

# ETSI TS 122 179 V14.3.0 (2017-05)



**Universal Mobile Telecommunications System (UMTS);  
LTE;  
Mission Critical Push to Talk (MCPTT) over LTE;  
Stage 1  
(3GPP TS 22.179 version 14.3.0 Release 14)**



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Reference

RTS/TSGS-0122179ve30

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Keywords

LTE,UMTS

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## Foreword

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## Introduction

The present document covers requirements for Mission Critical Push To Talk (MCPTT) service (represented by the term, MCPTT Service). The MCPTT Service can be used for public safety applications and also for general commercial applications (e.g., utility companies and railways). The specifications contained within the present document can also form the basis for a non-mission critical Push To Talk service (called a PTT service).

Note that further development of mission critical services beyond MCPTT (such as Mission Critical Video and Mission Critical Data) created an opportunity to re-use base functionality documented in the Stage 1 requirements for MCPTT. For example, the ability to communicate mission critical information to groups of users is a common need regardless of service type. Wherever originating MCPTT requirements were found to be in common with other mission critical services, those requirements were moved to a new Technical Specification (3GPP TS 22.280). Each requirement that was moved has been voided in this version of 3GPP TS 22.179, and an informative annex has been created at the end of this specification documenting the location of the originating 3GPP TS 22.179 requirement in 3GPP TS 22.280.

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# 1 Scope

The present document provides the service requirements for operation of the MCPTT Service. MCPTT makes use of capabilities included in Group Communications System Enablers for LTE (GCSE\_LTE) and Proximity Services (ProSe), with additional requirements specific to the MCPTT Service. The MCPTT Service can be used for public safety applications and also for general commercial applications (e.g., utility companies and railways).

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# 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] TSB-102-B: "Project 25 TIA-102 Document Suite Overview".
- [3] TIA-603-D: "Land Mobile FM or PM Communications Equipment Measurement and Performance Standards".
- [4] TIA-102.BABA: "Vocoder Description".
- [5] 3GPP TS 22.278: "Service requirements for the Evolved Packet System (EPS)".
- [6] 3GPP TS 22.468: "Group Communication System Enablers for LTE (GCSE\_LTE)".
- [7] ITU-T Recommendation P.862: "Perceptual evaluation of speech quality (PESQ): An objective method for end-to-end speech quality assessment of narrow-band telephone networks and speech codecs".
- [8] ITU-T Recommendation P.862.1: "Mapping function for transforming P.862 raw result scores to MOS-LQO".
- [9] ITU-T Recommendation P.863: "Perceptual objective listening quality assessment".
- [10] TIA-102.BABG: "Enhanced Vocoder Methods of Measurement for Performance", March 2010.
- [11] 3GPP TS 26.190: "Speech codec speech processing functions; Adaptive Multi-Rate - Wideband (AMR-WB) speech codec; Transcoding functions".
- [12] 3GPP TS 26.194: "Speech codec speech processing functions; Adaptive Multi-Rate - Wideband (AMR-WB) speech codec; Voice Activity Detector (VAD)".
- [13] 3GPP TS 22.011: "Service accessibility".
- [14] 3GPP TS 23.122: "Non-Access-Stratum (NAS) functions related to Mobile Stations (MS) in idle mode".
- [15] 3GPP TS 22.280: "Mission Critical Services Common Requirements (MCCoRe)".