ETSI TS 132 251 V9.13.0 (2016-01)

Digital cellular telecommunications system (Phase 2+);
Universal Mobile Telecommunications System (UMTS);
LTE;
Telecommunication management;
Charging management;
Packet Switched (PS) domain charging
(3GPP TS 32.251 version 9.13.0 Release 9)

Reference
RTS/TSGS-0532251v9d0

Keywords
GSM,LTE,UMTS

ETSI

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Sous-Préfecture de Grasse (06) N° 7803/88

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Foreword

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1 Scope

The present document is part of a series of documents specifying charging functionality and charging management in Packet Switched networks (GSM/UMTS, EPS). The 3GPP core network charging architecture and principles are specified in 3GPP TS 32.240 [1], which provides an umbrella for other charging management documents that specify:

- the content of the CDRs per domain / subsystem / service (offline charging);
- the content of real-time charging messages per domain / subsystem /service (online charging);
- the functionality of online and offline charging for those domains / subsystems / services;
- the interfaces that are used in the charging framework to transfer the charging information (i.e. CDRs or charging events).

The complete document structure for these TSs is defined in 3GPP TS 32.240 [1].

The present document specifies the Offline and Online Charging description for the Packet Switched (PS) domain based on the functional stage 2 description in 3GPP TS 23.060 [201], 3GPP TS 23.401[208] and 3GPP TS 23.402 [209]. This charging description includes the offline and online charging architecture and scenarios specific to the PS domain, as well as the mapping of the common 3GPP charging architecture specified in TS 32.240 [1] onto the PS domain. It further specifies the structure and content of the CDRs for offline charging, and the charging events for online charging. The present document is related to other 3GPP charging TSs as follows:

- The common 3GPP charging architecture is specified in TS 32.240 [1];
- The parameters, abstract syntax and encoding rules for the CDRs are specified in TS 32.298 [51];
- A transaction based mechanism for the transfer of CDRs within the network is specified in TS 32.295 [54];
- The file based mechanism used to transfer the CDRs from the network to the operator"s billing domain (e.g. the billing system or a mediation device) is specified in TS 32.297 [52];
- The 3GPP Diameter application that is used for PS domain offline and online charging is specified in TS 32.299 [50].

Note that a CAMEL based prepaid function and protocol is also specified for the PS domain (3GPP TS 23.078 [206] and 3GPP TS 29.078 [202]). CAMEL entities and functions are outside the scope of the present document.

All terms, definitions and abbreviations used in the present document, which are common across 3GPP TSs, are defined in 3GPP TR 21.905 [100]. Those that are common across charging management in PS domains, services or subsystems are provided in the umbrella document 3GPP TS 32.240 [1] and are copied into clause 3 of the present document for ease of reading. Finally, those items that are specific to the present document are defined exclusively in the present document.

Furthermore, requirements that govern the charging work are specified in 3GPP TS 22.115 [102].