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Contents

Intellectual Property Rights	2
Foreword.....	2
Modal verbs terminology.....	2
Foreword.....	7
1 Scope	8
2 References	9
3 Definitions, symbols and abbreviations	11
3.1 Definitions	11
3.2 Symbols.....	11
3.3 Abbreviations	12
4 Architecture Considerations	13
4.1 High level IP Multimedia Subsystem (IMS) architecture	13
4.2 IMS offline charging architecture.....	14
4.3 IMS online charging architecture	15
5 Charging Principles	16
5.1 IMS Charging Principles	16
5.1.1 IMS Charging applicability	16
5.1.2 IMS Charging Correlation	16
5.1.2.1 Basic Principles for IMS Domain Correlation	16
5.1.2.2 IMS Charging Identifier (ICID).....	17
5.1.2.2A Related ICID	17
5.1.2.3 Access network charging identifier.....	17
5.1.2.4 Inter Operator Identifier (IOI).....	17
5.1.2.5 Void.....	18
5.1.2.6 IMS visited network identifier	18
5.1.3 SDP handling.....	18
5.1.4 Trigger conditions.....	18
5.1.5 IMS support of real-time tariff transfer.....	18
5.1.6 Served user identification	19
5.1.7 Single Charging session from AS/ATCF acting as B2BUA.....	19
5.1.8 Charging support for Roaming Architecture for Voice over IMS with Local Breakout.....	19
5.1.9 Charging support for Network provided Location information	20
5.1.9a Charging support for IMS transit scenarios	21
5.1.10 Charging support for TRF.....	21
5.2 IMS Offline Charging Principles.....	21
5.2.1 Basic Principles	21
5.2.2 Diameter message flows and types	23
5.2.2.1 Message Flows - Successful Cases and Scenarios	23
5.2.2.1.1 Session Establishment - Mobile Origination	23
5.2.2.1.2 Session Establishment - Mobile Termination.....	26
5.2.2.1.3 Mid-Session Procedures	27
5.2.2.1.4 Session Release - Mobile Initiated	29
5.2.2.1.5 Session-Unrelated Procedures	30
5.2.2.1.6 Session Establishment - PSTN Initiated.....	31
5.2.2.1.7 Session Establishment - IMS Initiated.....	32
5.2.2.1.8 Session Release - PSTN Initiated	33
5.2.2.1.9 Session Release - IMS Initiated.....	34
5.2.2.1.10 Multi-Party Call.....	35
5.2.2.1.11 AS Related Procedures - AS Acting as a Redirect Server	37
5.2.2.1.12 AS Related Procedures - AS Acting as a Voice Mail Server.....	38
5.2.2.1.13 AS Related Procedures - AS Acting as a SCC AS	39
5.2.2.1.13.1 UE originating call (PS only or CS only).....	39

5.2.2.1.13.2	UE originating call (PS and CS combined origination)	41
5.2.2.1.13.3	UE terminating call (PS only or CS only).....	44
5.2.2.1.13.4	UE terminating call (PS and CS combined origination)	46
5.2.2.1.13.5	Session transfer from PS to CS	49
5.2.2.1.13.6	Session transfer from CS to PS	51
5.2.2.1.13.7	Session transfer from PS to (CS+PS).....	54
5.2.2.1.13.8	Session transfer from (CS+PS) to PS.....	57
5.2.2.1.13.9	IMS Emergency Session transfer from PS to CS.....	60
5.2.2.1.14	Initiating Alternate Charged Party Call	63
5.2.2.1.15	Session Establishment via IBCF to S-CSCF - IMS Initiated.....	64
5.2.2.1.16	AS Related Procedures - AS Acting as a MMTel AS.	65
5.2.2.1.17	Session Establishment via IBCF to a third party AS providing tariff information in real time (RTTI)	65
5.2.2.1.18	Third party AS providing tariff information in real time (RTTI) during the session.....	66
5.2.2.1.19	Support of Optimal Media Routing (OMR)	67
5.2.2.1.19.1	IMS-ALG Related Procedures for OMR – Session establishment and IMS-ALG bypasses its local GW	68
5.2.2.1.19.2	IMS-ALG Related Procedures for OMR – Session establishment and alternate IP realm is selected	71
5.2.2.1.19.3	IMS-ALG Related Procedures for OMR – Mid-session procedure	73
5.2.2.1.19.4	IMS-ALG Related Procedures for OMR – transcoding.....	74
5.2.2.1.19.4.1	IMS-ALG Related Procedures for OMR – transcoder provided by IMS-ALG.....	74
5.2.2.1.19.4.2	IMS-ALG Related Procedures for OMR – transcoder offered by IMS-ALG but not selected.....	76
5.2.2.1.20	AS acting as a B2BUA – Single Charging session.....	78
5.2.2.1.21	Session Establishment for Roaming Architecture for Voice over IMS with Local Breakout	80
5.2.2.1.22	Service Continuity using ATCF	82
5.2.2.1.22.1	UE originating call (CS only) through ATCF.....	82
5.2.2.1.22.1A	UE originating call (PS only) through ATCF	84
5.2.2.1.22.2	UE terminating call (CS only) through ATCF.....	84
5.2.2.1.22.2A	UE terminating call (PS only) through ATCF	86
5.2.2.1.22.3	UE session transfer PS to CS using ATCF	87
5.2.2.1.22.4	UE session transfer CS to PS using ATCF	88
5.2.2.2	Message Flows - Error Cases and Scenarios.....	90
5.2.2.2.1	Session Related SIP Procedures- Reception of SIP error messages	90
5.2.2.2.2	Session Related SIP Procedures - SIP session failure	90
5.2.2.2.3	Session Unrelated SIP procedures	91
5.2.2.2.4	CDF Connection Failure.....	91
5.2.2.2.5	No Reply from CDF	91
5.2.2.2.6	Duplicate Detection	91
5.2.2.2.7	CDF Detected Failure.....	91
5.2.3	CDR generation	91
5.2.4	GTP" record transfer flows	91
5.2.5	Bi CDR file transfer	92
5.3	IMS Online Charging Scenarios.....	92
5.3.1	Basic Principles	92
5.3.2	Diameter Message Flows and Types	94
5.3.2.1	Immediate Event Charging (IEC)	94
5.3.2.1.1	Message Flows - Successful Cases and Scenarios.....	94
5.3.2.1.1.1	IEC – Debit Units Operation.....	94
5.3.2.1.1.2	Scenarios.....	95
5.3.2.1.2	Message Flows - Error Cases and Scenarios	95
5.3.2.1.2.1	Reception of SIP Error Messages	96
5.3.2.1.2.2	Debit Units Operation Failure.....	96
5.3.2.1.2.3	Duplicate Detection	96
5.3.2.2	Event Charging with Unit Reservation (ECUR) and Session Charging with Unit Reservation (SCUR)	96
5.3.2.2.1	Message Flows - Successful Cases and Scenarios.....	96
5.3.2.2.1.1	ECUR and SCUR - Reserve Units and Debit Units Operations	96
5.3.2.2.1.2	Expiration of Reservation Validity	96
5.3.2.2.1.3	Scenarios.....	97
5.3.2.2.1.3.1	Session Related Procedures (SCUR).....	98

5.3.2.2.1.3.2	Session Unrelated Procedures (ECUR)	105
5.3.2.2.2	Message Flows - Error Cases and Scenarios	106
5.3.2.2.2.1	Reception of SIP Error Messages	106
5.3.2.2.2.2	Reserve Units and Debit Units Operation Failure.....	106
5.3.2.2.2.3	Duplicate Detection	106
5.3.2.2.2.4	Aborted Session Setup	106
5.3.2.3	IMS Service Termination by OCS	106
5.3.2.3.1	Triggers on Ro interface which imply the termination of the IMS service	106
5.3.2.3.2	Indication to the UE of the reason for IMS service release	107
6	Definition of charging information	108
6.1	Data description for IMS offline charging	108
6.1.1	Rf Message contents	108
6.1.1.1	Charging Data-Request Message	108
6.1.1.2	Charging Data Response Message	109
6.1.2	GTP" message contents	109
6.1.3	CDR Description on the Bi Interface.....	109
6.1.3.1	CDR Field Types	109
6.1.3.2	CDR Triggers.....	110
6.1.3.2.1	Session Related CDRs	110
6.1.3.2.2	Session Unrelated CDRs	110
6.1.3.3	S-CSCF CDR Content.....	111
6.1.3.4	P-CSCF CDR Content.....	115
6.1.3.5	I-CSCF CDR Content	119
6.1.3.6	MRFC CDR Content.....	120
6.1.3.7	MGCF CDR Content.....	123
6.1.3.8	BGCF CDR Content	126
6.1.3.9	SIP AS CDR Content	128
6.1.3.10	IBCF CDR Content.....	132
6.1.3.11	E-CSCF CDR Content	135
6.1.3.12	TRF CDR Content	138
6.1.3.13	ATCF CDR Content.....	141
6.1.3.14	TF CDR Content	145
6.2	Data description for IMS online charging	148
6.2.1	Ro message contents	148
6.2.1.1	Debit and Reserve Units Request Message.....	149
6.2.1.2	Debit and Reserve Units Response Message	150
6.3	IMS Charging Specific Parameters	151
6.3.1	Definition of IMS charging information.....	151
6.3.1.1	IMS charging information assignment for Service Information	151
6.3.1.2	Definition of the IMS Information.....	151
6.3.2	Detailed Message Format for offline charging	155
6.3.3	Detailed Message Format for online charging	158
6.3.4	Formal IMS charging parameter description	160
6.3.4.1	IMS charging information for CDRs	160
6.3.4.2	IMS charging information for charging events	160
Annex A (informative):	Bibliography.....	161
Annex B (informative):	Message Flows for Service Termination by OCS.....	162
B.1	Scenario 1 - Session Related (SCUR): Service Termination on reception of an initial SIP INVITE Request.....	162
B.2	Scenario 2 - Session Related (SCUR): Service Termination triggered after an early SIP Dialog is established	163
B.3	Scenario 3 - Session Related (SCUR): Service Termination triggered after a confirmed SIP Dialog is established	166
B.4	Scenario 4 - Session Unrelated (ECUR): Service Termination on reception of an initial SIP non-INVITE Request.....	169
B.5	Scenario 5 - Session Unrelated (IEC): Service Termination on reception of an initial SIP non-INVITE Request	170
Annex C (informative):	Change history	171

History174

Foreword

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1 Scope

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

- the content of the CDRs per domain and subsystem (offline charging),
- the content of real-time charging events per domain / subsystem (online charging);
- the functionality of online and offline charging for those domains and subsystems;
- 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 TS 32.240 [1].

The present document specifies the Offline and Online Charging description for the IP Multimedia Subsystem (IMS), based on the functional descriptions of the IMS in 3GPP TS 23.228 [200]. This charging description includes the offline and online charging architecture and scenarios specific to IMS, as well as the mapping of common 3GPP charging architecture specified in TS 32.240 [1] onto IMS. 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 these CDR types 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 IMS offline and online charging is specified in TS 32.299 [50].

All terms, definitions and abbreviations used in the present document, that are common across 3GPP TSs, are defined in the 3GPP Vocabulary, TR 21.905 [100]. Those that are common across charging management in GSM/UMTS domains, services or subsystems are provided in the umbrella document 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 [101].