. mcvideo-ue- config+xml"			MCVIDEO
	"application/vnd.3gpp. mcdata-ue-config+xml"			MCDATA
Content-Type				UEUSERP ROF
media-type	"application/vnd.3gpp. mcptt-user-profile+xml"		TS 24.484 [14]	MCPTT
	"application/vnd.3gpp. mcvideo-user- profile+xml"			MCVIDEO
	"application/vnd.3gpp. mcdata-user- profile+xml"			MCDATA
Content-Type				UESERVC ONFIG
media-type	"application/vnd.3gpp. mcptt-service- config+xml"		TS 24.484 [14]	MCPTT
	"application/vnd.3gpp. mcvideo-service- config+xml"			MCVIDEO

		_	1	1
	"application/vnd.3gpp. mcdata-service- config+xml"			MCDATA
Content-Type	gering rann			GROUPC ONFIG
media-type	"application/vnd.oma.p oc.groups+xml"		TS 24.481 [11]	
Content-Type				TEMPGRO UP
media-type	"application/vnd.3gpp.G MOP+xml"		TS 24.481 [11]	
Content-Type				FD_HTTP
media-type	"application/octet- stream"			
Message-body				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	As described in Table			KMSKEY
KMS Key Set	As described in Table 5.5.4.10.8-1			I I E IN II E IA I
Message-body				UEINITIAL CONFIG
mcptt-initial-UE-configuration	As described in Table 5.5.8.1-1	Initial UE Configuration document returned		
Message-body				UECONFI G
mcptt-UE-configuration	As described in Table 5.5.8.2-1	UE Configuration document returned		MCPTT
mcvideo-UE-configuration	As described in Table 5.5.8.5-1	UE Configuration document returned		MCVIDEO
mcdata-UE-configuration	As described in Table 5.5.8.10-1	UE Configuration document returned		MCDATA
Message-body				UEUSERP ROF
mcptt-user-profile	As described in Table 5.5.8.3-1	UE User Profile document returned		MCPTT
mcvideo-user-profile	As described in Table 5.5.8.7-1	UE User Profile document returned		MCVIDEO
mcdata-user-profile	As described in Table 5.5.8.11-1	UE User Profile document returned		MCDATA
Message-body				UESERVC ONFIG
service-configuration-info	As described in Table 5.5.8.4-1	UE Service Configuration document returned		MCPTT
service-configuration-info	As described in Table 5.5.8.8-1	UE Service Configuration document returned		MCVIDEO
service-configuration-info	As described in Table 5.5.8.12-1	UE Service Configuration document returned		MCDATA
Message-body				GROUPC ONFIG
group-configuration	As described in Table 5.5.7.1-1	Group Configuration document returned		5
Message-body	5.5777	accument rotumou		TEMPGRO UP
gmop:document				
gmop:response				
gmop:group-regroup-creation-response				
temporary-group-document- ETag	unique value arbitrarily selected by the SS			
Message-body				FD_HTTP

file content	binary data		
	representing the file		

5.5.4.7 HTTP 201 (Created)

Table 5.5.4.7-1: HTTP 201 (Created)

Derivation Path: RFC 2616 [26] Information Element	Value/remark	Comment	Reference	Condition
Status-Line	Value/Terrial K	Comment	Reference	Condition
HTTP-Version	"HTTP/1.1"			
Status-Code	"201"			
Reason-Phrase	"Created"			
Cache-Control	Groated		RFC 2616 [26]	
cache-directive	"no-store"		0 20.0 [20]	
Pragma			RFC 2616 [26]	
pragma-directive	"no-cache"			
ETag			RFC 2616 [26]	
entity-tag	unique value arbitrarily selected by the SS			
Location			RFC 7231 [118] clauses 4.3.3, 6.3.2, 7.1.2	
uri	tsc_MCX_GMSXCAPR ootURI & "/" & "org.openmobileallianc e.groups/global/byGrou pID/" & group-id	URI referring to the created group document		
	tsc_MCData_MSF_URI & "/file-location-1"	URL identifying the location of the stored file		FD_HTTP
group-id = px_MCV	TT_Group_B_ID for Condition TTGoroup_B_ID for Condition TTGoroup_B_ID for Condition TTGOROUP_B_ID for Condition	tion MCVIDEO		

5.5.4.8 HTTP 302 (Found)

Table 5.5.4.8-1: HTTP 302 (Found)

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

5.5.4.9 HTTP 409 (Conflict)

Table 5.5.4.9-1: HTTP 409 (Conflict)

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

5.5.4.10 HTTP Message Bodies

5.5.4.10.1 Authentication Request

Table 5.5.4.10.1-1: Authentication Request

Derivation Path: TS 33.180 [9 Information Element	Value/remark	Comment	Reference	Condition
(NOTE 1)	"code"	For native MCX	OpenID Connect	
response-type		clients the value shall be set to "code"	OpenID Connect 1.0 [95]	
client_id	px_MCX_OAuth_ClientId_ A	Identifier of the MCX client making the API request	OpenID Connect 1.0 [95]	
Scope	"openid"	Scope values are expressed as a list of space-delimited, case-sensitive strings which indicate which MCS resource servers the client is requesting access to. "openid" is defined by the OpenID Connect standard and is mandatory	TS 33.180 [94] OpenID Connect 1.0 [95]	
	"3gpp:mc:ptt_service" "3gpp:mc:ptt_key_manage ment_service" "3gpp:mc:ptt_config_mana gement_service" "3gpp:mc:ptt_group_manag ement_service" NOTE: The list may contain further scope values which are not checked	Additional authorization scopes when the UE supports MCPTT		MCPTT
	"3gpp:mc:video_service" "3gpp:mc:video_key_mana gement_service" "3gpp:mc:video_config_ma nagement_service" "3gpp:mc:video_group_ma nagement_service" NOTE: The list may contain further scope values which are not checked	Additional authorization scopes when the UE supports MCVideo		MCVIDEO
	"3gpp:mc:data_service" "3gpp:mc:data_key_manag ement_service" "3gpp:mc:data_config_man agement_service" "3gpp:mc:data_group_man agement_service" NOTE: The list may contain further scope values which are not checked	Additional authorization scopes when the UE supports MCData		MCDATA
redirect_uri	px_MCX_OAuth_RedirectU RI_A	The URI of the MCX client to which the IdM server will redirect the MCX client's user agent in order to return the authorization code	OpenID Connect 1.0 [95]	
state	any value as selected by the UE	An opaque value used by the MCX client to maintain state between the authentication request and authentication response	OpenID Connect 1.0 [95]	

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

NOTE 1: The Authentication Request may contain other parameters in addition to the parameters specified in this column.

5.5.4.10.2 Authentication Response

Table 5.5.4.10.2-1: Authentication Response

Information Element	Value/remark	Comment	Reference	Condition
code	"SplxIOBeZQQYbYS6 WxSbIA"	The authorization code generated by the authorization endpoint and returned to the MCX client via the authentication response	TS 33.180 [94]	
state	same value as in the Authentication Request	The value shall match the exact value used in the authorization request	TS 33.180 [94]	

5.5.4.10.3 Token Request

Table 5.5.4.10.3-1: Token Request

Derivation Path: TS 33.180 [94]	Derivation Path: TS 33.180 [94], clause B.4.2.4			
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 MCX client via the authentication response	TS 33.180 [94]	
client_id	px_MCX_OAuth_Client Id_A	Identifier of the MCX client making the API request	TS 33.180 [94]	
redirect_uri	px_MCX_OAuth_Redir ectURI_A	The URI of the MCX client to which the IdM server will redirect the MCX 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		0	Deference	0
Information Element access_token	Value/remark	Comment The access token. The	Reference RFC 6749 [77]	Condition
access_token		access token is opaque to the MCX client	TS 33.180 [94]	
{		11 1 11 11		
	"jws-rsa"	Header Algorithm hint indicating which key was used to secure the JWS: name of the RSA public key in case of RS256 Editor's note: value to be confirmed	RFC 7515 [102]	
"alg"	"RS256"	identifies the cryptographic algorithm used to secure the JWS: RSASSA-PKCS1-v1_5 SHA-256 digital signature Editor's note: value to be confirmed	RFC 7515 [102]	
}		Payload Data	RFC 7519 [101]	
"mcptt_id"	px_MCPTT_ID_User_A	r ayluad Dala	TS 24.380 TS 24.483 TS 24.380 B.2.2.3	MCPTT
"mcvideo_id"	px_MCVideo_ID_User_A		TS 33.180 B.2.2.3	MCVIDEO
"mcdata_id"	px_MCData_ID_User_A		TS 24.380 B.2.2.3	MCDATA
"scope"	"openid"	list of space-delimited, case-sensitive strings to inform the client of the scope of the access token issued and is OPTIONAL, if identical to the scope requested by the client otherwise REQUIRED "openid" is defined by the OpenID Connect standard and is mandatory regardless from the MCS context in which the message is used	RFC 6749 [77] TS 33.180 [94] B.2.2.2 OpenID Connect 1.0 [95]	MODIT
	"3gpp:mc:ptt_service" "3gpp:mc:ptt_key_manag ement_service" "3gpp:mc:ptt_config_man agement_service" "3gpp:mc:ptt_group_man agement_service"			MCPTT
	"3gpp:mc:video_service" "3gpp:mc:video_key_ma nagement_service" "3gpp:mc:video_config_ management_service" "3gpp:mc:video_group_m anagement_service"			MCVIDEO

	"3gpp:mc:data_service" "3gpp:mc:data_key_man agement_service" "3gpp:mc:data_config_m anagement_service" "3gpp:mc:data_group_m anagement_service"			MCDATA
"exp"	Current system time + 7199 seconds; the system time is the number of seconds since 00:00:00 UTC on 1 January 1970	Number containing a NumericData value identifies the expiration time on or after which the JWT MUST NOT be accepted for processing Editor's note: value to be confirmed	RFC 7519 [101] TS 33.180 [94]	
"client_id"	Same value as received in the token request	Identifier of the MCX client making the API request	TS 33.180 [94]	
Signature	HASH [base64UrlEncode(heade r) + "." + base64UrlEncode(payloa d))	Created by the hash algorithm corresponding to the algorithm provided in the header	RFC 7515 [102]	
refresh_token	"Y7NSzUJuS0Jp7G4SKp BKSOJVHIZxFbxqsqCIZ hOEk9"	Arbitrarily selected string: The refresh token that can be used to refresh the access token and avoid having to prompt the user for authentication again	RFC 6749 [77]	
id_token		The MCX client may validate the user with the ID token and configure itself for the user	RFC 6749 [77] TS 33.180 [94]	
{		11 1 A1 31	DE0 7545 [400]	
* "kid"	"jws-rsa"	Header Algorithm hint indicating which key was used to secure the JWS Editor's note: value to be confirmed	RFC 7515 [102]	
"alg"	"RS256"	identifies the cryptographic algorithm used to secure the JWS Editor's note: value to be confirmed		
} {		Payload Data	RFC 7519 [101]	
"mcptt_id"	px_MCPTT_ID_User_A	. ayrouu zanu	TS 24.380 TS 24.483 TS 33.180 B.2.1.3	MCPTT
"mcvideo_id"	px_MCVideo_ID_User_A		TS 33.180 B.2.1.3	MCVIDEO
"mcdata_id"	px_MCData_ID_User_A		TS 24.380 B.2.1.3	MCDATA

"sub"	"1234567890" client_id as received in token request	Arbitrarily selected string: case-sensitive string containing a StringOrURI value which identifies the principal that is the subject of the JWT and is optional Audience: identifies the recipients that the JWT	RFC 7519 [101]
		is intended for and is optional	
"iss"	tsc_MCX_IdMS_token_U riPath	Issuer: case-sensitive string containing a StringOrURI value which identifies the principal that issued the JWT and is optional	RFC 7519 [101]
"exp"	Current system time + 7199 seconds; the system time is the number of seconds since 00:00:00 UTC on 1 January 1970	Number containing a NumericData value identifies the expiration time on or after which the JWT MUST NOT be accepted for processing	RFC 7519 [101] TS 33.180 [94]
"iat"	Current system time Epoch time: number of seconds since 00:00:00 UTC on 1 January 1970	Numeric value which identifies the time at which the JWT was issued and is optional	RFC 7519 [101] TS 33.180 [94]
Signature	HASH (base64UrlEncode(heade r) + "." + base64UrlEncode(payloa d))	Created by the hash algorithm corresponding to the algorithm provided in the header	RFC 7515 [102]
token-type	"Bearer"	The token type for access	RFC 6749 [77]
expires-in	"7199"	Token expiry time	RFC 6749 [77]

5.5.4.10.5 Void

5.5.4.10.6 KMS Certificate

Table 5.5.4.10.6-1: KMS Certificate

Derivation Path: TS 33.180 [94] Information Element	Value/remark	Comment	Reference	Condition
SignedKmsResponse	. siwe/i eriidi it			23
Id	"kmsResponse"	arbitrarily selected id		
		which the Signature's		
		Reference URI refers to		
KmsUri	tsc_MCX_KMS_Hostna	The URI of the KMS		
	me	which issued the key		
		set		
UserUri	tsc_MCX_MC_ID_User	The MC ID with which		
	A	the user has used for		
	Editor's note: to be	authentication		
	clarified whether the			
	MC ID can be used in			
	this context or whether			
	there are restrictions			
	how to set the UserUri			
Time	Current system time of	Time stamp of KMS		
	the SS	message		
ClientReqUrl	tsc_MCX_KMS_Client	URL of the client		
•	RegUrl_init	making the key request		
KmsMessage	, =			
KmsInit				
Version	"1.0.0"			
KmsCertificate				
Version	"1.1.0"	The version number of		
VOIGIOII	111.0	the certificate type		
Role	"Root"	This shall indicate		
11010	11001	whether the certificate		
		is a "Root" or "External"		
		certificate		
CertUri	tsc_MCX_KMS_CertUri	The URI of the		
331.311	tee_mex_rune_eenen	Certificate (this object)		
KmsUri	tsc_MCX_KMS_Hostna	The URI of the KMS		
Tanoon	me	which issued the		
		Certificate		
Issuer	Not present	(Optional) String		
	i i i i i i i i i i i i i i i i i i i	describing the issuing		
		entity		
ValidFrom	Not present	(Optional) Date from		
	. tot process.	which the Certificate		
		may be used		
ValidTo	Not present	(Optional) Date at		
valia i o	Troc process	which the Certificate		
		expires		
Revoked	false	(Optional) A Boolean		
	14.55	value defining whether		
		a Certificate has been		
		revoked		
UserIDFormat	"2"	Shall contain the value		
Cooner children	-	'2'		
UserKeyPeriod	"2592000"	The number of seconds		
econtoy: ched	2002000	that each user key		
		issued by this KMS		
		should be used		
		(2592000 seconds are		
		30 days)		
UserKeyOffset	CurrentTimestamp	UserKeyOffset so that		
Coorto, Crisci	MODULO	KeyPeriod starts at		
	UserKeyPeriod	current system time;		
	Joseph Grida	CurrentTimestamp is		
		the current system time		
		in seconds since 0h on		
		1 st Jan 1900		

PubEncKey	SAKKE Public Key Z_T	The SAKKE Public	RFC 6508 [99]	
1 doznorcy	derived from master	Key, "Z_T". This is an	11. 6 6666 [66]	
	secret z_T according to	OCTET STRING		
	RFC 6508	encoding of an elliptic		
		curve point		
PubAuthKey	ECCSI Public Key	The ECCSI Public Key,	RFC 6507 [98]	
	KPAK derived from	"KPAK". This is an		
	private key KSAK	OCTET STRING		
	according to RFC 6507	encoding of an elliptic		
		curve point		
ParameterSet	Not present	(Optional) The choice		
		of parameter set used for SAKKE and ECCSI		
KmsDomainList	Not present	(Optional) List of		
KITISDOMAITILISU	Not present	domains associated		
		with the certificate		
SignedInfo		with the certificate		
CanonicalizationAlgorithm	"xml-c14n"	XML Signature		
Ganomean_anom ngomm	, and 6.1	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		
DigestAlgorithm	"SHA-256"	this case) Hashing algorithm to be		
DigestAigontiiii	31 IA-230	applied to sign the data		
		object		
DigestValue	Hash signing the data	00,000		
2.9001.0.00	object (referred to by			
	the URI)			
SignatureValue	Hash signing the	The signing key is		
	SignedInfo	derived from the InK		
		(px_MCX_InK)		
		according to TS 33.180		
		[94] Annex F.1.4 with		
		FC = 0x52		
		XPK-ID = InK-ID (px_MCX_InK_ID)		
KeyInfo		(by mov lilk in)		
KeyName	base64 encoded InK-ID			
Regivanie	(px_MCX_InK_ID)			
	(PA_MOA_IIII_ID)	I		

5.5.4.10.7 Void

5.5.4.10.8 KMS Key Set

Table 5.5.4.10.8-1: KMS Key Set

Derivation Path: TS 33.180 [94] Information Element	Value/remark	Comment	Reference	Condition
Signed KmsResponse				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		
onorm toqon	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		
laavaa	Not propert	the key set		
Issuer	Not present	(Optional) String describing the issuing		
		entity		
UserUri	px_MCPTT_ID_User_A	The user's MCPTT ID		MCPTT
2001011	px_MCVideo_ID_User_	The user's MCVideo ID		MCVIDEO
	A	The deer of Me video ib		WOVIDEO
	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 MCX-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		

Derivation Path: TS 33.180 [94],			.	
Information Element	Value/remark	Comment	Reference	Condition
Signed KmsResponse				
KeyPeriodNo	FLOOR((CurrentTimest amp - UserKeyOffset) / UserKeyPeriod)	Current Key Period: CurrentTimestamp is the current system time in seconds since 0h on 1st Jan 1900; UserKeyOffset and UserKeyPeriod are given in the KMS Certificate (Table 5.5.4.10.6-1) in seconds	TS 33.180 [94]	
Revoked	"false"	(Optional) A Boolean value defining whether the key set has been revoked		
UserDecryptKey		The SAKKE "Receiver Secret Key" (RSK). This is an OCTET STRING encoding of an elliptic curve point	RFC 6508 [99]	
EncryptionAlgorithm	"AES256"	Encryption algorithm to use		
KeyInfo				
KeyName	base64 encoded TrK- ID (px_MCX_TrK_ID)			
CipherData				
CipherValue	encrypted RSK	The encryption key is derived from the TrK (px_MCX_TrK) according to TS 33.180 [94] Annex F.1.4 with FC = 0x51 XPK-ID = TrK-ID (px_MCX_TrK_ID)		
UserSigningKeySSK	NA FOOTON	The ECCSI private Key, "SSK". This is an OCTET STRING encoding of an integer; the PVT is generated using the UID as contained in the UserID of the KSM message	RFC 6507 [98]	
EncryptionAlgorithm	"AES256"	Encryption algorithm to use		
KeyInfo				
KeyName	base64 encoded TrK- ID (px_MCX_TrK_ID)			
CipherData	. 100:			
CipherValue	encrypted SSK	The encryption key is derived from the TrK (px_MCX_TrK) according to TS 33.180 [94] Annex F.1.4 with FC = 0x51 XPK-ID = TrK-ID (px_MCX_TrK_ID)		

Derivation Path: TS 33.180 [94],	clause D.3.2.2			
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				
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		g.v.o.v.		
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] Information Element	Value/remark	Comment	Reference	Condition
SignedKmsRequest				
KmsRequest				
Id attribute	any value	value as used as reference in the signature		
Version attribute	"1.1.0"			
UserUri	px_MCPTT_ID_User_A	The user's MCPTT ID		MCPTT
	px_MCVideo_ID_User_ A	The user's MCVideo ID		MCVIDEO
	px_MCData_ID_User_ A	The user's MCData ID		MCDATA
KmsUri	tsc_MCX_KMS_Hostna	The URI of the KMS to		
	me	which the request is sent		
Time	any value	Date/time that the request is made by the client		
ClientId	any value if present	A string representing the client		
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 ld attribute of the request with leading "#"		
DigestAlgorithm	"http://www.w3.org/200 1/04/xmlenc#sha256"	Hashing algorithm applied to sign the data object		
DigestValue	Hash signing the data object (referred to by the URI)			
SignatureValue	Hash signing the SignedInfo; shall be validated by the SS	The signing key is derived from the InK (px_MCX_InK) according to TS 33.180 [94] Annex F.1.4 with FC = 0x52 XPK-ID = InK-ID (px_MCX_InK_ID)		
KeyInfo				
KeyName	base64 encoded InK-ID (px_MCX_InK_ID)			

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

5.5.5.1 GROUP CALL PROBE

Table 5.5.5.1-1: GROUP CALL PROBE

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

5.5.5.2 GROUP CALL ANNOUNCEMENT

5.5.5.2.1 GROUP CALL ANNOUNCEMENT from the UE

Table 5.5.5.2.1-1: GROUP CALL ANNOUNCEMENT from the UE

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

GROUP CALL ANNOUNCEMENT from the SS 5.5.5.2.2

Table 5.5.5.2.2-1: GROUP CALL ANNOUNCEMENT from the SS

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

5.5.5.3 GROUP CALL ACCEPT

5.5.5.3.1 GROUP CALL ACCEPT from the UE

Table 5.5.5.3.1-1: GROUP CALL ACCEPT from the UE

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

5.5.5.3.2 GROUP CALL ACCEPT from the SS

Table 5.5.5.3.2-1: GROUP CALL ACCEPT from the SS

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

5.5.5.4 GROUP CALL EMERGENCY END

5.5.5.4.1 GROUP CALL EMERGENCY END from the UE

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

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

5.5.5.4.2 GROUP CALL EMERGENCY END from the SS

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

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

5.5.5.5 GROUP CALL IMMINENT PERIL END

5.5.5.5.1 GROUP CALL IMMINENT PERIL END from the UE

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

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

5.5.5.5.2 GROUP CALL IMMINENT PERIL END from the SS

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

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

5.5.5.6 GROUP CALL BROADCAST

5.5.5.6.1 GROUP CALL BROADCAST from the UE

Table 5.5.5.6.1-1: GROUP CALL BROADCAST from the UE

Derivation Path: TS 24.379 [9] Table 15.1.20.1-1			
Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Call type	"0000010"	Broadcast Group Call	
Originating MCPTT user ID	px_MCPTT_ID_User_A		
MCPTT group ID	px_MCPTT_Group_A_ID		
SDP	As described in Table 5.5.3.1.3-1		

5.5.5.6.2 GROUP CALL BROADCAST from the SS

Table 5.5.5.6.2-1: GROUP CALL BROADCAST from the SS

Derivation Path: TS 24.379 [9] Table 15.1.20.1- Information Element	Value/remark	Comment	Condition
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Call type	"0000010"	Broadcast Group Call	
Originating MCPTT user ID	px_MCPTT_ID_User_B		
MCPTT group ID	px_MCPTT_Group_A_ID		
SDP	As described in Table 5.5.3.1.4-1		

5.5.5.7 GROUP CALL BROADCAST END

5.5.5.7.1 GROUP CALL BROADCAST END from the UE

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

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

5.5.5.7.2 GROUP CALL BROADCAST END from the SS

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

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

5.5.5.8 PRIVATE CALL SETUP REQUEST

5.5.5.8.1 PRIVATE CALL SETUP REQUEST from the UE

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

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

5.5.5.8.2 PRIVATE CALL SETUP REQUEST from the SS

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

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

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	
FA	IE for when an active Functional Alias is used	
Multi-Talker	IE for when a Multi Talker call is active	
ACK	Message requests a Floor Ack	
NOTE: For further conditions see table 5.5.1-1		

For MCPTT media plane control different SSRCs (Synchronization SouRCes) need to be distinguished. Table 5.5.6.1-2 specifies the SSRCs as used in the default MCPTT media plane control messages for the case that there is no multiplexing of media plane control channels.

NOTE 1: Multiplexing of media plane control channels has been introduced in Rel-18 of TS 24.379 [9] and TS 24.380 [10] and is out of scope for the current release of this document.

Table 5.5.6.1-2: SSRCs in MCPTT media plane control messages (No multiplexing of media plane control channels)

SSRC (NOTE 1)	Description	Value

Audio SSRC of the client	SSRC to be used by the client (Client	Arbitrarily selected by the SS and assigned to			
	A) in the audio stream	the client when the floor is granted (NOTE 2, 3)			
Audio SSRC of a remote	SSRC of the audio stream of a remote	Arbitrarily selected by the SS (NOTE 2)			
client	client (Client B)				
RTCP SSRC of the client	SSRC used by the client (Client A) in	The client may use any value, value is not			
	the RTCP header of the MCPTT media	checked by the SS (NOTE 4).			
	plane control messages sent to the SS				
RTCP SSRC of the SS	SSRC used by the SS in the RTCP	Arbitrarily selected by the SS (NOTE 4)			
	header of the MCPTT media plane				
	control messages sent to the client				
	SRC" and "RTCP SSRC" are as introduced				
NOTE 2: Different SSRC value	es shall be selected by the SS for audio str	eams from different clients			
⇒ There is no need	to consider collision detection and resolution	on according to IETF RFC 3550 [76].			
		cate which SSRC it would like to use in the audio			
	stream, according to TS 24.380 [10] the client has to use the value provided by the server in the "mc_ssrc" fmtp				
attribute of the SDP answer or in the "SSRC of queued floor participant" field of the Floor Granted message.					
	NOTE 4: As TS 24.380 [10] clarifies in Rel-18 that "the SSRC of the RTCP header is used to enable multiplexing of media				
plane control channe	els" it is assumed that RTCP SSRC values	have no meaning in case of no multiplexing.			

5.5.6.2 Floor Request

Table 5.5.6.2-1: Floor Request

Derivation Path: 24.380 [10], Table 8.2.4-1. Information Element	Value/remark	Comment	Condition
RTCP header	value/lellialk	Comment	Condition
Subtype	00000	Floor Request	
SSRC	RTCP SSRC of the client	1 loor resqueet	
	The SSRC of the		OFF-
	message sender		NETWORK
name	MCPT		
Floor priority	Not present or Any allowed value	If present, a value between '0' and '255' where '0' is the lowest priority If the Floor Priority field is not included in the message the default priority (='0') is used as the Floor Priority value The max floor priority that can be requested in a Floor Request message is negotiated between the MCPTT client and the controlling MCPTT function using the "mc_priority" fmtp	
		parameter e.g. at call setup	
User ID	Not present	- can cotap	
User ID	Trock production		OFF-
			NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT User ID of the floor participant requesting the floor.	
Track Info	Not present	The MCPTT call	
		does not involve a	
		non-controlling MCPTT function	
Floor Indicator		IVIOI I I IUIICIIOII	
Floor Indicator	10000x000000000	Normal call: x:=1 if pc_MCPTT_Floor RequestQueueing = "true", x:=0 otherwise	
	01000x000000000	Broadcast group call: x:=1 if pc_MCPTT_Floor RequestQueueing = "true", x:=0 otherwise	BROADCAS T-CALL
	00010x000000000	Emergency call: x:=1 if pc_MCPTT_Floor RequestQueueing = "true", x:=0 otherwise	EMERGEN CY-CALL

Derivation Path: 24.380 [10], Table 8.2.4-1.			
Information Element	Value/remark	Comment	Condition
	00001x000000000	Imminent Peril call: x:=1 if pc_MCPTT_Floor RequestQueueing = "true", x:=0 otherwise	IMMPERIL- CALL
Functional Alias	Not present		
	px_MCPTT_ID_FA_A	Functional Alias = URI	FA
Location	optional		
Location Type	Any allowed value	See TS 24.380 [10] Table 8.2.3.21-3	
Location Value	Not present or Any allowed value	See TS 24.380 [10] Table 8.2.3.21-3. Not present if Location Type is set to "Not provided"	
Location			REL-15
Location Type	Any allowed value	See TS 24.380 [10] Table 8.2.3.21-3	
Location Value	Not present or Any allowed value	See TS 24.380 [10] Table 8.2.3.21-3. Not present if Location Type is set to "Not provided"	

Condition	Explanation	
REL-15	In effect when PICS "PICS FFS" is in effect	

5.5.6.3 Floor Granted

Table 5.5.6.3-1: Floor Granted

Derivation Path: 24.380 [10], Table 8.2.5-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00001	Floor Granted with acknowledgment not required	
	10001	Floor Granted with acknowledgment required	ACK
SSRC	RTCP SSRC of the SS	The SSRC of the floor control server	
	The SSRC of the message sender	The SSRC of the floor arbitrator	OFF- NETWORK
name	MCPT		
Duration			
Duration	"00000000 10000000"	128 sec (an arbitrary value)	
SSRC of granted floor participant	Audio SSRC of the client		

Derivation Path: 24.380 [10], Table 8.2.5-1. Information Element	Value/remark	Comment	Condition
Floor priority		If the Floor Priority	Condition
rioor 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	
User ID	Not present		OFF-
OSEI ID			NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT User	
		ID of the floor	
		participant	
		granted the floor.	
Queue Size	Not present		
Queue Size	"0"	the number of	OFF-
		queued MCPTT	NETWORK
		clients in the	
		MCPTT call	
SSRC of queued floor participant	Not present		
Queued User ID	Not present		
Queue Info	Not present		
Track Info	Not present	The MCPTT call	
		does not involve a	
		non-controlling	
		MCPTT function	
Floor Indicator			
Floor Indicator	100001000000000	Normal call,	
		queueing	
		supported	
	010001000000000	Broadcast group	BROADCAS
		call, queueing	T-CALL
		supported	
	0001010000000000	Emergency call,	EMERGEN
		queueing	CY-CALL
		supported	
	000011000000000	Imminent peril	IMMPERIL-
		call, queueing	CALL
		supported	

5.5.6.4 Floor Deny

Table 5.5.6.4-1: Floor Deny

Derivation Path: 24.380 [10], Table 8.2.6-1. Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00011	Floor Deny with acknowledgment not required	
	10011	Floor Deny with acknowledgment required	ACK
SSRC	RTCP SSRC of the SS	The SSRC of the floor control server	
	The SSRC of the message sender	The SSRC of the floor arbitrator	OFF- NETWORK
name	MCPT		
Reject Cause			
Reject Cause	"1"	Cause #1 - Another MCPTT client has permission	
Reject Phrase	"Another MCPTT client has permission"	An additional text string explaining the reason for rejecting the floor request.	
User ID	Not present		
User ID			OFF- NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT User ID of the floor participant being denied floor request.	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	1000010000000000	Normal call, queueing supported	
	0100010000000000	Broadcast group call, queueing supported	BROADCAS T-CALL
	0001010000000000	Emergency call, queueing supported	EMERGEN CY-CALL
	000110000000000	Imminent peril call, queueing supported	IMMPERIL- CALL

5.5.6.5 Floor Release

Table 5.5.6.5-1: Floor Release

Derivation Path: 24.380 [10], Table 8.2.7-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	x0100	Floor Release with x=0,1 depending on the UE implementation; x=0: Acknowledgment is not required x=1: Acknowledgment	
		is required	
SSRC	RTCP SSRC of the client The SSRC of the message sender		OFF- NETWORK
name	MCPT		- NETWORK
User ID	Not present		
User ID			OFF- NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT User ID of the floor participant releasing the floor.	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	10000x0000000000	Normal call x:=1 if pc_MCPTT_Floor RequestQueueing = "true", x:=0 otherwise	
	01000x0000000000	Broadcast group call: x:=1 if pc_MCPTT_Floor RequestQueueing = "true", x:=0 otherwise	BROADCAS T-CALL
	00010x000000000	Emergency call: x:=1 if pc_MCPTT_Floor RequestQueueing = "true", x:=0 otherwise	EMERGEN CY-CALL
	00001x0000000000	Imminent Peril call: x:=1 if pc_MCPTT_Floor RequestQueueing = "true", x:=0 otherwise	IMMPERIL- CALL

5.5.6.6 Floor Idle

Table 5.5.6.6-1: Floor Idle

Derivation Path: 24.380 [10], Table 8.2.8-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00101	Floor Idle with acknowledgment not required	
	10101	Floor Idle with acknowledgment required	ACK
SSRC	RTCP SSRC of the SS	The SSRC of the floor control server	
	The SSRC of the message sender	The SSRC of the floor arbitrator	OFF- NETWORK
name	MCPT		
Message Sequence Number			
Message Sequence Number	The value sent in the previous Floor Idle message, if any, increased with 1	Any value between '0' and '65535' When the '65535' value is reached, the <message number="" sequence=""> value starts from '0' again</message>	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	1000010000000000	Normal call, queueing supported	
	0100010000000000	Broadcast group call, queueing supported	BROADCAS T-CALL
	0001010000000000	Emergency call, queueing supported	EMERGEN CY-CALL
	000110000000000	Imminent peril call, queueing supported	IMMPERIL- CALL

5.5.6.7 Floor Taken

Table 5.5.6.7-1: Floor Taken

Derivation Path: 24.380 [10], Table 8.2.9-1. Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00010	Floor Taken with acknowledgment not required	
	10010	Floor Taken with acknowledgment required	ACK
SSRC	RTCP SSRC of the SS	The SSRC of the floor control server	
	The SSRC of the message sender	The SSRC of the floor arbitrator	OFF- NETWORK
name	MCPT		
User ID	Not present		055
User ID	MODIT ID Have A	The MODIT	OFF- NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT user ID of the floor participant sending the Floor Taken message	
Granted Party's Identity			
Granted Party's Identity	px_MCPTT_ID_User_B	The MCPTT User ID of the floor participant being granted the floor.	
Granted Party's Identity	Not Present		Multi-Talker
Permission to Request the Floor			
Permission to Request the Floor	"1"	The receiver is permitted to request floor	
Message Sequence Number			
Message Sequence Number	The value sent in the previous Floor Taken message, if any, increased with 1	Any value between '0' and '65535' When the '65535' value is reached, the <message number="" sequence=""> value starts from '0' again</message>	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	1000010000000000	Normal call, queueing supported	
	0100010000000000	Broadcast group call, queueing supported	BROADCAS T-CALL
	0001010000000000	Emergency call, queueing supported	EMERGEN CY-CALL
	000110000000000	Imminent peril call, queueing supported	IMMPERIL- CALL
Floor Indicator			Multi-Talker
Floor Indicator	1000010010000000	Normal call, queueing supported, multi- talker	

Derivation Path: 24.380 [10], Table 8.2.9-1. Information Element	Value/remark	Comment	Condition
iniormation Element			BROADCAS
	0100010000000000	Broadcast group call, queueing supported	T-CALL
	0001010010000000	Emergency call,	EMERGEN
	000101001000000	queueing supported, multi- talker	CY-CALL
	0001100010000000	Imminent peril call, queueing supported, multitalker	IMMPERIL- CALL
SSRC of granted floor participant	Audio SSRC of a remote client (Client B)	The SSRC of the granted floor participant.	
SSRC of granted floor participant	Not present		Multi-Talker
Functional Alias	Not present px_MCPTT_ID_FA_B	Functional Alias = URI	FA AND NOT Multi- Talker
List of Granted Users	Not present		
List of Granted Users	·		Multi-Talker
No of users	'10'		
User ID	px_MCPTT_ID_User_A		
User ID	px_MCPTT_ID_User_B		
List of SSRCs of granted floor participants	Not present		
List of SSRCs of granted floor participants	14.01		Multi-Talker
Number of SSRCs	'10'		
SSRC	Audio SSRC of the client (Client A)		
SSRC List of Functional Aliases	Audio SSRC of a remote client (Client B)		
List of Functional Aliases List of Functional Aliases	Not present		FA AND
No of FAs	'10'		Multi-Talker
Functional Alias	px_MCPTT_ID_FA_A		
Functional Alias	px_MCPTT_ID_FA_A		
Location	px_wci ii_ib_i x_b		NOT Multi- Talker
Location Type	'00000000'	Not provided See TS 24.380 [10] Table 8.2.3.21-3	, and
Location Value	Not present	See TS 24.380 [10] Table 8.2.3.21-3. Not present if Location Type is set to "Not provided"	
Location	Not present		Multi-Talker
List of Locations	Not present		NOT Multi- Talker
Number of Locations	'10'	The location information shall be maintained in the same order as the users in the List of Granted Users to allow location information to be matched to the correct user.	Multi-Talker

Derivation Path: 24.380 [10], Table 8.2.9-1.			
Information Element	Value/remark	Comment	Condition
Location Type	'0000000'	Not provided See TS 24.380 [10] Table 8.2.3.21-3	
Location Value	Not present	See TS 24.380 [10] Table 8.2.3.21-3. Not present if Location Type is set to "Not provided"	
Location Type	'0000000'	Not provided See TS 24.380 [10] Table 8.2.3.21-3	
Location Value	Not present	See TS 24.380 [10] Table 8.2.3.21-3. Not present if Location Type is set to "Not provided"	

5.5.6.8 Floor Revoke

Table 5.5.6.8-1: Floor Revoke

Derivation Path: 24.380 [10], Table 8.2.10.1-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00110	Floor Revoke	
SSRC	RTCP SSRC of the SS	The SSRC of the floor control server	
	The SSRC of the	The SSRC of the	OFF-
	message sender	floor arbitrator	NETWORK
name	MCPT		
Reject Cause			
Reject Cause	"4"	Cause#4 - Media Burst pre-empted	
Reject Phrase	"Media Burst pre- empted"	a text string encoded the text string in the SDES item CNAME as specified in IETF RFC 3550 [76], clause 6.5.1.	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	1000010000000000	Normal call, queueing supported	
	0100010000000000	Broadcast group call, queueing supported	BROADCAS T-CALL
	0001010000000000	Emergency call, queueing supported	EMERGEN CY-CALL
	00011000000000	Imminent peril call, queueing supported	IMMPERIL- CALL

5.5.6.9 Floor Queue Position Request

Table 5.5.6.9-1: Floor Queue Position Request

Derivation Path: 24.380 [10], Table 8.2.11-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	01000	Floor Queue Position Request	
SSRC	RTCP SSRC of the client		
	The SSRC of the message sender		OFF- NETWORK
name	MCPT		
User ID	Not present		
User ID			OFF- NETWORK
User ID	px_MCPTT_ID_User_A	The MCPTT ID of the floor participant requesting the information.	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	

5.5.6.10 Floor Queue Position Info

Table 5.5.6.10-1: Floor Queue Position Info

Derivation Path: 24.380 [10], Table 8.2.12-1. Information Element	Value/remark	Comment	Condition
RTCP header	value/remark	Comment	Condition
Subtype	01001	Floor Queue Position Info with acknowledgment not required	
	11001	Floor Queue Position Info with acknowledgment required	ACK
SSRC	RTCP SSRC of the SS	The SSRC of the floor control server	
	The SSRC of the message sender	The SSRC of the floor arbitrator	OFF- NETWORK
name	MCPT		
User ID	Not present		
User ID			OFF- NETWORK
User ID	px_MCPTT_ID_User_B	the MCPTT ID of the floor participant sending the Floor Queue Position Info message	
SSRC of queued floor participant	Not present		
	The SSRC of the message recepient	The SSRC field carries the SSRC of the queued floor participant	OFF- NETWORK
Queued User ID	Not present		
Queued User ID			OFF- NETWORK
Queued User ID	px_MCPTT_ID_User_A	the MCPTT ID of the queued floor participant	
Queue Info			
Queue Position Info	"1"		
Queue Priority Level	"0"		
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Floor Indicator			
Floor Indicator	100001000000000	Normal call, queueing supported	
	010001000000000	Broadcast group call, queueing supported	BROADCAS T-CALL
	000101000000000	Emergency call, queueing supported	EMERGEN CY-CALL
	00011000000000	Imminent peril call, queueing supported	IMMPERIL- CALL

5.5.6.11 Floor Ack

Table 5.5.6.11-1: Floor Ack

Derivation Path: 24.380 [10], Table 8.2.13-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	01010	Floor Ack	
SSRC	RTCP SSRC of the SS	The SSRC of the floor control server for onnetwork and floor arbitrator for offnetwork.	DOWNLINK
	RTCP SSRC of the client		UPLINK
name	MCPT		
Source			
Source	"2"	The controlling MCPTT function is the sender of the message see TS 24.380[10] cl 4.2.1 and cl. 8.2.3.12	DOWNLINK
Source	"0"	The Floor participant is the sender of the message see TS 24.380[10] cl 6.2 and cl. 8.2.3.12	UPLINK
Message Type			
Message Type	'0000xxxx' with 'xxxx' being the lower four bits of the subtype of the message to be acknowledged	Message Type of the Floor Control message which requested the acknowledgment	
Track Info	Not present	The MCPTT call does not involve a non-controlling MCPTT function	
Location	Not present	Rel-16	DOWNLINK
Location	If present	Rel-16	UPLINK
Location Type	'00000000'	Not provided See TS 24.380 [10] Table 8.2.3.21-3	
Location Value	Not present	See TS 24.380 [10] Table 8.2.3.21-3. Not present if Location Type is set to "Not provided"	

Condition	Explanation
UPLINK	The message is sent from the UE
DOWNLINK	The message is sent from the SS
For further conditions see table 5.5.6.1-1	

5.5.6.11A Floor Release Multi Talker

Table 5.5.6.11A-1: Floor Release Multi Talker

Derivation Path: 24.380 [10], Table 8.2.14-1.	Malara Irania d	0	0
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	01111	Floor Release Multi Talker	
SSRC	RTCP SSRC of the SS	The SSRC of the floor participant sending the message.	
	The SSRC of the		OFF-
	message sender		NETWORK
name	MCPT		
User ID			
User ID	px_MCPTT_ID_User_B	The MCPTT User ID of the floor participant releasing the floor.	
Floor Indicator			
Floor Indicator	1000010010000000	Normal call, queueing, multi- talker	
	010001000000000	Broadcast group call, queueing supported	BROADCAS T-CALL
	0001010010000000	Emergency call, queueing supported, multi- talker	EMERGEN CY-CALL
	0001100010000000	Imminent peril call, queueing supported, multitalker	IMMPERIL- CALL

5.5.6.12 Connect

Table 5.5.6.12-1: Connect

Derivation Path: 24.380 [10], Table 8.3.4-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00000	Connect with acknowledgment required	
	10000	Connect with acknowledgment required	ACK
SSRC	RTCP SSRC of the SS		
name	MCPC		
MCPTT Session Identity field			
Session Type	"0000000"	No session type	DDN (4.TE
	"0000001"	private	PRIVATE- CALL
	"00000011"	prearranged	GROUP- CALL
	"00000100"	chat	CHAT- GROUP- CALL
MCPTT Session Identity	tsc_MCX_SessionID_B	SIP URI, which identifies the MCPTT session between the MCPTT client and the controlling MCPTT function	
MCPTT Group Identity field	Not Present		PRIVATE- CALL
MCPTT Group Identity field			GROUP- 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 session	
Control Channel	"2"	8 bit parameter giving the number of the "m=application" m-line negotiated in the preestablished session	
	"0"	no floor control	WITHOUT_ FLOORCON TROL
Warning Text field	Not Present		
Answer State field			
Answer State	"1"	confirmed	
Inviting MCPTT User Identity field			
Inviting MCPTT User Identity	px_MCPTT_ID_User_B	URI, which identifies the inviting MCPTT user	
PCK I_MESSAGE field	Not Present		

Condition	Explanation
WITHOUT_FLOORCONTROL	There shall be no floor control during the call
	(e.g. in case of private or first-to-answer call)
For further conditions see table 5.5.1-1	

5.5.6.13 Disconnect

Table 5.5.6.13-1: Disconnect

Derivation Path: 24.380 [10], Table 8.3.5-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00001	Disconnect with acknowledgment not required	
	10001	Disconnect with acknowledgment required	ACK
SSRC	RTCP SSRC of the SS		
name	MCPC		
MCPTT Session Identity field	Same MCPTT Session Identity as used in the connect message at call establishment	TS 24.380 [10] clause 9.3.2.4.5	
Reason Cause	Not Present	Rel-17	

5.5.6.14 Acknowledge

Table 5.5.6.14-1: Acknowledge

Derivation Path: 24.380 [10], Table 8.3.6-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00010	Acknowledge	
SSRC	RTCP SSRC of the client		
name	MCPC		
Reason Code			
Reason Code	"0"	Accepted	

5.5.6.15 Map Group To Bearer

Table 5.5.6.15-1: Map Group To Bearer

Derivation Path: 24.380 [10], Table 8.4.4-1. Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00000	Map Group To Bearer	
SSRC	RTCP SSRC of the SS	The SSRC of the floor control server	
name	MCMC		
MCPTT Group ID	px_MCPTT_Group_A_ID	The group ID of the call	
TMGI			
MBMS Service ID	The same value as for PLMN1 specified in	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 Mobile Country Code	
MNC	Table 5.5.8.1-x The same value as for	Mobile Network	
	PLMN1 specified in	Code	
MPMC Cubebonnel	Table 5.5.8.1-x		
MBMS Subchannel	"1"	The more han of the	
Audio m-line Number		The number of the "m=audio" m-line in the SIP MESSAGE request announcing the MBMS bearer	
Floor m-line Number	"2"	The number of the "m=application" m-line in the SIP MESSAGE request announcing the MBMS bearer. The <floor m-line="" number=""> value is set to "0" when the same subchannel is used for media and for floor control.</floor>	
IP version	"0"	'0' = IP version 4 '1' = IP version 6 All other values are reserved for future use	

Derivation Path: 24.380 [10], Table 8.4.4-1.			
Information Element	Value/remark	Comment	Condition
Floor control Port Number	"9"	The port to be used if the <floor m-line="" number=""> value is greater than '0'. If the <floor m-line="" number=""> value is equal to '0', the <floor control="" number="" port=""> value is not included in the MBMS Subchannel field</floor></floor></floor>	
Media Port Number	"9"		
IP Address	"0.0.0.0"		

5.5.6.16 Unmap Group To Bearer

Table 5.5.6.16-1: Unmap Group To Bearer

Derivation Path: 24.380 [10], Table 8.4.5-1. Information Element	Value/remark	Comment	Condition
	value/remark	Comment	Condition
RTCP header			
Subtype	00001	Unmap Group To	
,,		Bearer	
SSRC	RTCP SSRC of the SS	The SSRC of the	
		floor control	
		server	
name	MCMC		
MCPTT Group ID	px_MCPTT_Group_A_ID	The group ID of	
-		the call	

5.5.6.17 Application Paging

Table 5.5.6.17-1: Application Paging

Derivation Path: 24.380 [10], Table 8.4.6-1.			
Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00010	Application Paging	
SSRC	RTCP SSRC of the SS	The SSRC of the participating MCPTT function.	
name	MCMC		
MCPTT Group ID	px_MCPTT_Group_A_ID	The group ID of the call	

5.5.6.18 Bearer Announcement

Table 5.5.6.18-1: Bearer Announcement

Information Element	Value/remark	Comment	Condition
RTCP header			
Subtype	00011	Bearer Announcement	
name	MCMC		
TMGI			
MBMS Service ID	"0F0F0F"	The selected value is randomly chosen - a 6 digit hexadecimal number between 000000 and FFFFFF (see TS 23.003 [69] clause 15.2. The coding of the MBMS Service ID is the responsibility of each administration	
MCC	The same value as for PLMN1 specified in Table 5.5.8.1-x	Mobile Country Code	
MNC	The same value as for PLMN1 specified in Table 5.5.8.1-x	Mobile Network Code	
Alternative TMGI	Not present		
Monitoring State	'1'	The <monitoring state=""> value is a binary value where the following values are defined: '0' Monitoring is inactive '1' Monitoring is active</monitoring>	

5.5.7 Default MCX group management messages and other information elements

5.5.7.1 MCPTT Group Configuration

The structure of a group configuration document is specified in TS 24.481 [11] clause 7, single MCPTT group configuration parameters are defined in TS 24.483 [13] clause 6.3.

The structure of the configuration document is based on several XML schemas. To distinguish the schemas the prefixes of their corresponding name spaces are used in the 'Information Element' column as according to table 7.2.2-2 of TS 24.481 [11].

Table 5.5.7.1-1: MCPTT Group Configuration Defaults

Information Element	Value/remark	Comment	Reference	Condition
list-service[1]		Group 1		
uri attribute	px_MCPTT_Group_A_I D	Value is a "uri" attribute specified in OMA OMA-TS-XDM_Group-V1_1	TS 24.483 [13] clause 6.2.7	
display-name	px_MCPTT_Group_A_ Name	Value is a <display- name> element specified in OMA OMA- TS-XDM_Group-V1_1</display- 	TS 24.483 [13] clause 6.2.8	
list				
entry[1]		group member 1		
uri attribute	px_MCPTT_ID_User_A	Indicates an MCPTT user identity (MCPTT ID) which is a globally unique identifier within the MCPTT service that represents the MCPTT user	TS 24.483 [13] clause 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"3"	Indicates the user priority of the MCPTT group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCX_User_A_Parti cipantType	Participant type of the MCPTT group	TS 24.483 [13] clause 6.2.13	
mcpttgi:multi-talker-allowed	Present	Presence of the <multi-talker-allowed> element indicates that the MCPTT group member is authorized for multi-talker floor control in a MCPTT group call of the MCPTT group in on-network MCPTT procedures when the MCPTT group supports multi-talker-control. Absence of the <multi-talker-allowed> element indicates that the MCPTT group member identified by the <entry> element is not authorized for multi-talker floor control</entry></multi-talker-allowed></multi-talker-allowed>		
entry[2]	MODET ID II	group member 2	TO 04 400 [40]	
uri attribute	px_MCPTT_ID_User_B	Indicates an MCPTT user identity (MCPTT ID) which is a globally unique identifier within the MCPTT service that represents the MCPTT user	TS 24.483 [13] clause 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"2"	Indicates the user priority of the MCPTT group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCX_User_B_Parti cipantType	Participant type of the MCPTT group	TS 24.483 [13] clause 6.2.13	

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

Derivation Path: TS 24.481 [11] c			D-(0
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		
		on the MCPTT group		
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		
cp:on-network-allow-	"true"	Indicates that the		
getting-affiliation-list		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		
conference-state		identity is allowed to		
The state of the s		subscribe to the		
		conference event		
		package of an MCPTT		
		group session of the		
		MCPTT group in on-		
		network MCPTT		
		procedures		
oxe:supported-services			TO 04 404 5443	
oxe:service	# 7 0		TS 24.481 [11]	
oxe:enabler	"urn:urn-7:3gpp-			
	service.ims.icsi.mcptt"			
oxe:group-media				
mcpttgi:mcptt-speech	Present			
mcpttgi:owner	px_MCX_Group_A_Ow	Group's owner (Mission	TS 24.483 [13]	
	ner_Organization	Critical Organisation).	clause 6.2.15	
mcpttgi:preferred-voice-				
encodings				
mcpttgi:encoding-				
mcpttgi:name[1]	px_MCPTT_Group_A_	Preferred voice codec	RFC 4566 [27]	
. 5	preferred_VCodec	is a RTP payload.	TS 26.171 [66]	
	1.	MCPTT clients shall	TS 24.483 [13]	
		support the AMR-WB	clause 6.2.16	
		codec.	3.2230 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	514400 0.2.17	
		applicable for group-		
monttaiderel with!	"0"	broadcast group).	TC 04 400 (40)	
mcpttgi:level-within-user-	^U	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]	
signalling	1.30	confidentiality and	clause 6.2.23	
oignaming		integrity of floor control	SIGUSE U.Z.ZS	
		signalling is required on	1	
		the MCPTT group		

Derivation Path: TS 24.481 [11] cl				
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:off-network-ProSe-	tsc_MCX_Group_A_Pr	Indicates the Prose	TS 23.303 [68]	
layer-2-group-id	oSeLayer2GroupID	layer-2 group ID	TS 24.483 [13]	
	#0.000#		clause 6.2.27	
mcpttgi:off-network-IP- multicast-address	"0.0.0.0"	Indicates the ProSe	TS 23.303 [68]	
muiticast-address		group IP multicast address;the IP version	TS 24.483 [13] clause 6.2.28	
		is implicitly given by the	ciause 6.2.26	
		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		
	#DT401401450#	applications	TO 04 400 [40]	
mcpttgi:off-network-in-	"PT18H12M15S"	Indicates the timeout	TS 24.483 [13]	
progress-emergency-state- cancellation-timeout		value for the cancellation of an in	clause 6.2.31	
Cancenation-timeout		progress emergency for		
		an MCPTT group call.		
		"PT18H12M15S"		
		corresponds to 65535		
		seconds what is		
		maximum allowed		
		value according to		
		TS 24.483 [13]		
mcpttgi:off-network-in-	"PT18H12M15S"	Indicates the timeout	TS 24.483 [13]	
progress-imminent-peril-state- cancellation-timeout		value for the cancellation of an in	clause 6.2.32	
cancenation-timeout		progress imminent peril		
		for an MCPTT group		
		call. "PT18H12M15S"		
		corresponds to 65535		
		seconds what is		
		maximum allowed		
		value according to		
		TS 24.483 [13]		
mcpttgi:off-network-hang-	"PT5S"	Indicates the group call	TS 24.483 [13]	
timer		hang timer. "PT5S"	clause 6.2.33	
		corresponds to 5		
mcpttgi:off-network-	"PT1M"	Indicates the max	TS 24.483 [13]	
maximum-duration		duration of group calls.	clause 6.2.34	
		"PT1M" corresponds to	3.2230 0.2.01	
		1 minute		
mcpttgi:off-network-queue-	"true"	Indicates if queuing is	TS 24.483 [13]	
usage		enabled or not	clause 6.2.34A	
mcpttgi:off-network-ProSe-	"1"	Indicates the default	TS 24.483 [13]]
signalling-PPPP		ProSe Per-Packet	clause 6.2.36	
monthsis off assessed David	11411	Priority (PPPP) value	TO 04 400 1101	
mcpttgi:off-network-ProSe- media-PPPP	"1"	Indicates the default	TS 24.483 [13]	
meula-FFF		ProSe Per-Packet Priority (PPPP) value	clause 6.2.37	
mcpttgi:off-network-ProSe-	"8"	Indicates the default	TS 24.483 [13]	
emergency-call-signalling-		ProSe Per-Packet	clause 6.2.38	
PPPP		Priority (PPPP) value	3.4430 0.2.00	
mcpttgi:off-network-ProSe-	"8"	Indicates the default	TS 24.483 [13]	
emergency-call-media-PPPP		ProSe Per-Packet	clause 6.2.39	
		Priority (PPPP) value		
mcpttgi:off-network-ProSe-	"7"	Indicates the default	TS 24.483 [13]	
imminent-peril-call-signalling-		ProSe Per-Packet	clause 6.2.40	
PPPP		Priority (PPPP) value		
mcpttgi:off-network-ProSe-	"7"	Indicates the default	TS 24.483 [13]	
imminent-peril-call-media-		ProSe Per-Packet	clause 6.2.41	
PPPP		Priority (PPPP) value		

Derivation Path: TS 24.481 [11] clause 7.2.2					
Information Element	Value/remark	Comment	Reference	Condition	
mcpttgi:multi-talker-control	"false"	"true" indicates that multi-talker control is enabled for the group "false" indicates that multi-talker control is disabled for the group			
mcpttgi:max-number- simultaneous-talkers	"1"	Indicates the maximum number of parallel talkers in a MCPTT group session in onnetwork MCPTT procedures			
mcpttgi:audio-mixing-entity	Not present	Absence of the <audio- mixing-entity> element indicates that audio mixing is performed in the network</audio- 			

5.5.7.2 MCVideo Group Configuration

The structure of a group configuration document is specified in TS 24.481 [11] clause 7, single MCVideo group configuration parameters are defined in TS 24.483 [13] clause 6.

Table 5.5.7.2-1: MCVideo Group Configuration Defaults

Derivation Path: TS 24.481 [11] Information Element	Value/remark	Comment	Reference	Condition
list-service[1]		Group 1		
uri attribute	px_MCVideo_Group_A	Value is a "uri" attribute	TS 24.483 [13]	
	_ID	specified in OMA OMA-	clause 6.2.7	
	5	TS-XDM_Group-V1_1	0.0000 0.2.7	
display-name	px_MCVideo_Group_A	Value is a <display-< td=""><td>TS 24.483 [13]</td><td></td></display-<>	TS 24.483 [13]	
alopia, namo	_Name	name> element	clause 6.2.8	
	_Namo	specified in OMA OMA-	0.0000 0.2.0	
		TS-XDM_Group-V1_1		
list		TO ABIN_Group VI_I		
entry[1]		group member 1		
uri attribute	px_MCVideo_ID_User_	Indicates an MCVideo	TS 24.483 [13]	
un attribute	A	user identity (MCVideo	clause 6.2.11	
		ID) which is a globally	ciause 0.2.11	
		unique identifier within		
		the MCVideo service		
		that represents the		
		MCVideo user		
display namo	Not procent	MC video usei		
display-name mcpttgi:user-priority	Not present	Indicates the user	TS 24.483 [13]	
mopugi.user-priority	3	priority of the MCVideo	clause 6.2.12	
			ciause 0.2.12	
monttainartiainant tura	ny MCV Hoor A Doub	group member	TC 24 402 [42]	
mcpttgi:participant-type	px_MCX_User_A_Parti	Participant type of the	TS 24.483 [13]	
rlimovidos mavidas id	cipantType	MCVideo group	clause 6.2.13	
rl:mcvideo-mcvideo-id	my MOV/star ID II			
uri attribute	px_MCVideo_ID_User_			
. [0]	A			
entry[2]	140) (1 1 1 1 1 1 1	Group member 2	TO 0 4 400 1401	
uri attribute	px_MCVideo_ID_User_	Indicates an MCVideo	TS 24.483 [13]	
	В	user identity (MCVideo	clause 6.2.11	
		ID) which is a globally		
		unique identifier within		
		the MCVideo service		
		that represents the		
		MCVideo user		
display-name	Not present			
mcpttgi:user-priority	"2"	Indicates the user	TS 24.483 [13]	
		priority of the MCVideo	clause 6.2.12	
		group member		
mcpttgi:participant-type	px_MCX_User_B_Parti	Participant type of the	TS 24.483 [13]	
	cipantType	MCVideo group	clause 6.2.13	
rl:mcvideo-mcvideo-id				
uri attribute	px_MCVideo_ID_User_			
	В			
entry[3]		Group member 3		
uri attribute	px_MCVideo_ID_User_	Indicates an MCVideo	TS 24.483 [13]	
	Ċ	user identity (MCVideo	clause 6.2.11	
		ID) which is a globally		
		unique identifier within		
		the MCVideo service		
		that represents the		
		MCVideo user		
display-name	Not present			
mcpttgi:user-priority	"1"	Indicates the user	TS 24.483 [13]	
		priority of the MCVideo	clause 6.2.12	
		group member		
mcpttgi:participant-type	px_MCX_User_C_Parti	Participant type of the	TS 24.483 [13]	
	cipantType	MCVideo group	clause 6.2.13	
rl:mcvideo-mcvideo-id				
uri attribute	px_MCVideo_ID_User_			
	C			
cp:ruleset	-			
cp:rule				
cp:rule cp:id attribute	"rule1"			

Derivation Path: TS 24.481 [11] c	lause 7.2.2			
Information Element	Value/remark	Comment	Reference	Condition
mcpttgi:on-network-allow- getting-member-list	"true"	Indicates that the identity is allowed to get the MCS group member list of the MCS group in on-network procedures.		
mcpttgi:mcvideo-allow- emergency-call	"true"	Indicates that the identity is allowed to request an MCVideo-emergency call on the MCVideo group.		
mcpttgi:mcvideo-allow- emergency-alert	"true"	Indicates that the identity is allowed to request an MCVideo-emergency alert on the MCVideo group.		
mcpttgi:mcvideo-allow- imminent-peril-call	"true"	Indicates that the identity is allowed to request an MCVideo imminent peril call on the MCVideo group.		
mcpttgi:mcvideo-on- network-allow-conference-state	"true"	Indicates that the identity is allowed to subscribe to the conference event package of an MCVideo group session of the MCVideo group in on-network MCVideo procedures.		
mcpttgi:mcvideo-on- network-allow-getting-affiliation- list	"true"	Indicates that the identity is allowed to get the list of MCVideo users affiliated to the MCVideo group in onnetwork MCVideo procedures.		
oxe:supported-services				
oxe:service				
oxe:enabler	"urn:urn-7:3gpp- service.ims.icsi.mcvide o"	String defining an enabler		
oxe:group-media				
oxe:mcvideo-video-media	1. 11011.0	1	TO 00 000 000	
mcpttgi:off-network-ProSe- layer-2-group-id	tsc_MCX_Group_A_Pr oSeLayer2GroupID	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_MCX_Group_A_Ow	Group's owner (Mission	TS 24.483 [13]	
mcpttgi:level-within-group-	ner_Organization	Critical Organisation). Indicates the level	clause 6.2.15 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] cl	ause 7.2.2 Value/remark	Commant	Doforon	Condition
	"0"	Comment	Reference	Condition
mcpttgi:level-within-user- hierarchy		Indicates the level within user hierarchy (only applicable for user-broadcast group).	TS 24.483 [13] clause 6.2.18	
mcpttgi:mcvideo-on- network-invite-members	"true"			
mcpttgi:mcvideo-on- network-maximum-duration	"1800"	Indicates the max duration of MCVideo group calls.	TS 24.483 [13] clause 6.2.56	
mcpttgi:mcvideo-urgent-real- time-video-mode	"true"	Indicates that urgent real-time video mode is allowed for the MCVideo group.		
mcpttgi:mcvideo-non-urgent- real-time-video-mode	"true"	indicates that non urgent real-time video mode is allowed for the MCVideo group.		
mcpttgi:mcvideo-non-real- time-video-mode	"true"	indicates that non real- time video mode is allowed for the MCVideo group.		
mcpttgi:mcvideo-active-real- time-video-mode	"non-urgent-real-time"	Indicates the the active real time video mode of the current group session		
mcpttgi:mcvideo-maximum- simultaneous-mcvideo- transmitting-group-members	"1"	Indicates the allowed maximum number of simultaneous transmitting MCVideo Group Members.		
mcpttgi:mcvideo-on- network-minimum-number-to- start	"1"	Indicates the minimum number of affiliated group members acknowledging before start of video transmission specified in 3GPP TS 23.281 [24] in on-network MCVideo procedures.		
mcpttgi: mcvideo-on- network-group-priority	"1"	Indicates the priority level of the group in on- network MCVideo procedures. Higher value indicates higher priority. Absence of the <mcvideo-on-network- group-priority=""> element of the list-service> element of the MCVideo group document indicates the lowest possible priority.</mcvideo-on-network->		
mcpttgi:mcvideo-off- network-arbitration-approach	"self"	This leaf node indicates the arbitration approach used for off-network video tranmissions on the group.	TS 24.483 [13] clause 6.2.47	
mcpttgi:mcvideo-off- network-maximum- simultaneous-transmissions	"1"	indicates maximum number of simultaneous transmissions for offnetwork MCVideo procedures.	TS 24.483 [13] clause 6.2.48	
mcpttgi:mcvideo-off- network-ProSe-signalling- PPPP	"1"	Indicates the default ProSe Per-Packet Priority (PPPP) value	TS 24.483 [13] clause 6.2.50	

Derivation Path: TS 24.481 [11] cl	Value/remark	Comment	Reference	Condition
mcpttgi:mcvideo-off-	"8"	Indicates the default	TS 24.483 [13]	Condition
network-ProSe-emergency-	8	ProSe Per-Packet	clause 6.2.52	
call-signalling-PPPP		Priority (PPPP) value	clause 0.2.52	
can-signalling-FFFF		(as specified in		
		3GPP TS 23.303 [6])		
		for the MCVideo		
		emerency group call		
		signalling.		
mcpttgi:mcvideo-off-	"7"	Indicates the default	TS 24.483 [13]	
network-ProSe-imminent-		ProSe Per-Packet	clause 6.2.54	
peril-call-signalling-PPPP		Priority (PPPP) value		
		(as specified in		
		3GPP TS 23.303 [6])		
		for the MCVideo		
		imminent peril group		
		call signalling.		
mcpttgi:mcvideo-off-	"1"	Indicates the default	TS 24.483 [13]	
network-ProSe-media-PPPP		ProSe Per-Packet	clause 6.2.51	
		Priority (PPPP) value		
mcpttgi:mcvideo-off-	"8"		TS 24.483 [13]	
network-ProSe-emergency-			clause 6.2.53	
call-media-PPPP				
mcpttgi:mcvideo-off-	"7"	Indicates the default	TS 24.483 [13]	
network-ProSe-imminent-		ProSe Per-Packet	clause 6.2.55	
peril-call-media-PPPP		Priority (PPPP) value		
		(as specified in		
		3GPP TS 23.303 [6])		
		for the MCVideo		
		imminent peril group		
		call media.		
mcpttgi:mcvideo-off-	"60	Indicates the maximum		
network-maximum-duration		duration of group calls		
mcpttgi:mcvideo-off-	"65535"	Indicates the timeout		
network-in-progress-	10000	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		
cancenation-timeout				
		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	clause 7.2.2 Value/remark	Comment	Reference	Condition
list-service[1]		Group 1		
uri attribute	px_MCDATA_Group_A _ID	Value is a "uri" attribute specified in OMA OMA-TS-XDM_Group-V1_1	TS 24.483 [13] clause 6.2.7	
display-name	px_MCData _Group_A_Name	Value is a <display- name> element specified in OMA OMA- TS-XDM_Group-V1_1</display- 	TS 24.483 [13] clause 6.2.8	
list				
entry[1]		group member 1		
uri attribute	px_MCData_ID_User_ A	Indicates an MCData user identity (MCData ID) which is a globally unique identifier within the MCData service that represents the MCData user	TS 24.483 [13] clause 6.2.11	
display-name	Not present			
mcpttgi:user-priority	"3"	Indicates the user priority of the MCData group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCX _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_MCX _User_B_ParticipantTy pe	Participant type of the MCData group	TS 24.483 [13] clause 6.2.13	
rl:mcdata-mcdata-id				
uri attribute	px_MCData_ID_User_ B		TS 24.483 [13] clause 6.2.11	
entry[3]		Group member 3		
uri attribute	px_MCData_ID_User_ C	Indicates an MCData user identity (MCData ID) which is a globally unique identifier within the MCData service that represents the MCData user	TS 24.483 [13] clause 6.2.11	
display-name	Not present		TO 0 / 10 / 11 / 1	
mcpttgi:user-priority	"1"	Indicates the user priority of the MCData group member	TS 24.483 [13] clause 6.2.12	
mcpttgi:participant-type	px_MCX _User_C_ParticipantTy pe	Participant type of the MCData group	TS 24.483 [13] clause 6.2.13	
rl:mcdata-mcdata-id				
uri attribute	px_MCData_ID_User_ C		TS 24.483 [13] clause 6.2.11	
cp:ruleset cp:rule				

Derivation Path: TS 24.481 [11] cl	Value/remark	Comment	Reference	Condition
cp:id attribute	"rule1"	Comment	iveleteting	Condition
cp.id attribute cp:actions	rule i			
mcpttgi:on-network-allow-	"true"	Indicates that the		
getting-member-list	lide	identity is allowed to		
getting-member-list		get the MCS group		
		member list of the MCS		
		group in on-network		
		procedures.		
monttai:modata an	"true"	Indicates that the		
mcpttgi:mcdata-on-	true			
network-allow-getting-affiliation-		identity is allowed to		
list		get the list of MCData users affiliated to the		
		MCData group in on-		
		network MCData		
		procedures		
monttai:modata allaw	"true"	Indicates that the		
mcpttgi:mcdata-allow-	true			
transmit-data-in-this-group		identity is allowed to transmit data in this		
evereinnerted comitees		group		
oxe:supported-services oxe:service				
oxe:service oxe:enabler	"urn:urn-7:3gpp-	String defining an		
OXE.EHADIEI	service.ims.icsi.mcdata.	enabler		
	service.ims.icsi.mcdata.	CITADICI		
mcpttgi:off-network-ProSe-	tsc_MCX_Group_A_Pr	Indicates the Prose	TS 23.303 [68]	
layer-2-group-id	oSeLayer2GroupID		TS 24.483 [13]	
layer-z-group-id	0SeLayer2GroupiD	layer-2 group ID		
mcpttgi:off-network-IP-	"0.0.0.0"	Indicates the ProSe	clause 6.2.27	
multicast-address	0.0.0.0		TS 23.303 [68] TS 24.483 [13]	
muticast-address		group IP multicast	clause 6.2.28	
		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	123430	connectivity service that	TS 24.483 [13]	
relay-service-code		the ProSe UE-to-	clause 6.2.29	
		network relay provides	Clause 0.2.29	
		to public safety		
		applications		
mcpttgi:owner				
	ny MCY Group A Ow	Group's owner (Mission	TC 2/ //22 [12]	
	px_MCX_Group_A_Ow	Group's owner (Mission	TS 24.483 [13]	
	ner_Organization	Critical Organisation).	clause 6.2.15	
mcpttgi:level-within-group-		Critical Organisation). Indicates the level	clause 6.2.15 TS 24.483 [13]	
	ner_Organization	Critical Organisation). Indicates the level within a group	clause 6.2.15	
mcpttgi:level-within-group-	ner_Organization	Critical Organisation). Indicates the level within a group hierarchy (only	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group-	ner_Organization	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group-	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy	ner_Organization	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group- broadcast group).	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy mcpttgi:mcdata-enhanced-	ner_Organization	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group- broadcast group). A list of operational	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy	ner_Organization	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group- broadcast group). A list of operational values used for the	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy mcpttgi:mcdata-enhanced-	ner_Organization	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group-broadcast group). A list of operational values used for the enhanced status	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy mcpttgi:mcdata-enhanced-	ner_Organization	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group- broadcast group). A list of operational values used for the enhanced status service and two text	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy mcpttgi:mcdata-enhanced-	ner_Organization	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group- broadcast group). A list of operational values used for the enhanced status service and two text strings used to display	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy mcpttgi:mcdata-enhanced-	ner_Organization	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group-broadcast group). A list of operational values used for the enhanced status service and two text strings used to display a meaningful message	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy mcpttgi:mcdata-enhanced- status-operational-values	ner_Organization	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group- broadcast group). A list of operational values used for the enhanced status service and two text strings used to display	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy mcpttgi:mcdata-enhanced- status-operational-values mcpttgi:status	ner_Organization "0"	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group-broadcast group). A list of operational values used for the enhanced status service and two text strings used to display a meaningful message	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group-hierarchy mcpttgi:mcdata-enhanced-status-operational-values mcpttgi:status id	ner_Organization	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group-broadcast group). A list of operational values used for the enhanced status service and two text strings used to display a meaningful message	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy mcpttgi:mcdata-enhanced- status-operational-values mcpttgi:status id mcpttgi:shortText	ner_Organization "0" "0"	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group-broadcast group). A list of operational values used for the enhanced status service and two text strings used to display a meaningful message	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy mcpttgi:mcdata-enhanced- status-operational-values mcpttgi:status id mcpttgi:shortText langType	ner_Organization "0" "0" "English"	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group-broadcast group). A list of operational values used for the enhanced status service and two text strings used to display a meaningful message	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy mcpttgi:mcdata-enhanced- status-operational-values mcpttgi:status id mcpttgi:shortText langType langText	ner_Organization "0" "0"	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group-broadcast group). A list of operational values used for the enhanced status service and two text strings used to display a meaningful message	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy mcpttgi:mcdata-enhanced- status-operational-values mcpttgi:status id mcpttgi:shortText langType langText mcpttgi:description	"O" "English" "going"	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group-broadcast group). A list of operational values used for the enhanced status service and two text strings used to display a meaningful message	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy mcpttgi:mcdata-enhanced- status-operational-values mcpttgi:status id mcpttgi:shortText langType langText mcpttgi:description langType	"O" "English" "going"	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group-broadcast group). A list of operational values used for the enhanced status service and two text strings used to display a meaningful message	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy mcpttgi:mcdata-enhanced- status-operational-values mcpttgi:status id mcpttgi:shortText langType langText mcpttgi:description	"O" "English" "going" "English" "going to the operation	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group-broadcast group). A list of operational values used for the enhanced status service and two text strings used to display a meaningful message	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy mcpttgi:mcdata-enhanced- status-operational-values mcpttgi:status id mcpttgi:shortText langType langText mcpttgi:description langType langText	"O" "English" "going"	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group-broadcast group). A list of operational values used for the enhanced status service and two text strings used to display a meaningful message	clause 6.2.15 TS 24.483 [13]	
mcpttgi:level-within-group- hierarchy mcpttgi:mcdata-enhanced- status-operational-values mcpttgi:status id mcpttgi:shortText langType langText mcpttgi:description langType	"O" "English" "going" "English" "going to the operation	Critical Organisation). Indicates the level within a group hierarchy (only applicable for group-broadcast group). A list of operational values used for the enhanced status service and two text strings used to display a meaningful message	clause 6.2.15 TS 24.483 [13]	

Derivation Path: TS 24.481 [11] cl	Value/remark	Comment	Reference	Condition
	"English"	Comment	Kelefelice	Condition
langType	"arrived"			
langText	anived			
mcpttgi:description	"Faciob"			
langType	"English" "just arrived at the			
langText	operation site"			
mcpttgi:level-within-user-	"0"	Indicates the level	TS 24.483 [13]	
hierarchy		within user hierarchy	clause 6.2.18	
		(only applicable for		
		user-broadcast group).		
mcpttgi:mcdata-on-network-	"1"	Indicates the priority		
group-priority		level of the group in on-		
		network MCData		
		procedures. Higher		
		value indicates higher		
		priority		
mcpttgi:mcdata-on-network-	"10000"	Indicates the maximum		
max-data-size-for-SDS		size of data (in bytes)		
		that the originating		
		MCData client is allowed to send to the		
		MCData server for on-		
		network SDS		
		communications		
mcpttgi:mcdata-on-network-	"10000"	Indicates the maximum		
max-data-size-for-FD	10000	size of data (in bytes)		
111dx-udta-312e-101-1 D		that the originating		
		MCData client is		
		allowed to send to the		
		MCData server for on-		
		network FD		
		communications		
mcpttgi:mcdata-on-network-	"2000"	Indicates the maximum		
max-data-size-auto-recv		size of data (in bytes)		
		which the MCData		
		server always requests		
		the terminating MCData		
		client to automatically		
		download for on-		
		network FD		
		communications using		
		HTTP		
mcpttgi:mcdata-off-network-	"1"	Indicates the ProSe		
ProSe-signalling-PPPP		Per-Packet Priority		
		value to be used when		
		transmitting IP packets carrying signalling for a		
		call on the MCData		
		group in off-network		
		MCData procedures		
mcpttgi:mcdata-off-network-	"1"	Indicates the ProSe		
ProSe-media-PPPP		Per-Packet Priority		
		value to be used when		
		transmitting IP packets		
	1		1	
		L carrying media for a call		
		carrying media for a call		
		carrying media for a call on the MCData group in off-network MCData		

5.5.7.4 MCX Group Creation Documents

Table 5.5.7.4-1: MCX Group Creation Document

Derivation Path: TS 24.481 [11] clause	e 7.2.2			
Information Element	Value/remark	Comment	Reference	Condition
list-service [1]				
uri-attribute	px_MCPTT_Grou	uri of the MCPTT group	TS 24.481 [11]	MCPTT
	p_B_ID			
	px_MCVideo_Gro			MCVIDEO
	up_B_ID			
	px_MCData_Grou			MCDATA
	p_B_ID			
display-name	any value	group display name	TS 24.481 [11]	
list				
entry[1]		User-C		
uri-attribute	px_MCPTT_ID_U	User ID allowed to	TS 24.481 [11]	MCPTT
	ser_C	participate in this group		
	px_MCVideo_ID_			MCVIDEO
	User_C			1405 4 7 4
	px_MCData_ID_U			MCDATA
diantarrana	ser_C	Hear display pages	TC 04 404 [44]	
display-name	Not present	User display name	TS 24.481 [11]	
entry[2]	MODTT ID II	User-D	TO 04 404 [44]	MODET
uri-attribute	px_MCPTT_ID_U	User ID allowed to	TS 24.481 [11]	MCPTT
	ser_D	participate in this group		MOVUDEO
	px_MCVideo_ID_			MCVIDEO
	User_D px_MCData_ID_U			MCDATA
	ser D			MCDATA
display-name	Not present	User display name	TS 24.481 [11]	
oxe:supported-services	Not present	Oser display flame	10 24.401 [11]	
oxe:service			TS 24.481 [11]	
oxe:enabler	"urn:urn-7:3gpp-		10 24.401 [11]	MCPTT
Oxe.enablei	service.ims.icsi.m			10101 11
	cptt"			
	"urn:urn-7:3gpp-			MCVIDEO
	service.ims.icsi.m			
	cvideo"			
	"urn:urn-7:3gpp-			MCDATA
	service.ims.icsi.m			
	cdata.sds"			
oxe:group-media				
mcpttgi:mcptt-speech	Present		_	MCPTT
mcpttgi:mcvideo-video-media	Present			MCVIDEO

Table 5.5.7.4-2: MCX Temporary Group Creation Document

Information Element	Value/remark	Comment	Reference	Condition
gmop:document				
gmop:request				
gmop:group-regroup-creation				
group				
list-service[1]				
uri attribute	px_MCPTT_Group_T_I D	MCS temporary group identity		MCPTT
	px_MCVideo_Group_T ID			MCVIDEO
	px_MCData_Group_T_I D			MCDATA
display-name	Not present			
list	Not present	Temporary group contains constituent groups but no group members		
mcpttgi:on-network-			TS 24.481 [11]	
temporary constituent-MCPTT-				
group-IDs				
constituent-MCPTT-	px_MCPTT_Group_A_I	MCS group ID of a		MCPTT
group-ID[1]	p _A _wior +1_oroup_A_r	constituent MCS group of the temporary MCS group		I WOT TT
	px_MCVideo_Group_A _ID			MCVIDEO
	px_MCData_Group_A_ ID			MCDATA
constituent-MCPTT- group-ID[2]	px_MCPTT_Group_B_I D	MCS group ID of a constituent MCS group of the temporary MCS group		MCPTT
	px_MCVideo_Group_B ID			MCVIDEO
	px_MCData_Group_B_ ID			MCDATA
oxe:supported-services				
oxe:service			TS 24.481 [11]	
oxe:enabler	"urn:urn-7:3gpp- service.ims.icsi.mcptt"			MCPTT
	"urn:urn-7:3gpp- service.ims.icsi.mcvide o"			MCVIDEO
	"urn:urn-7:3gpp- service.ims.icsi.mcdata. sds"			MCDATA
oxe:group-media				
mcpttgi:mcptt-speech	Present			MCPTT
mcpttgi:mcvideo-video-	Present			MCVIDEO
media				

5.5.8 Default MCS configuration management messages and other information elements

5.5.8.1 MCX Initial UE Configuration

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

Table 5.5.8.1-1: MCX Initial UE Configuration Defaults

Derivation Path: TS 24.484 [14]		_	T	T
Information Element	Value/remark	Comment	Reference	Condition
mcptt-UE-initial-configuration	1101/ 5			
domain attribute	px_MCX_DomainName _Organization_A	Mandatory attribute: domain name of the mission critical organization		
Default-user-profile	not present			
on-network				
Timers				
T100	"2"	Values 0-255 sec	TS 24.483 [13] clause 8.2.11	
T101	"2"	Values 0-255 sec	TS 24.483 [13] clause 8.2.12	
T103	"5"	Values 0-255 sec	TS 24.483 [13] clause 8.2.13	
T104	"2"	Values 0-255 sec	TS 24.483 [13] clause 8.2.14	
T132	"3"	Values 0-255 sec	TS 24.483 [13] clause 8.2.15	
HPLMN				
PLMN attribute	PLMN-Id = MCC MNC with MCC and MNC being the same as stored in EF _{IMSI} on the test SIM card according to clause 4.9.2 in TS	PLMN on which the UE is allowed for MCX services. NOTE: Same PLMN as of the Cell on which the UE is camped during	TS 23.003 [69] clause 12.1 TS 24.483 [13] clause 8.2.16	
	36.508 [6]	testing.		
service		MCX related services on a per HPLMN basis		
MCPTT-to-con-ref	px_MCX_APN	configuration parameter for establishment of the PDN connection for the MCX service	TS 24.483 [13] clause 8.2.21	
MC-common-core-to-con- ref	px_MCX_APN	configuration parameter for establishment of the PDN connection for the MC common core service	TS 24.483 [13] clause 8.2.24	
MC-ID-to-con-ref	px_MCX_APN	configuration parameter for establishment of the PDN connection for the MC identity management service	TS 24.483 [13] clause 8.2.27	
VPLM[1]	empty list			
App-Server-Info				
idms-auth-endpoint	"https://" & px_MCX_IdMS_auth_I PAddress & ":" & px_MCX_IdMS_auth_P ort & tsc_MCX_IdMS_auth_ UriPath	Identity management server authorisation endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41	IPv4
	"https://[" & px_MCX_IdMS_auth_I PAddress & "]:" & px_MCX_IdMS_auth_P ort & tsc_MCX_IdMS_auth_ UriPath	Identity management server authorisation endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41	IPv6

rivation Path: TS 24.484 [14]	Value/remark	Comment	Reference	Condition
idms-token-endpoint	"https://" &	Identity management	TS 23.003 [69]	IPv4
idino tokon onapoliti	px_MCX_ldMS_token_l	server token endpoint	TS 24.483 [13]	11 V-T
	PAddress & ":" &	identity information	clause 8.2.41A	
	px_MCX_ldMS_token_	dentity information	Clause U.Z.+1A	
	Port &			
	tsc_MCX_IdMS_token_			
	UriPath			
	"https://[" &	Identity management	TS 23.003 [69]	IPv6
				IFVO
	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_			
1.0	UriPath	ID II	TO 00 000 [00]	ID 4
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			
gms	tsc_MCX_GMS_Hostna	Indicates the group	TS 23.003 [69]	
	me	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	
		identity information		
kms	tsc_MCX_KMS_Hostna	Indicates the key	TS 23.003 [69]	
	me	management server	TS 24.483 [13]	
		identity information	clause 8.2.44	
tls-tunnel-auth-method		·		
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		
		is used		
x509	Not present	the X.509 certificate for	TS 24.483 [13]	
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	. Tot procent	mutual authentication	clause 8.2.44C	
		for the TLS tunnel	JIGGG 0.2.440	
		authentication		
key	Not present	pre-shared key for	TS 24.483 [13]	
Ney	140t bieseilt	mutual authentication	clause 8.2.44D	
			Gause 6.2.44D	
		for the TLS tunnel		
CMC LIDI	too MCV CMCUDI	authentication	TC 22 002 [00]	
GMS-URI	tsc_MCX_GMSURI	The group	TS 23.003 [69]	
		management service	TS 24.483 [13]	
		URI information which	clause 8.2.9	
		contains the public		
		service identity for		
		performing subscription		
		proxy function of the		
		GMS		
group-creation-XUI	px_MCX_GroupCreatio	Indicates the group	TS 23.003 [69]	
-	nXUI	creation XUI	TS 24.483 [13]	
				1
		information for creation	clause 8.2.9A	

Derivation Path: TS 24.484 [14], Information Element	Value/remark	Comment	Reference	Condition
GMS-XCAP-root-URI	tsc_MCX_GMSXCAPR	Indicates the group	TS 23.003 [69]	20.1411.01
GING-AGAI -1001-0141	ootURI	management server	TS 24.483 [13]	
	OOLOINI	XCAP Root URI	clause 8.2.9B	
			ciause o.z.9b	
0110 1/015	1101/ 01101/0155	information	=0 !!	
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 enabled	lido	integrity protection is	clause 8.2.44E	
		enabled	Clause 0.2.44L	
er i er ire e er			TO 04 400 [40]	
confidentiality-protection-	"true"	Indicates whether	TS 24.483 [13]	
enabled		integrity protection is	clause 8.2.44F	
		enabled		
anyExt				
MCPTT-Service-Details				
IPv6-Required	false	indicates whether IPv6		
ii vo-ixequileu	laise			
		shall be used to access		
		the MCPTT service		
Server-URI	tsc_MCPTT_PublicServ	URI used to contact the		
	iceld_A	MCPTT service server		
MCVideo-Service-Details				
IPv6-Required	false	indicates whether IPv6		
ii vo-itequirea	laise	shall be used to access		
		the MCVideo service		
Server-URI	tsc_MCVideo_PublicSe	URI used to contact the		
	rviceld_A	MCVideo service server		
MCData-Service-Details				
IPv6-Required	false	indicates whether IPv6		
ii vo-itequileu	laise	shall be used to access		
		the MCData service		
Server-URI	tsc_MCData_PublicSer	URI used to contact the		
	viceId_A	MCData service server		
off-network				
Timers				
TFG1	"150"	Indicates the timer for	TS 24.483 [13]	
11 01	100	wait for call	clause 8.2.47	
			Clause 0.2.41	
		announcement; Values:		
		0-65535 ms		
TFG2	"2000"	Indicates the timer for	TS 24.483 [13]	
		call announcement;	clause 8.2.48	
		Values: 0-65535 ms		
TFG3	"40"	Indicates the timer for	TS 24.483 [13]	
33	1 .5	call probe	clause 8.2.49	
		retransmission; Values:	5.4450 J.Z.73	
		•		
	1,000	0-65535 ms		
TFG4	"20"	Indicates the timer for	TS 24.483 [13]	
		waiting for the MCX	clause 8.2.50	
		user; Values: 0-60 s		
TFG5	"2"	Indicates the timer for	TS 24.483 [13]	
55	1 -	not present incoming	clause 8.2.51	
			GIAUSE G.Z.JT	
		call announcements;		
		Values: 0-255 s		
TFG11	"3000"	Indicates the timer for	TS 24.483 [13]	
		MCX emergency end	clause 8.2.52	
		retransmission; Values:		
		0-65535 ms		
TFG12	"2000"		TC 24 402 [42]	
11612	"3000"	Indicates the timer for	TS 24.483 [13]	
		MCX imminent peril	clause 8.2.53	
		end retransmission;		
		Values: 0-65535 ms		1

Derivation Path: TS 24.484 [14] Information Element	Value/remark	Comment	Deference	Condition
TFG13	"1"	Indicates the timer for	Reference TS 24.483 [13]	Condition
11 613	'	implicit priority	clause 8.2.54	
		downgrade; Values: 0-	0.0000 0.2.0	
		255 s		
TFG14	"1"	Indicates the MCX	TS 24.483 [13]	
		timer for implicit priority	clause 8.2.54A	
		downgrade (imminent		
		peril); Values: 0-255 s		
TFP1	"2000"	Indicates the timer for	TS 24.483 [13]	
		private call request	clause 8.2.55	
		retransmission; Values:		
		0-65535 ms	=======================================	
TFP2	"50"	Indicates the timer for	TS 24.483 [13]	
		waiting for call	clause 8.2.56	
		response message;		
TEDO	"2000"	Values: 0-60 s	TC 04 400 [40]	
TFP3	"2000"	Indicates the timer for	TS 24.483 [13] clause 8.2.57	
		private call release	ciause 6.2.57	
		retransmission; Values: 0-65535 ms		
TFP4	"5000"	Indicates the timer for	TS 24.483 [13]	
1117	3000	private call release	clause 8.2.58	
		retransmission; Values:	3.4400 0.2.00	
		0-65535 ms		
TFP5	"30"	Indicates the timer for	TS 24.483 [13]	
		call release; Values: 0-	clause 8.2.59	
		600 s		
TFP6	"3000"	Indicates the timer for	TS 24.483 [13]	
		MCX emergency	clause 8.2.60	
		private call cancel		
		retransmission; Values:		
		0-65535 ms		
TFP7	"6"	Indicates the timer for	TS 24.483 [13]	
		waiting for any	clause 8.2.61	
		message with same call		
		identifier; Values: 0-255		
TFB1	"300"	Indicates the timer for	TS 24.483 [13]	
IFBI	300	max duration; Values:	clause 8.2.62	
		0-600 s	ciause o.z.oz	
TFB2	"10"	Indicates the timer for	TS 24.483 [13]	
52		max duration; Values:	clause 8.2.63	
		0-10 s		
TFB3	"20"	Indicates the timer for	TS 24.483 [13]	
		waiting for the MCX	clause 8.2.64	
		user; Values: 0-60 s		
T201	"1000"	Indicates the timer for	TS 24.483 [13]	
		floor request; Values:	clause 8.2.65	
		0-65535 ms		
T203	"5"	Indicates the timer for	TS 24.483 [13]	
		end of RTP media;	clause 8.2.66	
T00.4	151	Values: 0-255 s	TO 0.1.10 2 21.22	
T204	"5"	Indicates the timer for	TS 24.483 [13]	
		floor queue position	clause 8.2.67	
		request; Values: 0-255		
T205	"1"	Indicates the timer for	TS 24.483 [13]	
1200		floor granted request;	clause 8.2.68	
		Values: 0-255 s	Glause 0.2.00	
T230	"10"	Indicates the timer for	TS 24.380 [10]	
1200	10	inactivity; Values: 0-255	TS 24.580 [10]	
		S	10 27.001 [00]	
T233	"10"	Indicates the timer for	TS 24.483 [13]	
. 200	'	pending user action;	clause 8.2.70	
		Values: 0-255 s		1

Information Element	Value/remark	Comment	Reference	Condition
TFE1	"30"	Indicates the timer for	TS 24.483 [13]	
		MCX emergency alert;	clause 8.2.71	
		Values: 0-65535 s		
TFE2	"10"	Indicates the timer for	TS 24.483 [13]	
		MCX emergency alert	clause 8.2.72	
		re-transmission;		
		Values: 0-10 s		
Counters				
CFP1	"3"	Indicates the counter	TS 24.483 [13]	
		for private call request	clause 8.2.74	
		retransmission		
CFP3	"5"	Indicates the counter	TS 24.483 [13]	
		for private call release	clause 8.2.75	
		retransmission		
CFP4	"2"	Indicates the counter	TS 24.483 [13]	
		for private call accept	clause 8.2.76	
		retransmission		
CFP6	"2"	Indicates the counter	TS 24.483 [13]	
		for private call accept	clause 8.2.77	
		retransmission		
CFP11	"2"	Indicates the counter	TS 24.483 [13]	
		for MCX group call	clause 8.2.78	
		emergency end		
		retransmission		
CFP12	"2"	Indicates the counter	TS 24.483 [13]	
		for MCX imminent peril	clause 8.2.79	
		call emergency end		
		retransmission		
C201	"3"	Indicates the counter	TS 24.483 [13]	
		for floor request	clause 8.2.80	
C204	"2"	Indicates the counter	TS 24.483 [13]	
		for floor queue position	clause 8.2.81	
		request		
C205	"4"	Indicates the counter	TS 24.483 [13]	
		for floor granted	clause 8.2.82	
		request		

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

5.5.8.2 MCPTT UE Configuration

The structure of a group configuration document is specified in TS 24.484 [14] clause 8.2, single MCPTT group configuration parameters are defined in TS 24.483 [13] clause 4.2.

Table 5.5.8.2-1: MCPTT UE Configuration Defaults

Information Element	Value/remark	Comment	Reference	Condition
mcptt-UE-configuration				
domain attribute	px_MCX_DomainName _Organization_A	Mandatory attribute: domain name of the mission critical organization		
common				
private-call				
Max-Simul-Call-N10	"2"	Indicates the maximum number of private calls	TS 24.483 [13] clause 4.2.7	
MCPTT-Group-Call				
Max-Simul-Call-N4	"3"	Indicates the maximum number of simultaneous group calls	TS 24.483 [13] clause 4.2.9	
Max-Simul-Trans-N5	"5"	Indicates the maximum number of transmissions in a group	TS 24.483 [13] clause 4.2.10	
Prioritized-MCPTT-Group				
MCPTT-Group-Priority[1]				
MCPTT-Group-ID	px_MCPTT_Group_A_I D	Value is a "uri" attribute specified in OMA OMA-TS-XDM_Group-V1_1 that indicates the group id.	TS 24.483 [13] clause 4.2.13	
group-priority-hierarchy	"7"	Indicates the requested presentation priority of group call; Values: 0-7 "7"=the top priority among groups	TS 24.483 [13] clause 4.2.14	
on-network				
IPv6Preferred	"false"	Indicates whether IPv6 is preferred over IPv4 for on-network operation when the UE has both IPv4 and IPv6 host configuration.	TS 24.483 [13] clause 4.2.17	
Relay-Service	"true"	Indicates the authorisation to use a relay service	TS 24.483 [13] clause 4.2.16	
Relayed-MCPTT-Group[1]				
MCPTT-Group-ID	px_MCPTT_Group_A_I D	One allowed relayed MCPTT group	TS 24.483 [13] clause 4.2.20	
Relay-Service-Code	"123456"	Identifies a connectivity service the ProSe UE- to-Network Relay provides to Public Safety applications; 24- bit value	TS 23.303 [68] TS 24.483 [13] clause 4.2.21	

5.5.8.3 MCPTT User Profile

The structure of a user profile document is specified in TS 24.484 [14] clause 8.3, single MCPTT group configuration parameters are defined in TS 24.483 [13] clause 5.2.

The structure of the configuration document is based on the XML Schema in clause 8.3.2.3 of TS 24.484 [14] and XML "ruleset" schema according to IETF RFC 4745 [103]. To distinguish the schemas the prefix "cp" ("common policy") is used for the ruleset.

Table 5.5.8.3-1: MCPTT User Profile Defaults

Information Element	Value/remark	Comment	Reference	Condition
mcptt-user-profile				
XUI-URI attribute	"sip:" & px_MCPTT_ID_User_A	same as the XUI value of the Document URI		
user-profile-index attribute	"49"	value arbitrarily selected		
Status	true	MCPTT user profile is enabled		
ProfileName	"mcptt-user-profile-" & user-profile-index & ".xml"	name of the user profile document; user-profile-index is the value of the user-profile-index attribute	TS 24.483 [13] clause 5.2.7B	
Common				
index attribute	"0"	Index for the particular MCPTT user profile		
MCPTTUserID		·		
index attribute	"0"			
uri-entry	px_MCPTT_ID_User_A	MCPTT user identity (MCPTT ID) which is a globally unique identifier within the MCPTT service that represents the MCPTT user	TS 24.483 [13] clause 5.2.7	
UserAlias		Alphanumeric aliases of MCPTT user	TS 24.483 [13] clause 5.2.8	
alias-entry	px_MCPTT_User_A_Ali as			
ParticipantType	px_MCX_User_A_Parti cipantType			
MissionCriticalOrganization	px_MCX_DomainName _Organization_A	Indicates the organization an MCPTT user belongs to	TS 24.483 [13] clause 5.2.11	
PrivateCall				
PrivateCallList				
PrivateCallURI[1]				
index attribute	"0"			
uri-entry	px_MCPTT_ID_User_B	MCPTT user(s) who can be called in a MCPTT private call	TS 24.483 [13] clause 5.2.17	
display-name	"User B Name"	a human readable name for this User	TS 24.483 [13] clause 5.2.18	
PrivateCallURI[2]				
index attribute	"1"			
uri-entry	px_MCPTT_ID_User_C	MCPTT user(s) who can be called in a MCPTT private call	TS 24.483 [13] clause 5.2.17	
display-name	"User C Name"	a human readable name for this User	TS 24.483 [13] clause 5.2.18	
PrivateCallProSeUser[1]				
index attribute	"0"			
DiscoveryGroupID	'123456'O	Discovery group ID in the ProSe discovery procedures	TS 23.303 [68] TS 24.483 [13] clause 5.2.19	
User-Info-ID	'55555555555O	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" '123456'O	Discovery group ID in the ProSe discovery procedures	TS 23.303 [68] TS 24.483 [13] clause 5.2.19	
User-Info-ID	'66666666666'O	Prose user Info ID in the ProSe discovery procedures	TS 23.303 [68] TS 24.483 [13] clause 5.2.19A	
EmergencyCall				

Perivation Path: TS 24.484 [14] of the Information Flament		Commont	Deference	Conditio
Information Element	Value/remark	Comment	Reference	Conditio
MCPTTPrivateRecipient				
entry entry-info attribute	"UsePreConfigured"	Indicates the criteria to determine when initiation of an MCPTT emergency private call uses the MCPTT private recipient ID.	TS 24.483 [13] clause 5.2.29F	
index attribute	"0"	private recipient ib.		
uri-entry	px_MCPTT_ID_User_B	The MCPTT private recipient for an MCPTT emergency private call	TS 24.483 [13] clause 5.2.29B	
display-name	"User B Name"	a human readable name for this User	TS 24.483 [13] clause 5.2.29E	
ProSeUserID-entry				
index attribute	"0"			
DiscoveryGroupID	'123456'O	Discovery group ID in the ProSe discovery procedures	TS 24.483 [13] clause 5.2.29C	
User-Info-ID	'555555555555'O	ProSe user Info ID in the ProSe discovery procedures	TS 24.483 [13] clause 5.2.29D	
MCPTT-group-call				
MaxSimultaneousCallsN6	"3"	Indicates the maximum number of simultaneously received MCPTT group calls	TS 24.483 [13] clause 5.2.31	
EmergencyCall				
MCPTTGroupInitiation				
entry				
entry-info attribute	"UseCurrentlySelected Group"	Use currently selected MCPTT group for an on-network MCPTT emergency group call	TS 24.483 [13] clause 5.2.34D	
index attribute	"0"			
uri-entry	px_MCPTT_Group_A_I D	The group used upon certain criteria on initiation of an MCPTT emergency group call	TS 24.483 [13] clause 5.2.34B	
display-name	px_MCPTT_Group_A_ Name	The display name for group used for emergency	TS 24.483 [13] clause 5.2.34C	
ImminentPerilCall				
MCPTTGroupInitiation				
entry				
entry-info attribute	"UseCurrentlySelected Group"	Use currently selected MCPTT group for an on-network MCPTT imminent peril group call	TS 24.483 [13] clause 5.2.39D	
index attribute	"0"			
uri-entry	px_MCPTT_Group_A_I D	the group used on initiation of an MCPTT imminent peril group call.	TS 24.483 [13] clause 5.2.39B	
display-name	px_MCPTT_Group_A_ Name	display name for group used for the imminent peril call	TS 24.483 [13] clause 5.2.39C	
EmergencyAlert				
MCPTTGroupInitiation				
entry				
index attribute	"0"			
entry-info attribute	"UseCurrentlySelected Group"	Use currently selected MCPTT group for emergency alert	TS 24.483 [13] clause 5.2.43E	

Derivation Path: TS 24.484 [14] Information Element	Value/remark	Comment	Reference	Conditio
uri-entry	px_MCPTT_Group_A_I	Indicates the MCPTT	TS 24.483 [13]	
G Gy	D	group used upon	clause 5.2.43B	
	_	certain criteria on		
		initiation of an MCPTT		
		emergency alert.		
display-name	px_MCPTT_Group_A_	Optional; name of	TS 24.483 [13]	
display-flaffle	Name	emergency alert group	clause 5.2.43D	
Priority	"10"	Indicates the priority of	TS 24.483 [13]	
Phoney	10			
		the MCPTT group calls,	clause 5.2.43F	
0001.4		0-255		
OffNetwork				
index attribute	"0"			
MCPTTGroupInfo				
entry[1]				
index attribute	"0"			
uri-entry	px_MCPTT_Group_A_I	Indicates an off-network	TS 24.483 [13]	
•	D =	MCPTT group for use	clause 5.2.53	
		by an MCPTT user		
display-name	px_MCPTT_Group_A_	The display name	TS 24.483 [13]	
alopiay namo	Name	corresponding to off-	clause 5.2.53A	
	Name	network group id	JIAUSE J.Z.JSA	
User-Info-ID	'55555555555'O	ProSe user info ID	TS 23.303 [68]	
User-info-ID	55555555555 U	Prose user into ID		
			TS 24.483 [13]	
O.N. (clause 5.2.58	
OnNetwork				
index attribute	"0"			
MCPTTGroupInfo				
entry[1]		Group 1 the MCPTT		
7		user is allowed to		
		affiliate to		
index attribute	"0"			
uri-entry	px_MCPTT_Group_A_I	The MCPTT group ID	TS 24.483 [13]	
dif-entry	D	for the on-network	clause 5.2.48B	
		MCPTT group that the	4	
		MCPTT group that the	4	
P. I	MORTT	to affiliate to.	TO 04 400 [40]	
display-name	px_MCPTT_Group_A_	The display name for	TS 24.483 [13]	
	Name	the group	clause 5.2.48B	
			5	
anyEXT				
RulesForAffiliation			TS 24.483 [13]	
			clause 5.2.48B	
			4A	
ListOfLocationCriteria				
EnterSpecificArea				
EllipsoidArcArea				
Center	<u> </u>			
	"2221600"	Latitude of 35.74428		
Latitude	"3331608"			
		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
Longitude	"6510349"	Longitude of 139.69695		
		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
Radius	"10"	Radius of 50 meters		
		encoded according to		
		TS 23.032 [65] clause		
		6.6		
OffcotAnglo	"0"			
OffsetAngle	-	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees		
		encoded according to		
		TS 23.032 [65] clause		
		6.7		
ExitSpecificArea				

	Comment	Reference	Condition
			4
i			
"3331608"	Latitude of 35.74428 degrees encoded		
	according to TS 23.032		
"6510401"			
	according to TS 23.032		
"10"			
10	encoded according to		
"0"			
-			
179	encoded according to TS 23.032 [65] clause		
	0.1	TS 24 483 [13]	
		clause 5.2.48B	
1			
1			
1			
"3331608"	Latitude of 35,74428		
333.333			
"6510401"	Longitude of 139.69806		
	degrees encoded		
	according to TS 23.032		
"10"			
_			
"179"	Full circle: 360 degrees		
	6.7		
			-
			-
"0004000"	1-44-4 (05.74422		
"3331608"	degrees encoded		
"6510349"			
"10"			
l lou			
"1/9"			
	encoded according to		1
i	TS 23.032 [65] clause		
	"6510401" "10" "0" "179" "3331608" "6510401" "10" "179" "179" "179"	[65] clause 6.1 "6510401" Longitude of 139.69806 degrees encoded according to TS 23.032 [65] clause 6.1 "10" Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6. "0" O degrees "179" Full circle: 360 degrees encoded according to TS 23.032 [65] clause 6.7 "3331608" Latitude of 35.74428 degrees encoded according to TS 23.032 [65] clause 6.7 "6510401" Longitude of 139.69806 degrees encoded according to TS 23.032 [65] clause 6.1 "10" Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6 "0" O degrees "179" Full circle: 360 degrees encoded according to TS 23.032 [65] clause 6.7 "3331608" Latitude of 35.74428 degrees encoded according to TS 23.032 [65] clause 6.6 "0" O degrees "179" Latitude of 35.74428 degrees encoded according to TS 23.032 [65] clause 6.7 "3331608" Latitude of 35.74428 degrees encoded according to TS 23.032 [65] clause 6.7 "3331608" Latitude of 35.74428 degrees encoded according to TS 23.032 [65] clause 6.7 "3331608" Latitude of 35.74428 degrees encoded according to TS 23.032 [65] clause 6.7 "3331608" Latitude of 35.74428 degrees encoded according to TS 23.032 [65] clause 6.6 "0" O degrees "10" Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6 "0" O degrees "179" Full circle: 360 degrees	[65] clause 6.1 Longitude of 139.69806 degrees encoded according to TS 23.032 [65] clause 6.1 TS 23.032 [65] clause 6.6 G.6 TO" O degrees Full circle: 360 degrees encoded according to TS 23.032 [65] clause 6.6 TS 23.032 [65] clause 6.7 TS 24.483 TS 2

Derivation Path: TS 24.484 [14] cl	Value/remark	Comment	Reference	Condition
manual-deaffiliation-not-	"false"		TS 24.483 [13]	
allowed-if-affiliation-rules-are-			clause	
met			5.2.48B6	
MaxAffiliationsN2	20			
	20			· · · · · ·
MaxSimultaneousTransmissions N7				
ImplicitAffiliations		Group 1 the MCPTT		
		user is implicitly affiliated to		
entry				
index attribute	"0"			
uri-entry	px_MCPTT_Group_A_I D	indicates a MCPTT group ID to which the MCPTT user is implicitly affiliated to	TS 24.483 [13] clause 5.2.48C 4	
display-name	px_MCPTT_Group_A_ Name	display name for implicitly affiliated group	TS 24.483 [13] clause 5.2.48C 5	
PrivateEmergencyAlert				
entry				
entry-info attribute	"UsePreConfigured"	Indicates the criteria to determine when initiation of an MCPTT emergency private call uses the MCPTT private recipient ID.	TS 24.483 [13] clause 5.2.48O	
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	"User B Name"	The display name corresponding to private emergency call id	TS 24.483 [13] clause 5.2.48N	
anyExt		g ,		
RemoteGroupSelectionURIList			TS 24.483 [13] clause 5.2.48U2	
entry[1]	px_MCPTT_ID_User_A		TS 24.483 [13] clause 5.2.48U4	
entry[2]	px_MCPTT_ID_User_B		TS 24.483 [13] clause 5.2.48U4	
entry[3]	px_MCPTT_ID_User_C		TS 24.483 [13] clause 5.2.48U4	
FunctionalAliasList			TS 24.483 [13] clause 5.2.48 W6	
entry[1]				
uri-entry[1]	px_MCPTT_ID_FA_A			
anyExt				
LocationCriteriaForActivation				
EnterSpecificArea				
EllipsoidArcArea				
Center				

Derivation Path: TS 24.484 [14] c			D. (10
Information Element	Value/remark	Comment	Reference	Condition
latitude	"3331608"	Latitude of 35.74428		
		degrees encoded		
		according to TS 23.032		
I a sa astro al a	11054040411	[65] clause 6.1		
longitude	"6510401"	Longitude of 139.69806		
		degrees encoded according to TS 23.032		
		[65] clause 6.1		
Radius	"10"	Radius of 50 meters		
Radius	10	encoded according to		
		TS 23.032 [65] clause		
		6.6		
OffsetAngle	"0"	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees		
inordada/trigio	170	encoded according to		
		TS 23.032 [65] clause		
		6.7		
ExitSpecificArea		-		
EllipsoidArcArea				
Center				
latitude	"3331608"	Latitude of 35.74428		
	333.333	degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
longitude	"6510349"	Longitude of 139.69695		
		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
Radius	"10"	Radius of 50 meters		
		encoded according to		
		TS 23.032 [65] clause		
		6.6		
OffsetAngle	"0"	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees		
		encoded according to		
		TS 23.032 [65] clause		
		6.7		
LocationCriteriaForDeactivation				
EnterSpecificArea				
EllipsoidArcArea				
Center	"0004055"	1		
latitude	"3331608"	Latitude of 35.74428		
		degrees encoded		
		according to TS 23.032		
1 22 1		[65] clause 6.1		
longitude	"6510349"	Longitude of 139.69695		
		degrees encoded		
		according to TS 23.032		
Dedition		[65] clause 6.1		
Radius	"10"	Radius of 50 meters		
		encoded according to		
		TS 23.032 [65] clause		
Officet A note	"0"	6.6		
OffsetAngle	"179"	0 degrees Full circle: 360 degrees		
IncludedAngle	119	encoded according to		
		TS 23.032 [65] clause		
		6.7		
ExitSpecificArea		0.7		
EllipsoidArcArea				
Center				
Jenter	1			<u> </u>

Derivation Path: TS 24.484 [14] clarification Element	Value/remark	Comment	Reference	Condition
latitude	"3331608"	Latitude of 35.74428	11210101100	22
		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
longitude	"6510401"	Longitude of 139.69806		
9		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
Radius	"10"	Radius of 50 meters		
	-	encoded according to		
		TS 23.032 [65] clause		
		6.6		
OffsetAngle	"0"	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees		
		encoded according to		
		TS 23.032 [65] clause		
		6.7		
manual-deactivation-not-	"false"		TS 24.483 [13]	
allowed-if-location-criteria-met			clause 5.2.48	
and the state of t			W6C	
cp:ruleset				
cp:rule				
cp:id attribute	"rule1"	+		
cp:actions	Taloi			
allow-create-delete-user-	"true"	Indicates authorisation	TS 24.483 [13]	
alias	l luc	to create and delete	clause 5.2.9	
alias		aliases of other MCPTT	01au36 3.2.8	
allow-private-call	"true"	Indicates the	TS 24.483 [13]	
allow-private-call	uue	authorisation to make a	clause 5.2.13	
			Gause 3.2.13	
allow-private call to any	"true"	MCPTT private call indicates the	TC 24 402 [42]	
allow-private-call-to-any-	uue		TS 24.483 [13] clause 5.2.14	
user		authorisation to make a	ciause 5.2.14	
		MCPTT private call to		
allow manual	"truo"	any MCPTT user Indicates the	TC 24 402 [42]	
allow-manual-	"true"		TS 24.483 [13]	
commencement		authorisation to make a	clause 5.2.20	
		MCPTT private call with		
allow automotic	"truo"	manual commencement	TC 04 400 [40]	
allow-automatic-	"true"	Indicates the	TS 24.483 [13]	
commencement		authorisation to make a	clause 5.2.21	
		MCPTT private call with		
		automatic		
	" "	commencement	TO 04 400 515	
allow-force-auto-answer	"true"	Indicates the	TS 24.483 [13]	
		authorisation of MCPTT	clause 5.2.22	
		user to force automatic		
		answer for a MCPTT		
		private call		
allow-failure-restriction	"false"	Indicates the	TS 24.483 [13]	
		authorisation to restrict	clause 5.2.23	
		the provision of a		
		notification of call failure		
		reason for a MCPTT		
		private call		
allow-private-call-media-	"true"	Indicates authorisation	TS 24.483 [13]	
protection		to protect confidentiality	clause 5.2.24	
		and integrity of media		
		for MCPTT private calls		
allow-private-call-floor-	"true"	Indicates authorisation	TS 24.483 [13]	
control-protection		to protect confidentiality	clause 5.2.25	
•		and integrity of floor		
		control signalling for		

Information Element	ause 8.3 Value/remark	Comment	Reference	Condition
allow-emergency-private-	"true"	Indicates the	TS 24.483 [13]	
call		authorisation to make	clause 5.2.27	
		an MCPTT emergency		
		private call.		
allow-cancel-private-	"true"	Indicates the	TS 24.483 [13]	
emergency-call		authorisation to cancel	clause 5.2.28	
emergeney can		emergency priority in an	0.0.000 0.2.20	
		MCPTT emergency		
		private call by an		
		authorised MCPTT user		
allow-emergency-group-call	"true"	Indicates the	TS 24.483 [13]	
and the second group can		authorisation to make	clause 5.2.33	
		an MCPTT emergency	0.0.0.0	
		group call functionality		
		enabled for MCPTT		
		user		
allow-cancel-group-	"true"	Indicates the	TS 24.483 [13]	
emergency		authorisation to cancel	clause 5.2.35	
oorgonoy		an in progress MCPTT	314400 0.2.00	
		emergency call		
		associated with a		
		group.		
allow-imminent-peril-call	"true"	Indicates the	TS 24.483 [13]	
anow infillinetit-perif-call	1140	authorisation to make	clause 5.2.37	
		an Imminent Peril group	Glause 5.2.57	
		call		
allow-cancel-imminent-peril	"true"	Indicates the	TS 24.483 [13]	
allow-cancer-infinitent-peni	lide	authorisation for in-	clause 5.2.38	
		progress MCPTT	ciause 3.2.30	
		imminent peril		
		cancelation		
allow activate emergency	"true"	Indicates the	TS 24.483 [13]	
allow-activate-emergency- alert	liue	authorisation to activate	clause 5.2.41	
alert		an MCPTT emergency	ciause 3.2.41	
		alert		
allow-cancel-emergency-	"true"	Indicates the	TS 24.483 [13]	
alert	lide	authorisation to cancel	clause 5.2.42	
alert		an MCPTT emergency	Clause 3.2.42	
		alert		
allow-create-group-	"true"	Indicates the	TS 24.483 [13]	
broadcast-group	lide	authorisation to create a	clause 5.2.46	
bioadoast gioup		group-broadcast group.	JIGGG J.Z.40	
allow-create-user-	"true"	Indicates the	TS 24.483 [13]	
broadcast-group	uuc	authorisation to create a	clause 5.2.48	
bioaucasi-gioup		user-broadcast group	Uause 3.2.40	
allow-offnetwork	"true"	Indicates the	TS 24.483 [13]	
anow-onnetwork	uue	authorisation for off-	clause 5.2.50	
		network services	Jiause 3.2.30	
allow liston both overriding	"false"		TS 24.483 [13]	
allow-listen-both-overriding- and-overridden	idise	Indicates whether the MCPTT user is allowed	18 24.483 [13] clause 5.2.54	
anu-overnuden			Uause 3.2.34	
		to listen both overriding and override		
allow transmit during	"false"	Indicates whether the	TS 24.483 [13]	
allow-transmit-during-	idise			
override		MCPTT user is allowed	clause 5.2.55	
		to transmit in case of		
		override (overriding		
-II		and/or overridden)	TO 04 400 [46]	
allow-off-network-group-	"true"	Indicates the	TS 24.483 [13]	
call-change-to-emergency		authorisation for a	clause 5.2.56	
		participant to change an		
		off-network group call		
		in-progress to an off-		
		network MCPTT		
	Ī	emergency group call		Ì

Information Element allow-imminent-peril- change	Value/remark "true"	Comment Indicates the	Reference TS 24.483 [13]	Condition
	140			
onango		authorisation for a	clause 5.2.57	I
	1	participant to change an		I
		off-network group call		I
		in-progress to an off-		I
		network MCPTT		I
		imminent peril group		I
		call		
allow-regroup	"true"	Indicates whether the	TS 24.483 [13]	I
		MCPTT user is	clause 5.2.48D	I
		authorised to perform		I
		dynamic regrouping		I
allaw process atatus		operations	TC 04 400 [40]	
allow-presence-status	"true"	Indicates the presence status on the network of	TS 24.483 [13] clause 5.2.48E	I
		this MCPTT user is	clause 5.2.46E	I
		available		I
allow-request-presence	"true"	Indicates whether the	TS 24.483 [13]	
anow-request-presence	แนธ	MCPTT user is	clause 5.2.48F	Ì
		authorised to obtain	JIQUSC J.2.401	Ì
		whether a particular		Ì
		MCPTT User is present		Ì
		on the network		Ì
allow-private-call-	"true"	Indicates whether the	TS 24.483 [13]	<u> </u>
participation		MCPTT user is allowed	clause 5.2.48G	1
,		to participate in MCPTT		I
		private calls that they		I
		are invited to		<u> </u>
allow-override-of-	"true"	Indicates whether the	TS 24.483 [13]	 [
transmission		MCPTT user is	clause 5.2.48H	I
		authorised to override		I
		transmission in a		I
		MCPTT private call		<u> </u>
allow-manual-off-network-	"true"	Indicates whether the	TS 24.483 [13]	I
switch		MCPTT user is	clause 5.2.48I	I
		authorised to manually switch to off-network		I
		operation while in on-		I
		network operation		I
anyExt		network operation		
allow-request-private-call-	"true"	Indicates whether the	TS 24.483 [13]	
call-back	1140	MCPTT user is allowed	clause 5.2.48P	1
Jan Jan		to request a private call	3,0000 0,2,701	Ì
		call-back		Ì
allow-cancel-private-call-	"true"	Indicates whether the	TS 24.483 [13]	<u></u> İ
call-back		MCPTT user is allowed	clause 5.2.48Q	Ì
		to cancel an		Ì
		outstanding private call		Ì
		call-back request		<u> </u>
allow-request-remote-	"true"	Indicates whether the	TS 24.483 [13]	
initiated-ambient-listening		MCPTT user is allowed	clause 5.2.48R	Ì
		to request a remote		1
		initiated ambient		1
		listening call		
allow-request-locally- initiated-ambient -listening	"true"	Indicates whether the	TS 24.483 [13]	Ì
		MCPTT user is allowed	clause 5.2.48S	Ì
		to request a locally		Ì
		initiated ambient		1
allow version of P. C.		listening call	TO 04 400 (40)	
allow-request-first-to-	"true"	Indicates whether the	TS 24.483 [13]	Ì
answer-call		MCPTT user is authorised to request a	clause 5.2.48T	Ì
	i	i aumonseu to reduest a	i	1

Information Element	Value/remark	Comment	Reference	Condition
allow-request-remote-init- private-call	"true"	Indicates whether the MCPTT user is authorised to request remotely initiated private calls	TS 24.483 [13] clause 5.2.48 W1	
allow-request-remote-init- group-call	"true"	Indicates whether the MCPTT user is authorised to request a remotely initiated group call	TS 24.483 [13] clause 5.2.48W2	
allow-query-functional- alias-other-user	"true"	Indicates whether the MCPTT user is authorised to query the functional alias(es) activated by another MCPTT user	TS 24.483 [13] clause 5.2.48 W8	
allow-takeover-functional- alias-other-user	"true"	Indicates whether he MCPTT user is authorised to take over the functional alias(es) previously activated by another MCPTT user	TS 24.483 [13] clause 5.2.48 W9	
allow-location-info-when- talking	"false"	When set to "true" the MCPTT user is authorised to send its location information when it is requesting the floor. When set to "false" the MCPTT user is not authorised to send its location information when it is requesting the floor.	TS 24.483 [13] clause 5.2.48 W10	

5.5.8.4 MCPTT Service Configuration

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

Table 5.5.8.4-1: MCPTT Service Configuration Defaults

Derivation Path: TS 24.484 [14], o		Commont	Doforonce	Condition
Information Element	Value/remark	Comment	Reference	Condition
service configuration	my MOV Describi	Mandatonication		
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				
private-cancel-timeout	"PT30M"	30 minutes		
group-time-limit	"PT20M"	20 minutes		
private-call				
hang-time	"PT30S"	30 seconds		
max-duration-with-floor-	"PT30S"	30 seconds		
control				
max-duration-without-floor- control	"PT20M"	20 minutes		
num-levels-priority-hierarchy	10			
transmit-time				
time-limit	"PT30S"	30 seconds		
time-warning	"PT20M"	20 minutes		
hang-time-warning	"PT20M"	20 minutes		
floor-control-queue				
depth	5			
max-user-request-time	"PT20M"	20 minutes		
fc-timers-counters				
T1-end-of-rtp-media	"PT4S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T3-stop-talking-grace	"PT3S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T7-floor-idle	"PT2S"	Depends on the characteristic of the radio access network	TS 24.380 [10] clause 11	
T8-floor-revoke	"PT1S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T11-end-of-RTP-dual	"PT4S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T12-stop-talking-dual	"PT30S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T15-conversation	"PT30S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T16-map-group-to-bearer	"PT0.5S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T17-unmap-group-to-bearer	"PT0.2S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T20-floor-granted	"PT1S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T55-connect	"PT2S"	Default value Value in seconds	TS 24.380 [10] clause 11	
T56-disconnect	"PT2S"	Default value Value in seconds	TS 24.380 [10] clause 11	
C7-floor-idle	10	Default value	TS 24.380 [10] clause 11	

Derivation Path: TS 24.484 [14], c		Commont	Poforance	Condition
Information Element	Value/remark	Comment	Reference TS 24.380 [10]	Condition
C17-unmap-group-to-bearer		Default value	clause 11	
C20-floor-granted	3	Default value	TS 24.380 [10] clause 11	
C55-connect	3	Default value	TS 24.380 [10] clause 11	
C56-disconnect	3	Default value	TS 24.380 [10] clause 11	
signalling-protection				
confidentiality-protection	true			
integrity-protection	true			
protection-between-mcptt- servers				
allow-signalling-protection	true			
allow-floor-control-protection	true			
emergency-resource-priority				
resource-priority-namespace	"mcpttp"		RFC 8101 [45]	
resource-priority-priority	"8"		RFC 8101 [45]	
imminent-peril-resource-			• •	
priority				
resource-priority-namespace	"mcpttp"		RFC 8101 [45]	
resource-priority-priority	"5"		RFC 8101 [45]	
normal-resource-priority				
resource-priority-namespace	"mcpttp"		RFC 8101 [45]	
resource-priority-priority	"1"		RFC 8101 [45]	
anyExt			• 1	
functional-alias-list				
functional-alias-entry[1]				
functional-alias	px_MCPTT_ID_FA_A			
max-simultaneous-	"1"			
activations				
allow-takeover	"true"			
mcptt-user-list				
entry[1]				
uri-entry	px_MCPTT_ID_User_A			
off-network				
emergency-call				
private-cancel-timeout	"PT5S"	5 seconds; Indicates timeout value for the cancellation of an in progress emergency for an MCPTT private call. Values: : 0-65535 s	TS 24.483 [13] clause 7.2.14	
group-time-limit	"PT5S"	5 seconds; Indicates time limit for an in progress MCPTT emergency call related to an MCPTT group. Values: 0-65535 s	TS 24.483 [13] clause 7.2.16	
private-call				
hang-time	"PT5S"	5 seconds; Indicates hang timer for private calls (with floor control). Values: 0- 65535 s	TS 24.483 [13] clause 7.2.13	
max-duration-with-floor- control	"PT60S"	60 seconds; Indicates max private call (with floor control) duration. Values: 0- 65535 s	TS 24.483 [13] clause 7.2.12	

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

5.5.8.5 Void

5.5.8.6 MCVideo UE Configuration

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

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 UE has both IPv4 and IPv6 host configuration.		
Relay-Service	"true"	Indicates the authorisation to use a relay service		
Relayed-MCVideo-Group[1]		-		
MCVideo-Group-ID	px_MCVideo_Group_A _ID	One allowed relayed MCVideo group		
Relay-Service-Code	"123456"	Identifies a connectivity service the ProSe UE- to-Network Relay provides to Public Safety applications; 24- bit value	TS 23.303 [68]	

5.5.8.7 MCVideo User Profile

The structure of a user profile document is specified in TS 24.484 [14] clause 9.3. Single MCVideo group configuration parameters are defined in TS 24.483 [13] clause 13.2.

Table 5.5.8.7-1: MCVideo User Profile Defaults

Derivation Path: TS 24.484 [14], clause 9.3					
Information Element	Value/remark	Comment	Reference	Condition	
mcvideo-user-profile					
XUI-URI attribute	"sip:" & px_MCVideo_ID_User_ A	same as the XUI value of the Document URI			
user-profile-index attribute	"42"	value arbitrarily selected			
Status	"true"	MCVideo user profile is enabled			
ProfileName	"mcvideo-user-profile-" & user-profile-index & ".xml"	name of the user profile document; user- profile-index is the value of the user- profile-index attribute	TS 24.483 [13] clause 13.2.3;		
Common					
index attribute	"0"	Index for the particular MCVideo user profile			
MCVideoUserID		Indicates an MCVideo user identity (MCVideo ID) which is a globally unique identifier within the MCVideo service that represents the MCVideo user	TS 24.483 [13] clause 13.2.7		
index attribute	"0"				
uri-entry	px_MCVideo_ID_User_ A	MCVideo user identity (MCVideo ID) which is a globally unique identifier within the MCVideo service that represents the MCVideo user			
UserAlias					
alias-entry	px_MCVideo_User_A_ Alias	Alphanumeric aliases of MCVideo user	TS 24.483 [13] clause 13.2.11		
ParticipantType	px_MCX_User_A_Parti cipantType	The functional category of the participant (e.g., first responder, second responder, dispatch, dispatch supervisor), typically defined by the MCVideo administrators.	TS 24.483 [13] clause 13.2.15		
MissionCriticalOrganization	px_MCX_DomainName _Organization_A	Indicates the organization an MCVideo user belongs to	TS 24.483 [13] clause 13.2.16		
PrivateCall					
PrivateCallList					
PrivateCallOnNetwork[1]					
PrivateCallURI					
index attribute	0				
uri-entry	px_MCVideo_ID_User_ B				
display-name	"User B Name"				
PrivateCallKMSURI uri-entry	нн	According to TS 24.484 [14] if the entry element is empty, the KMS URI present in the MCS initial configuration document is used			
PrivateCallOnNetwork[2]					
PrivateCallURI					
index attribute	1				

Derivation Path: TS 24.484 [14], Information Element	Value/remark	Comment	Reference	Condition
uri-entry	px_MCVideo_ID_User_	1 1		
,	c			
display-name	"User C Name"			
PrivateCallKMSURI				
uri-entry	""	According to TS 24.484		
•		[14] if the entry element		
		is empty, the KMS URI		
		present in the MCS		
		initial configuration		
		document is used		
PrivateCallOffNetwork	not present			
EmergencyCall				
MCVideoPrivateRecipient				
entry				
entry-info attribute	"UsePreConfigured"			
index attribute	"0"			
uri-entry	px_MCVideo_ID_User_			
·	В			
display-name	"User B Name"			
ProSeUserID-entry				
index attribute	"0"			
DiscoveryGroupID	'123456'O			
User-Info-ID	'55555555555'O			
MCVideo-group-call				
MaxSimultaneousCallsN6	3			
EmergencyCall				
MCVideoGroupInitiation				
entry				
entry-info attribute	"UseCurrentlySelected			
•	Group"			
index attribute	"0"			
uri-entry	px_MCVideo_Group_A ID			
display-name	px_MCVideo_Group_A _Name			
ImminentPerilCall				
MCVideoGroupInitiation				
entry				
entry-info attribute	"UseCurrentlySelected Group"			
index attribute	"0"			
uri-entry	px_MCVideo_Group_A			
•	_ID			
display-name	px_MCVideo_Group_A _Name			
EmergencyAlert				
MCVideoGroupInitiation				
entry				
index attribute	"0"			
entry-info attribute	"UseCurrentlySelected Group"			
uri-entry	px_MCVideo_Group_A _ID			
display-name	px_MCVideo_Group_A _Name			
Priority	10			
OnNetwork				
index	"1"			
MCVideoGroupInfo				
MCVideo-Group-ID	px_MCVideo_Group_A _ID			
GMS-Serv-Id	tsc_MCX_GMS_Hostna me			

Derivation Path: TS 24.484 [14], (clause 9.3			
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
RelativePresentationPriority	"7"		TS 24.483 [13] clause 13.2.51	
GroupKMSURI	tsc_MCX_KMS_Hostna me			
MaxAffiliationsN2	"10"		TS 24.483 [13] clause 13.2.67	
PrivateEmergencyAlert			TS 24.483 [13] clause 13.2.87	
entry	HI D O " "			
entry-info attribute index attribute	"UsePreConfigured"			
uri-entry	px_MCVideo_ID_User_ B			
display-name	"User B Name"			
			TS 24.483 [13]	
RemoteGroupSelectionURIList entry[1]	px_MCVideo_ID_User_ A		clause 13.2.87	
entry[2]	px_MCVideo_ID_User_ B			
entry[3]	px_MCVideo_ID_User_ C			
anyExt	not present			
OffNetwork	"1"			
index MCVideoGroupInfo	T"			
MCVideo-Group-ID	px_MCVideo_Group_A			
GMS-App-Serv-Id	tsc_MCX_GMS_Hostna me			
IdMS-Token-Endpoint	"https://" & px_MCX_IdMS_token_I PAddress & ":" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv4
	"https://[" & px_MCX_IdMS_token_I PAddress & "]:" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv6
RelativePresentationPriority	"7"		TS 24.483 [13] clause 13.2.51	
User-Info-Id	'5555555555'O		TS 24.483 [13] clause 13.2.10 2	
cp:ruleset				
cp:rule				

Derivation Path: TS 24.484 [14], c Information Element	Value/remark	Comment	Reference	Condition
cp:id attribute	"rule1"			
cp:actions				
allow-presence-status	"true"			
allow-request-presence	"true"			
allow-query-availability-for-	"true"			
private-calls				
allow-enable-disable-user	"true"			
allow-enable-disable-UE	"true"			
allow-private-call	"true"			
allow-manual-	"true"			
commencement				
allow-automatic-	"true"			
commencement				
allow-force-auto-answer	"true"			
allow-failure-restriction	"true"			
allow-emergency-group-call	"true"			
allow-emergency-private-	"true"			
call				
allow-cancel-group-	"true"			†
emergency	1140			
allow-cancel-private-	"true"			1
emergency-call	ii de			
allow-imminent-peril-call	"true"			
allow-cancel-imminent-peril	"true"			
allow-activate-emergency-	"true"			
allow-activate-emergency-	tide			
allow-cancel-emergency-	"true"			
allow-caricer-emergency-	lide			
allow-offnetwork	"true"			
allow-imminent-peril-	"true"			
change	lide			
allow-private-call-media-	"true"			
protection	lide			
allow-request-affiliated-	"true"			
groups	lide			
allow-request-to-affiliate-	"true"			
other-users	liue			
allow-recommend-to-	"true"			
affiliate-other-users	liue			
allow-private-call-to-any-	"true"			
user	liue			
allow-regroup	"true"			
allow-regroup allow-private-call-	"true"			
	tiue			
participation allow-manual-off-network-	"true"			+
allow-manual-off-network-	uue			
allow-off-network-group-	"true"			+
	uue			
call-change-to-emergency allow-revoke-transmit	"true"			
	"true"			
allow-create-group-	i i de			
broadcast-group	"4", 10"			
allow-create-user-	"true"			
broadcast-group				+
anyExt				+
allow-request-remote-	"true"			
initiated-ambient-viewing	He H			
allow-request-locally-	"true"			
initiated-ambient-viewing			1	1

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

5.5.8.8 MCVideo Service Configuration

The structure of a service configuration document is specified in TS 24.484 [14] clause 8.4. Single MCVideo group configuration parameters are defined in TS 24.483 [13] clause 14.2.

Table 5.5.8.8-1: MCVideo Service Configuration Defaults

Derivation Path: TS 24.484 [14], of Information Element	Value/remark	Comment	Reference	Condition
service configuration	value/lellialk	Comment	Veletelice	Condition
domain attribute	my MOV Dama 1 M	Manadata 44'		
domain attribute	px_MCX_DomainName	Mandatory attribute:		
	_Organization_A	domain name of the		
		mission critical		
		organization		
Common				
min-length-alias	"2"	Indicates minimum		
min-lengur-alias				
		length of an		
		alphanumeric identifier		
		(i.e., alias)		
broadcast-group				
num-levels-group-hierarchy	"1"	Indicates the number of		
num-levels-group-meratorly	'			
		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				<u> </u>
signalling-protection				
confidentiality-protection	"true"			
integrity-protection	"true"			
protection-between-mcvideo-				
servers				
allow-signalling-protection	"true"			
allow-transmission-control-	"true"			1
	true			
protection				
emergency-resource-priority				
resource-priority-namespace	"mcpttp"	MCVideo uses the	RFC 8101 [45]	
recedired priority riamedpade	Портр	MCPTT namespace	141 0 0 10 1 [10]	
		WICE IT Harriespace		
		values of RFC 8101		
		[45]		
resource-priority-priority	"7"		RFC 8101 [45]	
imminent-peril-resource-				
priority				
		N40) (; 1	DE0 0404 [45]	
resource-priority-namespace	"mcpttp"	MCVideo uses the	RFC 8101 [45]	
		MCPTT namespace		
		values of RFC 8101		
		[45]		
rosource priority priority	"4"	[10]	RFC 8101 [45]	
resource-priority-priority	7		NEC 0101 [43]	
normal-resource-priority				
resource-priority-namespace	"mcpttp"	MCVideo uses the	RFC 8101 [45]	
• •		MCPTT namespace		
		values of RFC 8101		
		[45]	DE0 0404 51=5	1
resource-priority-priority	"0"		RFC 8101 [45]	
off-network				
default-prose-per-packet-				
priority	"1"	Indiante de la 1000		
mcvideo-private-call-	"1"	Indicates the default		
signalling		ProSe Per-Packet		
		Priority (PPPP) value		
mcvideo-private-call-media	"1"	Indicates the default		
movidos private san media		ProSe Per-Packet		
	1 121	Priority (PPPP) value		
mcvideo-emergency-private-	"8"	Indicates the default		1
call-signalling		ProSe Per-Packet		
3 3		Priority (PPPP) value		
movidos amargas ar animata	"8"	Indicator the default		1
mcvideo-emergency-private-	°	Indicates the default		
call-media		ProSe Per-Packet		
		Priority (PPPP) value		
private-call				
	"600"	Value in seconds	TC 24 402 [42]	1
mcvideo-max-duration	000	value in seconds	TS 24.483 [13]	
	1	I	clause 14.2.17	1

Derivation Path: TS 24.484 [14], clause 9.4					
Information Element	Value/remark	Comment	Reference	Condition	
num-levels-priority-hierarchy	"4"		TS 24.483 [13]		
			clause 14.2.18		

5.5.8.9 Void

5.5.8.10 MCData UE Configuration

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

Table 5.5.8.10-1: MCData UE Configuration Defaults

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				
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 ID	ny MCData Carrier A	Identifies a MOD-1-	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	

Derivation Path: TS 24.484 [14] c	Value/remark	Comment	Reference	Condition
transmission-control	value/reiliark	Comment	Reference	Condition
	"3"	Indicates the maximum	TS 24.483	
Max-Simul-Data- Transmissions-Nc4	3	Indicates the maximum number of	clause 9.2.21	
11411511115510115-1404		simultaneous data	Clause 9.2.21	
Max-Data-Transmissions-In-	"3"	transmissions. Indicates the maximum	TS 24.483	
	3	number of	clause 9.2.22	
Group-Nc5		simultaneous data	Clause 9.2.22	
		transmissions.		
Data Proportation Priority			TS 24.483	
Data-Presentation-Priority		lindicates the		
		requested presentation	clause 9.2.23	
		priority of data		
MOData Oracia Delastr		received.		
MCData-Group-Priority	my MCDate Organia			
MCData-Group-ID	px_MCData_Group_A_ ID			
group-priority-hierarchy	"7"	Indicates the requested	TS 24.483	
		presentation priority of	clause 9.2.26	
		data received.		
reception-control				
Max-Simul-Data_Reception-	"3"	Indicates the maximum		
Nc4		number of		
		simultaneous data		
		receptions.		
Max-Simul-	"5"	Indicates the maximum		
Data_Receptions-In-Group-Nc5		number of data		
		receptions in a group.		
on-network				
IPv6Preferred	"false"	Indicates whether IPv6	TS 24.483 [13]	
		is preferred over IPv4	clause 9.2.31,	
		for on-network	10.2	
		operation when the UE		
		has both IPv4 and IPv6		
		host configuration.		
Relay-Service	"true"	Indicates the	TS 24.483 [13]	
		authorisation to use a	clause 9.2.32,	
		relay service.	10.2	
		NOTE: When the		
		<relay-service></relay-service>		
		element is set to "false"		
		a list of <relayed-< td=""><td></td><td></td></relayed-<>		
		MCData-Group>		
		elements is not		
		needed.		1

5.5.8.11 MCData User Profile

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

Table 5.5.8.11-1: MCData User Profile Defaults

Derivation Path: TS 24.484 [14],		0	D-4	0- ""
Information Element	Value/remark	Comment	Reference	Condition
mcdata-user-profile XUI-URI attribute	"sip:" & px_MCData_ID_User_ A	same as the XUI value of the Document URI		
user-profile-index attribute	"49"	value arbitrarily selected		
Status	"true"	MCData user profile is enabled		
ProfileName	"mcdata-user-profile-" & user-profile-index & ".xml"	name of the user profile document; user- profile-index is the value of the user- profile-index attribute	TS 24.483 [13] clause 5.2.7B	
Common	"0"	La dan fan tha nastiandan	TO 04 400 [40]	
index attribute	-0-	Index for the particular MCData user profile	TS 24.483 [13] clause 10.2.6	
UserAlias	1105			
alias-entry	px_MCData_User_A_Al ias	Alphanumeric aliases of MCData user	TS 24.483 [13] clause 10.2.11	
MCDATAUserID				
entry	px_MCData_ID_User_ A			
MissionCriticalOrganization	px_MCX_DomainName _Organization_A	Indicates the organization an MCData user belongs to	TS 24.483 [13] clause 10.2.16	
FileDistribution				
FD-cancel-List-Entry	1.05			
MCData-ID	px_MCData_ID_User_ A	Contains the MCData user identity (MCData ID) of an MCData user that the configured MCData user is authorised to initiate a one-to-one communication, and corresponds to the "MCDataID" element of clause 10.2.16E in 3GPP TS 24.483 [4];	TS 24.483 clause 10.2.21 A	
MCData_ID_KMSURI TxRxControl	tsc_MCX_KMS_Hostna me	Contains the KMS URI for the security domain of the MCData user identity (MCData ID) of the MCData user and corresponds to the "MCDataUserIDKMSU RI" element of clause 10.2.9A in 3GPP TS 24.483 [4]. If this parameter is absent, the KMS URI is identified by the <kmssec> element of the <app-server-info> of the MCS UE initial configuration document as specified in clause 7.2.2.1</app-server-info></kmssec>	TS 24.483 [13] clause 10.2.21 A	

Information Element	clause 10.3.2.1 Value/remark	Comment	Reference	Conditio
MaxData1To1	"65535"	Indicates the maximum amount of data (in megabytes) that an MCData user can transmit in a single request during one-to-one communication.	TS 24.483 [13] clause 10.2.25	
MaxTime1to1	"65535"	Indicates the maximum amount of time that an MCData user can transmit for in a single request during one-to-one communication.	TS 24.483 [13] clause 10.2.26	
TxReleaseList	px_MCData_ID_User_ A	Indicates an MCData ID of an MCData user that this MCData user is allowed to request release of an ongoing transmission	TS 24.483 [13] clause 10.2.30	
GroupEmergencyAlert		Indicates the MCData group recipient for an MCData emergency Alert	TS 24.483 [13] clause 10.2.38	
entry	px_MCData_ID_User_ A			
OnNetwork index attribute	"0"	Is of type "token" and is		
		included within some elements for uniqueness purposes, and does not appear in the user profile configuration managed object specified in 3GPP TS 24.483 [4].		
MCDataGroupInfo		•		
MCData-Group-ID	px_MCData_Group_A_ ID	Indicates the MCData group ID for the on- network MCData group that the MCData user is allowed to use.	TS 24.483 [13] clause 10.2.47	
GMS-App-Serv-ID	tsc_MCX_GMS_Hostna me	URI of the group management server hosting the on-network MCData group identified by the <mcdata-group-id> element</mcdata-group-id>	TS 24.483 [13] clause 10.2.51	
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
GroupKMSURI	tsc_MCX_KMS_Hostna me		TS 24.483 [13] clause 10.2.54A	

Derivation Path: TS 24.484 [14], Information Element	Value/remark	Comment	Reference	Condition
MaxAffiliations	"10"	contains an integer	TS 24.483	Condition
MaxAmilations	10	value between 0 and	clause 10.2.71	
			ciause 10.2.71	
		255 indicating the		
		presentation priority of		
		the off-network group		
		relative to other off-		
		network groups and		
		off-network users		
One-To-One-EmergencyAlert		Indicates the MCData	TS 24.483	
		user recipient for an	clause 10.2.91	
		on-network MCData		
		emergency one-to-one		
		alert		
	MOD-t- ID II	Indicates the name of	TO 04 400	
entry	px_MCData_ID_User_		TS 24.483	
	A	the MCData user	clause 10.2.92	
		recipient for an on-		
		network MCData		
		emergency one-to-one		
	+	alert		-
anyExt				
MCDataContentServerURI	"http://" &	absolute URI	TS 24.483	
	tsc_MCData_MSF_Hos	associated with media	clause 10.2.97	
	tname & "/userA/files"	storage function of	A	
		MCData content server	' '	
FunctionalAliasList		Webata content server	TS 24.483	
FunctionalAllastist				
			clause 10.2.97	
			В	
entry[1]				
uri-entry[1]	px_MCData_ID_FA_A			
anyExt				
апушлі				1
LocationCriteriaForActivation				
EnterSpecificArea				
EllipsoidArcArea				
Center				
latitude	"3331608"	Latitude of 35.74428		
latitude	3331006			
		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
longitude	"6510401"	Longitude of		
iongitado	0010101	139.69806 degrees		
		encoded according to		
		TS 23.032 [65] clause		
		6.1		
Radius	"10"	Radius of 50 meters		
		encoded according to		
		TS 23.032 [65] clause		
		6.6		
OffsetAngle	"0"	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees		
		encoded according to		
		TS 23.032 [65] clause		
F.:ii0 :6: A		6.7		
ExitSpecificArea				
EllipsoidArcArea				
Center				
latitude	"3331608"	Latitude of 35.74428		
iditado				
		degrees encoded		
		according to TS 23.032		
		[65] clause 6.1		
longitude	"6510349"	Longitude of		
	1		i	1
-		139,69695 degrees		
·		139.69695 degrees		
-		encoded according to		
·				

Derivation Path: TS 24.484 [14], o	clause 10.3.2.1			
Information Element	Value/remark	Comment	Reference	Condition
Radius	"10"	Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6		
OffsetAngle	"0"	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees encoded according to TS 23.032 [65] clause 6.7		
LocationCriteriaForDeactivation				
EnterSpecificArea				
EllipsoidArcArea				
Center latitude	"3331608"	Latitude of 35.74428 degrees encoded according to TS 23.032 [65] clause 6.1		
longitude	"6510349"	Longitude of 139.69695 degrees encoded according to TS 23.032 [65] clause 6.1		
Radius	"10"	Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6		
OffsetAngle	"0"	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees encoded according to TS 23.032 [65] clause 6.7		
ExitSpecificArea				
EllipsoidArcArea				
Center				
latitude	"3331608"	Latitude of 35.74428 degrees encoded according to TS 23.032 [65] clause 6.1		
longitude	"6510401"	Longitude of 139.69806 degrees encoded according to TS 23.032 [65] clause 6.1		
Radius	"10"	Radius of 50 meters encoded according to TS 23.032 [65] clause 6.6		
OffsetAngle	"0"	0 degrees		
IncludedAngle	"179"	Full circle: 360 degrees encoded according to TS 23.032 [65] clause 6.7		
manual-deactivation-not- allowed-if-location-criteria-met	"false"		TS 24.483 [13] clause 10.2.97 B3D	
MessageStoreHostname	tsc_MCData_MSF_Hos tname	hostname identifying the message store function	TS 24.483 clause 10.2.97 E	
OffNetwork				
index attribute	"0"			
MCDataGroupInfo				

Derivation Path: TS 24.484 [14], c				
Information Element	Value/remark	Comment	Reference	Condition
MCData-Group-ID	px_MCData_Group_A_ ID	Indicates the MCData group ID for the off- network MCData group that the MCData user is allowed to use.	TS 24.483 [13] clause 10.2.10 3	
GMS-App-Serv-Id	tsc_MCX_GMS_Hostna me			
IdMS-Token-Endpoint	"https://" & px_MCX_IdMS_token_I PAddress & ":" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv4
	"https://[" & px_MCX_IdMS_token_I PAddress & "]:" & px_MCX_IdMS_token_ Port & tsc_MCX_IdMS_token_ UriPath	Identity management server token endpoint identity information	TS 23.003 [69] TS 24.483 [13] clause 8.2.41A	IPv6
Group-KMSURI	tsc_MCX_KMS_Hostna me		TS 24.483 [13] clause 10.2.110A	
RelativePresentationPriority	"7"	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> element of the <offnetwork> element, contains an integer value between 0 and 255 indicating the presentation priority of the off-network group relative to other off- network groups and off-network users, and corresponds to the "PresentationPriority" element of clause 10.2.111 in 3GPP TS 24.483 [4];</offnetwork></mcdatagroupinfo></onnetwork></mcdatagroupinfo>		
User-Info-Id	'55555555555'O			
ruleset rule				
actions				
allow-create-delete-user- alias	"true"			

Derivation Path: TS 24.484 [14], of	clause 10.3.2.1			
Information Element	Value/remark	Comment	Reference	Condition
allow-create-group-	"true"			
broadcast- group				
allow-create-user-	"true"			
broadcast-group				
allow-transmit-data	"true"			
allow-request-affiliated-	"true"			
groups				
allow-request-to-affiliate-	"true"			
other-users				
allow-recommend-to-	"true"			
affiliate-other-users				
allow-regroup	"true"			
allow-presence-status	"true"			
allow-request-presence	"true"			
allow-activate-emergency-	"true"			
alert				
allow-cancel-emergency-	"true"			
alert				
allow-cancel-emergency-	"true"			
alert-any-user				
allow-enable-disable-user	"true"			
allow-enable-disable-UE	"true"			
allow-off-network-manual-	"true"			
switch				
allow-off-network	"true"			
anyExt				
allow-query-functional-	"true"			
alias-other-user				
allow-takeover-functional-	"true"			
alias-other-user				
allow-one-to-one-	"true"			
communication-from-any-user				

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

5.5.8.12 MCData Service Configuration

The structure of a service configuration document is specified in TS 24.484 [14] clause 10.4.2.1. Single MCData group configuration parameters are defined in TS 24.483 [13] clause 11.2.

Table 5.5.8.12-1: MCData Service Configuration Defaults

Derivation Path: TS 24.484 [14], o	Value/remark	Comment	Doforon	Condition
	value/remark	Comment	Reference	Condition
service configuration	1105			
domain attribute	px_MCData_User_A_O rganization	Mandatory attribute: domain name of the mission critical organization		
on-network				
tx-and-rx-control				
max-data-size-sds-bytes	"10000000"	The maximum data that the originating client can send in an SDS message		
max-payload-size-sds- cplane-bytes	"1000"	The maximum payload data that the originating client can send in an SDS message over C-plane		
max-data-size-fd-bytes	"100000000"	The maximum data that the originating client can send in an FD message		
max-data-size-auto-recv- bytes	"1000000"	The maximum data that the server can send to the terminating client without requesting the user to indicate a present need for the data		
signalling-protection				
confidentiality-protection	"true"	Indicating whether confidentiality protection of MCData signalling is enabled or disabled between the MCData client and MCData server		
integrity-protection	"true"	Indicating whether integrity protection of MCData signalling is enabled or disabled between the MCData client and MCData server		
protection-between-mcdata- servers				
allow-signalling-protection	"true"	Indicating whether protection of MCData signalling is enabled between MCData servers		
file-availability				
default-file-availability	"10000000"	The default time for which a file is available on the server for download, if a explicit time period is not requested by the originating client		
max-file-availability	"10000000"	The maximum time for which a file can be made available on the server for download		
anyExt				
functional-alias-list				
functional-alias-entry[1]				
tunctional-alias-entryi i				

Derivation Path: TS 24.484 [14],	Derivation Path: TS 24.484 [14], clause 10.4			
Information Element	Value/remark	Comment	Reference	Condition
max-simultaneous-	"1"			
activations				
allow-takeover	"true"			
mcdata-user-list				
entry[1]				
uri-entry	px_MCData_ID_User_			
	Α			
functional-alias-priority	"1"			
off-network				
default-prose-per-packet-				
priority				
mcdata-one-to-one-call-	"1"		TS 24.483 [13]	
signalling			clause 11.2.11	
mcdata-one-to-one-call-	"1"		TS 24.483 [13]	
media			clause 11.2.12	

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

Table 5.5.9.1-1: MIKEY-SAKKE I_MESSAGE (CSK distribution by the UE)

MikEY Common Header (Derivation path: RFC 6509 [23], RFC 6043 [25]	5], RFC 3830 [24]		
Version	Field	Value/remark	Comment	Condition
Data Type	·			
Next payload Identifier for the next payload (NOTE 1)				
PRF HMAC-SHA-256			SAKKE msg (26)	
PRF func		payload (NOTE 1)		
CSB ID				
Significant bits set to 1 most significant bits indicate the purpose of the key, the other 28-bits shall be randomly generated (TS 33.180 [94] clause 5.2.2 and E.6.11) #CS			256	
#CS '00000001'B or '0000000B Number of crypto sessions in the CS ID map info: if #CS is 0 the default security policies shall be applied (TS 33.180 [94] E.1.2) CS ID map type 2 if #CS > 0 GENERIC-ID enty factor of the crypto session: '6' for CSK use within MCPTT (TS 33.180 [94] E.4.2) Prot type O Any value Any value Ps { Any value Ps { Any value Ps { Any value Any value Ps { Any value	CSB ID	significant bits set to	4 most significant bits indicate the purpose of the key, the other 28- bits shall be randomly generated (TS 33.180 [94] clause 5.2.2 and	
1 if #CS == 0 empty map	#CS		Number of crypto sessions in the CS ID map info: if #CS is 0 the default security policies shall be applied (TS 33.180 [94]	
1 if #CS == 0 empty map	CS ID map type	2 if #CS > 0		
CS ID map info { CS ID CS ID of the crypto session: '6' for CSK use within MCPTT (TS 33.180 [94] E.4.2) Prot type O SRTP the security protocol to be used for the crypto session S Any value S flag to indicate whether the ROC and SEQ fields are provided (1') or if they are omitted (0') #P 1 the number of security policies provided for the crypto session Ps { Policy_no_1 Any value Policy_no_1 Any value CS ID of the crypto session: '6' for CSK use within MCPTT (TS 33.180 [94] E.4.2) SRTP the security protocol to be used for the crypto session If the number of security policies provided for the crypto session Policy_no_1 Any value a policy_no that corresponds to the policy_no of a		1 if #CS == 0	empty map	
CS ID Output CS ID CS ID of the crypto session: '6' for CSK use within MCPTT (TS 33.180 [94] E.4.2) Prot type Output Any value Any value The number of security policies provided for the crypto session Ps { Policy_no_1 Any value CS ID of the crypto session: '6' for CSK use within MCPTT (TS 33.180 [94] E.4.2) SRTP the security protocol to be used for the crypto session S flag to indicate whether the ROC and SEQ fields are provided ('1') or if they are omitted ('0') #P Any value Any value Any value Any value a policy_no that corresponds to the policy_no of a	CS ID map info {	Present only if #CS > 0		
the security protocol to be used for the crypto session S Any value S flag to indicate whether the ROC and SEQ fields are provided ('1') or if they are omitted ('0') #P 1 the number of security policies provided for the crypto session Ps { lists the policies for the crypto session Policy_no_1 Any value a policy_no that corresponds to the policy_no of a		'00000110'B	crypto session: '6' for CSK use within MCPTT (TS 33.180 [94] E.4.2)	
whether the ROC and SEQ fields are provided ('1') or if they are omitted ('0') #P 1 the number of security policies provided for the crypto session Ps { Policy_no_1 Any value a policy_no that corresponds to the policy_no of a	, ·		the security protocol to be used for the crypto session	
Ps { Policy_no_1 Any value security policies provided for the crypto session lists the policies for the crypto session Any value a policy_no that corresponds to the policy_no of a		·	whether the ROC and SEQ fields are provided ('1') or if they are omitted ('0')	
Policy_no_1 Any value a policy_no that corresponds to the policy_no of a		1	security policies provided for the crypto session	
corresponds to the policy_no of a			for the crypto session	
	Policy_no_1	Any value	corresponds to the policy_no of a	

Derivation path: RFC 6509 [23], RFC 6043 [25]	, RFC 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	Value/remark	Comment	Condition
RAND Payload {	value/remark	Addressed by '00001011'B in the 'Next payload'	Condition
Next payload	Identifier for the next	field of the previous payload	
	payload (NOTE 1)		
RAND len RAND	'00010000'B 128-bit random number	At least 16 Bytes 128-bit random number	
} IDRi payload {		Addressed by '00001110'B in the 'Next payload' field of the previous payload	
Next payload	Identifier for the next payload (NOTE 1)		
ID Role	1	Initiator (IDRi)	
ID Type	1	URI	
ID len ID data	Length of ID Data px_MCPTT_ID_User_A	MCPTT ID See TS 33.180 [94] clause E.4.1	MCPTT
	px_MCVideo_ID_User_A	MCVideo ID See TS 33.180 [94] clause E.4.1	MCVIDEO
1	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 ID Type	1	Responder (IDRr) URI	
ID len	Length of ID Data	Orti	
ID data	tsc_MCPTT_PublicServic eld_A tsc_MCVideo_PublicServ		MCPTT MCVIDEO
	iceld_A tsc_MCData_PublicServi		MCDATA
1	celd_A		
IDRkmsi payload {		Addressed by '00001110'B in the 'Next payload' field of the previous payload	
Next payload	Identifier for the next payload (NOTE 1)		
ID Role	6	Initiator's KMS (IDRkmsi)	
ID Type	1	URI	
ID len ID data	Length of ID Data tsc_MCX_KMS_Hostnam e	KMS of the initiating user (UE)	
}		<u> </u>	

Derivation path: RFC 6509 [23], RFC 6043 [25	5J, RFC 3830 [24]	Comment	Condition
Field	Value/remark	Comment	Condition
IDRkmsr payload {		Addressed by	
		'00001110'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	Identifier for the next		
	payload (NOTE 1)		
ID Role	7	Responder's KMS	
		(IDRkmsr)	
ID Type	1	ÙRI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
	e	responder (MCX	
		domain)	
}		Addressed by	
,		'00001010'B in the	
		'Next payload'	
		field of the	
Oit- Danti	D 17 #00 0	previous payload	
Security Properties payload {	Present if #CS > 0	If not present	
		(#CS == 0) then	
		the default	
		security profile	
		defined in Annex	
		E.4.2 of	
		TS 33.180 [94]	
		shall be used	
Next payload	Identifier for the next		
	payload (NOTE 1)		
Policy no	same as Policy_no_1 in		
,	the CS ID map info of the		
	header payload		
Prot type	0	SRTP	
Policy param length			
Policy param {			
s			
Type	0	Encryption	
туре	0	Algorithm	
la in orth		Algorithm	
length		450.0014	
value	6	AES-GCM	
}			
{			
Туре	1	Session	
		encryption key	
		length	
length			
value	16	16 octets	
}			
{			
Type	4	Session salt key	
1,700	7	length	
longth		iongui	
length	10	10 ootsts	
value	12	12 octets	
}			
{			
Туре	5	SRTP PRF	
length			
value	0	AES-CM	
}			
•			
{		Mary daviruation	
	1.6	Key derivation	
{ Type	6	Key derivation	
	6	rate	
Type length value	0		

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

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

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

Table 5.5.9.1-1A: MIKEY-SAKKE I_MESSAGE (CSK download sent by the SS)

Derivation path: RFC 6509 [23], RFC 6043			
Field	Value/remark	Comment	Condition
MIKEY Common Header {	Any		
version	'0000001'B	0.41(1(5 (00)	
Data Type	'00011010'B	SAKKE msg (26)	
Next payload V	'00000101'B '0'B	Timestamp, T	
PRF func	'0000001'B	PRF-HMAC-SHA-	
PRETUING	0000001B	256	
CSB ID	'0001xxxx xxxxxxxx'B	32 bit CSK-ID: the	
00818	000 1XXXX XXXXXXX B	4 most significant	
		bits indicate the	
		purpose of the	
		key, CSK = 0010,	
		the other 28-bits	
		are randomly	
		generated	
		(TS 33.180 [94]	
		clause 5.2.2 and	
		E.6.11)	
#CS	'00000000'B	Number of crypto	
		sessions in the	
		CS ID map info: if	
		#CS is 0 the	
		default security	
		policies shall be	
		applied	
		(TS 33.180 [94]	
CC ID man time		E.1.2) See TS 33.180	
CS ID map type	1	[94] E.1.2	
CS ID map info	Not present	Present only if	
CS ID IIIap IIIIO	Not present	#CS > 0	
}		110010	
Timestamp Payload (T) {			
Next payload	'00001011'B		
TS Type	'0000000'B	NTP-UTC (0): 64-	
71		bits	
TS Value	Current system time	64bit UTC value	
		representing the	
		number of	
		seconds since 1	
		January 1900 with	
		respect to the	
		Coordinated	
		Universal Time	
		(UTC)	
PAND Devide ed.		A -1 -1	
RAND Payload {		Addressed by	
		'00001011'B in the	
		'Next payload' field of the	
		previous payload	
Next payload	'00001110'B	provious payload	
RAND len	'00010000'B	At least 16 Bytes	
RAND	Random value arbitrarily	128-bit random	
	selected by the SS	number	
}	55,55,554 57 110 55		
IDRi payload {		Addressed by	
		'00001110'B in the	
		'Next payload'	
		field of the	
		previous payload	

Derivation path: RFC 6509 [23], RFC 60-	43 [25], RFC 3830 [24]		
Field	Value/remark	Comment	Condition
Next payload	'00001110'B		
ID Role	1	Initiator (IDRi)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCPTT_PublicServic		MCPTT
.2 3.4.4	eld_A		
	tsc_MCVideo_PublicServ		MCVIDEO
	iceld_A		
	tsc_MCData_PublicServi		MCDATA
	celd_A		mob/ti/t
}			
IDRr payload {		Addressed by	
1211 payload ('00001110'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	'00001110'B	provious payload	
ID Role	2	Responder (IDRr)	
ID Type	1	URI	
ID len	Length of ID Data	JIN	
ID data	px_MCPTT_ID_User_A	MCPTT ID	MCPTT
ID data	px_iviCPTT_iD_0set_A	See	IVICETI
		TS 33.180 [94]	
		clause E.4.1	
	my MCV/idea ID Hear A	MCVideo ID	MCVIDEO
	px_MCVideo_ID_User_A	See	MCAIDEO
		TS 33.180 [94] clause E.4.1	
	THE MODELL ID HERE A		MODATA
	px_MCData_ID_User_A	MCData ID	MCDATA
		See	
		TS 33.180 [94]	
,		clause E.4.1	
		A dalas a sad boo	
IDRkmsi payload {		Addressed by	
		'00001110'B in the	
		'Next payload'	
		field of the	
Navi a suda sud	1000044401D	previous payload	
Next payload	'00001110'B	Initiate all 17840	
ID Role	6	Initiator's KMS	
ID T		(IDRkmsi)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
	е	initiating user (UE)	
}			
IDRkmsr payload {		Addressed by	
		'00001110'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	'00011010'B		
ID Role	7	Responder's KMS	
		(IDRkmsr)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
	e	responder (MCX	
		domain)	
}		,	
_ ,	1	1	l

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC 3830 [24]					
Field	Value/remark	Comment	Condition		
Security Properties payload	Not present	If not present (#CS == 0) then the default security profile defined in Annex E.4.2 of TS 33.180 [94] shall be used			
SAKKE payload {		Addressed by '00011010'B in the 'Next payload' field of the previous payload			
Next payload	'00000100'B				
SAKKE params { ID scheme	2	Parameter Set 1 according to RFC 6509 [23], Appendix A '3GPP MCX hashed UID' (33.180 [94]			
SAKKE data length	Longth of SAKKE data	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)			
SIGN (ECCSI) payload {		Addressed by			
		'00000100'B in the 'Next payload' field of the previous payload			
S type	2	ECCSI signature			
S len	Length of the signature field (in bytes)	12 bits			
S data	Signature	The signature shall be validated according to RFC 3830 [24] clause 5.3 using the algorithm according to RFC 6507 [98] clause 5.2.2 using the UID generated from the ID associated with the initiating user (provided in IDRi payload).			
}					

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

Table 5.5.9.1-2: MIKEY-SAKKE I_MESSAGE (Private call) by the SS

Derivation path: RFC 6509 [23], RFC 6043 [2	5j, RFC 3830 [24] Value/remark	Comment	Condition
MIKEY Common Header {	Value/Terriar K	Comment	Condition
version	'0000001'B		
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	'00000101'B	Next payload is	
Nox payload	000001012	timestamp	
V	'0'B		
PRF func	'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	'00000000'B	the number of	
	3333333	crypto sessions in	
		the CS ID map	
		info.	
CS ID map type	1	empty map	
CS ID map Info	not present		
}			
Timestamp Payload (T) {			
Next payload	'00001011'B	Next payload is RAND	
TS Type	'00000000'B	NTP-UTC (0): 64- bits	
TS Value	Current system time	64bit UTC value	
10 Value	Current dystern 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	
ι τολί ραγίσαυ	0000111015	IDRi	
RAND len	'00010000'B	16 Bytes RAND	
RAND	128-bit random number	,	
}			
IDRi payload {			
Next payload	'00001110'B	Next payload is	
ID D I		IDRi	
ID Role	1	Initiator (IDRi)	
ID Type	0	URI	
ID len ID data	Length of ID Data px_MCPTT_ID_User_B	MCPTT ID	MCPTT
	Px_IVICF L1_ID_USEI_B	associated with	IVIOFII
		the initiating user	
	px_MCVideo_ID_User_B	MCVideo ID	MCVIDEO
	PX_INIO VIGCO_ID_0361_D	See	, vio viblo
		TS 33.180 [94]	
		clause E.4.1	
	px_MCData_ID_User_B	MCData ID	MCDATA
	F054.44_15_0001_5	See	
		TS 33.180 [94]	
		clause E.4.1	

Derivation path: RFC 6509 [23], RFC 604	Value/remark	Comment	Condition
rieia	value/remark	Comment	Condition
} IDRr payload {			
Next payload	'00001110'B	Next payload is	
Next payload	00001110 B	IDRkmsi	
ID Role	2	Responder (IDRr)	
ID Type	0	ixesponder (ibixi)	
ID len	Length of ID Data		
ID data	px_MCPTT_ID_User_A	MCPTT ID	MCPTT
ID data	px_wcF11_iD_osei_A	associated to the	IVICETT
		receiving user	
	px_MCVideo_ID_User_A	MDSI of the	MCVIDEO
	px_ivio video_ib_osei_A	MCVideo Domain	MOVIDEO
	px_MCData_ID_User_A	MDSI of the	MCDATA
	px_Mobala_ib_edei_/(MCData Domain	MODITION
}		Wobala Bolliani	
IDRkmsi payload {			
Next payload	'00001110'B	Next payload is	
Noxt payload	0000111018	IDRkmsr	
ID Role	6	Initiator's KMS	
ID Role	Ŭ	(IDRkmsi)	
ID Type	0	(151 (111101)	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
ID data	e	initiating user	
1	<u> </u>	iriitiatiirig usei	
IDRkmsr payload {			
Next payload	'00011010'B	Next payload is	
Next payload	0001101016	SAKKE (26)	
ID Role	7	Responder's KMS	
ID Role	1	(IDRkmsr)	
ID Tupo	0	(IDIXIIISI)	
ID Type ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
ID data			
	e	responding user (UE)	
1		(UE)	
SAKKE payload {	+		
Next payload	'00000100'B	Next payload is	
Next payload	00000100 В	SIGN	
SAKKE params {	1	Parameter Set 1	
SARRE params (1	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	
OANNE data length	(in bytes)	וט טונס	
SAKKE data	Encapsulated PCK	The PCK is	
JAINE Udia	Encapsulated PCK	encapsulated by	
		using the public	
		key (PubEncKey	
		in KMS	
		Certificate) and	
		the UID generated	
		from the MC	
		Service user ID of	
		the terminating	
1		user	
) (10N (E000))			
SIGN (ECCSI) payload {		F000' : :	1
S type	2	ECCSI signature	
S len	Length of the signature	12 bits	
	field (in bytes)	ĺ	1

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC 3830 [24]					
Field	Value/remark	Comment	Condition		
S data	Signature: In case of UL message the signature shall be validated by the SS	Signature created according to RFC 3830 [24] clause 5.2 using the algorithm according to RFC 6507 [98] clause 5.2.1 using the UID generated from the MC Service user ID of the initiating user			
}					

- 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 it is more (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	
πι		security policies	
		provided for the	
		crypto session	
Ps {		lists the policies	
		for the crypto	
	•	session	i contract of the contract of

Derivation path: RFC 6509 [23], RFC 6043	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 [25],			
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)	
}		(010)	
RAND Payload {		Addressed by	
		'00001011'B in the	
		'Next payload'	
		field of the	
N. c. l. l.		previous payload	
Next payload	Identifier for the next payload (NOTE 1)		
RAND len	'00010000'B	16 Bytes RAND	
RAND	Any value	128-bit random	
	,	number	
}			
IDRi payload {		Addressed by '00001110'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	Identifier for the next	previous payidad	
Next payload	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	MCPTT
		associated with	
		the initiating user	
	px_MCVideo_ID_User_A	MCVideo ID	MCVIDEO
		See TS 33.180	
		[94] clause E.4.1	
	px_MCData_ID_User_A	MCData ID	MCDATA
		See TS 33.180	
1		[94] clause E.4.1	
IDRr payload {		Addressed by	
151th payload ('00001110'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	Identifier for the next		
10.0.1	payload (NOTE 1)	D	
ID Role	2	Responder (IDRr)	
ID Type	1	URI	
ID len	Length of ID Data	MCDTT ID	MCDTT
ID data	px_MCPTT_ID_User_B	MCPTT ID associated to the	MCPTT
		receiving user	
	px_MCVideo_ID_User_B	MDSI of the	MCVIDEO
	Py_INIC AIGEO_ID_O26I_B	MCVideo Domain	MOVIDEO
	px_MCData_ID_User_B	MDSI of the	MCDATA
		MCData Domain	
}			
IDRkmsi payload {		Addressed by	
		'00001110'B in the	
		'Next payload'	
		field of the previous payload	
		Previous payidau	

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC 3	3830 [24]		
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 data	e	initiating user (UE)	
IDRkmsr payload {	+	Addressed by	
IDRKITSI payioau {		'00001110'B in the 'Next payload' field of the previous payload	
Next payload	Identifier for the next payload (NOTE 1)		
ID Role	7	Responder's KMS	
		(IDRkmsr)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_KMS_Hostnam	KMS of the	
	e	responding user	
Security Properties payload {	Present if #CS > 0	Addressed by '00001010'B in the 'Next payload' field of the previous payload 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		O	
Policy param {	†		
f	+		
Туре	0	Encryption Algorithm	
length			
value	6	AES-GCM	
}			
Туре	1	Session encryption key length	
length			
value }	16	16 octets	
{			
Туре	4	Session salt key length	
length		<u> </u>	
value	12	12 octets	
\		12 00000	
<u> </u>	+		
Typo	5	SRTP PRF	
Type	"	JNIF FRF	
length	1	l	

Derivation path: RFC 6509 [23], RFC 604 Field	Value/remark	Comment	Condition
value	0	AES-CM	
}			
		Many danisatian	
Type	6	Key derivation rate	
length		Tale	
value	0	No session key	
value		refresh.	
}		10.1100.11	
{			
Туре	20	AEAD	
		authentication tag	
		length	
length			
value	16	16 octets	
}			
}			
SAKKE payload {		Addressed by	
OARRE Payloau ('00011010'B in the	
		'Next payload'	
		field of the	
		previous payload	
Next payload	Identifier for the next	promote paryroana	
. ,	payload (NOTE 1)		
SAKKE params {	1	Parameter Set 1	
		according to RFC	
		6509 [23],	
		Appendix A	
ID Scheme	2	'3GPP MCX	
		hashed UID'	
		(33.180 [94] E.1.2)	
SAKKE data length	Length of SAKKE data	16 bits	
SARKE data length	(in bytes)	10 bits	
SAKKE data	Encapsulated PCK	The PCK is	
O/ II II I Z GGIG		encapsulated by	
		using the public	
		key (PubEncKey	
		in KMS	
		Certificate) and	
		the UID generated	
		from the MC	
		Service user ID of	
		the terminating	
1		user	
SICN (ECCSI) poyload (Addrogged by	
SIGN (ECCSI) payload {		Addressed by '00000100'B in the	
		'Next payload'	
		field of the	
		previous payload	
S type	2	ECCSI signature	
Signature len	Length of the signature	12 bits	
2.3	field (in bytes)	1 = 25	

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC 38	330 [24]		
Field	Value/remark	Comment	Condition
S data	Signature: In case of UL message the signature shall be validated by the SS	Signature created according to RFC 3830 [24] clause 5.2 using the algorithm according to RFC 6507 [98] clause 5.2.1 using the UID generated from the MC Service user ID of the initiating user	
NOTE 1. MUCEV paulanda may appur in any arder and		1:1: 1 (1 (2	

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

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

Table 5.5.9.1-3: MIKEY-SAKKE I_MESSAGE (GMK distribution by the SS)

Derivation path: RFC 6509 [23], RFC 604	Value/remark	Comment	Condition
		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	'000001'B	PRF-HMAC-SHA-	
THE TOTAL	00000012	256	
CSB ID	GUK-ID:	Group User Key	
C3B ID	4 bit purpose tag ('0000'B	Identifier	
	for GMK) & 28 bit	Derived from	
	identifier	GMK-ID and User	
		Salt according to	
		TS 33.180 [94]	
		clause 5,2,3	
#CS	'00000000'B	no crypto	
		sessions in the	
		CS ID map info.	
CS ID map type	1	empty map	
CS ID map Info	Not present		
\	Not present		
Timestamp Payload (T) (
Timestamp Payload (T) {	(0000404425	Next perdent	
Next payload	'00001011'B	Next payload is	
		RAND	
TS Type	'00000000'B	NTP-UTC (0): 64-	
		bits	
TS Value	Current system time	64bit UTC value	
		representing the	
		number of	
		seconds since 0h	
		on 1 January	
		1900 with respect	
		to the Coordinated	
		Universal Time	
		(UTC)	
}			
RAND Payload {			
Next payload	'00001110'B	Next payload is	
		IDRi	
RAND len	'00010000'B	16 Bytes RAND	
RAND	128-bit random number		
	arbitrarily selected by the		
	ss		
}			
J IDRi payload {			
Next payload	'00001110'B	Next payload is	
NEAL PAYIDAU	UUUUTTIU B	IDRr	
ID Role	4	Initiator (IDRi)	
	1		
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCX_GMS_Hostna	URI of the group	
	me	management	
		server	
}			
IDRr payload {			
Next payload	'00001110'B	Next payload is	
. iom payioda	0000111010	IDRkmsi	
ID Role	2	Responder (IDRr)	
	1	Mesholinei (IDKI)	
ID Type	•		
ID len	Length of ID Data		

Value/remark	Comment	Condition
px_MCPTT_ID_User_A	MCPTT ID associated to the group management client	MCPTT
px_MCVideo_ID_User_A	MCVideo ID associated to the group management client	MCVIDEO
px_MCData_ID_User_A	MCData ID associated to the group management client	MCDATA
'00001110'B	Next payload is IDRkmsr	
	(IDRkmsi)	
1	URI	
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 e	KMS of the UE	
'00010101'B	Next payload is	
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	encapsulated by using the SAKKE public key and the UID generated from the MC Service user ID of the group management client (provided in	
	px_MCData_ID_User_A '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 '00011010'B 1 2 Length of SAKKE data	group management client px_MCVideo_ID_User_A MCVideo ID associated to the group management client px_MCData_ID_User_A MCData ID associated to the group management client 100001110'B Next payload is IDRkmsr Initiator's KMS (IDRkmsi) 1 URI Length of ID Data tsc_MCX_KMS_Hostnam e 100011010'B Next payload is SAKKE (26) Responder's KMS (IDRkmsr) 1 Length of ID Data tsc_MCX_KMS_Hostnam KMS of the UE 100011010'B Next payload is General Extension Parameter Set 1 according to RFC 6509 [23], Appendix A 13GPP 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

Field	Value/remark	Comment	Condition
General Extension Payload {			
Next payload	'00000100'B	Next payload is SIGN	
Туре	7	'3GPP key parameters' See 33.180 [94] clause E.6.1	
Length	Length of the data (in bytes)		
Content {		MCData Protected Payload message according to TS 33.180 [94] clause 8.5.4.1	
Message Type	,C3,O	protected and authenticated DATA PAYLOAD	
Date and Time	Same number of seconds as in the Timestamp Payload	UTC time in seconds since midnight UTC of January 1, 1970	
Payload ID	O'00000000'O	value according to TS 33.180 [94] E.6.1	
Payload sequence number	,00,O	value according to TS 33.180 [94] E.6.1	
Payload algorithm	'01'O	AEAD_AES_128_ GCM	
Signalling algorithm	not present		
IV	'AAAAAAAAAAAAAA 555555555555555'O	arbitrarily selected	
DPPK-ID	Same as the CSB ID in the MIKEY Common Header		
Payload {		'Payload' element according to TS 24.282 [87] clause 15.2.13	
type	'78'O	Value as used in MCData messages in TS 24.282 [87]	
length	length of the payload data		
content type	'02'O	BINARY	
Data {	Protected Payload: encrypted with AEAD algorithms	See TS 33.180 [94] clause E.6 and 8.5.4.2	
Key Type	'00000000'B	GMK	
Status	'1'	Not-revoked	

Derivation path: RFC 6509 [23], RFC 6043 [25], RFC 38	330 [24]		
Field	Value/remark	Comment	Condition
Activation Time	0	The time in UTC	
		at which the	
		associated GMK	
		is to be made	
		active for	
		transmission in	
		seconds since	
		midnight UTC of	
		January 1, 1970	
		(not counting leap	
		seconds). It shall	
		be 5 octets in	
		length.	
		A value of 0 shall	
		imply the	
		activation time is	
		the timestamp of	
		the received	
		MIKEY	
		I_MESSAGE	
Expiry Time	0	The 'Expiry time'	
		element shall	
		define the time in	
		UTC at which the	
		associated key	
		shall no longer be	
		used in seconds	
		since midnight	
		UTC of January 1,	
		1970 (not	
		counting leap	
		seconds). It shall	
		be 5 octets in	
		length.	
		A value of 0 shall	
		imply the key shall	
T .	1111	not expire.	
Text		no text:	
		Text element shall	
		contain Length	
		sub-element with	
		the value 0 (see	
		TS 33.180 [94] E.6.5)	
Group IDs {		E.0.5)	
Number of Group IDs	'1'		
Group ID	px_MCPTT_Group_A_ID	The ID for the	MCPTT
Gloup ID	px_ivioi i _Gioup_A_iD 	group associated	IVIOI I I
		with the key.	
	px_MCVideo_Group_A_I	The ID for the	MCVIDEO
	D	group associated	IVICVIDEO
	ט	with the key.	
	px_MCData_Group_A_I	The ID for the	MCDATA
	px_McData_Group_A_i D	group associated	MICDATA
	ט	with the key.	
1		with the key.	
] 1			
\ \ \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			
MIKEN SVKKET WESSVCE	not procept		
MIKEY_SAKKE I-MESSAGE	not present		
SICN (ECCSI) poyland (
SIGN (ECCSI) payload {			

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

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

Table 5.5.9.1-4: MIKEY-SAKKE I_MESSAGE (MSCCK distribution by the SS)

Field	5], RFC 3830 [24] Value/remark	Comment	Condition
MIKEY Common Header {	Any		
version	'0000001'B		
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	'00000101'B	Next payload is	
. tom payload	00000.0.2	timestamp	
V	'0'B	······ottap	
PRF func	'000001'B	PRF-HMAC-SHA-	
	00000012	256	
CSB ID	'0101xxxx xxxxxxxx'B	32-bit MSCCK-ID	
	0.0.70000700000000	The 4 most	
		significant bits of	
		the MSCCK-ID	
		indicate the	
		purpose of the	
		MSCCK is to	
		protect general	
		purpose	
		subchannel	
		control messages.	
		The other 28-bits	
		are randomly	
		generated	
#CS	'00000000'B	no crypto	
	0000000 B	sessions in the	
		CS ID map info.	
CS ID man type	1	•	
CS ID map type CS ID map Info	Not present	empty map	
CS ID Map Mio	Not present		
Timestama Devide ed (T) (
Timestamp Payload (T) {	(00004044)D	Novemonto a dia	
Next payload	'00001011'B	Next payload is	
TO T	(00000000)D	RAND	
TS Type	(00000000)B	NTP-UTC (0): 64- bits	
TS Value	Current system time	64bit UTC value	
10 value	Current cyclem time	representing the	
		number of	
		seconds since 0h	
		on 1 January	
		1900 with respect	
		to the Coordinated	
		Universal Time	
		(UTC)	
}		(0.0)	
RAND Payload {	(00001110)	<u> </u>	
Next payload	'00001110'B	Next payload is IDRi	
RAND len	'00010000'B	16 Bytes RAND	
RAND	128-bit random number	10 DYICO IVAIND	
ועטואר	arbitrarily selected by the		
	SS selected by the		
	აა		
} IDRi payload {			
	(00001110 ² D	Novt povland in	
Next payload	'00001110'B	Next payload is	
ID Data	1	IDRr	
ID Role	1	Initiator (IDRi)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCPTT_PublicServic	The public service	
	eld_A	identity identifying	
		the participating	
		MCPTT function	
}			
IDRr payload {			
Next payload	'00001110'B	Next payload is	
• •		IDRkmsi	Ì

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	
١		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 L VIII	1

Derivation path: RFC 6509 [23], RFC 6043 [25]	5], RFC 3830 [24]		
Field	Value/remark	Comment	Condition
S data	Signature	The signature shall be created according to RFC 3830 [24] clause 5.2 using the algorithm according to RFC 6507 [98] clause 5.2.1 using the UID generated from the public service identity identifying the participating MCPTT function	
}			

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

Table 5.5.9.1-5: MIKEY-SAKKE I_MESSAGE (MuSiK distribution by the SS)

Derivation path: RFC 6509 [23], RFC 6043 [2	25], RFC 3830 [24]		
Field	Value/remark	Comment	Condition
MIKEY Common Header {	Any		
version	'0000001'B		
Data Type	'00011010'B	SAKKE msg (26)	
Next payload	'00000101'B	Next payload is	
		timestamp	
V	'0'B		
PRF func	'0000001'B	PRF-HMAC-SHA-	
OOD ID	10440	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	
		sessions in the	
		CS ID map info.	
CS ID map type	1	empty map	
CS ID map Info	Not present		
}			
Timestamp Payload (T) {	(2000404415	N	
Next payload	'00001011'B	Next payload is	
TO Time	(0000000)D	RAND NTP-UTC (0): 64-	
TS Type	'00000000'B	bits	
TS Value	Current system time	64bit UTC value	
13 value	Current system time	representing the	
		number of	
		seconds since 0h	
		on 1 January	
		1900 with respect	
		to the Coordinated	
		Universal Time	
		(UTC)	
}			
RAND Payload {	(0000011100	N	
Next payload	'00001110'B	Next payload is	
DANDian	(00040000)D	IDRi	
RAND len	'00010000'B 128-bit random number	16 Bytes RAND	
RAND	arbitrarily selected by the		
	SS selected by the		
3			
IDRi payload {			
Next payload	'00001110'B	Next payload is	
		IDRr	
ID Role	1	Initiator (IDRi)	
ID Type	1	URI	
ID len	Length of ID Data		
ID data	tsc_MCPTT_PublicServic	The public service	
	eld_A	identity identifying	
		the participating	
		MCPTT function	
}			
IDRr payload {			
Next payload	'00001110'B	Next payload is	
	_	IDRkmsi	
ID Role	2	Responder (IDRr)	

Derivation path: RFC 6509 [23], RFC 6043	Value/remark	Comment	Condition
ID Type	1	URI	
ID len	Length of ID Data	<u> </u>	
ID data	px_MCPTT_ID_User_A	MCPTT ID	
.2	pe	associated to the	
		terminating user	
}		torrimiaming door	
IDRkmsi payload {			
Next payload	'00001110'B	Next payload is	
. Total payload	33311132	IDRkmsr	
ID Role	6	Initiator's KMS	
		(IDRkmsi)	
ID Type	1	URI	
ID len	Length of ID Data	O T T	
ID data	tsc_MCX_KMS_Hostnam		
15 data	e		
}			1
IDRkmsr payload {			
Next payload	'00011010'B	Next payload is	
Hom payioud	0001101010	SAKKE (26)	
ID Role	7	Responder's KMS	
IB Role	'	(IDRkmsr)	
ID Type	1	URI	
ID len	Length of ID Data	OKI	
ID data	tsc_MCX_KMS_Hostnam	KMS of the UE	
ID data	e	KIVIS OF THE OF	
1	E		
SAKKE payload {			
Next payload	'00000100'B	Next payload is	
Next payload	00000100 В	SIGN	
SAKKE params	1	Parameter Set 1	
SARRE params	'	according to RFC	
		6509 [23],	
		0009 [20], Appondix A	
ID Scheme	2	Appendix A '3GPP MCX	
ID Scheme	2	hashed UID'	
		(33.180 [94]	
SAKKE data length	Length of SAKKE data	E.1.2)	1
SARKE data length			
SAKKE data	(in bytes) Encapsulated MuSiK	The MuSiK is	
SARKE data	Encapsulated MuSIK	The Musik is	
		encapsulated by	
		using the SAKKE	
		public key and the	
		UID generated	
		from the MC	
		Service user ID of	
		the terminating	
		user	
}			
SIGN (ECCSI) payload {			
S type	2	ECCSI signature	
S len	Length of the signature	12 bits	
	field (in bytes)		ĺ

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

5.5.10 Common MCS test USIM parameters

5.5.10.1 General

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

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

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

5.5.10.2 Default settings for the Elementary Files (EFs)

EFUST (USIM Service Table)

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

EF_{MST} (MCS Service Table)

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

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

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

 $\mathsf{EF}_{\mathsf{MCS_CONFIG}} \ (\mathsf{MCS} \ \mathsf{configuration} \ \mathsf{data})$

This file shall be present.

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

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

5.5.11 Default MCVideo Transmission Control Messages and other Information Elements

5.5.11.0 General

The following conditions apply throughout clause 5.5.11:

Table 5.5.11.0-1: Conditions

Condition	Explanation
FA	IE for when an active Functional Alias is used
ACK	Message requests a Transmission control Ack
UPLINK	The message is sent from the UE
DOWNLINK	The message is sent from the SS
NOTE: For further condition	ons see table 5.5.1-1

For MCVideo media plane control different SSRCs (Synchronization SouRCes) need to be distinguished. Table 5.5.11.0-2 specifies the SSRCs as used in the default MCVideo media plane control messages for the case that there is no multiplexing of media plane control channels.

- NOTE 1: Multiplexing of media plane control channels has been introduced in Rel-18 of TS 24.281 [86] and TS 24.581 [88] and is out of scope for the current release of this document.
- NOTE 2: In contrast to Rel-18 where there are distinct SSRCs for the audio and video stream, in Rel-14 .. Rel-15 there is still only one SSRC identifying a media stream.

Table 5.5.11.0-2: SSRCs in MCVideo media plane control messages (No multiplexing of media plane control channels)

SSRC (NOTE 1)	Description	Value
Media SSRC of the client	SSRC identifying the client (Client A)	Arbitrarily selected by the SS and assigned to the client when the transmission is granted (NOTE 2)
Media SSRC of a remote client	SSRC identifying the media stream of a remote client (Client B, C)	Arbitrarily selected by the SS (NOTE 2)
RTCP SSRC of the client	SSRC used by the client (Client A) in the RTCP header of the MCVideo media plane control messages sent to the SS	The client may use any value, value is not checked by the SS (NOTE 3).
RTCP SSRC of the SS	SSRC used by the SS in the RTCP header of the MCPTT media plane control messages sent to the client	Arbitrarily selected by the SS (NOTE 3)

- NOTE 1: The term "RTCP SSRC" has been introduced in Rel-18 of TS 24.581 [88]. "Media SSRC" is used as in Rel-14 .. Rel-17 there is no "Audio SSRC" and "Video SSRC" yet in media plane control messages, but only a single SSRC value identifying the transmitter of a media stream.
- NOTE 2: Different SSRC values shall be selected by the SS for media streams from different clients.

 Nevertheless it is not clear for Rel-14 .. Rel-17 how the client uses the SSRC value provided by the server in the Transmission Granted message and there is no way to provide SSRC value(s) in case of implicit transmission grant ⇒ In general collisions according to IETF RFC 3550 [76] may occur but collision resolution is out of scope of this document.
- NOTE 3: As TS 24.581 [88] clarifies in Rel-18 that "the SSRC of the RTCP header is used to enable multiplexing of media plane control channels" it is assumed that RTCP SSRC values have no meaning in case of no multiplexing.

5.5.11.1 Transmission Control Specific Messages Sent by the Transmission Participant

5.5.11.1.1 Transmission Request

Table 5.5.11.1.1-1: Transmission Request

Derivation Path: TS 24.581 [88	3] Table 9.2.4-1			
Information Element	Value/remark	Comment	Reference	Condition
RTCP-header				
Subtype	"00000"	Transmission Request	TS 24.581 [88] clause 9.2.4 and Table 9.2.2.1-1	
	"10000"			ACK
SSRC	RTCP SSRC of the client		IETF RFC 35 50 [76].	
	The SSRC of the message sender			OFF- NETWORK
name	MCV0			
Transmission Priority	If present		TS 24.581 [88] clause 9.2.3.2	

Derivation Path: TS 24.581 [88] Table 9.2.4-1				
Information Element	Value/remark	Comment	Reference	Condition
Transmission Priority Value	Any allowed value	If present, a value between '0' and '255' where '0' is the lowest priority and '255' is the highest priority. If the Transmission Priority field is not included in the message the default priority is used as the Transmission Priority value. The value of the default priority is '0'. The default priority is sometimes referred to as normal priority.		
User ID	Not Present			
User ID		The User ID field is used in off-network only. The User ID field carries the MCVideo ID of the transmission participant sending the Transmission Release message.	TS 24.581 [88] clause 9.2.3.8	OFF- NETWORK
User ID	px_MCVideo_ID_User_ A			
Transmission Indicator			TS 24.581 [88] clause 9.2.3.1 1	
Transmission Indicator	"1000000000000000"	Normal call		
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL
	"0001000000000000"	Emergency call		EMERGEN CY-CALL
	"0000100000000000"	Imminent peril call		IMMPERIL- CALL
Functional Alias	Not present			
	px_MCVideo_ID_FA_B	functional alias URI of the transmitting user	TS 24.581 [88] clause 9.2.3.21	FA

5.5.11.1.2 Transmission Release

Table 5.5.11.1.2-1: Transmission Release

Derivation Path: TS 24.581 [88] Table 9.2.7-1				
Information Element	Value/remark	Comment	Reference	Condition
RTCP-header				
Subtype	"00010"	Transmission Release	TS 24.581 [88] clause 9.2.7 and Table 9.2.2.1-1	
	"10010"			ACK
SSRC	RTCP SSRC of the client		IETF RFC 35 50 [76].	
	The SSRC of the message sender			OFF- NETWORK
name	MCV0			
User ID	Not Present			

Derivation Path: TS 24.581 [88]	Derivation Path: TS 24.581 [88] Table 9.2.7-1					
Information Element	Value/remark	Comment	Reference	Condition		
User ID		The User ID field is used in off-network only. The User ID field carries the MCVideo ID of the transmission participant sending the Transmission Release message.	TS 24.581 [88] clause 9.2.3.8	OFF- NETWORK		
User ID	px_MCVideo_ID_User_ A					
Transmission Indicator						
Transmission Indicator	"1000000000000000"	Normal call	TS 24.581 [88] clause 9.2.3.1 1			
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL		
	"0001000000000000"	Emergency call		EMERGEN CY-CALL		
	"0000100000000000"	Imminent peril call		IMMPERIL- CALL		

5.5.11.1.3 Queue Position Request

Table 5.5.11.1.3-1: Queue Position Request

Derivation Path: TS 24.581 [88]	Table 9.2.11-1			
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00011"	Queue Position	TS 24.581 [88]	
		Request	clause 9.2.11	
			and 9.2.2.1-1	
	"10011"			ACK
SSRC	RTCP SSRC of the		IETF RFC 355	
	client		0 [76],	
	The SSRC of the			OFF-
	message sender			NETWOR
				K
name	MCV0			
User ID	Not Present			
User ID			TS 24.581 [88]	OFF-
			clause 9.2.3.8	NETWOR
				K
User ID	px_MCVideo_ID_User_			
	Ā			
Track Info	Not present	The MCVideo call does	TS 24.581 [88]	
		not involve a non-	clause	
		controlling MCVideo	9.2.3.13	
		function		

5.5.11.1.4 Receive Media Request

Table 5.5.11.1.4-1: Receive Media Request

Derivation Path: TS 24.581 [88]				
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00100"	Receive Media	TS 24.581 [88]	
		Request	clause 9.2.14	
			and 9.2.2.1-1	
	"10100"			ACK
SSRC	RTCP SSRC of the		IETF RFC 355	
	client		0 [76]	
	The SSRC of the			OFF-
	message sender			NETWOR
				K
name	MCV0			
User ID		The User ID field is		
		used to carry the		
		identity of the user who		
		is requesting the		
		reception of the media.		
User ID	px_MCVideo_ID_User_		TS 24.581 [88]	
	Α		Table 9.2.3.8-	
			2	
SSRC of transmitter	Media SSRC of remote	The SSRC of the user		
	client (Client B) as	transmitting the media		
	provided by the SS in			
	the Media Transmission			
	Notification			
Transmission Indicator			TS 24.581 [88]	
			clause	
	",		9.2.3.11	
Transmission Indicator	"1000000000000000"	Normal call		DD04D04
	"0100000000000000"	Broadcast group call		BROADCA
				ST-CALL
	"0001000000000000"	Emergency call		EMERGEN
	#0000400000000000000000			CY-CALL
	"0000100000000000"	Imminent peril call		IMMPERIL
D	<u> </u>		TO 04 F04 505	-CALL
Reception Priority	if present	Describes the level of	TS 24.581 [88]	
		reception priority	clause	
		requested in a	9.2.3.19 and	
		Reception Request	6.2.5.3.3	
		message or granted in		
		a Reception Granted		
		message. The max		
		reception priority that		
		can be requested in a		
		Reception Request		
		message is negotiated		
		between the		
		transmission control		
		participant and the		
		transmission control		
		server		

Derivation Path: TS 24.581 [88] Ta	Derivation Path: TS 24.581 [88] Table 9.2.14-1				
Information Element	Value/remark	Comment	Reference	Condition	
Reception Priority value	any allowed value	The reception priority (0 to 255) where 0 is the lowest reception priority and 255 is the highest reception priority. If the Reception Priority field is not included in the message the default reception priority is used as the Reception Priority value. The value of the default reception priority is 0. The default reception priority is 0. The default reception priority is sometimes referred to as normal reception priority.			
Track Info	Not present	The MCVideo call does not involve a non-controlling MCVideo function	TS 24.581 [88] clause 9.2.3.13		
Functional Alias	Not present px_MCVideo_ID_FA_B	functional alias URI of the transmitting user	TS 24.581 [88] clause 9.2.3.21	FA	

5.5.11.1.5 Void

5.5.11.1.6 Remote Transmission Request

Table 5.5.11.1.6-1: Remote Transmission Request

Derivation Path: TS 24.581 [8 Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00111"	Remote Transmission Request	TS 24.581 [88] clause 9.2.22 and Table 9.2.2.1-1	
	"10111"			ACK
SSRC	RTCP SSRC of the client		IETF RFC 35 50 [76].	
	The SSRC of the			OFF-
	message sender			NETWORK
name	MCV0			
Remote ID		Carries the identity of the user who remotely initiated the media transmission of another user.	TS 24.581 [88] clause 9.2.3.8	
User ID	px_MCVideo_ID_User_ B			
User ID		Carries the identity of the user whose media transmission is requested.	TS 24.581 [88] clause 9.2.3.8	
User ID	px_MCVideo_ID_User_ A			

5.5.11.1.7 Remote Transmission Cancel Request

Table 5.5.11.1.7-1: Remote Transmission Cancel Request

Derivation Path: TS 24.581 [88] Table 9.2.24-1				
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"01000"	Remote transmission cancel request	TS 24.581 [88] clause 9.2.24 and Table 9.2.2.1-1	
	"11000"			ACK
SSRC	RTCP SSRC of the client		IETF RFC 35 50 [76].	
	The SSRC of the message sender			OFF- NETWORK
name	MCV0			
User ID		Carries the identity of the user whose media transmission is requested for cancellation.	TS 24.581 [88] clause 9.2.3.8	
User ID	px_MCVideo_ID_User_ A			

5.5.11.2 Transmission Control Specific Messages Sent by the Transmission Control Server

5.5.11.2.1 Transmission Granted

Table 5.5.11.2.1-1: Transmission Granted

Derivation Path: TS 24.581 [88] T	able 9.2.5-1			
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00000"	Transmission granted	TS 24.581 [8 8] clause 9.2.5 and 9.2.2.1-2	
	"10000"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 3550 [76].	
	The SSRC of the message sender	The SSRC of the transmission arbitrator		OFF- NETWORK
name	MCV1	Transmission Control messages sent by the transmission control server and transmission control participant		
Duration			TS 24.581 [8 8] clause 9.2.3.3	
Duration	"00000000 10000000"	128 sec (an arbitrary value)		
SSRC of granted transmission participant	Media SSRC which should be used by the client in the header of RTP packets		IETF RFC 3550 [76]	

Information Element	Value/remark	Comment	Reference	Condition
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			
User ID			TS 24.581 [88] clause 9.2.3.8	OFF- NETWORK
User ID	px_MCVideo_ID_User_ A			
Queue Size	Not present	_		
Queue Size	"0"	the number of queued MCVideo clients in the MCVideo call	TS 24.581 [88] clause 9.2.3.1 5	OFF- NETWORK
SSRC of queued floor participant	Not present			
	The SSRC of queued transmission participant		IETF RFC 3550 [76]	OFF- NETWORK
Queued User ID	Not present px_MCVideo_ID_User_ C	MCVideo ID of the transmission participant in the queue	TS 24.581 [88] clause 9.2.3.1	OFF- NETWORK
Queue Info	Not present			
Queue Info		queue position and granted transmission priority in the queue		OFF- NETWORK
queue position info	"0000001"		TS 24.581 [88] clause 9.2.3.5	
queue priority level	"00000000"		TS 24.581 [88] clause 9.2.3.2	
Transmission Indicator			TS 24.581 [8 8] Table 9.2.3.11-2	
Transmission Indicator	"1000000000000000"	Normal call		
	"0100000000000000"	Broadcast group call		BROADCAS T-CALL
	"0001000000000000"	Emergency call		EMERGENC Y-CALL
	"0000100000000000"	Imminent peril call		IMMPERIL- CALL

5.5.11.2.2 Transmission Rejected

Table 5.5.11.2.2-1: Transmission Rejected

Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00001"	Transmission rejected	TS 24.581 [88] clause 9.2.6 and 9.2.2.1-2	
	"10001"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 355 0 [76]	

Derivation Path: TS 24.581 [88] Information Element	Value/remark	Comment	Reference	Condition
	The SSRC of the message sender			OFF- NETWOR K
name	MCV1			
name Reject Cause	MCV1	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	TS 24.581 [88] clause 9.2.3.4	
Reject Cause	"255"	dependent field. Th <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>	TS 24.581 [88] clause 9.2.6.2	
Reject Cause Phrase	"Other reason"	A text string encoded the text string in the SDES item CNAME.	IETF RFC 355 0 [76]	
User ID	Not present			
User ID		The User ID field is used in off-network only. The User ID carries the MCVideo ID of the requesting transmission participant to which the Transmission Rejected message is sent.	TS 24.581 [88] clause 9.2.3.8	OFF- NETWOR K
User ID	px_MCVideo_ID_User_ A			
Transmission Indicator			TS 24.581 [88] clause 9.2.3.11	
Transmission Indicator	"1000000000000000"	Normal call		
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL
	"0001000000000000"	Emergency call		EMERGEN CY-CALL
	"0000100000000000"	Imminent peril call		IMMPERIL -CALL

5.5.11.2.3 Transmission Arbitration Taken

Table 5.5.11.2.3-1: Transmission Arbitration Taken

Derivation Path: TS 24.581 [88] T				
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00010"	Transmission Arbitration Taken	TS 24.581 [88] clause 9.2.8 and 9.2.2.1-2	
	"10010"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 355 0 [76]	
	The SSRC of the message sender			OFF- NETWOR K
name	MCV1			
Granted Party's Identity		Identifies the MCVideo user that is granted to send media.	TS 24.581 [88] clause 9.2.3.6	
Granted Party's Identity	px_MCVideo_ID_User_ A			
Permission to Request the Transmission		Indicates whether receiving parties are allowed to request the transmission.	TS 24.581 [88] clause9.2.3.7	
Permission to Request the Transmission	"1"	Coded as follows: 0 The receiver is not permitted to request transmission. 1 The receiver is permitted to request transmission.		
User ID	Not Present			
User ID		The User ID field is used in off-network only. The User ID carries the MCVideo ID of the transmission participant sending the Transmission Arbitration Taken message.	TS 24.581 [88] clause 9.2.3.8	OFF- NETWOR K
User ID	px_MCVideo_ID_User_ A			
Message Sequence Number			TS 24.581 [88] clause 9.2.3.9	
Message Sequence Number	The value sent in the previous Transmission Arbitration Taken message, if any, increased by 1	The <message 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>	TO 04 F04 F04	
Transmission Indicator			TS 24.581 [88] clause 9.2.3.11	
Transmission Indicator	"1000000000000000"	Normal call.		
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL
	"0001000000000000"	Emergency call		EMERGEN CY-CALL
	"0000100000000000"	Imminent peril call		IMMPERIL -CALL

Derivation Path: TS 24.581 [88] Table 9.2.8-1					
Information Element	Value/remark	Comment	Reference	Condition	
SSRC of Granted	Media SSRC of granted	Notation in accordance	IETF RFC 355		
Transmission Participant	transmission	with clause 5.5.11.0.	0 [76]		
_	participant:				

5.5.11.2.4 Transmission Arbitration Released

Table 5.5.11.2.4-1: Transmission Arbitration Released

Information Element	Table 9.2.9-1 Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00011"	Transmission	TS 24.581 [88]	
		Arbitration Release	clause 9.2.9	
			and 9.2.2.1-2	
	"10011"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the	IETF	
		Transmission Control	RFC 3550 [76]	
		server		
	The SSRC of the			OFF-
	message sender			NETWOR
	NAC) /4			K
name	MCV1	Identifica the MCV/idea	TC 04 504 [00]	
Granted Party's Identity		Identifies the MCVideo	TS 24.581 [88] clause 9.2.3.6	
		user that is granted to send media.	clause 9.2.3.6	
Granted Party's Identity	px_MCVideo_ID_User_	Senu meula.		
Granted Farty S Identity	px_ivic video_ib_oser_ A			
User ID	Not Present			
User ID	1100111000111	The User ID field is	TS 24.581 [88]	OFF-
		used in off-network	clause 9.2.3.8	NETWOR
		only. The User ID	0.0000 0.2.0.0	K
		carries the MCVideo ID		'
		of the transmission		
		participant sending the		
		Transmission		
		Arbitration Release		
		message.		
User ID	px_MCVideo_ID_User_			
	A			
Message Sequence Number			TS 24.581 [88]	
			clause 9.2.3.9	
Message Sequence Number	The value sent in the	The <message< td=""><td></td><td></td></message<>		
	previous Transmission	Sequence Number>		
	Arbitration Release	value can be between		
	message, if any,	'0' and '65535'. When		
	increased by 1	the '65535' value is		
		reached, the <message< td=""><td></td><td></td></message<>		
		Sequence Number>		
		value starts from '0'		
Transmission Indicator		again.	TC 04 F04 [00]	
riansinission indicator			TS 24.581 [88]	
			clause 9.2.3.11	
Transmission Indicator	"1000000000000000"	Normal call	3.Z.J.11	
Tanoniosion iluicator	"010000000000000"	Broadcast group call		BROADCA
	310000000000000000000000000000000000000	Droddoddi group can		ST-CALL
	"0001000000000000"	Emergency call		EMERGEN
	355.555555555555			CY-CALL
	"0000100000000000"	Imminent peril call		IMMPERIL
				-CALL
SSRC of Granted	Media SSRC of the	Notation in accordance	IETF RFC 355	
Transmission Participant	intended recipient of	with clause 5.5.11.0.	0 [76]	
•	the message		-	1

5.5.11.2.5 Transmission Revoked

Table 5.5.11.2.5-1: Transmission Revoked

Derivation Path: TS 24.581 [88]				
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00100"	Transmission Revoked	TS 24.581 [88] clause 9.2.10 and 9.2.2.1-2	
	"10100"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 355 0 [76]	
	The SSRC of the message sender			OFF- NETWOR K
name	MCV1			
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] clause 9.2.3.4	
Reject Cause Value	7	The <reject cause=""> value set to 7 indicates that the MCVideo client's permission to send a media is being queued. No additional information is included.</reject>	TS 24.581 [88] clause 9.2.10.2	
Reject Cause Phrase	"Queue the transmission"	A text string encoded the text string in the SDES item CNAME.	TS 24.581 [88] clause 9.2.10.2	
Transmission Indicator			TS 24.581 [88] clause 9.2.3.11	
Transmission Indicator	"1000000000000000"	Normal call		
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL
	"0001000000000000"	Emergency call		EMERGEN CY-CALL
	"0000100000000000"	Imminent peril call		IMMPERIL -CALL

5.5.11.2.6 Queue Position Info

Table 5.5.11.2.6-1: Queue Position Info

Derivation Path: TS 24.581 [88] T				
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00101"	Queue Position Info	TS 24.581 [88] clause 9.2.12 and 9.2.2.1-2	
	"10101"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 355 0 [76]	
	The SSRC of the message sender			OFF- NETWORK
name	MCV1			
User ID	Not present			
User ID		The User ID field is used in off-network only. The User ID field carries the MCVideo user ID of the transmission participant sending the Queue Position Info message.	TS 24.581 [88] clause 9.2.3.8	OFF- NETWORK
User ID	px_MCVideo_ID_User_ A			
SSRC of Queued Transmission Participant	Not present			
SSRC of Queued Transmission Participant	The SSRC of the queued transmission participant	Applicable only in off- network and shall carry the SSRC of the queued transmission participant.	IETF RFC 355 0 [76].	OFF- NETWORK
Queued User ID	Not present			
Queued User ID	px_MCVIDEO_ID_User _B	Used in off-network only. The Queued User ID field carries the MCVideo ID of the queued transmission control participant.	TS 24.581 [88] clause 9.2.3.8	OFF- NETWORK
Queue Info		Defines the queue position and granted transmission control priority in the queue.	TS 24.581 [88] clause 9.2.3.5	
Queue Position Info	"1"	value is a binary value		
Queue Priority Level	"O"	value consists of 8 bit parameter giving the transmission priority. The value of the default priority is '0'. The default priority is sometimes referred to as normal priority.	TS 24.581 [88] clause 9.2.3.2	
Track Info	Not present	The MCVideo call does not involve a non- controlling MCVideo function	TS 24.581 [88] clause 9.2.3.13	
Transmission Control Indicator			TS 24.581 [88] clause 9.2.3.11	
Transmission Indicator	"1000000000000000"	Normal call		
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL
	"0001000000000000"	Emergency call		EMERGEN CY-CALL

Derivation Path: TS 24.581 [88] Table 9.2.12-1					
Information Element	Value/remark	Comment	Reference	Condition	
	"0000100000000000"	Imminent peril call		IMMPERIL- CALL	

5.5.11.2.7 Media Transmission Notification

Table 5.5.11.2.7-1: Media Transmission Notification

Derivation Path: TS 24.581 [88] Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00110"	Media Transmission Notification	TS 24.581 [88] clause 9.2.13 and 9.2.2.1-2	
	"10110"		una 0.2.2.1 2	ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 355 0 [76]	, non
	The SSRC of the message sender			OFF- NETWORK
name	MCV1			
User ID		User ID of the user transmitting the media	TS 24.581 [88] clause 9.2.3.8	
User ID	px_MCVideo_ID_User_B			
SSRC of transmitter	Media SSRC of remote client (Client B)	The SSRC of transmitter field carries the SSRC of the user transmitting the media		
Permission to Request the Transmission		Indicates whether receiving parties are allowed to request the transmission.	TS 24.581 [88] clause 9.2.3.7	
Permission to Request the Transmission value	1	The receiver is permitted to request transmission		
	0	The receiver is not permitted to request transmission		BROADCA ST-CALL
Transmission Indicator			TS 24.581 [88] clause 9.2.3.11	
Transmission Indicator	"1000000000000000"	Normal Call		
	"010000000000000"	Broadcast group call		BROADCA ST-CALL
	"000100000000000"	Emergency call		EMERGEN CY-CALL
	"0000100000000000"	Imminent peril call		IMMPERIL- CALL
Track Info	Not present	The MCVideo call does not involve a non-controlling MCVideo function	TS 24.581 [88] clause 9.2.3.13	
Functional Alias	Not present			
	px_MCVideo_ID_FA_B	functional alias URI of the transmitting user	TS 24.581 [88] clause 9.2.3.21	FA
Reception Mode			TS 24.581 [88] clause 9.2.3.22	
Reception Mode value	1	The receiver is not granted permission to automatically receive media		

Derivation Path: TS 24.581 [88] Table 9.2.13-1					
Information Element	Value/remark	Comment	Reference	Condition	
	0	The receiver is granted		EMERGEN	
		permission to		CY-CALL,	
		automatically receive		IMMPERIL-	
		media		CALL,	
				BROADCA	
				ST-CALL	

5.5.11.2.8 Receive Media Response

Table 5.5.11.2.8-1: Receive Media Response

Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00111"	Receive Media	TS 24.581 [88]	
		Response	clause 9.2.15	
			and 9.2.2.1-2	
	"10111"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the	IETF RFC 355	
		Transmission Control	0 [76],	
		server		
	The SSRC of the			OFF-
	message sender			NETWOR
				K
name	MCV1			
Result		Indicates whether	TS 24.581 [88]	
		media reception is	clause	
		possible as per the	9.2.3.17	
		request		
Result	"1"	0 - The receiver is not		
		permitted (rejected) to		
		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		
SSRC of transmitter	Same value as in the	The SSRC of	IETF RFC 355	
	corresponding Receive	transmitter field carries	0 [76]	
	Media Request	the SSRC of the user		
		transmitting the media		
		Notation in accordance		
<u> </u>		with clause 5.5.11.0.		
Transmission Indicator			TS 24.581 [88]	
			clause	
			9.2.3.11	
Transmission Indicator	"10000000000000000"	Normal call		
	"0100000000000000"	Broadcast group call		BROADCA
				ST-CALL
	"0001000000000000"	Emergency call		EMERGEN
				CY-CALL

Derivation Path: TS 24.581 [88] Table 9.2.15-1					
Information Element	Value/remark	Comment	Reference	Condition	
	"0000100000000000"	Imminent peril call		IMMPERIL -CALL	

5.5.11.2.9 Media Reception Notification

Table 5.5.11.2.9-1: Media Reception Notification

Derivation Path: TS 24.581 [88]		1		
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"01000"	Media Reception Notification	TS 24.581 [88] clause 9.2.16 and 9.2.2.1-2	
	"11000"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 355 0 [76]	
	The SSRC of the message sender			OFF- NETWOR K
name	MCV1			
User ID		The User ID field is used to carry the identity of the user who is receiving the media	TS 24.581 [88] clause 9.2.3.8	
User ID	px_MCVideo_ID_User_ B	-		
Functional Alias	Not present			
	px_MCVideo_ID_FA_B	functional alias URI of the transmitting user	TS 24.581 [88] clause 9.2.3.21	FA

5.5.11.2.10 Void

5.5.11.2.11 Transmission Cancel Request Notify

Table 5.5.11.2.11-1: Transmission Cancel Request Notify

Derivation Path: TS 24.581 [88]	Table 9.2.19-1			
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"01010"	Transmission Cancel Request Notify	TS 24.581 [88	
			clause 9.2.19 and 9.2.2.1-2	
	"11010"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the	IETF RFC	
		Transmission Control	3550 [76].	
		server		
	The SSRC of the	The SSRC of the		OFF-
	message sender	transmission arbitrator		NETWORK
name	MCV1	Transmission Control		
		messages sent by the		
		transmission control		
		server and transmission		
		control participant		

5.5.11.2.12 Remote Transmission Response

Table 5.5.11.2.12-1: Remote Transmission Response

Derivation Path: TS 24.581 [88]	Derivation Path: TS 24.581 [88] Table 9.2.23-1					
Information Element	Value/remark	Comment	Reference	Condition		
RTCP						
Subtype	"01011"	Remote Transmission Response	TS 24.581 [88] clause 9.2.23 and 9.2.2.1-2			
	"11011"			ACK		
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server	IETF RFC 3550 [76].			
	The SSRC of the message sender			OFF- NETWORK		
name	MCV1					

5.5.11.2.13 Remote Transmission Cancel Response

Table 5.5.11.2.13-1: Remote Transmission Cancel Response

Derivation Path: TS 24.581 [88] Table 9.2.25-1					
Information Element	Value/remark	Comment	Reference	Condition	
RTCP					
Subtype	"01100"	Remote Transmission Cancel Response	TS 24.581 [88] clause 9.2.25 and 9.2.2.1-2		
	"11100"			ACK	
SSRC	RTCP SSRC of the SS		IETF RFC 3550 [76].		
name	MCV1				

5.5.11.2.14 Media Reception Override Notification

Table 5.5.11.2.14-1: Media Reception Override Notification

Derivation Path: TS 24.581 [88]	Table 9.2.28-1			
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"01101"	Media Reception Override Notification	TS 24.581 [88	
			clause 9.2.28 and 9.2.2.1-2	
	"11101"			ACK
SSRC	RTCP SSRC of the SS		IETF RFC 3550 [76].	
	The SSRC of the message sender			OFF- NETWORK
name	MCV1			_
User ID		Carries the identity of the user who is requesting the reception of the media.	TS 24.581 [88] clause 9.2.3.8	
User ID	px_MCVideo_ID_User_ A			

Derivation Path: TS 24.581 [88] T	Derivation Path: TS 24.581 [88] Table 9.2.28-1					
Information Element	Value/remark	Comment	Reference	Condition		
SSRC of transmitter Overriding ID	Same value as sent to the client in the Receive Media Response (Media SSRC of client B)	The SSRC of transmitter field carries the SSRC of the user transmitting the media Notation in accordance with clause 5.5.11.0. Carries the identity of	IETF RFC 3550 [76].			
-		the user of the overriding media.] clause 9.2.3.8			
User ID	px_MCVideo_ID_User_ C					
Overridden ID		Carries the identity of the user of the overridden media.	TS 24.581 [88] clause 9.2.3.8			
User ID	px_MCVideo_ID_User_ B					

5.5.11.2.15 Transmission End Notify

Table 5.5.11.2.15-1: Transmission End Notify

Derivation Path: TS 24.581 [88]	Table 9.2.29-1			
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"01110"	Transmission End Notify	TS 24.581 [88] clause 9.2.29 and 9.2.2.1-2	
	"11110"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the transmission control server.	IETF RFC 3550 [76].	
	The SSRC of the			OFF-
	message sender			NETWORK
name	MCV1			
User ID		Carries the identity of the user whose media transmission has been released	TS 24.581 [88] clause 9.2.3.8	
User ID	px_MCVideo_ID_User_ B			
SSRC of transmitter	Media SSRC of remote client (Client B)	The SSRC of transmitter field carries the SSRC of the user transmitting the media Notation in accordance with clause 5.5.11.0	IETF RFC 3550 [76].	

5.5.11.2.16 Transmission Idle

Table 5.5.11.2.16-1: Transmission Idle

Derivation Path: TS 24.581 [88] Table 9.2.30-1					
Information Element	Value/remark	Comment	Reference	Condition	
RTCP					
Subtype	"01111"		TS 24.581 [88		
] clause		
			9.2.2.1-2		
SSRC	RTCP SSRC of the SS	The SSRC of the	IETF RFC		
		Transmission Control	3550 [76].		
		server			

Derivation Path: TS 24.581 [88] 1	Table 9.2.30-1			
Information Element	Value/remark	Comment	Reference	Condition
	The SSRC of the message sender	The SSRC of the transmission arbitrator.		OFF- NETWORK
name	"MCV1"	Transmission Control messages sent by the Transmission Control Server and the Transmission Control Participant.		
Message Sequence Number				
Message Sequence Number	The value sent in the previous Transmission Idle message, if any, increased with 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			TS 24.581 [88] clause 9.2.3.1 1	
Transmission Indicator	"1000000000000000"	Normal call		
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL
	"0001000000000000"	Emergency call		EMERGEN CY-CALL
	"0000100000000000"	Imminent peril call		IMMPERIL- CALL

5.5.11.3 Transmission control specific messages sent by both the transmission control server and transmission control participant

5.5.11.3.1 Transmission End Request

Table 5.5.11.3.1-1: Transmission End Request

Derivation Path: TS 24.581 [88]	Table 9.2.20-1			
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00000"	Transmission End Request	TS 24.581 [88] clause 9.2.20 and 9.2.2.1-3	
	"10000"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server for on-network and transmission arbitrator for offnetwork.	IETF RFC 3550 [76].	DOWNLINK
	RTCP SSRC of the client	The SSRC of transmission control participant		UPLINK
name	MCV2			

Derivation Path: TS 24.581 [88] T	able 9.2.20-1			
Information Element	Value/remark	Comment	Reference	Condition
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	px_MCVideo_ID_User_ A			
Reject Cause		Includes the reason explaining why the transmission control server wants the transmission participant to stop sending media	TS 24.581 [88] clause 9.2.3.4	DOWNLINK
Reject Cause Value	8			
Reject Cause Phrase	"No receiving participant"			
Reject Cause	not present			UPLINK

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
RTCP				
Subtype	"00001"	Transmission End Response	TS 24.581 [88] clause 9.2.21 and 9.2.2.1-3	
	"10001"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server for on-network and transmission arbitrator for offnetwork.	IETF RFC 3550 [76].	DOWNLIN K
	RTCP SSRC of the client			UPLINK
name	MCV2			
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	px_MCVideo_ID_User_ A			

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]			•	
Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00010"	Media Reception End Request	TS 24.581 [88] clause 9.2.26 and 9.2.2.1-3	
	"10010"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the transmission control server	IETF RFC 35 50 [76]	DOWNLIN K
	RTCP SSRC of the client	The SSRC of the transmission control participant		UPLINK
name	MCV2			
SSRC of transmitter	Media SSRC of remote client as provided in Media transmission notification message sent to the UE	The SSRC of transmitter field carries the SSRC of the user transmitting the media	IETF RFC 35 50 [76]	
Transmission Indicator			TS 24.581 [88] clause 9.2.3.11	
Transmission Indicator	"10000000000000000"	Normal call		
	"0100000000000000"	Broadcast group call		BROADCA ST-CALL
	"0001000000000000"	Emergency call		EMERGEN CY-CALL
	"0000100000000000"	Imminent peril call		IMMPERIL- CALL

5.5.11.3.4 Media Reception End Response

Table 5.5.11.3.4-1: Media Reception End Response

Information Element	Value/remark	Comment	Reference	Condition
RTCP				
Subtype	"00011"	Media Reception End Response	TS 24.581 [88] clause 9.2.27 and 9.2.2.1-3	
	"10011"			ACK
SSRC	RTCP SSRC of the SS	The SSRC of the transmission control server	IETF RFC 35 50 [76]	DOWNLIN K
	RTCP SSRC of the client	The SSRC of the transmission control participant		UPLINK
name	MCV2			
SSRC of transmitter	Media SSRC of remote client (same value as in the corresponding Media Reception End Request)	The SSRC of transmitter field carries the SSRC of the user transmitting the media	IETF RFC 35 50 [76]	

5.5.11.3.5 Transmission Control Ack

Table 5.5.11.3.5-1: Transmission Control Ack

Derivation Path: TS 24.581 [88] Information Element	Value/remark	Comment	Reference	Condition
RTCP	value/reiliai k	Comment	Reference	Condition
Subtype	"00100"	Transmission Control Ack	TS 24.581 [88] clause 9.2.31 and 9.2.2.1-3	
SSRC	RTCP SSRC of the SS	The SSRC of the Transmission Control server for on-network and transmission arbitrator for off-network.	IETF RFC 3550 [76]	DOWNLIN K
	RTCP SSRC of the client	The SSRC of the transmission control participant		UPLINK
name	MCV2			
Source			TS 24.581 [88] clause 9.2.3.12	
Source	"2"	the controlling MCVideo function is the sender of the message		DOWNLIN K
	"0"	the transmission participant is the sender of the message		UPLINK
Message name			TS 24.581 [88] clause 9.2.3.18	
Message Name	Message Name of the transmission control messages which requested the acknowledgement	value is as coded as an ascii name field of the RTCP APP packet containing the message to be acknowledged		
Message type			TS 24.581 [88] clause 9.2.3.10	
Message Type	'0000xxxx' with 'xxxx' being the lower four bits of the subtype of the message to be acknowledged	Message Type of the transmission control messages which requested the acknowledgement		

5.5.12 MSRP Messages for MCData

5.5.12.1 MSRP SEND

5.5.12.1.1 MSRP SEND from the UE

Table 5.5.12.1.1-1: MSRP SEND from the UE

0] clause 9	· · · · · · · · · · · · · · · · · · ·		
Value/remark	Comment	Reference	Condition
and allowed and a			
any allowed value			
MSRP URI as provided by the SS in its SDP message sent to the UE during call			
establishment			
MSRP URI as provided by the UE during call establishment			
any allowed value	In case of chunking the same Message-ID shall be used for all chunks of the message		
1 for the first chunk of a message, length of all previous chunks for a second or later chunk of the message			
1			EMPTY_S END_REQ
any allowed value			
			EMPTY_S END_REQ
any allowed value	may be a specific length or "*"		
0			EMPTY_S END_REQ
as specified by the test case		TS 24.582 [89] , clause 6.4	
not present			EMPTY_S END_REQ
as specified by the test case			
not present			EMPTY_S END_REQ
			END_KEQ
same value as used in Transaction Identifier field			
"+" in case of chunking when further chunks will follow; "\$" in case of the message's last chunk or if the MSRP SEND request contains the entire message "\$"			EMPTY_S END_REQ
	Any allowed value MSRP URI as provided by the SS in its SDP message sent to the UE during call establishment MSRP URI as provided by the UE during call establishment MSRP URI as provided by the UE during call establishment any allowed value 1 for the first chunk of a message, length of all previous chunks for a second or later chunk of the message 1 any allowed value 0 any allowed value 0 as specified by the test case not present as specified by the test case not present same value as used in Transaction Identifier field "+" in case of chunking when further chunks will follow; "\$" in case of the message's last chunk or if the MSRP SEND request contains the entire message	Walue/remark any allowed value MSRP URI as provided by the SS in its SDP message sent to the UE during call establishment MSRP URI as provided by the UE during call establishment any allowed value In case of chunking the same Message-ID shall be used for all chunks of the message 1 for the first chunk of a message, length of all previous chunks for a second or later chunk of the message 1 any allowed value 0 any allowed value may be a specific length or "*" 0 as specified by the test case not present as specified by the test case not present same value as used in Transaction Identifier field "+" in case of chunking when further chunks will follow; "\$" in case of the message's last chunk or if the MSRP SEND request contains the entire message	Any allowed value MSRP URI as provided by the SS in its SDP message sent to the UE during call establishment MSRP URI as provided by the UE during call establishment any allowed value In case of chunking the same Message-ID shall be used for all chunks of the message 1 for the first chunk of a message, length of all previous chunks for a second or later chunk of the message 1 any allowed value any allowed value o any allowed value o any allowed value o as specified by the test case not present same value as used in Transaction Identifier field "+" in case of chunking when further chunks will follow; "\$" in case of the message's last chunk or if the MSRP SEND request contains the entire message'

Condition	Explanation
EMPTY_SEND_REQ	Empty SEND request to bind the TCP connection to an MSRP
	session
For further conditions see table 5.5.1-1	

Table 5.5.12.1.1-2..4: Void

5.5.12.1.2 MSRP SEND from the SS

Table 5.5.12.1.2-1: MSRP SEND from the SS

Derivation Path: RFC 4975 [120 Information Element	Value/remark	Comment	Reference	Condition
Transaction Identifier	value/remark	Comment	Reference	Condition
value	value assigned by the SS	The SS shall use a different value for each SEND request sent to the UE during a test case		
To-Path				
value	MSRP URI as provided by the UE in its SDP message sent to the SS during call establishment			
From-Path				
value	MSRP URI as provided by the SS in its SDP message sent to the UE during call establishment			
Message-ID				
value	value assigned by the SS	The SS shall use a different value for each message sent to the UE during a test case (NOTE 1)		
Byte-Range				
range-start	1			
range-end	length of the message in bytes	NOTE 1		
	0			EMPTY_S END_REQ
total length	length of the message in bytes	NOTE 1		
	0			EMPTY_S END_REQ
Content-Type	as specified by the test case		TS 24.582 [89] , clause 6.4	
	not present			EMPTY_S END_REQ
data	as specified by the test case			
	not present			EMPTY_S END_REQ
End-line				
transact-id	same value as used in Transaction Identifier field			
continuation-flag	"\$"	NOTE 1 In DL for MCData test case		

Condition	Explanation
EMPTY_SEND_REQ	Empty SEND request to bind the TCP connection to an MSRP
	session
For further conditions see table 5.5.1-1	

Table 5.5.12.1.2-2: Void

5.5.12.2 MSRP 200 (OK)

5.5.12.2.1 MSRP 200 (OK) from the UE

Table 5.5.12.2.1-1: MSRP 200 (OK) from the UE

Information Element	Value/remark	Comment	Reference	Condition
Transaction Identifier				
value	same value as received in the MSRP SEND request			
To-Path	request			
value	Same value as received in the From-Path of the MSRP SEND request	According to Table 5.5.12.1.2-1 the SS sends only one URI in its SEND requests	RFC 4975 clause 7.2	
From-Path		1		
value	MSRP URI of the UE (as provided by the UE in its SDP message sent to the SS during call establishment)		RFC 4975 clause 7.2	
End-line				
transact-id	same value as used in Transaction Identifier field			
continuation-flag	"\$"			

5.5.12.2.2 MSRP 200 (OK) from the SS

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

Derivation Path: RFC 4975 [1	[20] clause 9			
Information Element	Value/remark	Comment	Reference	Condition
Transaction Identifier				
value	same value as received in the MSRP SEND message			
To-Path				
value	same value as received in the From-Path of the MSRP SEND request	According to Table 5.5.12.1.1-1 it is assumed that the UE sends only one URI in its SEND requests	RFC 4975 clause 7.2	
From-Path				
value	MSRP URI of the SS (as provided by the SS in its SDP message sent to the UE during call establishment)		RFC 4975 clause 7.2	
End-line				
transact-id	same value as used in Transaction Identifier field			
continuation-flag	"\$"			

5.5.13 Default XML messages and elements for XML security

5.5.13.1 XML signature for integrity protection of MIME bodies

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

Derivation Path: TS 24.379 [9] a	Value/remark	Comment	Reference	Condition
Signatures	value/Terrial K	list of N signatures for	Reference	Condition
Signatures		the signed XML bodies		
		of a SIP message		
Signature [n]		n ∈ {1N}		
id	any value if present			
SignedInfo	any value if present			
CanonicalizationAlgorithm	any value	canonicalisation		
CanonicalizationAlgorithm	any value			
		method e.g. "http://www.w3.org/TR/		
		2001/REC-xml-c14n-		
		2001/REC-xiiii-C14ii-		
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	The signing key is		
	SignedInfo	derived from the CSK		
		according to		
		TS 33.180 [94] Annex		
		F.1.4 with		
		FC = 0x52 XPK-ID = CSK-ID		
KeyInfo		7.1. TO = 001(1B		
KeyName	base64 encoded CSK-			
-	ID			

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

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

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

Table 5.5.13.2-1: XML <EncryptedData> element from the UE

Derivation Path: XML Encryption Syntax, Version 1.1 [108] clause 9.1					
Information Element	Value/remark	Comment	Reference	Condition	
EncryptedData					
Type attribute	"http://www.w3.org/200				
	1/04/xmlenc#Content" if				
	present				
EncryptionMethod	if present				
Algorithm attribute	"http://www.w3.org/200				
	9/xmlenc11#aes128-				
	gcm"				
KeyInfo	if present				
KeyName	base64 encoded CSK-	The CSK-ID is provided			
	ID	by the UE at CSK			
		distribution			
CipherData					
CipherValue	encrypted XML element	The encryption key is	TS 33.180 [94]		
	content	derived from the CSK	clause 9.3.4.2		
		according to			
		TS 33.180 [94] Annex			
		F.1.4 with			
		FC = 0x51			
		XPK-ID = CSK-ID			

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

Information Element	Value/remark	Comment	Reference	Condition
EncryptedData				
Type attribute	"http://www.w3.org/200 1/04/xmlenc#Content"			
EncryptionMethod				
Algorithm attribute	"http://www.w3.org/200 9/xmlenc11#aes128- gcm"			
KeyInfo				
KeyName	base64 encoded CSK- ID	The CSK-ID is provided by the UE at CSK distribution		
CipherData				
CipherValue	encrypted XML element content	The encryption key is derived from the CSK according to TS 33.180 [94] Annex F.1.4 with FC = 0x51 XPK-ID = CSK-ID	TS 33.180 [94] clause 9.3.4.2	

5.5.13.3 Encrypted XML URI attribute

Table 5.5.13.3-1: Encrypted XML URI attribute

Delivery Path: RFC 3261 [22] c	lause 19.1			
Information Element	Value/remark	Comment	Reference	Condition
SIP URI				
scheme	"sip"			
user	semicolon separated list of:		TS 24.379 [9] clause 6.6.2.3.4	
	base64 encoded encrypted URI	The encryption key is derived from the CSK according to TS 33.180 [94] Annex F.1.4 with FC = 0x51 XPK-ID = CSK-ID		
	"iv=" & base64 encoded 96-bit random initialisation vector (IV)	IV as used by AES-128 encryption algorithm		
	"key-id=" & base64 encoded encryption key identifier (XPK-ID)	with XPK-ID = CSK-ID		
	"alg=128-aes-gcm"	AES-128 encryption algorithm		
password	not present			
host	"mc1- encryption.3gppnetwor k.org"		TS 24.379 [9] clause 6.6.2.3.4; TS 23.003 [69] clause 26.2	
port	not present			
uri parameters	not present		_	
headers	not present			

5.5.14 Default MCVideo Call Control Off-network Messages and Other Information Elements

5.5.14.1 GROUP CALL PROBE

Table 5.5.14.1-1: GROUP CALL PROBE from the UE to Other UEs

Derivation Path: TS 24.281 [86] Table 17.1.2.1-1			
Information Element	Value/remark	Comment	Condition
Group call probe message identity	"10000001"		
MCVideo group ID	px_MCVideo_Group_A_I		
	D		

5.5.14.2 GROUP CALL ANNOUNCEMENT

Table 5.5.14.2-1: GROUP CALL ANNOUNCEMENT from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.3.1-1			
Information Element	Value/remark	Comment	Condition
Group call announcement message Identity	"10000010"		
Call identifier	a random number uniformly distributed between (0, 65535) generated at the beginning of a call establishment		
Call type	"00000001"	Basic Group Call	
	"0000011"	,	EMERGEN CY-CALL
	"00000100"		IMMPERIL- CALL
Refresh interval	10000	The Refresh interval contains a number denoting the minimum time interval (milliseconds) between two successive periodic announcements. NOTE: TS 24.281 [26] clause 9.3.2.4.3.1 states that the refresh interval of the call is fixed to 10 seconds (10000 ms)	
Call start time	The Call start time value is an unsigned integer containing UTC time of the time when a call was started, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
Last call type change time	The Last call type change time value is an unsigned integer containing UTC time of the time when a call priority was changed, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
MCVideo group ID	px_MCVideo_Group_A_I D		
SDP	As described in TS36.579-1, Table 5.5.3.1.3-2		
Originating MCPTT user ID	px_MCVideo_ID_User_A	pre-set MCVideo user ID	
Last user to change call type	The ID of the last user to change contents		
Confirm mode indication	Present		
Probe response	Not Present		

5.5.14.3 GROUP CALL ACCEPT

Table 5.5.14.3-1: GROUP CALL ACCEPT from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.4.1-	1		
Information Element	Value/remark	Comment	Condition
Group call accept message identity	"10000011"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Call type	"0000001"	Basic Group Call	
	"0000011"		EMERGEN CY-CALL
	"00000100"		IMMPERIL- CALL
MCVideo group ID	px_MCVideo_Group_A_I D		
Sending MCVideo user ID	px_MCVideo_ID_User_A		

5.5.14.4 GROUP CALL EMERGENCY END

Table 5.5.14.4-1: GROUP CALL EMERGENCY END from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.13.1-1			
Information Element	Value/remark	Comment	Condition
Group call emergency end message identity	"10000100"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Last call type change time	The Last call type change time value is an unsigned integer containing UTC time of the time when a call priority was changed, in seconds since midnight UTC of January 1, 1970 (not counting leap seconds).		
Last user to change call type	px_MCVideo_ID_User_A	The ID of the last user to change contents	
MCVideo group ID	px_MCVideo_Group_A_I D		_
Originating MCVideo user ID	px_MCVideo_ID_User_A		

5.5.14.5 **GROUP CALL IMMINENT PERIL END**

Table 5.5.14.5-1: GROUP CALL IMMINENT PERIL END from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.12.1-1			
Information Element	Value/remark	Comment	Condition
Group call imminent peril end message identity	"10000101"		
Call identifier	a random number		
	uniformly distributed		
	between (0, 65536)		
	generated at the		
	beginning of a call		
	establishment		
Last call type change time	The Last call type change		
	time value is an unsigned		
	integer containing UTC		
	time of the time when a		
	call priority was changed,		
	in seconds since		
	midnight UTC of January		
	1, 1970 (not counting		
	leap seconds).	TI 15 (4) 1 (
Last user to change call type	px_MCVideo_ID_User_A	The ID of the last	
		user to change	
100/71	140) (1.1	contents	
MCVideo group ID	px_MCVideo_Group_A_I		
	D		
Originating MCVideo user ID	px_MCVideo_ID_User_A		

5.5.14.6 **GROUP CALL BROADCAST**

Table 5.5.14.6-1: GROUP CALL BROADCAST from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.18.1-1			
Information Element	Value/remark	Comment	Condition
Group call broadcast message identity	"10000110"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Call type	"00000010"	Broadcast Group Call	
Originating MCVideo user ID	px_MCVideo_ID_User_A		
MCVideo group ID	px_MCVideo_Group_A_I D		
SDP	As described in TS36.579-1, Table 5.5.3.1.3-2		

5.5.14.7 GROUP CALL BROADCAST END

Table 5.5.14.7.1-1: GROUP CALL BROADCAST END from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.19.1-1			
Information Element	Value/remark	Comment	Condition
Group Call Broadcast end message identity	"10000111"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCVideo group ID	px_MCVideo_Group_A_I D		
Originating MCVideo user ID	px_MCVideo_ID_User_A		

5.5.14.8 PRIVATE CALL SETUP REQUEST

Table 5.5.14.8-1: PRIVATE CALL SETUP REQUEST from the UE to another UE

Derivation Path: TS 24.281 [86] Table 17.1.5.1-1.			
Information Element	Value/remark	Comment	Condition
Private call setup request message identity	"10001000"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Commencement mode	"00000000"	Automatic Commencement Mode	
Call type	"00000101"	Private Call	
MCVideo user ID of the caller	px_MCVideo_ID_User_A		
MCVideo user ID of the callee	px_MCVideo_ID_User_B		
SDP offer	As described in TS36.579-1, Table 5.5.3.1.3-2 with condition PRIVATE_CALL		
User location	Not Present		

5.5.14.9 PRIVATE CALL RINGING

Table 5.5.14.9-1: PRIVATE CALL RINGING from the UE to another UE

Derivation Path: TS 24.281 [86] Table 17.1.6.1-	1.		
Information Element	Value/remark	Comment	Condition
Private call ringing message identity	"10001001"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCVideo user ID of the caller	px_MCVideo_ID_User_A		
MCVideo user ID of the callee	px_MCVideo_ID_User_B		

5.5.14.10 PRIVATE CALL ACCEPT

Table 5.5.14.10-1: PRIVATE CALL ACCEPT from the UE to another UE

Derivation Path: TS 24.281 [86] Table 17.1.7.1-	1.		
Information Element	Value/remark	Comment	Condition
Private call accept message identity	"10001010"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCVideo user ID of the caller	px_MCVideo_ID_User_A		
MCVideo user ID of the callee	px_MCVideo_ID_User_B		
SDP answer	As described in TS36.579-1, Table 5.5.3.1.3-2 with condition PRIVATE_CALL		

5.5.14.11 PRIVATE CALL REJECT

Table 5.5.5.11.1-1: PRIVATE CALL REJECT from the UE to another UE

Derivation Path: TS 24.281 [86] Table 17.1.8.1-1.			
Information Element	Value/remark	Comment	Condition
Private call reject message identity	"10001011"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
Reason	"0000000"	00000000 = REJECT; 00000001 = MEDIA FAILURE; 00000010 = BUSY; 00000011 = E2E SECURITY CONTEXT FAILURE; 00000100 = FAILED	
MCVideo user ID of the caller	px_MCVideo_ID_User_A		
MCVideo user ID of the callee	px_MCVideo_ID_User_B		

5.5.14.12 PRIVATE CALL RELEASE

Table 5.5.14.12-1: PRIVATE CALL RELEASE from the UE to another UE

Derivation Path: TS 24.281 [86] Table 17.1.9.1-1.			
Information Element	Value/remark	Comment	Condition
Private call release message identity	"10001100"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCVideo user ID of the caller	px_MCVideo_ID_User_A		
MCVideo user ID of the callee	px_MCVideo_ID_User_B		

5.5.14.13 PRIVATE CALL RELEASE ACK

Table 5.5.14.13-1: PRIVATE CALL RELEASE ACK from the UE to another UE

Derivation Path: TS 24.281 [86] Table 17.1.10.1-	1.		
Information Element	Value/remark	Comment	Condition
Private call release ack message identity	"10001101"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCVideo user ID of the caller	px_MCVideo_ID_User_A		
MCVideo user ID of the callee	px_MCVideo_ID_User_B		

5.5.14.14 PRIVATE CALL ACCEPT ACK

Table 5.5.14.14-1: PRIVATE CALL ACCEPT ACK from the UE to another UE

Derivation Path: TS 24.281 [86] Table 17.1.11.1-1			
Information Element	Value/remark	Comment	Condition
Private call accept ack message identity	"10001110"		
Call identifier	a random number uniformly distributed between (0, 65536) generated at the beginning of a call establishment		
MCVideo user ID of the caller	px_MCVideo_ID_User_A		
MCVideo user ID of the callee	px_MCVideo_ID_User_B		

5.5.14.15 GROUP EMERGENCY ALERT

Table 5.5.14.15.1-1: GROUP EMERGENCY ALERT from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.14.1-1			
Information Element	Value/remark	Comment	Condition
Group emergency alert message identity	"10001111"		
MCVideo group ID	px_MCVideo_Group_A_I D		
Originating MCVideo user ID	px_MCVideo_ID_User_A		
Organization name	px_MCX_DomainName_ Organization_A		
User location	Not Present		
User location			USER_LOC
Latitude	any allowed value		
Longitude	any allowed value		
Altitude	Not present, or any allowed value	Optional IE	
Accuracy	any allowed value		
Timestamp	any allowed value		

Condition	Explanation
USER_LOC	If requested, shall set the location IE with UE (MCPVideo Client)
	current location

5.5.14.16 GROUP EMERGENCY ALERT ACK

Table 5.5.14.16.1-1: GROUP EMERGENCY ALERT ACK from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.15.1-1						
Information Element	Value/remark	Comment	Condition			
Group emergency alert ack message identity	"10010000"					
MCVideo group ID	px_MCVideo_Group_A_I					
	D					
Originating MCVideo user ID	px_MCVideo_ID_User_B					
Sending MCVideo user ID	px_MCVideo_ID_User_A	·				

5.5.14.17 GROUP EMERGENCY ALERT CANCEL

Table 5.5.14.17.1-1: GROUP EMERGENCY ALERT CANCEL from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.16.1-1						
Information Element	Value/remark	Comment	Condition			
Group emergency alert cancel message identity	"10010001"					
MCVideo group ID	px_MCVideo_Group_A_I					
	D					
Originating MCVideo user ID	px_MCVideo_ID_User_A					
Sending MCVideo user ID	px_MCVideo_ID_User_A					

5.5.14.18 GROUP EMERGENCY ALERT CANCEL ACK message

Table 5.5.14.18.1-1: GROUP EMERGENCY ALERT CANCEL ACK from the UE to other UEs

Derivation Path: TS 24.281 [86] Table 17.1.17.1-1						
Information Element	Value/remark	Comment	Condition			
Group emergency alert cancel ack message identity	"10010010"					
MCVideo group ID	px_MCVideo_Group_A_I					
	D					
Originating MCVideo user ID	px_MCVideo_ID_User_A					
Sending MCVideo user ID	px MCVideo ID User B					

5.5.14.19 PRIVATE REMOTE VIDEO PUSH REQUEST message

Table 5.5.14.19-1: PRIVATE REMOTE VIDEO PUSH REQUEST from the UE to another UE

Derivation Path: TS 24.381 [86] Table 17.1.20.1-1			
Information Element	Value/remark	Comment	Condition
Remote video push setup request message identity	"10010011"		
Call identifier	a random number uniformly distributed between (0, 65535) generated at the beginning of a call establishment		
MCVideo remote push requester	px_MCVideo_ID_User_A	TS 24.281, Section 13.3.2.2.1	
MCVideo remote push call originator	px_MCVideo_ID_User_A	The stored caller ID	
MCVideo remote push call recipient	px_MCVideo_ID_User_B	The stored callee ID	
Video Information	The Video Information IE is used to indicate the source (user/group) of the video being pushed.	TS 24.281, Sections 13.3.2.2.1 and 17.2.17, Figure 17.2.17-1, Tables 17.2.17-1 and 17.2.17-2.	
Source ID type	"00000000"	user ID	
Length of Source ID contents			
Source ID	px_MCVideo_ID_User_A		

5.5.14.20 GROUP REMOTE VIDEO PUSH REQUEST message

Table 5.5.14.20-1: GROUP REMOTE VIDEO PUSH REQUEST from the UE to another UE

Derivation Path: TS 24.281 [86] Table 17.1.21.1-1			
Information Element	Value/remark	Comment	Condition
Remote video push setup request message identity	"10010100"		
Call identifier	a random number		
	uniformly distributed		
	between (0, 65535)		
	generated at the		
	beginning of a call		
110.111	establishment		
MCVideo remote push requester	px_MCVideo_ID_User_A		
MCVideo remote push call originator	px_MCVideo_ID_User_A	The stored caller	
140)(1)	140) (11 0 11	ID .	
MCVideo remote push call recipient	px_MCVideo_Group_A_I	The stored group	
Alberta de farence e Cara	D	recipient ID	
Video Information		The Video Information IE is	
		used to indicate	
		the source	
		(user/group) of the	
		video being	
		pushed.	
Source ID type	"0000001"	group ID	
Length of Source ID contents			
Source ID	px_MCVideo_Group_A_I		
	D		

5.5.14.21 VIDEO PUSH TRYING RESPONSE message

Table 5.5.14.21-1: VIDEO PUSH TRYING RESPONSE from UE to other UE

Information Element	Value/remark	Comment	Condition
Remote video push trying response message identity	"10010101"		
Call identifier	a random number uniformly distributed between (0, 65535) generated at the beginning of a call establishment		

5.5.14.22 NOTIFY VIDEO PUSH message

Table 5.5.14.22-1: NOTIFY VIDEO PUSH message content

Derivation Path: TS 24.281 [86] Table 17.1.23.1-1			
Information Element	Value/remark	Comment	Condition
Remote video push notification message identity	"10010110"		
Call identifier	a random number		
	uniformly distributed		
	between (0, 65535)		
	generated at the		
	beginning of a call		
	establishment		
Result	"0000000"	00000000 =	
		SUCCESS	
		00000001	
		=FAILURE	
MCVideo remote push request notifier	px_MCVideo_ID_User_A	TS 24.281,	
		section 13.3.2.2.6	
MCVideo remote push request notification recipient	px_MCVideo_ID_User_B		
MCVideo remote push call recipient user	Not present		
	px_MCVideo_ID_User_A		PRIVATE-
			CALL
MCVideo remote push call recipient group	Not present		
	px_MCVideo_Group_A_I		GROUP-
	D		CALL
Reason	Not present		

5.6 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/
  <ClientReqUrl>http://kms.example.org/keymanagement/identity/v1/keyprov</ClientReqUrl>
  <KmsMessage>
    <KmsKeyProv Version = "1.0.0" xsi:type = "se:KmsKeyProvTkType">
      <KmsKeySet Version = "1.1.0">
        <KmsUri>kms.example.org/KmsUri>
        <CertUri>cert1.kms.example.org</CertUri>
        <Issuer>www.example.org</Issuer>
        <UserUri>user@example.org</UserUri>
        <UserID>0123456789ABCDEF0123456789ABCDEF</UserID>
        <ValidFrom>2017-07-31T17:00:00</ValidFrom>
        <ValidTo>2018-07-31T16:59:59</ValidTo>
```

```
<KeyPeriodNo>3710502000</KeyPeriodNo>
        <Revoked>false</Revoked>
        <UserDecryptKey xsi:type = "se:EncKeyContentType">
          <EncryptedKey xmlns = "http://www.w3.org/2001/04/xmlenc#">
            <EncryptionMethod Algorithm="http://www.w3.org/2001/04/xmlenc#kw-aes256"/>
              <ds: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:KevInfo>
              <ds:KeyName>tk.12.user@example.org</KeyName>
            </ds:KeyInfo>
            <CipherData>
              <CipherValue>DEADBEEF</CipherValue>
            </CipherData>
        </EncryptedKey>
        </UserSigningKeySSK>
        <UserPubTokenPVT xsi:type = "se:EncKeyContentType">
          <EncryptedKey xmlns = "http://www.w3.org/2001/04/xmlenc#">
            <EncryptionMethod Algorithm="http://www.w3.org/2001/04/xmlenc#kw-aes256"/>
              <ds:KeyName>tk.12.user@example.org</KeyName>
            </ds:KeyInfo>
            <CipherData>
              <CipherValue>DEADBEEF</CipherValue>
            </CipherData>
          </EncryptedKey>
        </UserPubTokenPVT>
      </KmsKeySet>
      <NewTransportKey xmlns= "TOBEDEFINED">
            <EncryptedKey xmlns="http://www.w3.org/2001/04/xmlenc#"</pre>
Type="http://www.w3.org/2001/04/xmlenc#EncryptedKey">
              <EncryptionMethod Algorithm="http://www.w3.org/2001/04/xmlenc#kw-aes256"/>
              <ds:KeyInfo>
                <ds:KeyName>tk.12.user@example.org</KeyName>
              </ds:KeyInfo>
              <CipherData>
                <CipherValue>DEADBEEF</CipherValue>
              </CipherData>
              <CarriedKeyName>tk.13.user@example.org</CarriedKeyName>
            </EncryptedKey>
          </NewTransportKey>
    </KmsKeyProv>
  </KmsMessage>
</KmsResponse>
<Signature xmlns="http://www.w3.org/2000/09/xmldsig#">
      <CanonicalizationMethod Algorithm="http://www.w3.org/TR/2001/REC-xml-c14n-20010315"/>
      <SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#hmac-sha256">
        <HMACOutputLength>128/HMACOutputLength>
      </SignatureMethod>
      <Reference URI="#xmldoc">
        <DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256"/>
        <DigestValue>nnnn</DigestValue>
      </Reference>
    </SignedInfo>
    <SignatureValue>DEADBEEF</SignatureValue>
    <KevInfo>
      <KeyName>tk.12.user@example.org</KeyName>
    </KeyInfo>
  </Signature>
</SignedKmsResponse>
```

5.6.3 XML schema for MCPTT location information

```
From TS 24.379 clause F.3.2:
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
xmlns:mcpttloc="urn:3gpp:ns:mcpttLocationInfo:1.0"</pre>
```

```
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:complexTvpe>
            <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:simpleTvpe>
                 <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"/>
            <\!\!\mathrm{xs}\!:\!\mathrm{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"/>
            </r></r></r></r>
        </xs:simpleContent>
    </xs:complexType>
    <xs:complexType name="tTravelledDistanceType">
        <xs:sequence>
            <xs:element name="TravelledDistance" type="xs:positiveInteger"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tSignallingEventType">
        <xs:sequence>
            <xs:element name="InitialLogOn" type="mcpttloc:tEmptyTypeAttribute" minOccurs="0"/>
```

```
<xs:element name="GroupCallNonEmergency" type="mcpttloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="PrivateCallNonEmergency" type="mcpttloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="LocationConfigurationReceived" type="mcpttloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type=" mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tEmergencyEventType">
        <xs:sequence>
            <xs:element name="GroupCallEmergency" type="mcpttloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="GroupCallImminentPeril" type="mcpttloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="PrivateCallEmergency" type="mcpttloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:element name="InitiateEmergencyAlert" type="mcpttloc:tEmptyTypeAttribute"</pre>
minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anvAttribute namespace="##anv" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tRequestedLocationType">
        <xs:sequence>
            <xs:element name="ServingEcqi" type="mcpttloc:tEmptyType" minOccurs="0"/>
            <xs:element name="NeighbouringEcgi" type="mcpttloc:tEmptyType" minOccurs="0"</pre>
maxOccurs="unbounded"/>
            <xs:element name="MbmsSaId" type="mcpttloc:tEmptyType" minOccurs="0"/>
            <xs:element name="MbsfnArea" type="mcpttloc:tEmptyType" minOccurs="0"/>
            <xs:element name="GeographicalCordinate" type="mcpttloc:tEmptyType" minOccurs="0"/>
            <xs:element name="minimumIntervalLength" type="xs:positiveInteger"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
<xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tCurrentLocationType">
        <xs:sequence>
            <xs:element name="CurrentServingEcgi" type="mcpttloc:tLocationType" minOccurs="0"/>
            <xs:element name="NeighbouringEcgi" type="mcpttloc:tLocationType" minOccurs="0"</pre>
maxOccurs="unbounded"/>
            <xs:element name="MbmsSaId" type="mcpttloc:tLocationType" minOccurs="0"/>
            <xs:element name="MbsfnArea" type="mcpttloc:tLocationType" minOccurs="0"/>
            <xs:element name="CurrentCoordinate" type="mcpttloc:tPointCoordinate" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:simpleType name="protectionType">
        <xs:restriction base="xs:string">
            <xs:enumeration value="Normal"/>
            <xs:enumeration value="Encrypted"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tLocationType">
        <xs:choice minOccurs="1" maxOccurs="1">
            <xs:element name="Ecgi" type="mcpttloc:tEcgi" minOccurs="0"/>
            <xs:element name="SaId" type="mcpttloc:tMbmsSaIdentity" minOccurs="0"/>
            <xs:element name="MbsfnAreaId" type="mcpttloc:tMbsfnAreaIdentity" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:choice>
        <xs:attribute name="type" type="protectionType"/>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tGeographicalAreaChange">
            <xs:element name="AnyAreaChange" type="mcpttloc:tEmptyTypeAttribute" minOccurs="0"/>
```

```
<xs:element name="EnterSpecificAreaType" type="mcpttloc:tSpecificAreaType"</pre>
minOccurs="0"/>
            <xs:element name="ExitSpecificAreaType" type="mcpttloc:tSpecificAreaType"</pre>
minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tSpecificAreaType">
        <xs:sequence>
            <xs:element name="GeographicalArea" type="mcpttloc:tGeographicalAreaDef"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:attribute name="TriggerId" type="xs:string" use="required"/>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tPointCoordinate">
        <xs:sequence>
            <xs:element name="longitude" type="mcpttloc:tCoordinateType"/>
            <xs:element name="latitude" type="mcpttloc:tCoordinateType"/>
<xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tCoordinateType">
        <xs:choice minOccurs="1" maxOccurs="1">
            <xs:element name="threebytes" type="mcpttloc:tThreeByteType" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:choice>
        <xs:attribute name="type" type="protectionType"/>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:simpleType name="tThreeByteType">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="0"/>
            <xs:maxInclusive value="16777215"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tGeographicalAreaDef">
        <xs: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:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tEllipsoidArcType">
        <xs:sequence>
            <xs:element name="Center" type="mcpttloc:tPointCoordinate"/>
            <xs:element name="Radius" type="xs:nonNegativeInteger"/>
            <xs:element name="OffsetAngle" type="xs:unsignedByte"/>
            <xs:element name="IncludedAngle" type="xs:unsignedByte"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcpttloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="anyExtType">
            <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"
targetNamespace="urn:3gpp:ns:mcvideoLocationInfo:1.0" elementFormDefault="qualified"
attributeFormDefault="unqualified"
xmlns:xenc="http://www.w3.org/2001/04/xmlenc#">
    <xs:import namespace="http://www.w3.org/2001/04/xmlenc#"/>
    <xs:element name="location-info" id="loc">
        <xs:annotation>
            <xs:documentation>Root element, contains all information related to location
configuration, location request and location reporting for the MCVideo service</xs:documentation>
        </xs:annotation>
        <xs:complexType>
            <xs: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: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"/>
        </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="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"/>
        </r></r></r></r>
        <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"/>
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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>
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                <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="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"/>
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        </xs:sequence>
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            <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"/>
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    </xs:simpleType>
    <xs:complexType name="tMbsfnAreaIdentity">
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            <xs:extension base="mcvideoloc:tMbsfnAreaIdentityFormat">
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        </xs:simpleContent>
    </xs:complexType>
    <xs:complexType name="tIntegerAttributeType">
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            <xs:extension base="xs:integer">
                <xs:attribute name="TriggerId" type="xs:string" use="required"/>
            </xs:extension>
        </xs:simpleContent>
```

```
</xs:complexType>
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        <xs:sequence>
            <xs:element name="TravelledDistance" type="xs:positiveInteger"/>
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        </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"/>
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        <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:anvAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tCurrentLocationType">
        <xs:sequence>
            <xs:element name="CurrentServingEcgi" type="mcvideoloc:tLocationType" minOccurs="0"/>
            <xs:element name="NeighbouringEcgi" type="mcvideoloc:tLocationType" minOccurs="0"</pre>
            <xs:element name="MbmsSaId" type="mcvideoloc:tLocationType" minOccurs="0"/>
            <xs:element name="MbsfnArea" type="mcvideoloc:tLocationType" minOccurs="0"/>
            <xs:element name="CurrentCoordinate" type="mcvideoloc:tPointCoordinate" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:simpleType name="protectionType">
        <xs:restriction base="xs:string">
            <xs:enumeration value="Normal"/>
            <xs:enumeration value="Encrypted"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tLocationType">
        <xs:choice minOccurs="1" maxOccurs="1">
            <xs:element name="Ecgi" type="mcvideoloc:tEcgi" minOccurs="0"/>
<xs:element name="SaId" type="mcvideoloc:tMbmsSaIdentity" minOccurs="0"/>
```

```
<xs:element name="MbsfnAreaId" type="mcvideoloc:tMbsfnAreaIdentity" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax"/>
            <xs:element name="anyExt" type="mcvideoinfo:anyExtType" minOccurs="0"/>
        </xs:choice>
        <xs:attribute name="type" type="protectionType"/>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tGeographicalAreaChange">
        <xs:sequence>
            <xs:element name="AnyAreaChange" type="mcvideoloc:tEmptyTypeAttribute" minOccurs="0"/>
            <xs:element name="EnterSpecificAreaType" type="mcvideoloc:tSpecificAreaType"</pre>
minOccurs="0"/>
            <xs:element name="ExitSpecificAreaType" type="mcvideoloc:tSpecificAreaType"</pre>
minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tSpecificAreaType">
        <xs:sequence>
            <xs:element name="GeographicalArea" type="mcvideoloc:tGeographicalAreaDef"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:attribute name="TriggerId" type="xs:string" use="required"/>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tPointCoordinate">
        <xs:sequence>
            <xs:element name="longitude" type="mcvideoloc:tCoordinate"/>
            <xs:element name="latitude" type="mcvideoloc:tCoordinate"/>
            <xs:any namespace="##other" processContents="lax" minOccurs="0" maxOccurs="unbounded"/>
            <xs:element name="anyExt" type="mcvideoloc:anyExtType" minOccurs="0"/>
        </xs:sequence>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:complexType name="tCoordinateType">
        <xs:choice minOccurs="1" maxOccurs="1">
            <xs:element name="threebytes" type="mcvideoloc:tThreeByteType" minOccurs="0"/>
            <xs:any namespace="##other" processContents="lax"/>
            <xs:element name="anyExt" type="mcvideoinfo:anyExtType" minOccurs="0"/>
        </xs:choice>
        <xs:attribute name="type" type="protectionType"/>
        <xs:anyAttribute namespace="##any" processContents="lax"/>
    </xs:complexType>
    <xs:simpleType name="tThreeByteType">
        <xs:restriction base="xs:integer">
            <xs:minInclusive value="0"/>
            <xs:maxInclusive value="16777215"/>
        </xs:restriction>
    </xs:simpleType>
    <xs:complexType name="tGeographicalAreaDef">
            <xs: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:anvAttribute 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:element name="Center" type="mcvideoloc:tPointCoordinate"/>
<xs:element name="Radius" type="xs:nonNegativeInteger"/>
```

Annex A (informative): Change history

						Change history	
Date	Meeting	TDoc	CR	R ev	Cat	Subject/Comment	New version
2017-02	R5#74	R5-171298	-	-	-	Introduction of TS 36.579-1.	0.0.1
2017-05	R5#75	R5-172100	-	-	-	Introduction of default message content for some media control messages, some generic procedures from R5-172078 Default MCPTT media plane control messages R5-172079 Generic MCPTT procedures	0.0.2
2017-06	RAN5#75	-	_	† <u>-</u>	-	lifted to v0.1.0 because of technical contents	0.1.0
2017-08	RAN5#76	- R5-173766	-	-	-	Implemented approved: R5-173702 'Various updates of MCPTT TS 36579-1' R5-173703 'Update of MCPTT generic procedures' R5-173704 'New Generic procedures ProSe and MCPTT' R5-173705 'Update default media plane control messages' R5-173706 'Update of MCPTT Default MCPTT call control Offnetwork messages' R5-173707 'Update of MCPTT MIKEY-SAKKE I.MESSAGE' R5-173766 'Update of TS 36.579-1 to version 0.2.0' R5-174599 'SIP message defaults for 36.579-1' R5-174600 'MCPTT Off-Network Group Call Signaling Message	0.1.0
2017-12	RAN5#77	R5-176835	-	-	-	Defaults' Implemented approved: R5-177000 "Update of SIP Message Defaults for MCPTT" R5-176345 "Update of Specific SIP messages in Generic procedures" R5-177001 "Update of Generic procedures for SIP registration" R5-176347 "New Generic Procedure for ProSe group calls Announcing-Discoveree procedure for group member discovery" R5-176348 "New Generic Procedure for ProSe group calls Monitoring/Discoverer procedure for group member discovery" R5-177002 "Update with UE Configuration Defaults" - References updates	0.3.0
2017-12	RAN#78	RP-172182	-	-	-	Draft version for information purposes to the RAN Plneary	1.0.0
2018-03	RAN5#78	R5-180684				Implemented approved: R5-180534 "Update of Section 5.5.2 and 5.5.3 for TS 36.579-1" R5-180535 "Update of Section 5.5.5 for TS 36.579-1" R5-180536 "Update of Section 5.5.6 for TS 36.579-1" R5-181241 "Update of Section 5.5.9 TS 36.579-1" R5-180633 "Update of Default HTTP message and other information elements" R5-180634 "Update of Default MCPTT configuration management messages" R5-180635 "New Generic procedures for MCPTT Authorization/Configuration and Key Generation" R5-18063 "New Generic procedures for MCPTT communication in E-UTRA / Change of cells" R5-180637 "Generic Test Procedure for MCPTT communication over MBMS" R5-180638 "Various updates to 36579-1"	1.1.0
2018-03	RAN#79	RP-180126	-	-	-	Draft version for approval to move the spec under revision control to	2.0.0
2040.00	DANIAZO		-	-		the RAN Plenary	12.00
2018-03 2018-06	RAN#79 RAN#80	- R5-182418	0001	-	F	Editorial changes and promoted to v13.0.0 Addition and correction of GNSS information	13.0.0 13.1.0
2018-06	RAN#80	R5-182419	0001	+	F	Editorial correction of typos and incorrect references	13.1.0
2018-06	RAN#80	R5-182430	0003	1-	F	Editorial Update of 36.579-2 for style H6	13.1.0
2018-06	RAN#80	R5-182431	0004	-	F	Update of TC 5.1 for MCPTT APN	13.1.0
2018-06	RAN#80	R5-182432	0005	-	F	Updates of Location information messages in 36.579-2	13.1.0
2018-06	RAN#80	R5-182489	8000	-	F	Update of MCPTT TC 6.1.1.1	13.1.0
2018-06	RAN#80	R5-182510	0009	-	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	<u> </u>	F	Updates of TC 6.3.2 Update to TLS setup	13.1.0 13.2.0
2018-09	RAN#81	R5-185122	0009	1	F	Corrections to MCPTT Authorization	13.2.0
2018-09	RAN#81	R5-184685	8000	Ė	F	Update of default message contents for new Rel-14 TCs for Private Call Call-Back and Ambient listening call	14.0.0
	RAN#82	R5-186878	0010	-	F	Correction to Generic Test Procedure for MCPTT pre-established session establishment CO	14.1.0
2018-12			1	+	F	Editorial update of the default SDP and Resource-list Messages	14.1.0
	RAN#82	R5-186879	0011	-			
2018-12 2018-12 2018-12	RAN#82 RAN#82	R5-186879 R5-186880	0011 0012	- -	F	Update of default MCPTT media plane control messages and other	14.1.0
2018-12				- - -		Update of default MCPTT media plane control messages and other information elements to reflect latest Rel-13 core specs Update of XML schema for MCPTT location information to reflect	
2018-12 2018-12	RAN#82	R5-186880	0012	-	F	Update of default MCPTT media plane control messages and other information elements to reflect latest Rel-13 core specs	14.1.0

-							
2018-12	RAN#82	R5-187711	0016	1	F	Update for Resource-lists in 36.579-1	14.1.0
2018-12	RAN#82	R5-187712	0017	1	F	Correction to Table 5.5.1-1 in 36.579-1	14.1.0
2018-12	RAN#82	R5-187713	0018	1	F	Correction to Table 5.5.4.10.1-1 in 36.579-1	14.1.0
2018-12	RAN#82	R5-187714	0019	1	F	Correction to Table 5.5.4.2-1 in 36.579-1	14.1.0
2018-12	RAN#82	R5-187715	0020	1	F	Correction to SIP NOTIFY message in 36.579-1	14.1.0
2018-12 2018-12	RAN#82 RAN#82	R5-187716 R5-187717	0021 0022	1	F	Correction to SIP SUBSCRIBE message in 36.579-1 Update of Generic Test 5.3.2 in 36.579-1	14.1.0
2019-03	RAN#83	R5-107717	0022	-	F	Correction of default contents in SIP INVITE from the UE	14.1.0
2019-03	RAN#83	R5-191210	0023	-	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	-	Г	Correction and addition of references or values and editorial comments	14.4.0
2019-09	RAN#85	R5-197295	0041	2	F	Corrections to MCPTT UE registration procedures	14.4.0
2019-12	RAN#86	R5-198159	0050	_	F	Corrections to SIP signalling for MCPTT CO and CT communication	14.5.0
2013 12	147414#00	10-100100	0000		'	procedures	14.5.0
2019-12	RAN#86	R5-199043	0049	1	F	Correction to default HTTP messages	14.5.0
2019-12	RAN#86	R5-199044	0051	1	F	Corrections to MCPTT UE registration procedures	14.5.0
2019-12	RAN#86	R5-199045	0052	1	F	Additions of further references	14.5.0
2019-12	RAN#86	R5-199046	0053	1	F	Corrections related to MIKEY protocol	14.5.0
2019-12	RAN#86	R5-199047	0054	1	F	Correction to default messages for MCPTT group management and	14.5.0
						configuration management	
2019-12	RAN#86	R5-199048	0055	1	F	Correction of default SDP message and other information elements	14.5.0
2019-12	RAN#86	R5-199051	0056	1	F	SDP Default for MCVideo and MCData	14.5.0
2019-12	RAN#86	R5-199052	0058	1	F	Adding MCVideo Transmission Control Messages	14.5.0
2019-12 2019-12	RAN#86	R5-199053	0060 0048	2	F	Updates TS 33.179 references to TS 33.180	14.5.0 14.5.0
2020-03	RAN#86 RAN#87	R5-199077 R5-200264	0048	2	F	Correction to default SIP messages Corrections to default SIP message and other information elements	14.5.0
2020-03	RAN#87	R5-200265	0064	-	F	Addition of further references	14.6.0
2020-03	RAN#87	R5-200301	0065	-	F	Corrections to default HTTP message and other information	14.6.0
2020 00	10 11 11 10 1	1.0 200001	0000			elements	1 1.0.0
2020-03	RAN#87	R5-200385	0066	-	F	Corrections to default MCPTT configuration management messages	14.6.0
						and other information elements	
2020-03	RAN#87	R5-201220	0062	1	F	Corrections to MCPTT UE registration procedures	14.6.0
2020-06		R5-202552			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 contents	14.7.0
2020-06	RAN#88	R5-203074	0068	1	F	Updates to generic test procedure for MCPTT	14.7.0
2020-00	INAIN#00	K3-203074	0000	!	ı	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	RAN#89	R5-204490 R5-204491	0085	1	F	Updates to UE configuration document	14.8.0
2020-09	RAN#89	R5-204491 R5-204492	0086	1	F	Update of content with Rel-14 requirements	14.8.0
				1	F	New MCPTT Common Procedures for CT/CO session establishment	
2020-09	RAN#89	R5-204533	0078	1			
2020-09	RAN#89	R5-204534	0079	1	F	Updates to MCX generic test procedures and default message contents	14.8.0
2020-09	RAN#89	R5-204535	0081	1	F	Description of the distribution of MSCCK and MuSiK	14.8.0
2020-09	RAN#90	R5-204333	0094	-	F	PIDF body modifications	14.9.0
2020-12	RAN#90	R5-206084	0094		F	Condition updates for default MCS configuration management	14.9.0
2020-12	INCIN#30	110-20004	0090		['	messages	14.5.0
2020-12	RAN#90	R5-206108	0097	\vdash	F	Update of MCPTT Floor Control Messages for Rel-14	14.9.0
2020-12	RAN#90	R5-206445	0087	1	F	Correction to Generic Test Procedure for MCPTT pre-established	14.9.0
				1		session establishment CO	
2020-12	RAN#90	R5-206446	8800	1	F	Correction to MCPTT Common Procedures for CT/CO session	14.9.0
						establishment	
2020-12	RAN#90	R5-206447	0089	1	F	New MCPTT generic test procedures	14.9.0
2020-12	RAN#90	R5-206448	0090	1	F	Update to Default Message Content	14.9.0

2000-19 RANNEO R5-00450 0095 F Second proup control retrieval processing 1.5 0.0 2000-19 RANNEO R5-00452 0098 F Existing Generic Teel Procedures 1.5 0.0 2001-19 RANNEO R5-00452 0098 F Update of MCPTT Floor Control Messages for Rel-15 15.00 2001-19 RANNEO R5-00452 0098 F Update of MCPTT Floor Control Messages for Rel-15 15.00 2001-19 RANNEO R5-20020 0101 F Correction to Generic Teel Procedures for Rel-15 15.00 2001-19 RANNEO R5-20020 0102 F Web MCPTT Control from the Message content of Rel-15 Location 15.10 2001-19 RANNEO R5-210200 0103 F New MCPTT Control from the Message Content 15.10 2001-19 RANNEO R5-210200 0104 F Update to Default Message Content - NoTE 15.10 2001-19 RANNEO R5-210210 0106 F Update to Default Message Content - NoTE 15.10 2001-19 RANNEO R5-210210 0106 F Update to Default Message Content - NoTE 15.10 2001-19 RANNEO R5-210211 0110 F Update to Default Message Content - NoTE 15.10 2001-19 RANNEO R5-210211 0111 F Update to Default Message Content - NoTE 15.10 2001-19 RANNEO R5-210211 0111 F Update to Default Message Content - NoTE 15.10 2001-19 RANNEO R5-210211 0111 F Update to Default Message Content - NoTE 15.10 2001-19 RANNEO R5-210211 0111 F Update to Default Message Content MEY-SAKE KELKESAKE 15.10 2001-19 RANNEO R5-210210 0111 F Update to Default Message Content NOTE 15.10 2001-19 RANNEO R5-210210 0111 F Update to Default Message Content NOTE 15.10 2001-19 RANNEO R5-210210 0111 F Update to Default Message Content SIP 180 R10 2001-19 RANNEO R5-210210 0111 F Update to Default Message Content SIP RESAGE 15.10 2001-19 RANNEO R5-210210 0111 F Update to Default Message Content SIP RESAGE 15.10 2001-19 RANNEO R5-210210 0111 F Update to Default Message Content SIP RESAGE 15.10 2001-19 RANNEO R5-2102	2020 42	D V VI#00	DE 206440	0001	4	I -	Lindates for Craus Communications Kov retrieval	1400
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2021-06 RAN#92 R5-213657 0140 1 F Update to Default Message Content - REFER 15.2.0 2021-09 RAN#93 R5-214625 0154 - F Addition of clause 5.3.27 - Generic Test Procedure for MCPTT CO 15.3.0 2021-09 RAN#93 R5-214626 0155 - F Addition of clause 5.3.28 - Generic Test Procedure for MCPTT CO 15.3.0 2021-09 RAN#93 R5-214630 0159 - F Correction of clause 5.3.24 - Generic Test Procedure for UE intitated Intitated					_			
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2021-09 RAN#93 R5-214633 0162 - F Correction of clause 5.3.3 – Generic Test Procedure for MCPTT pre- 15.3.0	2021-09	RAN#93	R5-214632	0161	-	F	Correction of clause 5.3.26 - Generic Test Procedure for MCPTT CO	15.3.0
	2021-09	RAN#93	R5-214633	0162	-	F	Correction of clause 5.3.3 – Generic Test Procedure for MCPTT pre-	15.3.0

2021-09	RAN#93	R5-214635	0164	-	F	Correction of clause 5.5.2.11 – SIP PUBLISH	15.3.0
2021-09	RAN#93	R5-214646	0175	-	F	Correction of clause 5.5.4.3 - HTTP POST	15.3.0
2021-09	RAN#93	R5-214918	0182	-	F	MCX IUT	15.3.0
2021-09	RAN#93	R5-215370	0183	-	F	Correction of General extension payload in Mikey message	15.3.0
2021-09	RAN#93	R5-215383	0184	-	F	Correction of XCAP Root URI in HTTP GET Requests	15.3.0
2021-09	RAN#93	R5-215728	0156	1	F	Addition of clause 5.3.29 - Generic Test Procedure for MCPTT Subscription and Notification	15.3.0
2021-09	RAN#93	R5-215729	0157	1	F	Correction of clause 5.3.15 – Generic Test Procedure for MCPTT CO session modification without implicit Floor Control	15.3.0
2021-09	RAN#93	R5-215730	0158	1	F	Correction of clause 5.3.22 - Generic Test Procedure for NW initiated temporary group creation	15.3.0
2021-09	RAN#93	R5-215731	0163	1	F	Correction of clause 5.5.1 – General	15.3.0
2021-09	RAN#93	R5-215732	0165	1	F	Correction of clause 5.5.2.14 – SIP SUBSCRIBE	15.3.0
2021-09	RAN#93	R5-215733	0166	1	F	Correction of clause 5.5.2.5 – SIP INVITE	15.3.0
2021-09	RAN#93	R5-215734	0167	1	F	Correction of clause 5.5.2.8 – SIP NOTIFY	15.3.0
2021-09	RAN#93	R5-215735	0168	1	F	Correction of clause 5.5.3.1 – SDP Message	15.3.0
2021-09	RAN#93	R5-215736	0169	1	F	Correction of clause 5.5.3.11 – PoC-Settings	15.3.0
2021-09	RAN#93	R5-215737	0170	1	F	Correction of clause 5.5.3.12 – XCAP-DIFF	15.3.0
2021-09	RAN#93	R5-215738	0171	1	F	Correction of clause 5.5.3.2 – MCS Info Lists	15.3.0
2021-09	RAN#93	R5-215739	0172	1	F	Correction of clause 5.5.3.3 – Resource Lists	15.3.0
2021-09	RAN#93	R5-215740	0173	1	F	Correction of clause 5.5.3.5 – PIDF	15.3.0
2021-09	RAN#93	R5-215741	0174	1	F	Correction of clause 5.5.4.1 – General conditions	15.3.0
2021-09	RAN#93	R5-215742	0176	1	F	Correction of clause 5.5.4.4 - HTTP PUT	15.3.0
2021-09	RAN#93	R5-215743	0177	1	F	Correction of clause 5.5.4.5 - HTTP DELETE	15.3.0
2021-09	RAN#93	R5-215745	0179	1	F	Correction of clause 5.5.4.7 - HTTP 201 (Created)	15.3.0
2021-09	RAN#93	R5-215746	0180	1	F	Correction of clause 5.5.6.7 - Floor Taken	15.3.0
2021-09	RAN#93	R5-215747	0181	1	F	Correction of clause 5.5.7.1 - MCPTT Group Configuration	15.3.0
2021-09	RAN#93	R5-216282	0185	1	Г	Addition of MIKEY-SAKKE I_MESSAGE Table 5.5.9.1-1A CSK download sent by the SS	15.3.0
2021-09	RAN#93	-	-	-	-	Editorial fixes	15.3.1
2021-12	RAN#94	R5-216663	0187	-	F	Correction of clause 5.5.2.11 - SIP PUBLISH	15.4.0
2021-12	RAN#94	R5-216664	0188	-	F	Correction of clause 5.5.2.12 - SIP REFER	15.4.0
2021-12	RAN#94	R5-216665	0189	-	F	Correction of clause 5.5.2.13 - SIP REGISTER	15.4.0
2021-12	RAN#94	R5-216667	0191	-	F	Correction of clause 5.5.2.16.3 - SIP 183 (Session Progress)	15.4.0
2021-12	RAN#94	R5-216668	0192	-	F	Correction of clause 5.5.2.17.1 - SIP 200 (OK)	15.4.0
2021-12	RAN#94	R5-216669	0193	-	F	Correction of clause 5.5.2.2 - SIP BYE	15.4.0
2021-12	RAN#94	R5-216670	0194	-	F	Correction of clause 5.5.2.5 - SIP INVITE	15.4.0
2021-12	RAN#94	R5-216671	0195	-	F	Correction of clause 5.5.2.7 - SIP MESSAGE	15.4.0
2021-12	RAN#94	R5-216672	0196	-	F	Correction of clause 5.5.2.8 - SIP NOTIFY	15.4.0
2021-12	RAN#94	R5-216674	0198	-	F	Correction of clause 5.5.3.10 - MCData Protected Payload Message	15.4.0
2021-12	RAN#94	R5-216676	0200	-	F	Correction of clause 5.5.3.2 - MCPTT-Info from the UE	15.4.0
2021-12	RAN#94	R5-216677	0201	-	F	Correction of clause 5.5.3.3 - Resource-lists	15.4.0
2021-12	RAN#94	R5-216678	0202	-	F	Correction of clause 5.5.3.4 - Location-info	15.4.0
2021-12	RAN#94	R5-216679	0203	-	F	Correction of clause 5.5.3.6 - SIMPLE-FILTER	15.4.0
		R5-216680	0204	-	F	Correction of clause 5.5.3.8 - SDS Signalling Payload	15.4.0
2021-12	RAN#94	R5-216681	0205	-	F	Correction of clause 5.5.3.9 - MCData Data Payload	15.4.0
2021-12	RAN#94	R5-216682	0206	-	F	Correction of clause 5.5.4 - Default HTTP message and other information elements	15.4.0
2021-12	RAN#94	R5-216684	0208	-	F	Correction of clause 5.5.7 - Default MCPTT group management messages and other information elements	15.4.0
2021-12	RAN#94	R5-216686	0210	-	F	Correction of clause 5.5.9.1 - MIKEY-SAKKE I_MESSAGE	15.4.0
2021-12	RAN#94	R5-216687	0211	-	F	Correction of Generic Test Procedure for MCPTT CO call establishment using a pre-established session 5.3.9	15.4.0
2021-12	RAN#94	R5-216689	0213	-	F	Correction of Generic Test Procedure for MCPTT CO call release	15.4.0
2021-12	RAN#94	R5-216690	0214	-	F	keeping the pre-established session 5.3.11 Correction of Generic Test Procedure for MCPTT CO Group	15.4.0
2021-12	RAN#94	R5-216691	0215	_	F	Creation 5.3.26 Correction of Generic Test Procedure for MCPTT CO session	15.4.0
2021 12	10 (14)/04	10001	0210		ľ	establishment/modification without provisional responses other than 100 Trying 5.3.7	10.4.0
2021-12	RAN#94	R5-216692	0216	-	F	Correction of Generic Test Procedure for MCPTT CO session	15.4.0
2021-12	RAN#94	R5-216693	0217	-	F	modification without implicit Floor Control 5.3.15 Correction of Generic Test Procedure for MCPTT CO Temporary	15.4.0
2021-12	RAN#94	R5-216694	0218	_	F	Group Creation 5.3.27 Correction of Generic Test Procedure for MCPTT CO Temporary	15.4.0
				Ĺ		Group Tear Down 5.3.28	
2021-12	RAN#94	R5-216695	0219	-	F	Correction of Generic Test Procedure for MCPTT CT call release 5.3.12	15.4.0
	RAN#94	R5-216696	0220	-	F	Correction of Generic Test Procedure for MCPTT CT call release	15.4.0
2021-12						keeping the pre-established session 5.3.13	

2021-12	RAN#94	R5-216698	0222	-	F	Correction of Generic Test Procedure for MCPTT CT session establishment/modification without provisional responses other than 100 Trying 5.3.4	15.4.0
2021-12	RAN#94	R5-216700	0224	-	F	Correction of Generic Test Procedure for MCPTT Subscription and Notification 5.3.29	15.4.0
2021-12	RAN#94	R5-216701	0225	-	F	Correction of Generic Test Procedure for MCPTT UE registration 5.4.2	15.4.0
2021-12	RAN#94	R5-216702	0226	-	F	Correction of Generic Test Procedure for UE initiated MCPTT functional alias status change 5.3.25	15.4.0
2021-12	RAN#94	R5-216703	0227	-	F	Correction of Generic Test Procedure for UE initiated MCPTT functional alias status determination and subscription 5.3.24	15.4.0
2021-12	RAN#94	R5-217632	0229	-	F	Update of Clause 5.5.8.3 MCPTT User Profile	15.4.0
2021-12	RAN#94	R5-217905	0186	1	F	5.5.7.3 MCDATA Group Configuration Updates	15.4.0
2021-12	RAN#94	R5-217964	0190	1	F	Correction of clause 5.5.2.14 - SIP SUBSCRIBE	15.4.0
2021-12	RAN#94	R5-217965	0197	1	F	Correction of clause 5.5.3.1 - SDP Message	15.4.0
2021-12 2021-12	RAN#94 RAN#94	R5-217966 R5-217967	0199 0207	1	F F	Correction of clause 5.5.3.12 - Xcap-diff documents Correction of clause 5.5.6.1 - 5.5.6.13 - Default MCPTT media plane	15.4.0 15.4.0
						control messages from UE	
2021-12	RAN#94	R5-217968	0212	1	F	Correction of Generic Test Procedure for MCPTT CO call release 5.3.10	15.4.0
2021-12	RAN#94	R5-217985	0209	1	F	Correction of clause 5.5.8 - Default MCS configuration management messages and other information elements	15.4.0
2021-12	RAN#94	R5-217986	0223	1	F	Correction of Generic Test Procedure for MCPTT pre-established session establishment CO 5.3.3	15.4.0
2021-12	RAN#94	R5-217987	0228	1	F	New MCX generic test procedures for SIP MESSAGE message flows	15.4.0
2022-03	RAN#95	R5-220461	0231	-	F	Correction of clause 2 - References	15.5.0
2022-03	RAN#95	R5-220462	0232	-	F	Correction of clause 5.4 - Generic test procedures for UE operation over E-UTRA/EPC	15.5.0
2022-03	RAN#95	R5-220463	0233	-	F	Correction of clause 5.5.11 - Default MCVideo Transmission Control Messages and other Information Elements	15.5.0
2022-03	RAN#95	R5-220464	0234	-	F	Correction of clause 5.5.12 - MSRP Messages for MCData	15.5.0
2022-03	RAN#95	R5-220465	0235	-	F	Correction of clause 5.5.2.16 - SIP 1xx	15.5.0
2022-03	RAN#95	R5-220466	0236	-	F	Correction of clause 5.5.2.17 - SIP 2xx	15.5.0
2022-03	RAN#95	R5-220467	0237	-	F	Correction of clause 5.5.2.5 - SIP INVITE	15.5.0
2022-03	RAN#95	R5-220468	0238	-	F	Correction of clause 5.5.2.7 - SIP MESSAGE	15.5.0
2022-03	RAN#95	R5-220469	0239	-	F	Correction of clause 5.5.2-11 - SIP PUBLISH	15.5.0
2022-03	RAN#95	R5-220470	0240	-	F F	Correction of clause 5.5.2-8 - SIP NOTIFY	15.5.0
2022-03 2022-03	RAN#95 RAN#95	R5-220472 R5-220474	0242 0244	-	F	Correction of clause 5.5.3.10 - MCData Protected Payload Message Correction of clause 5.5.3.8 - MCData Data signalling messages	15.5.0 15.5.0
2022-03	RAN#95	R5-220475	0245	-	F	Correction of clause 5.5.4 - Default HTTP message and other	15.5.0
						information elements	
2022-03	RAN#95	R5-220476	0246	-	F	Correction of clause 5.5.6 - Default MCPTT media plane control messages and other information elements	15.5.0
2022-03	RAN#95	R5-220477	0247	-	F	Correction of clause 5.5.7 - Default MCX group management messages and other information elements	15.5.0
2022-03	RAN#95	R5-220478	0248	-	F	Correction of clause 5.5.8 - Default MCS configuration management messages and other information elements	15.5.0
2022-03	RAN#95	R5-220479	0249	-	F	Correction of clause 5.5.9.1 - CSK download by the SS	15.5.0
2022-03	RAN#95	R5-220480	0250	-	F	Removal of clause 5.5.3.13	15.5.0
2022-03	RAN#95	R5-221545	0230	1	F	Additional Rel-15 parameters for MCVideo User Profile 5.5.8.7	15.5.0
2022-03	RAN#95	R5-222026	0241	1	F	Correction of clause 5.5.3.1 - SDP Message	15.5.0
2022-03 2022-03	RAN#95 RAN#95	R5-222027 R5-222028	0243 0251	1	F F	Correction of clause 5.5.3.6 - SIMPLE-FILTER Restructuring of clause 5.3 - Generic test procedures for UE MCS	15.5.0 15.5.0
2022-06	RAN#96	R5-222141	0252	<u> </u>	F	operation New MCData off-network signalling messages in 5.5.3.8	15.6.0
2022-06	RAN#96	R5-222141	0252	 -	F	New MCVideo Off-network Message Defaults 5.5.14	15.6.0
2022-06	RAN#96	R5-222392	0254	-	F	Addition of clause 5.5.3.15 - Conference-info	15.6.0
2022-06	RAN#96	R5-222394	0256	 -	F	Correction of clause 5.5.2.14 - SIP SUBSCRIBE	15.6.0
2022-06	RAN#96	R5-222396	0258	-	F	Correction of clause 5.5.3.2 - MCS Info Lists	15.6.0
2022-06	RAN#96	R5-222398	0260	-	F	Correction of clause 5.5.8 - Default MCS configuration management messages and other information elements	15.6.0
2022-06	RAN#96	R5-222399	0261	<u>l</u> -	F	Corrections of clause 5.5.3.1 - SDP message	15.6.0
2022-06	RAN#96	R5-222400	0262	-	F	Extensions of clause 2 - References	15.6.0
2022-06	RAN#96	R5-223477	0255	1	F	Correction of clause 5.3 - Generic test procedures for UE MCS operation	15.6.0
2022-06	RAN#96	R5-223478	0259	1	F	Correction of clause 5.5.3.6 - SIMPLE-FILTER	15.6.0
2022-09	RAN#97	R5-223942	0263	-	F	Correction of clause 5.3A - Generic test procedures for UE MCPTT operation	15.7.0
2022-09	RAN#97	R5-223943	0264	-	F	Correction of clause 5.3B - Generic test procedures for UE MCVideo operation	15.7.0

2022-09 RANNET R5-22394 0267 F Correction of clause 5.6.5 Details (NPTT metal plane control messages and other information elements 15.70	2022-09	RAN#97	R5-223945	0266	-	F	Correction of clause 5.5.2 - Default SIP message and other	15.7.0
2022-09 RANN97 R5-223947 0268 F Correction of clause 5.5.6. Default MCPTT media plane control 15.7.0	2022.00	D 4 N 1407	DE 000040	0007		_	information elements	45.70
2022-09 RANN897 R5-223949 0270 F Correction of clause 5.5.8 - Default MCS configuration management 15.7.0					-		Correction of clause 5.5.6 - Default MCPTT media plane control	
2022-10 RANN97 R5-223940 0270 - F Correction of clause 6.5.9 - Default miscellaneous messages and 15.7.0	2022-09	RAN#97	R5-223948	0269	-	F	Correction of clause 5.5.8 - Default MCS configuration management	15.7.0
2022-12 RAN99 R5-22606 0272 F Correction of Caluse 5.3 - NCVideo Media Transmission 15.8.0	2022-09	RAN#97	R5-223949	0270	-	F	Correction of clause 5.5.9 - Default miscellaneous messages and	15.7.0
2022-12 RAN-898 R5-226660 0272 F Correction of clause 5.3.3 - MCX pre-established session 15.8.0	0000 00	D 4 N 1 11 O 7	DE 005075	0074		_		45.7.0
September Content of clause 5.38.3 - MCVideo Media Transmission 15.8.0					1			
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2022-12 RAN#98 R5-22606 0276 F Correction of clause 5.5.12 - MSRP Messages for MCData 15.8.0							Notification and Request CT	
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2022-12 RANW98 R5-226068 0280 F Correction of clause 5.5.3.8 - MCData Data signalling messages 15.8.0								
2022-12 RAN#98 R5-226069 Q281 F Correction of clause 5.5.6 - Default MCPTT media plane control f5.8.0 messages and other information elements f5.8.0 messages and other information elements f5.8.0 messages and other information elements f5.8.0 messages and other information elements f5.8.0 messages and other information elements f5.8.0								
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2022-12 RAN#98 R5-226685 0285 F Correction of clause 5.3A.1 - MCPTT CO session 15.8.0	2022-12	RAN#98	R5-226532	0283		F		15.8.0
establishment/modification without provisional responses other than 100 Trying 15.8.0								
2022-12 RAN#98 R5-226685 0285 F Correction of clause 5.38.1 - MCVideo CO session 15.8.0							establishment/modification without provisional responses other than	
2022-12 RAN#98 R5-227614 0275 1 F Correction of clause 5.5.11 - Default MCVideo Transmission Control 15.8.0	2022-12	RAN#98	R5-226685	0285		F	Correction of clause 5.3B.1 - MCVideo CO session	15.8.0
Messages and other Information Elements							100 Trying	
2023-03 RAN#99 R5-230126 0288 - F Correction of clause 5.3A - Generic test procedures for UE MCPtt 15.9.0 operation 15.9.0 opera	2022-12	RAN#98	R5-227614	0275	1	F		15.8.0
2023-03 RAN#99 R5-230128 0290 - F Correction of clause 5.3C - Generic test procedures for UE MCData operation operation 15.9.0 2023-03 RAN#99 R5-230131 0293 - F Correction of clause 5.5.3.2 - MCS Info Lists 15.9.0 2023-03 RAN#99 R5-230134 0296 - F Correction of clause 5.5.3.4 - Location-info 15.9.0 2023-03 RAN#99 R5-230135 0297 - F Correction of clause 5.5.3 - Default MCS configuration management messages and other information elements 15.9.0 2023-03 RAN#99 R5-230395 0298 - F Correction of clause 5.5.8 - Default MCS configuration management messages and other information elements 15.9.0 2023-03 RAN#99 R5-231936 0287 1 F Correction of clause 5.5.4.6 - HTTP 200 OK 15.9.0 2023-03 RAN#99 R5-231937 0289 1 F Correction of clause 5.3.8 - Generic test procedures for UE MCS operation 15.9.0 2023-03 RAN#99 R5-231939 0291 1 F Correctio	2023-03	RAN#99	R5-230126	0288	-	F	Correction of clause 5.3A - Generic test procedures for UE MCPTT	15.9.0
2023-03 RAN#99 R5-230131 0.293 F Correction of clause 5.5.3.2 - MCS Info Lists 15.9.0	2023-03	RAN#99	R5-230128	0290	-	F	Correction of clause 5.3C - Generic test procedures for UE MCData	15.9.0
2023-03 RAN#99 R5-230134 0296 - F Correction of clause 5.5.3.4 - Location-info 15.9.0 2023-03 RAN#99 R5-230134 0296 - F Correction of clause 5.5.7 - Default MCS group management messages and other information elements 2023-03 RAN#99 R5-230135 0297 - F Correction of clause 5.5.8 - Default MCS configuration management messages and other information elements 15.9.0 2023-03 RAN#99 R5-230295 0298 - F Correction of clause 5.5.4.6 - HTTTP 200 OK 15.9.0 2023-03 RAN#99 R5-231936 0287 1 F Correction of clause 5.3.3 - Generic test procedures for UE MCS operation 15.9.0 2023-03 RAN#99 R5-231937 0289 1 F Correction of clause 5.3.8 - Generic test procedures for UE MCVideo operation 15.9.0 2023-03 RAN#99 R5-231939 0292 1 F Correction of clause 5.4 - Generic test procedures for UE operation over E-UTRA/EPC 15.9.0 2023-03 RAN#99 R5-231939 0294 1 F Correction	2023-03	PAN#99	P5-230131	0203		F		15.0.0
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2023-03 RAN#99 R5-231937 0289 1 F Correction of clause 5.3 - Generic test procedures for UE MCS operation 15.9.0	2023-03	RAN#99	R5-230135	0297	-	F		15.9.0
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Information elements							over E-UTRA/EPC	
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2023-09	RAN#101	R5-235403	0321	1	F	Addition of new generic procedure CO MCData call establishment using a pre-established session	16.2.0
2023-09	RAN#101	R5-235404	0322	1	F	Addition of new generic procedure MCData CO call release keeping the pre-established session	16.2.0
2023-12	RAN#102	R5-236320	0323		F	Correction of clause 5.5.11	16.3.0
2023-12	RAN#102	R5-236321	0324		F	Correction of clause 5.5.3.1	16.3.0
2023-12	RAN#102	R5-236322	0325		F	Correction of clause 5.5.3.2	16.3.0
2023-12	RAN#102	R5-236323	0326		F	Correction of clause 5.5.6	16.3.0
2023-12	RAN#102	R5-236324	0327		F	Corrections of generic test procedures in clause 5.3 and clause 5.3C	16.3.0
2023-12	RAN#102	R5-236601	0328		F	Addition of MCPTT User Profile Rules for Affiliation	16.3.0
2023-12	RAN#102	R5-237437	0329	1	F	Addition of MCPTT_Regoup Default	16.3.0
2024-03	RAN#103	R5-240555	0330	-	F	Corrections of clause 5.3.2	16.4.0
2024-03	RAN#103	R5-240556	0331	-	F	Corrections of clause 5.3.29	16.4.0
2024-03	RAN#103	R5-240557	0332	-	F	Corrections of clause 5.3.32	16.4.0
2024-03	RAN#103	R5-240558	0333	-	F	Corrections of clause 5.4.2	16.4.0
2024-03	RAN#103	R5-240559	0334	-	F	Corrections of clause 5.5.1	16.4.0
2024-03	RAN#103	R5-240560	0335	-	F	Corrections of clause 5.5.2.11	16.4.0
2024-03	RAN#103	R5-240561	0336	-	F	Corrections of clause 5.5.2.13	16.4.0
2024-03	RAN#103	R5-240562	0337	-	F	Corrections of clause 5.5.2.19.4	16.4.0
2024-03	RAN#103	R5-240563	0338	-	F	Corrections of clause 5.5.2.7.2	16.4.0
2024-03		R5-240564	0339	-	F	Corrections of clause 5.5.3.3.1A	16.4.0
2024-03	RAN#103	R5-240565	0340	-	F	Corrections of clause 5.5.9.1	16.4.0
2024-03		R5-240566	0341	-	F	Corrections of references to 24.282	16.4.0
2024-03	RAN#103	R5-240897	0342	-	F	Corrections to Table 5.5.3.3.1-3 MCData Resource-lists	16.4.0
2024-03	RAN#103	R5-240898	0343	-	F	Addition of Location-info for MCData	16.4.0

History

	Document history									
V16.0.0	April 2023	Publication								
V16.1.0	July 2023	Publication								
V16.2.0	October 2023	Publication								
V16.3.0	January 2024	Publication								
V16.4.0	May 2024	Publication								