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LTE;
Mission Critical (MC) services over LTE;
Part 4: Test Applicability and Implementation Conformance
Statement (ICS) proforma specification
(3GPP TS 36.579-4 version 14.3.0 Release 14)



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650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
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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:

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- 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 [2]: "Mission Critical (MC) services over LTE protocol conformance testing; Part 1: Common test environment"

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

3GPP TS 36.579-3 [4]: "Mission Critical (MC) services over LTE conformance testing; Part 3: Mission Critical Push To Talk (MCPTT) Server Application test specification"

3GPP TS 36.579-4: "Mission Critical (MC) services over LTE conformance testing; Part 4: Test Applicability and Implementation Conformance Statement (ICS) proforma specification" (the present document)

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

3GPP TS 36.579-6 [11]: "Mission Critical (MC) services over LTE; Part 6: Mission Critical Video (MCVideo) User Equipment (UE) Protocol conformance specification".

3GPP TS 36.579-7 [12]: "Mission Critical (MC) services over LTE; Part 7: Mission Critical Data (MCDATA) User Equipment (UE) Protocol conformance specification".

1 Scope

The present document provides the Implementation Conformance Statement (ICS) proforma for testing Client or Server implementations for compliance to the Mission Critical Services over LTE protocol requirements defined by 3GPP, and in accordance with the relevant guidance given in ISO/IEC 9646-1 [7] and ISO/IEC 9646-7 [8].

The present document specifies the recommended applicability statement for the test cases included in 3GPP TS 36.579-2 [3] and 3GPP TS 36.579-3 [4], as well as, TS 36.579-6 [3] and 3GPP TS 36.579-7 [4]. These applicability statements are based on the features implemented in the Client or the Server respectively.

The present document is valid for Mission Critical Services Servers and Clients implemented according to 3GPP releases starting from Release 13 up to the Release indicated on the cover page of the present document.

The present document is valid for Mission Critical Video (MCVideo) and Mission Critical Data (MCData) Clients implemented according to 3GPP releases starting from Release 14 up to the Release indicated on the cover page of the present document.

The present document does not specify applicability or ICS for protocol conformance testing for the EPS (LTE) bearers which carry the Mission Critical Services data sent or received by the Client and/or the Server. These are defined in TS 36.523-2 [6].

2 References

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

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

- [1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 36.579-1: "Mission Critical (MC) services over LTE; Part 1: Common test environment".
- [3] 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".
- [4] 3GPP TS 36.579-3: "Mission Critical (MC) services over LTE; Part 3: Mission Critical Push To Talk (MCPTT) Server Application test specification".
- [5] 3GPP TS 36.579-5: "Mission Critical (MC) services over LTE; Part 5: Abstract test suite (ATS)".
- [6] 3GPP TS 36.523-2: "Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Packet Core (EPC); User Equipment (UE) conformance specification; Part 2: Implementation Conformance Statement (ICS) proforma specification".
- [7] ISO/IEC 9646-1: "Information technology - Open Systems Interconnection - Conformance testing methodology and framework - Part 1: General concepts".
- [8] ISO/IEC 9646-7: "Information technology - Open systems interconnection - Conformance testing methodology and framework - Part 7: Implementation Conformance Statements".
- [9] 3GPP TS 23.179: "Functional architecture and information flows to support mission critical communication services; Stage 2".
- [10] 3GPP TS 23.401: "3GPP System Architecture Evolution; GPRS enhancements for E-UTRAN access".

- [11] 3GPP TS 36.579-6: "Mission Critical (MC) services over LTE; Part 6: Mission Critical Video (MCVideo) User Equipment (UE) Protocol conformance specification".
- [12] 3GPP TS 36.579-7: "Mission Critical (MC) services over LTE; Part 7: Mission Critical Data (MCData) User Equipment (UE) Protocol conformance specification".
- [13] 3GPP TS 23.379: "Functional architecture and information flows to support Mission Critical Push To Talk (MCPTT); Stage 2".

3 Definitions, symbols and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP 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].

In addition for the purposes of the present document, the following terms, definitions, symbols and abbreviations apply:

- such given in ISO/IEC 9646-1 [7] and ISO/IEC 9646-7 [8].

NOTE: Some terms and abbreviations defined in [7] and [8] are explicitly included below with small modification to reflect the terminology used in 3GPP.

Implementation Conformance Statement (ICS): A statement made by the supplier of an implementation or system claimed to conform to a given specification, stating which capabilities have been implemented.

ICS proforma: A document, in the form of a questionnaire, which when completed for an implementation or system becomes an ICS.

Implementation eXtra Information for Testing (IXIT): A statement made by a supplier or implementer of an UEUT which contains or references all of the information (in addition to that given in the ICS) related to the UEUT and its testing environment, which will enable the test laboratory to run an appropriate test suite against the UEUT.

IXIT proforma: A document, in the form of a questionnaire, which when completed for an UEUT becomes an IXIT.

Protocol Implementation Conformance Statement (PICS): An ICS for an implementation or system claimed to conform to a given protocol specification.

Protocol Implementation eXtra Information for Testing (PIXIT): An IXIT related to testing for conformance to a given protocol specification.

static conformance review: A review of the extent to which the static conformance requirements are claimed to be supported by the UEUT, by comparing the answers in the ICS(s) with the static conformance requirements expressed in the relevant specification(s).

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].

CUT	Client Under Test
FFS	For Further Study
ICS	Implementation Conformance Statement
IUT	Implementation Under Test

IXIT	Implementation eXtra Information for Testing
MC	Mission Critical
MCDData	Mission Critical Data
MCPTT	Mission Critical Push To Talk
MCVideo	Mission Critical Video
SCS	System Conformance Statement
SS	System Simulator
SUT	Server Under Test
TC	Test Case

4 Recommended Test Case Applicability

The applicability of each individual test is identified in Table 4-1 (MCPTT Client), Table 4-2 (MCPTT Server), Table 4-3 (MCVideo Client), Table 4-4 (MCDData Client). This is just a recommendation based on the purpose for which the test case was written.

The applicability of every test is formally expressed by the use of Boolean expression that are based on parameters (ICS) included in annex A of the present document.

Additional information related to the Test Case (TC), e.g. affecting its dynamic behaviour or its execution may be provided as well

The columns in Table 4-1, Table 4-2, Table 4-3, Table 4-4 have the following meaning:

Clause

The clause column indicates the clause number in TS 36.579-2 [3] or TS 36.579-3 [4] or TS 36.579-6 [11] or TS 36.579-7 [12] respectively which contains the test body.

Title

The title column describes the name of the test and contains the clause title of the clause in TS 36.579-2 [3] or TS 36.579-3 [4] or TS 36.579-6 [11] or TS 36.579-7 [12] respectively which contains the test body.

Release

The release column indicates the earliest release from which the test case is applicable. In some specific cases it may indicate the release(s) for which the TC is **only** applicable.

Note: Some exceptions to this interpretation may be indicated in Notes in column 'Number of TC Executions'.

Applicability - Condition

The following notations are used for the applicability column:

R	recommended - the test case is recommended
O	optional – the test case is optional
N/A	not applicable - in the given context, the test case is not recommended.
Ci	conditional - the test is recommended ("R") or not ("N/A") depending on the support of other items. "i" is an integer identifying a unique conditional status expression which is defined immediately following the table. For nested conditional expressions, the syntax "IF ... THEN (IF ... THEN ... ELSE...) ELSE ..." is used to avoid ambiguities.

NOTE: The conditions are defined in Table 4-1a (MCPTT Client), Table 4-2a (MCPTT Server), Table 4-3a (MCVideo Client), Table 4-4a (MCDData Client) respectively. To avoid ambiguity for the MCPTT Server testing conditions the notation of C*Ci* is used.

Applicability - Comments

This column contains a verbal description of the condition.

Additional Information - Specific ICS

This column contains the mnemonics of ICS(s) affecting the dynamic behaviour of the TC.

NOTE: ICS items specified in other test specifications can be referred, to avoid redundant definitions.

Additional Information - Specific IXIT

This column contains the mnemonics of IXIT(s) affecting the dynamic behaviour of the TC. IXITs are defined in TS 36.579-5 [6]

Additional Information - Number of TC Executions

This column contains, wherever applicable, the recommended for certification purposes number of TC executions. It may contain also other information e.g. exceptions to the release applicable to the test. Clarifying notes when available are listed in dedicated tables with table numbers having the suffixes "b" e.g. Table 4-1b (MCPTT Client).

Table 4-1: Applicability of MCPTT Client tests and additional information for testing

Clause	TC Title	Release	Applicability		Additional Information		
			Condition	Comment	Specific ICS	Specific IXIT	Number of TC Executions
5	MCPTT Client Configuration						
5.1	MCPTT / Configuration / Authentication / User Authorisation / UE Configuration / User Profile / Key Generation	Rel-13	C01	IUT is MCPTT Client			
5.2	MCPTT / Configuration / Group Creation / Group Regroup Creation / Group Regroup Teardown	Rel-13	C01	IUT is MCPTT Client			
5.3	MCPTT / Configuration / Group Affiliation / Remote change / De-affiliation / Home MCPTT system	Rel-13	C01	IUT is MCPTT Client			
5.4	MCPTT / Configuration / Pre-established Session Establishment / Pre-established Session Modification / Pre-established Session Release	Rel-13	C01	IUT is MCPTT Client			
6	On-network operation						
6.1	Group Calls - same MCPTT system						
6.1.1	Pre-arranged Group Call						
6.1.1.1	MCPTT / On-network / On-demand Pre-arranged Group Call / Automatic Commencement Mode / Floor Control / Upgrade to Emergency Group Call / Cancel Emergency State / Upgrade to Imminent Peril Group Call / Cancel Imminent Peril State / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
6.1.1.2	MCPTT / On-network / On-demand Pre-arranged Group Call / Automatic Commencement Mode / Floor Control / Upgrade to Emergency Group Call / Cancel Emergency State / Upgrade to Imminent Peril Group Call / Cancel Imminent Peril State / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.1.1.3	MCPTT / On-network / On-demand Pre-arranged Group Call / Manual Commencement Mode / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
6.1.1.4	MCPTT / On-network / On-demand Pre-arranged Group Call / Manual Commencement Mode / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.1.1.5	MCPTT / On-network / Pre-arranged Group Call using pre-established session / Client originated Pre-established Session Release with associated MCPTT session / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
6.1.1.6	MCPTT / On-network / Pre-arranged Group Call using pre-established session / Automatic Commencement Mode / Server originated Pre-established Session Release with associated MCPTT session / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			

Clause	TC Title	Release	Applicability		Additional Information		
			Condition	Comment	Specific ICS	Specific IXIT	Number of TC Executions
6.1.1.7	MCPTT / On-network / Pre-arranged Group Call using pre-established session / Manual Commencement Mode / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.1.1.8	MCPTT / On-network / Pre-arranged Broadcast Group Call / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
6.1.1.9	MCPTT / On-network / Pre-arranged Broadcast Group Call / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.1.1.10	MCPTT / On-network / Broadcast Group Call with Temporary Group / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
6.1.1.11	MCPTT / On-network / Pre-arranged Emergency Group Call / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
6.1.1.12	MCPTT / On-network / Pre-arranged Emergency Group Call / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.1.1.13	MCPTT / On-network / Pre-Arranged Imminent Peril Group Call / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
6.1.1.14	MCPTT / On-network / Pre-Arranged Imminent Peril Group Call / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.1.1.15	MCPTT / On-network / Emergency Alert / Cancel Emergency Alert / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
6.1.1.16	MCPTT / On-network / Emergency Alert / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.1.1.17	MCPTT / On-network / Broadcast Group Call using pre-established session / Client originated Pre-established Session Release with associated MCPTT session / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
6.1.1.18	MCPTT / On-network / Broadcast Group Call using pre-established session / Client originated Pre-established Session Release with associated MCPTT session / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.1.2	Chat Group Calls						
6.1.2.1	Void						
6.1.2.2	MCPTT / On-network / Chat Group Call Using Pre-established Session Including Emergency and Imminent Peril Calls / Client Server originated Pre-established Session Release with associated MCPTT session / Client Origination (CO)	Rel-13	C01	IUT is MCPTT Client			
6.1.2.3	Void						
6.1.2.4	Void						
6.1.2.5	Void						
6.1.2.6	Void						
6.1.2.7	MCPTT / On-network / Chat Group Call / Emergency Group Call / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
6.1.2.8	MCPTT / On-network / Chat Group Call / Emergency Group Call / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.1.2.9	MCPTT / On-network / Chat Group Call / Imminent Peril Group Call / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			

Clause	TC Title	Release	Applicability		Additional Information		
			Condition	Comment	Specific ICS	Specific IXIT	Number of TC Executions
6.1.2.10	MCPTT / On-network / Chat Group Imminent Peril Group Call / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.1.2.11	MCPTT / On-network / Chat Group Call / Join Chat Group Session / Upgrade to Emergency / Cancel Emergency / Upgrade to Imminent Peril / Cancel Imminent Peril / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
6.1.2.12	MCPTT / On-network / Chat Group Call / Upgrade to Emergency / Cancel Emergency / Upgrade to Imminent Peril / Cancel Imminent Peril / Client Originated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.2	Private Calls						
6.2.1	MCPTT / On-network / Private Call / On-demand / Automatic Commencement Mode / With Floor Control confidentiality and integrity protection/ Upgrade to Emergency Call / Cancellation of Emergency on User request / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
6.2.2	MCPTT / On-network / Private Call / On-demand / Automatic Commencement Mode / With Floor Control confidentiality and integrity protection/ Upgrade to Emergency Call / Cancellation of Emergency on User request / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.2.3	MCPTT / On-network / Private Call / On-demand / Automatic Commencement Mode / Without Floor Control / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
6.2.4	MCPTT / On-network / Private Call / On-demand / Automatic Commencement Mode / Without Floor Control / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.2.5	MCPTT / On-network / Private Call / Emergency Private Call / On-demand / Automatic Commencement Mode / Force of automatic commencement mode / Without Floor Control / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
6.2.6	MCPTT / On-network / Private Call / Emergency Private Call / On-demand / Manual Commencement Mode / Force of automatic commencement mode / Without Floor Control / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.2.7	MCPTT / On-network / Private Call / On-demand / Manual Commencement Mode / Without Floor Control / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
6.2.8	MCPTT / On-network / Private Call / On-demand / Manual Commencement Mode / Without Floor Control / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.2.9	MCPTT / On-network / Private Call / Within a pre-established session / Automatic Commencement Mode / Without Floor Control / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			

Clause	TC Title	Release	Applicability		Additional Information		
			Condition	Comment	Specific ICS	Specific IXIT	Number of TC Executions
6.2.10	MCPTT / On-network / Private Call / Within a pre-established session / Automatic Commencement Mode / Without Floor Control / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.2.11	MCPTT / On-network / Private Call / Within a pre-established session / Manual Commencement Mode / Without Floor Control / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
6.2.12	MCPTT / On-network / Private Call / Private Call Call-Back Request / Private Call Call-Back Cancel Request / Client Originated (CO) / Private call call-back fulfilment	Rel-14	C01	IUT is MCPTT Client			
6.2.13	MCPTT / On-network / Private Call / Private Call Call-Back Request / Private Call Call-Back Cancel Request / Client Terminated (CT) / Private call call-back fulfilment	Rel-14	C01	IUT is MCPTT Client			
6.2.14	MCPTT / On-network / Private Call / Ambient listening call / Remotely initiated Ambient listening call / Remotely initiated ambient listening call release / Success / Client Originated (CO) / Server initiated ambient call release	Rel-14	C01	IUT is MCPTT Client			
6.2.15	MCPTT / On-network / Private Call / Ambient listening call / Remotely initiated Ambient listening call / Remotely initiated ambient listening call release / Success / Client Terminated (CT)	Rel-14	C01	IUT is MCPTT Client			
6.2.16	MCPTT / On-network / Private Call / Ambient listening call / Locally initiated Ambient listening call / Locally initiated ambient listening call release / Success / Client Originated (CO) / Server initiated ambient call release	Rel-14	C01	IUT is MCPTT Client			
6.2.17	MCPTT / On-network / Private Call / Ambient listening call / Locally initiated Ambient listening call / Locally initiated ambient listening call release / Success / Client Terminated (CT)	Rel-14	C01	IUT is MCPTT Client			
6.3	Location						
6.3.1	MCPTT / On-network / Location / Event Triggered Location Information Report	Rel-13	C01	IUT is MCPTT Client			
6.3.2	MCPTT / On-network / Location / On-demand Location Information Request	Rel-13	C01	IUT is MCPTT Client			
6.4	MBMS						
6.4.1	MCPTT / On-network / MBMS / MBMS Bearer Announcement / MBMS Bearer Listening Status / Transition to MBMS from Unicast / MBMS Floor Control / Transition to Unicast from MBMS	Rel-13	C01	IUT is MCPTT Client			
7	Off-network						
7.1	Group Calls						

Clause	TC Title	Release	Applicability		Additional Information		
			Condition	Comment	Specific ICS	Specific IXIT	Number of TC Executions
7.1.1	MCPTT / Off-network / Group Call / Floor Control / Upgrade to Emergency Call / Downgrade from Emergency / Upgrade to Imminent Peril / Downgrade from Imminent Peril / Release Call / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
7.1.2	MCPTT / Off-network / Group Call / Floor Control / Upgrade to Emergency Call / Downgrade from Emergency / Upgrade to Imminent Peril / Downgrade from Imminent Peril / Release Call / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
7.1.3	MCPTT / Off-network / Group Call / Leave Group Call when GROUP CALL PROBE sent / Initiate Group Call for Released Call / Receive GROUP CALL ACCOUCHEMENT for Released call / No GROUP CALL ACCOUCHEMENT for Released Call / Receive Response to GROUP CALL PROBE	Rel-13	C01	IUT is MCPTT Client			
7.1.4	MCPTT / Off-network / Group Call / MCPTT User Acknowledgement Required / With Confirm Indication / MCPTT User Reject / MCPTT User Accept / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
7.1.5	MCPTT / Off-network / Group Call / MCPTT User Acknowledgement Required / Without Confirm Indication / MCPTT User Reject / MCPTT User Accept / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
7.1.6	MCPTT / Off-network / Group Call / Merge Two Calls	Rel-13	C01	IUT is MCPTT Client			
7.1.7	MCPTT / Off-network / Group Call / Emergency Call / Imminent Peril Call/ Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
7.1.8	MCPTT / Off-network / Group Call / Emergency Call / Imminent Peril Call/ Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
7.1.9	MCPTT / Off-network / Group Call / Emergency Alert / Emergency Alert Retransmission / Cancel Emergency Alert / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
7.1.10	MCPTT / Off-network / Group Call / Emergency Alert / Emergency Alert Retransmission / Cancel Emergency Alert / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
7.1.11	MCPTT / Off-network / Group Call / Broadcast Group Call / Broadcast Group Call Retransmitting / Broadcast Group Call Release / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
7.1.12	MCPTT / Off-network / Group Call / Broadcast Group Call / MCPTT User Ack Not Required / Originator Releases Call / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
7.1.13	MCPTT / Off-network / Group Call / Broadcast Group Call / MCPTT User Ack Required / MCPTT User Reject / MCPTT User Accept / MCPTT User Releases Call / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			

Clause	TC Title	Release	Applicability		Additional Information		
			Condition	Comment	Specific ICS	Specific IXIT	Number of TC Executions
7.2	Private Calls						
7.2.1	MCPTT / Off-network / Private Call / Automatic Commencement Mode / No Response to Private Call Setup Request / Private call setup success / Floor Control / Upgrade to Emergency Call / Downgrade from Emergency Call / Release Call / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
7.2.2	MCPTT / Off-network / Private Call / Automatic Commencement Mode / No Response to Private Call Setup Accept / Private call setup success / Floor Control / Upgrade to Emergency Call / Downgrade from Emergency Call / Release Call / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			
7.2.3	MCPTT / Off-network / Private Call / Automatic Commencement Mode / Upgrade to Emergency Call Reject / Downgrade from Emergency Call Failure / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
7.2.4	MCPTT / Off-network / Private Call / Manual Commencement Mode / Call Released before establishment completion / Call request Rejected / Call establishment successful / Client Originated (CO)	Rel-13	C01	IUT is MCPTT Client			
7.2.5	MCPTT / Off-network / Private Call / Manual Commencement Mode Call / Released before establishment completion / User does not answer to Ringing / User Rejects call request / Call establishment successful / Client Terminated (CT)	Rel-13	C01	IUT is MCPTT Client			

Table 4-1a: Applicability of tests Conditions MCPTT Client

C01	IF A.4.1-1/1 THEN R ELSE N/A
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Table 4-2: Applicability of MCPTT Server tests and additional information for testing

Clause	TC Title	Release	Applicability		Additional Information		
			Condition	Comment	Specific ICS	Specific IXIT	Number of TC Executions
5	Configuration						
5.1	MCPTT Server - MCPTT Client / Configuration / Authentication / User Authorisation / UE Configuration / User Profile	Rel-13	CC01	IUT is MCPTT Server			
6	Server - Client operation						
6.1	MCPTT Server - MCPTT Client / On-demand Pre-arranged Group Call / Automatic Commencement Mode / Floor Control	Rel-13	CC01	IUT is MCPTT Server			
7	Server - Server operation						
7.1	MCPTT Server - MCPTT Server / On-demand Pre-arranged Group Call / Automatic Commencement Mode / Floor Control / Controlling Server	Rel-13	CC01	IUT is MCPTT Server			
7.2	MCPTT Server - MCPTT Server / On-demand Pre-arranged Group Call / Automatic Commencement Mode / Floor Control / Participating Server	Rel-13	CC01	IUT is MCPTT Server			

Table 4-2a: Applicability of tests Conditions MCPTT Server

CC01	IF A.4.1-1/2 THEN R ELSE N/A
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Table 4-3: Applicability of MCVideo Client tests and additional information for testing

Clause	TC Title	Release	Applicability		Additional Information		
			Condition	Comment	Specific ICS	Specific IXIT	Number of TC Executions
6	On-Network Test Scenarios						
6.1	Group Calls						
6.1.1	Pre-Arranged Group Call						
6.1.1.1	MCVideo / On-network / On-demand Pre-arranged Group Call / Automatic Commencement Mode / Transmission Control / Upgrade to Emergency Group Call / Cancel Emergency State / Upgrade to Imminent Peril Group Call / Cancel Imminent Peril State / Client Originated (CO)	Rel-14	CV01	IUT is MCVideo Client			
6.1.1.2	MCVideo / On-network / On-demand Pre-arranged Group Call / Automatic Commencement Mode / Reception Control / Upgrade to Emergency Group Call / Cancel Emergency	Rel-14	CV01	IUT is MCVideo Client			

Clause	TC Title	Release	Applicability		Additional Information		
			Condition	Comment	Specific ICS	Specific IXIT	Number of TC Executions
	State / Upgrade to Imminent Peril Group Call / Cancel Imminent Peril State / Client Terminated (CT)						
6.1.1.3	MCVideo / On-network / On-demand Pre-arranged Group Call / Manual Commencement Mode / Client Originated (CO)	Rel-14	CV01	IUT is MCVideo Client			
6.1.1.4	MCVideo / On-network / On-demand Pre-arranged Group Call / Manual Commencement Mode / Client Terminated (CT)	Rel-14	CV01	IUT is MCVideo Client			
6.1.1.5	MCVideo / On-network / On-demand Pre-arranged Group Call / Emergency Group Call / Client Originated (CO)	Rel-14	CV01	IUT is MCVideo Client			
6.1.1.6	MCVideo / On-network / On-demand Pre-arranged Group Call / Emergency Group Call / Client Terminated (CT)	Rel-14	CV01	IUT is MCVideo Client			
6.1.1.7	MCVideo / On-network / On-demand Pre-arranged Group Call / Broadcast Group Call / Client Originated (CO)	Rel-14	CV01	IUT is MCVideo Client			
6.1.1.8	MCVideo / On-network / On-demand Pre-arranged Group Call / Broadcast Group Call / Client Terminated (CT)	Rel-14	CV01	IUT is MCVideo Client			
6.1.1.9	MCVideo / On-network / On-demand Pre-arranged Group Call / Broadcast Group Call with Temporary Group / Client Originated (CO)	Rel-14	CV01	IUT is MCVideo Client			
6.1.1.10	MCVideo / On-network / On-demand Pre-arranged Group Call / Imminent Peril Group Call / Client Originated (CO)	Rel-14	CV01	IUT is MCVideo Client			
6.1.1.11	MCVideo / On-network / On-demand Pre-arranged Group Call / Imminent Peril Group Call / Client Terminated (CT)	Rel-14	CV01	IUT is MCVideo Client			
6.1.2	Chat Group Call						
6.1.2.1	MCVideo / On-network / Chat Group Call / Join Chat Group Session / End Chat Group Call / Client Originated (CO)	Rel-14	CV01	IUT is MCVideo Client			
6.1.2.2	MCVideo / On-network / Chat Group Call / Upgrade to Emergency Chat Group Call / Cancel Emergency Chat Group Call / Upgrade to Imminent Peril Chat Group Call / Cancel Imminent Peril Chat Group Call / Client Origination (CO)	Rel-14	CV01	IUT is MCVideo Client			
6.1.2.3	MCVideo / On-network / Chat Group Call / Upgrade to Emergency Chat Group Call / Cancel Emergency Chat Group Call / Upgrade to Imminent Peril Chat Group Call / Cancel Imminent Peril Chat Group Call / Client Terminated (CT)	Rel-14	CV01	IUT is MCVideo Client			

Clause	TC Title	Release	Applicability		Additional Information		
			Condition	Comment	Specific ICS	Specific IXIT	Number of TC Executions
6.1.2.4	MCVideo / On-network / Chat Group Call / Emergency Call / Imminent Peril Call / Client Originated (CO)	Rel-14	CV01	IUT is MCVideo Client			
6.1.2.5	MCVideo / On-network / Chat Group Call / Emergency Call / Imminent Peril Call / Client Terminated (CT)	Rel-14	CV01	IUT is MCVideo Client			
6.4	Private Calls						
6.4.1	MCVideo / On-network / Private Call / On-demand / Automatic Commencement Mode / With Transmission Control / Upgrade to Emergency Call / Cancellation of Emergency on User Request / Client Originated (CO)	Rel-14	CV01	IUT is MCVideo Client			
6.4.2	MCVideo / On-network / Private Call / On-demand / Automatic Commencement Mode / With Transmission Control / Upgrade to Emergency Call / Cancellation of Emergency on User request / Client Terminated (CT)	Rel-14	CV01	IUT is MCVideo Client			
6.4.3	MCVideo / On-network / Private Call / On-demand / Automatic Commencement Mode / Without Transmission Control / Client Originated (CO)	Rel-14	CV01	IUT is MCVideo Client			
6.4.4	MCVideo / On-network / Private Call / On-demand / Automatic Commencement Mode / Without Transmission Control / Client Terminated (CT)	Rel-14	CV01	IUT is MCVideo Client			
6.4.5	MCVideo / On-network / Private Call / Emergency Private Call / On-demand / Automatic Commencement Mode / Force of Automatic Commencement Mode / Without Transmission Control / Client Originated (CO)	Rel-14	CV01	IUT is MCVideo Client			
6.4.6	MCVideo / On-network / Private Call / Emergency Private Call / On-demand / Manual Commencement Mode / Force of automatic commencement mode / Without Transmission Control / Client Terminated (CT)	Rel-14	CV01	IUT is MCVideo Client			
6.4.7	MCVideo / On-network / Private Call / On-demand / Manual Commencement Mode / Without Transmission Control / Client Originated (CO)	Rel-14	CV01	IUT is MCVideo Client			
6.4.8	MCVideo / On-network / Private Call / On-demand / Manual Commencement Mode / Without Transmission Control / Client Terminated (CT)	Rel-14	CV01	IUT is MCVideo Client			

Table 4-3a: Applicability of tests Conditions MCVideo Client

CV01	IF A.4.1-1/3 THEN R ELSE N/A
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Table 4-4: Applicability of MCDData Client tests and additional information for testing

Clause	TC Title	Release	Applicability		Additional Information		
			Condition	Comment	Specific ICS	Specific IXIT	Number of TC Executions
6	On-Network Test Scenarios						
6.1	Short Data Service						
6.1.1	MCDData / On-network / Short Data Service (SDS) / Standalone SDS Using Signalling Control Plane / One-to-one Standalone SDS / Client Originated (CO)	Rel-14	CV01	IUT is MCDData Client			
6.1.2	MCDData / On-network / Short Data Service (SDS) / Standalone SDS Using Signalling Control Plane / One-to-one Standalone SDS / Client Terminated (CT)	Rel-14	CV01	IUT is MCDData Client			
6.1.3	MCDData / On-network / Short Data Service (SDS) / Standalone SDS Using Signalling Control Plane / Group Standalone SDS / Client Originated (CO)	Rel-14	CV01	IUT is MCDData Client			
6.1.4	MCDData / On-network / Short Data Service (SDS) / Standalone SDS Using Signalling Control Plane / Group Standalone SDS / Client Terminated (CT)	Rel-14	CV01	IUT is MCDData Client			
6.1.5	MCDData / On-network / Short Data Service (SDS) / Standalone SDS Using Media Plane / One-to-one Standalone SDS / Client Originated (CO)	Rel-14	CV01	IUT is MCDData Client			
6.1.6	MCDData / On-network / Short Data Service (SDS) / Standalone SDS Using Media Plane / One-to-one Standalone SDS / Client Terminated (CT)	Rel-14	CV01	IUT is MCDData Client			
6.1.7	MCDData / On-network / Short Data Service (SDS) / Standalone SDS Using Media Plane / Group Standalone SDS / Client Originated (CO)	Rel-14	CV01	IUT is MCDData Client			
6.1.8	MCDData / On-network / Short Data Service (SDS) / Standalone SDS Using Media Plane / Group Standalone SDS / Client Terminated (CT)	Rel-14	CV01	IUT is MCDData Client			
6.1.9	MCDData / On-network / Short Data Service (SDS) / SDS Session / One-to-one SDS Session / Client Originated (CO)	Rel-14	CV01	IUT is MCDData Client			
6.1.10	MCDData / On-network / Short Data Service (SDS) / SDS Session / One-to-one SDS Session / Client Terminated (CT)	Rel-14	CV01	IUT is MCDData Client			
6.1.11	MCDData / On-network / Short Data Service (SDS) / SDS Session / Group SDS Session / Client Originated (CO)	Rel-14	CV01	IUT is MCDData Client			

Clause	TC Title	Release	Applicability		Additional Information		
			Condition	Comment	Specific ICS	Specific IXIT	Number of TC Executions
6.1.12	MCDData / On-network / Short Data Service (SDS) / SDS Session / Group SDS Session / Client Terminated (CT)	Rel-14	CV01	IUT is MCDData Client			

Table 4-4a: Applicability of tests Conditions MCDData Client

CD01	IF A.4.1-1/4 THEN R ELSE N/A
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Annex A (normative): ICS proforma for Mission Critical Services over LTE Client/Server

Notwithstanding the provisions of the copyright clause related to the text of the present document, The Organizational Partners of 3GPP grant that users of the present document may freely reproduce the ICS proforma in this annex so that it can be used for its intended purposes and may further publish the completed ICS.

A.1 Guidance for completing the ICS proforma

A.1.1 Purposes and structure

The purpose of this ICS proforma is to provide a mechanism whereby a supplier of an implementation of the requirements defined in relevant specifications may provide information about the implementation in a standardised manner.

The ICS proforma is subdivided into clauses for the following categories of information:

- instructions for completing the ICS proforma;
- identification of the implementation;
- identification of the protocol;
- ICS proforma tables (for example: Client implementation, Server implementation, etc).

When completing the proforma the supplier need to indicate if this is for a MCPTT Client or a MCPTT Server.

A.1.2 Abbreviations and conventions

The ICS proforma contained in this annex is comprised of information in tabular form in accordance with the guidelines presented in ISO/IEC 9646-7 [8].

Item column

The item column contains a number which identifies the item in the table.

Item description column

The item description column describes in free text each respective item (e.g. parameters, timers, etc.). It implicitly means "is <item description> supported by the implementation?".

Reference column

The reference column gives reference to the relevant 3GPP core specifications.

Release column

The release column indicates the earliest release from which the capability or option is relevant.

Mnemonic column

The Mnemonic column contains mnemonic identifiers for each item.

Comments column

This column is left blank for particular use by the reader of the present document.

References to items

For each possible item answer (answer in the support column) within the ICS proforma there exists a unique reference, used, for example, in the conditional expressions. It is defined as the table identifier, followed by a solidus character "/", followed by the item number in the table. If there is more than one support column in a table, the columns shall be discriminated by letters (a, b, etc.), respectively.

A.1.3 Instructions for completing the ICS proforma

The supplier of the implementation may complete the ICS proforma in each of the spaces provided. More detailed instructions are given at the beginning of the different clauses of the ICS proforma.

A.2 Identification of the MCPTT Client/Server Equipment

Identification of the MCPTT Client/Server should be filled in so as to provide as much detail as possible regarding version numbers and configuration options.

The product supplier information and client information should both be filled in if they are different.

A person who can answer queries regarding information supplied in the ICS should be named as the contact person.

A.2.1 Date of the statement

.....

A.2.2 MCPTT Client/Server Under Test (CUT/SUT) identification

MCPTT CUT/SUT name:

.....
.....

Hardware configuration:

.....
.....
.....

Software configuration:

.....
.....
.....

A.2.3 Product supplier

Name:

.....

Address:

.....

.....

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

.....

A.2.4 The Organisation responsible for the Product testing

Name:

.....

Address:

.....

.....

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

.....

A.2.5 ICS contact person

Name:

.....

Telephone number:

.....

Facsimile number:

.....

E-mail address:

.....

Additional information:

.....

.....

A.3 Identification of the protocol

This ICS proforma applies to the 3GPP standards listed in the normative references clause of the present document.

A.4 ICS proforma tables

A.4.1 Implementation Types

Table A.4.1-1: Mission Critical Services general functionality

Item	Functionality	Ref.	Release	Mnemonic	Comments
1	MCPTT Client	TS 23.179 [9]	Rel-13	pc_MCPTTClient	
2	MCPTT Server	TS 23.179 [9]	Rel-13	pc_MCPTTServer	
3	MCVideo Client	TS 23.281 [13]	Rel-14	pc_MCVideoClient	
4	MCDData Client	TS 23.282 [14]	Rel-14	pc_MCDDataClient	
NOTE 1: TS 23.179 [9] has been superseded from Release 14 by TS 23.379 [15]					

Table A.4.1-2: Mission Critical Services supplementary functionality

Item	Functionality	Ref.	Release	Mnemonic	Comments
1	Void				

Annex B (informative): Change history

Change history							
Date	Meeting	TDoc	CR	R ev	Cat	Subject/Comment	New version
2017-02	R5#74	R5-171301	-	-	-	Introduction of TS 36.579-4.	0.0.1
2017-12	R5#77	R5-177038	-	-	-	Adding applicability for all Client tests	0.2.0
2017-12	RAN#78	RP-172184	-	-	-	Draft version for information purposes to the RAN Plenary	1.0.0
2018-03	R5#78	R5-180656	-	-	-	Various updates	1.1.0
2018-03	RAN#79	RP-180129	-	-	-	Draft version for approval to move the spec under revision control to the RAN Plenary	2.0.0
2018-03	RAN#79	-	-	-	-	Editorial changes and promoted to v13.0.0	13.0.0
2018-06	RAN#80	R5-182435	0001	-	F	Updates of 36.579-4 for MCPTT APN and more	13.1.0
2018-09	RAN#81	R5-184693	0002	-	F	Adding applicability for new MCPTT Rel-14 TCs	14.0.0
2019-09	RAN#85	R5-196356	0003	-	F	Updates to Table 4-1	14.1.0
2019-12	RAN#86	R5-198129	0005		F	Adding applicability for MCVideo TCs	14.2.0
2019-12	RAN#86	R5-198130	0006		F	Adding applicability for MCDData TCs	14.2.0
2019-12	RAN#86	R5-198166	0007		F	Removal of px_MCPTT_APN_Default	14.2.0
2019-12	RAN#86	R5-199058	0004	1	F	Update for MCVideo and MCDData Clients test applicability	14.2.0
2020-06	RAN#88	R5-203112	0009	3	F	Update to applicability	14.3.0

History

Document history		
V14.0.0	October 2018	Publication
V14.1.0	October 2019	Publication
V14.2.0	January 2020	Publication
V14.3.0	July 2020	Publication