

# ETSI TS 123 682 V13.8.0 (2017-01)



TECHNICAL SPECIFICATION

**Digital cellular telecommunications system (Phase 2+) (GSM);  
Universal Mobile Telecommunications System (UMTS);  
LTE;  
Architecture enhancements to facilitate communications with  
packet data networks and applications  
(3GPP TS 23.682 version 13.8.0 Release 13)**



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Reference

RTS/TSGS-0223682vd80

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Keywords

GSM,LTE,UMTS

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# 1 Scope

The present document specifies architecture enhancements to facilitate communications with packet data networks and applications (e.g. Machine Type Communication (MTC) applications on the (external) network/MTC servers) according to the use cases and service requirements defined in TS 22.368 [2], TS 22.101 [3], and related 3GPP requirements specifications. Both roaming and non-roaming scenarios are covered.

The present document also specifies transmission of non-IP data via SCEF for the CIoT EPS Optimization.

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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] 3GPP TS 22.368: "Service Requirements for Machine-Type Communications (MTC)".
- [3] 3GPP TS 22.101: "Service Aspects; Service Principles".
- [4] 3GPP TS 23.003: "Numbering, addressing and identification".
- [5] 3GPP TS 23.002: "Network architecture".
- [6] 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".
- [7] 3GPP TS 23.401: "General Packet Radio Service (GPRS) enhancements for Evolved Universal Terrestrial Radio Access Network (E-UTRAN) access".
- [8] 3GPP TS 29.061: "Interworking between the Public Land Mobile Network (PLMN) supporting Packet Based services and Packet Data Networks (PDN)".
- [9] 3GPP TS 29.303: "Domain Name System Procedures; Stage 3".
- [10] 3GPP TS 23.228: "IP Multimedia Subsystem (IMS); Stage 2".
- [11] 3GPP TS 23.272: "Circuit Switched (CS) fallback in Evolved Packet System (EPS); Stage 2".
- [12] 3GPP TS 23.040: "Technical realization of the Short Message Service (SMS)".
- [13] 3GPP TS 23.204: "Support of Short Message Service (SMS) over generic 3GPP Internet Protocol (IP) access; Stage 2".
- [14] 3GPP TR 23.039: "Interface Protocols for the Connection of Short Message Service Centers (SMSCs) to Short Message Entities (SMEs)".
- [15] IETF RFC 3588: "Diameter Base Protocol".
- [16] IETF RFC 4960: "Stream Control Transmission Protocol".
- [17] [WAP-168-ServiceLoad-20010731-a](#): "Service Loading".
- [18] [OMA-TS-Push\\_MO-V1\\_0-20110809-A](#): "OMA Push Management Object".