



MCS TASSTA SOLUTION

MISSION CRITICAL SERVICES: MCPTT, MCVideo, MCData

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INTRODUCTION

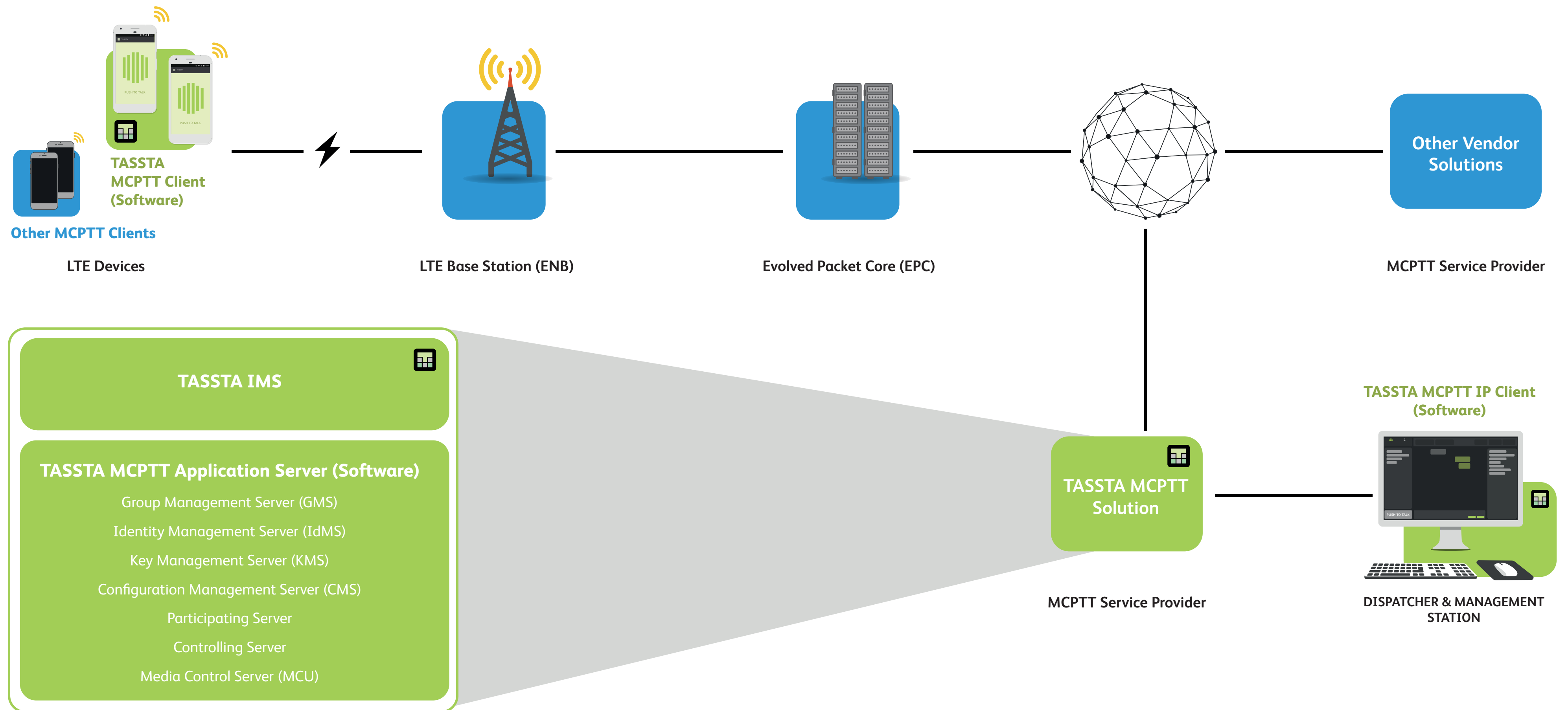
The MCS TASSTA solution is applicable primarily to mission critical services using LTE access.

Certain MC service functions such as dispatch and administrative functions could also be supported via non-3GPP access networks.

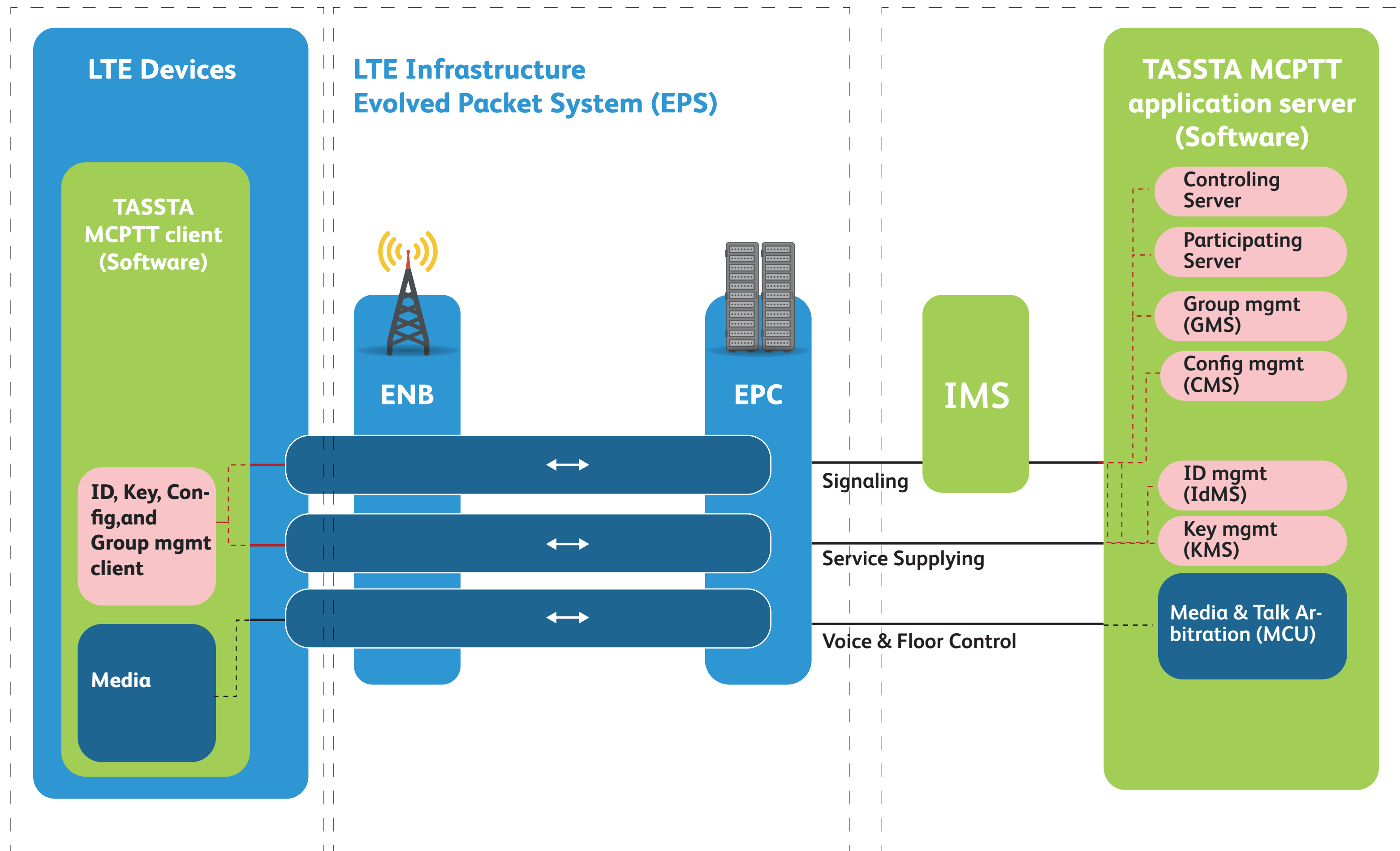
The solution can be used for public safety applications and also for general commercial applications e.g. utility companies and railways.

- MCPTT Mission Critical Push To Talk over LTE
- MCDData - Mission Critical Data
- MCVideo Mission Critical Video

TASSTA MCPTT Scheme



TASSTA MCPTT Technical Scheme



MCPTT - Mission Critical Push-to-Talk

A Push To Talk service provides an arbitrated method by which two or more users may engage in communication. Users may request permission to transmit (e.g., traditionally by means of a press of a button). The Mission Critical Push To Talk over LTE (MCPTT) service supports an enhanced PTT service, suitable for mission critical scenarios, based upon 3GPP Evolved Packet System (EPS) services. The requirements for Mission Critical Push To Talk (MCPTT) service defined within can also form the basis for a non-mission critical Push To Talk (PTT) service.

The MCPTT Service is intended to support communication between several users (a group call), where each user has the ability to gain access to the permission to talk in an arbitrated manner. However, the MCPTT Service also supports Private Calls between pairs of users. The MCPTT Service builds on the existing 3GPP transport communication mechanisms provided by the EPS architectures to establish, maintain, and terminate the actual communication path(s) among the users.

The MCPTT Service also builds upon service enablers: GCSE_LTE and ProSe. To the extent feasible, it is expected that the end user's experience to be similar regardless if the MCPTT Service is used under coverage of an EPC network or based on ProSe without network coverage. To clarify this intent, the requirements are grouped according to applicability to on-network use, off-network use, or both.

MCVideo - Mission Critical Video

MCVideo defines a service for Mission Critical video communication using LTE transport networks. Mission Critical refers to meeting the needs of agencies providing Public Safety services such as, but not limited to, Police, Fire and Ambulance services. Those needs include high reachability, availability and reliability of the service, low latency, realtime operating capabilities, highly secured operations, inter-operability with other services and systems, private and group communications, handling of emergencies and ability to provide prioritization, pre-emption, queuing and QoS.

Although the service is designed for transport over commercial and dedicated LTE networks it is not expected to be limited to use over LTE. However, performance over other transport networks has not been considered when producing this document.

MCVideo - Mission Critical Video

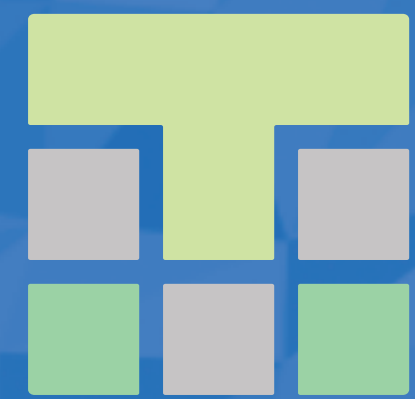
MCVideo service includes:

- Video capture and encoding of the video information;
- Secure streaming and storing of the video information;
- Video decoding and rendering of the video information;
- Processing of the video information, including the ability to annotate video frames and recognize video features;
- Mission critical and public safety level functionality (e.g. group sessions, affiliations, end-to-end confidentiality, emergency type communications) and performance (e.g. low latency);
- Transmission and control of the parameters relevant to those functions;
- Secure operation such that video information can be reasonably un-impeachable when used in evidentiary procedures;
- Definition and configuration of MCVideo groups and applications;
- Configuration of the MCVideo users' profiles and of the MCVideo UEs; and
- Interoperability with other services and systems.

While the streaming of video is part of the MCVideo Service, the non-real-time or off-line transfer of a video clip stored as a file containing video data is covered by the MCDData Service.

MCDData - Mission Critical Data

MCDData defines a service for Mission Critical Data services. As well as voice services, current mission critical users have been increasing their use of data services, including low throughput services on legacy networks and data services on commercial networks. This need will continue to grow with the creation of the new multimedia services. The MCDData service needs to provide a means to manage all data connections of mission critical users in the field and provide relevant resources to the ones who need it. For example mission critical users already use event manager software along with the voice system. The migration to LTE networks will allow mission critical users to operate current and new data services whilst relying on the fundamental capabilities of mission critical communication such as defined for MCPTT.



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