



**Universal Mobile Telecommunications System (UMTS);  
LTE;  
5G;  
Evolved Packet System (EPS);  
Mobility Management Entity (MME)  
and Serving GPRS Support Node (SGSN) related interfaces  
based on Diameter protocol  
(3GPP TS 29.272 version 15.10.0 Release 15)**

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**ETSI**

650 Route des Lucioles  
F-06921 Sophia Antipolis Cedex - FRANCE

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Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C  
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## Contents

Intellectual Property Rights .....	2
Legal Notice .....	2
Modal verbs terminology.....	2
Foreword.....	10
1    Scope .....	11
2    References .....	11
3    Definitions and abbreviations.....	14
3.1    Definitions .....	14
3.2    Abbreviations .....	14
4    General Description.....	14
5    MME – HSS (S6a) and SGSN – HSS (S6d) .....	15
5.1    Introduction .....	15
5.2    Mobility Services .....	15
5.2.1    Location Management Procedures.....	15
5.2.1.1    Update Location.....	15
5.2.1.1.1    General .....	15
5.2.1.1.2    Detailed behaviour of the MME and the SGSN .....	19
5.2.1.1.3    Detailed behaviour of the HSS .....	23
5.2.1.2    Cancel Location .....	27
5.2.1.2.1    General .....	27
5.2.1.2.2    Detailed behaviour of the MME and the SGSN .....	27
5.2.1.2.3    Detailed behaviour of the HSS .....	28
5.2.1.3    Purge UE.....	28
5.2.1.3.1    General .....	28
5.2.1.3.2    Detailed behaviour of the MME and the SGSN .....	29
5.2.1.3.3    Detailed behaviour of HSS .....	30
5.2.2    Subscriber Data Handling Procedures .....	30
5.2.2.1    Insert Subscriber Data .....	30
5.2.2.1.1    General .....	30
5.2.2.1.2    Detailed behaviour of the MME and the SGSN .....	32
5.2.2.1.3    Detailed behaviour of HSS .....	36
5.2.2.2    Delete Subscriber Data.....	38
5.2.2.2.1    General .....	38
5.2.2.2.2    Detailed behaviour of the MME and the SGSN .....	41
5.2.2.2.3    Detailed behaviour of the HSS .....	42
5.2.3    Authentication Procedures .....	42
5.2.3.1    Authentication Information Retrieval .....	42
5.2.3.1.1    General .....	42
5.2.3.1.2    Detailed behaviour of the MME and the SGSN .....	44
5.2.3.1.3    Detailed behaviour of the HSS .....	44
5.2.4    Fault Recovery Procedures .....	46
5.2.4.1    Reset.....	46
5.2.4.1.1    General .....	46
5.2.4.1.2    Detailed behaviour of the MME and the SGSN .....	47
5.2.4.1.3    Detailed behaviour of the HSS .....	48
5.2.5    Notification Procedures .....	49
5.2.5.1    Notification .....	49
5.2.5.1.1    General .....	49
5.2.5.1.2    Detailed behaviour of the MME and the SGSN .....	53
5.2.5.1.3    Detailed behaviour of the HSS .....	54
5A    MME – CSS (S7a) and SGSN – CSS (S7d).....	55
5A.1    Introduction .....	55

5A.2	Mobility Services .....	56
5A.2.1	Location Management Procedures.....	56
5A.2.1.1	Update VCSG Location .....	56
5A.2.1.1.1	General .....	56
5A.2.1.1.2	Detailed behaviour of the MME and the SGSN .....	57
5A.2.1.1.3	Detailed behaviour of the CSS .....	58
5A.2.1.2	Cancel VCSG Location.....	58
5A.2.1.2.1	General .....	58
5A.2.1.2.2	Detailed behaviour of the MME and the SGSN .....	59
5A.2.1.2.3	Detailed behaviour of the CSS .....	59
5A.2.2	Subscriber Data Handling Procedures .....	59
5A.2.2.1	Insert VCSG Subscriber Data .....	59
5A.2.2.1.1	General .....	59
5A.2.2.1.2	Detailed behaviour of the MME and the SGSN .....	60
5A.2.2.1.3	Detailed behaviour of CSS .....	60
5A.2.2.2	Delete VCSG Subscriber Data.....	61
5A.2.2.2.1	General .....	61
5A.2.2.2.2	Detailed behaviour of the MME and the SGSN .....	61
5A.2.2.2.3	Detailed behaviour of the CSS .....	62
5A.2.3	Fault Recovery Procedures .....	62
5A.2.3.1	VCSG Reset .....	62
5A.2.3.1.1	General .....	62
5A.2.3.1.2	Detailed behaviour of the MME and the SGSN .....	63
5A.2.3.1.3	Detailed behaviour of the CSS .....	63
6	MME – EIR (S13) and SGSN – EIR (S13') .....	64
6.1	Introduction .....	64
6.2	ME Identity Check Procedures.....	64
6.2.1	ME Identity Check.....	64
6.2.1.1	General.....	64
6.2.1.2	Detailed behaviour of the MME and the SGSN .....	65
6.2.1.3	Detailed behaviour of the EIR.....	65
7	Protocol Specification and Implementation .....	66
7.1	Introduction .....	66
7.1.1	Use of Diameter base protocol.....	66
7.1.2	Securing Diameter Messages .....	66
7.1.3	Accounting functionality .....	66
7.1.4	Use of sessions.....	66
7.1.5	Transport protocol .....	66
7.1.6	Routing considerations .....	67
7.1.7	Advertising Application Support .....	67
7.1.8	Diameter Application Identifier .....	67
7.1.9	Use of the Supported-Features AVP .....	68
7.2	Commands.....	69
7.2.1	Introduction.....	69
7.2.2	Command-Code values .....	69
7.2.3	Update-Location-Request (ULR) Command .....	70
7.2.4	Update-Location-Answer (ULA) Command .....	71
7.2.5	Authentication-Information-Request (AIR) Command .....	71
7.2.6	Authentication-Information-Answer (AIA) Command .....	72
7.2.7	Cancel-Location-Request (CLR) Command .....	72
7.2.8	Cancel-Location-Answer (CLA) Command .....	72
7.2.9	Insert-Subscriber-Data-Request (IDR) Command .....	73
7.2.10	Insert-Subscriber-Data-Answer (IDA) Command .....	73
7.2.11	Delete-Subscriber-Data-Request (DSR) Command .....	74
7.2.12	Delete-Subscriber-Data-Answer (DSA) Command .....	75
7.2.13	Purge-UE-Request (PUR) Command .....	76
7.2.14	Purge-UE-Answer (PUA) Command .....	76
7.2.15	Reset-Request (RSR) Command .....	77
7.2.16	Reset-Answer (RSA) Command .....	77
7.2.17	Notify-Request (NOR) Command .....	78

7.2.18	Notify-Answer (NOA) Command .....	78
7.2.19	ME-Identity-Check-Request (ECR) Command .....	79
7.2.20	ME-Identity-Check-Answer (ECA) Command .....	79
7.2.21	Update-VCSG-Location-Request (UVR) Command.....	80
7.2.22	Update-VCSG-Location-Answer (UVA) Command.....	80
7.2.23	Cancel-VCSG-Location-Request (CVR) Command .....	80
7.2.24	Cancel-VCSG-Location-Answer (CVA) Command.....	81
7.3	Information Elements .....	82
7.3.1	General.....	82
7.3.2	Subscription-Data .....	92
7.3.3	Terminal-Information .....	93
7.3.4	IMEI.....	93
7.3.5	Software-Version .....	94
7.3.6	3GPP2-MEID .....	94
7.3.7	ULR-Flags .....	94
7.3.8	ULA-Flags .....	95
7.3.9	Visited-PLMN-Id.....	96
7.3.10	Feature-List AVP.....	96
7.3.10.1	Feature-List AVP for the S6a/S6d application.....	96
7.3.10.2	Feature-List AVP for the S7a/S7d application.....	110
7.3.11	Requested-EUTRAN-Authentication-Info .....	110
7.3.12	Requested-UTRAN- GERAN-Authentication-Info.....	110
7.3.13	RAT-Type.....	111
7.3.14	Number-Of-Requested-Vectors .....	111
7.3.15	Re-Synchronization-Info .....	111
7.3.16	Immediate-Response-Preferred.....	111
7.3.17	Authentication-Info.....	111
7.3.18	E-UTRAN-Vector.....	111
7.3.19	UTRAN-Vector .....	112
7.3.20	GERAN-Vector .....	112
7.3.21	Network-Access-Mode .....	112
7.3.22	HPLMN-ODB.....	112
7.3.23	Item-Number.....	113
7.3.24	Cancellation-Type.....	113
7.3.25	DSR-Flags.....	113
7.3.26	DSA-Flags .....	116
7.3.27	Context-Identifier .....	116
7.3.28	Void .....	116
7.3.29	Subscriber-Status .....	116
7.3.30	Operator-Determined-Barring.....	117
7.3.31	Access-Restriction-Data .....	117
7.3.32	APN-OI-Replacement.....	117
7.3.33	All-APN-Configurations-Included-Indicator .....	118
7.3.34	APN-Configuration-Profile .....	118
7.3.35	APN-Configuration.....	118
7.3.36	Service-Selection .....	120
7.3.37	EPS-Subscribed-QoS-Profile .....	120
7.3.38	VPLMN-Dynamic-Address-Allowed .....	120
7.3.39	STN-SR .....	120
7.3.40	Allocation-Retention-Priority .....	121
7.3.41	AMBR .....	121
7.3.42	MIP-Home-Agent-Address.....	121
7.3.43	MIP-Home-Agent-Host .....	122
7.3.44	PDN-GW-Allocation-Type.....	122
7.3.45	MIP6-Agent-Info .....	122
7.3.46	RAT-Frequency-Selection-Priority-ID .....	122
7.3.47	IDA-Flags .....	122
7.3.48	PUA-Flags .....	123
7.3.49	NOR-Flags.....	123
7.3.50	User-Id .....	124
7.3.51	Equipment-Status.....	124
7.3.52	Regional-Subscription-Zone-Code .....	125

7.3.53	RAND .....	125
7.3.54	XRES .....	125
7.3.55	AUTN .....	125
7.3.56	KASME .....	125
7.3.57	Confidentiality-Key AVP .....	125
7.3.58	Integrity-Key AVP .....	125
7.3.59	Kc AVP .....	125
7.3.60	SRES .....	125
7.3.61	Void .....	125
7.3.62	PDN-Type .....	125
7.3.63	Trace-Data AVP .....	126
7.3.64	Trace-Reference AVP .....	126
7.3.65	Void .....	127
7.3.66	Void .....	127
7.3.67	Trace-Depth AVP .....	127
7.3.68	Trace-NE-Type-List AVP .....	127
7.3.69	Trace-Interface-List AVP .....	127
7.3.70	Trace-Event-List AVP .....	127
7.3.71	OMC-Id AVP .....	127
7.3.72	GPRS-Subscription-Data .....	127
7.3.73	Complete-Data-List-Included-Indicator .....	128
7.3.74	PDP-Context .....	128
7.3.75	PDP-Type .....	129
7.3.75A	Ext-PDP-Type .....	129
7.3.76	Void .....	129
7.3.77	QoS-Subscribed .....	129
7.3.78	CSG-Subscription-Data .....	129
7.3.79	CSG-Id .....	129
7.3.80	Expiration-Date .....	129
7.3.81	Roaming-Restricted-Due-To-Unsupported-Feature .....	130
7.3.82	Specific-APN-Info AVP .....	130
7.3.83	Alert-Reason AVP .....	130
7.3.84	LCS-Info .....	130
7.3.85	GMLC-Number .....	130
7.3.86	LCS-PrivacyException .....	131
7.3.87	SS-Code .....	131
7.3.88	SS-Status .....	131
7.3.89	Notification-To-UE-User .....	131
7.3.90	External-Client .....	131
7.3.91	Client-Identity .....	132
7.3.92	GMLC-Restriction .....	132
7.3.93	PLMN-Client .....	132
7.3.94	Service-Type .....	132
7.3.95	ServiceTypeIdentity .....	132
7.3.96	MO-LR .....	132
7.3.97	Void .....	133
7.3.98	Trace-Collection-Entity AVP .....	133
7.3.99	Teleservice-List .....	133
7.3.100	TS-Code .....	133
7.3.101	Call-Barring-Info .....	133
7.3.102	SGSN-Number .....	133
7.3.103	IDR-Flags .....	133
7.3.104	ICS-Indicator .....	134
7.3.105	Visited-Network-Identifier .....	134
7.3.107	Homogeneous-Support-of-IMS-Voice-Over-PS-Sessions .....	135
7.3.108	Last-UE-Activity-Time .....	135
7.3.109	GMLC-Address .....	135
7.3.110	EPS-User-State .....	135
7.3.111	EPS-Location-Information .....	136
7.3.112	MME-User-State .....	136
7.3.113	SGSN-User-State .....	136
7.3.114	User-State .....	136

7.3.115	MME-Location-Information .....	137
7.3.116	SGSN-Location-Information .....	137
7.3.117	E-UTRAN-Cell-Global-Identity .....	138
7.3.118	Tracking-Area-Identity .....	138
7.3.119	Cell-Global-Identity.....	138
7.3.120	Routing-Area-Identity.....	138
7.3.121	Location-Area-Identity .....	138
7.3.122	Service-Area-Identity.....	138
7.3.123	Geographical-Information .....	138
7.3.124	Geodetic-Information.....	138
7.3.125	Current-Location-Retrieved.....	138
7.3.126	Age-Of-Location-Information .....	139
7.3.127	Active-APN .....	139
7.3.128	Error-Diagnostic .....	139
7.3.129	Ext-PDP-Address AVP .....	140
7.3.130	UE-SRVCC-Capability .....	140
7.3.131	MPS-Priority.....	140
7.3.132	VPLMN-LIPA-Allowed .....	140
7.3.133	LIPA-Permission .....	140
7.3.134	Subscribed-Periodic-RAU-TAU-Timer.....	141
7.3.135	SIPTO-Permission .....	141
7.3.136	MDT-Configuration.....	141
7.3.137	Job-Type .....	142
7.3.138	Area-Scope .....	142
7.3.139	List-Of-Measurements .....	142
7.3.140	Reporting-Trigger .....	142
7.3.141	Report-Interval.....	142
7.3.142	Report-Amount .....	142
7.3.143	Event-Threshold-RSRP .....	142
7.3.144	Event-Threshold-RSRQ.....	142
7.3.145	Logging-Interval .....	142
7.3.146	Logging-Duration .....	143
7.3.147	Relay-Node-Indicator .....	143
7.3.148	MDT-User-Consent .....	143
7.3.149	PUR-Flags.....	143
7.3.150	Subscribed-VSRVCC .....	143
7.3.151	Equivalent-PLMN-List .....	144
7.3.152	CLR-Flags.....	144
7.3.153	UVR-Flags.....	144
7.3.154	UVA-Flags.....	144
7.3.155	VPLMN-CSG-Subscription-Data .....	145
7.3.156	Local-Time-Zone .....	145
7.3.157	A-MSISDN .....	145
7.3.158	Void .....	145
7.3.159	MME-Number-for-MT-SMS .....	145
7.3.160	Void .....	146
7.3.161	Void .....	146
7.3.162	SMS-Register-Request.....	146
7.3.163	Time-Zone .....	146
7.3.164	Daylight-Saving-Time .....	146
7.3.165	Subscription-Data-Flags .....	146
7.3.166	Measurement-Period-LTE .....	147
7.3.167	Measurement-Period-UMTS.....	147
7.3.168	Collection-Period-RRM-LTE .....	147
7.3.169	Collection-Period-RRM-UMTS .....	147
7.3.170	Positioning-Method .....	147
7.3.171	Measurement-Quantity .....	147
7.3.172	Event-Threshold-Event-1F .....	148
7.3.173	Event-Threshold-Event-1I .....	148
7.3.174	Restoration-Priority .....	148
7.3.175	SGs-MME-Identity.....	148
7.3.176	SIPTO-Local-Network-Permission.....	148

7.3.177	Coupled-Node-Diameter-ID .....	148
7.3.178	OC-Supported-Features .....	148
7.3.179	OC-OLR .....	148
7.3.180	ProSe-Subscription-Data .....	148
7.3.181	WLAN-offloadability .....	149
7.3.182	WLAN-offloadability-EUTRAN .....	149
7.3.183	WLAN-offloadability-UTRAN .....	149
7.3.184	Reset-ID .....	149
7.3.185	MDT-Allowed-PLMN-Id .....	150
7.3.186	Adjacent-PLMNs .....	150
7.3.187	Adjacent-Access-Restriction-Data .....	150
7.3.188	DL-Buffering-Suggested-Packet-Count .....	150
7.3.189	IMSI-Group-Id .....	151
7.3.190	Group-Service-Id .....	151
7.3.191	Group-PLMN-Id .....	151
7.3.192	Local-Group-Id .....	151
7.3.193	AESE-Communication-Pattern .....	152
7.3.194	Communication-Pattern-Set .....	152
7.3.195	Monitoring-Event-Configuration .....	152
7.3.196	Monitoring-Event-Report .....	153
7.3.197	UE-Reachability-Configuration .....	154
7.3.198	eNodeB-ID .....	154
7.3.199	Supported-Services .....	154
7.3.200	Supported-Monitoring-Events .....	154
7.3.201	AIR-Flags .....	155
7.3.202	UE-Usage-Type .....	155
7.3.203	DRMP .....	155
7.3.204	Non-IP-PDN-Type-Indicator .....	155
7.3.205	Non-IP-Data-Delivery-Mechanism .....	156
7.3.206	Additional-Context-Identifier .....	156
7.3.207	SCEF-Realm .....	156
7.3.208	Subscription-Data-Deletion .....	156
7.3.209	Preferred-Data-Mode .....	156
7.3.210	Emergency-Info .....	157
7.3.211	Load .....	157
7.3.212	V2X-Subscription-Data .....	157
7.3.213	V2X-Permission .....	157
7.3.214	PDN-Connection-Continuity .....	158
7.3.215	eDRX-Cycle-Length .....	158
7.3.216	eDRX-Cycle-Length-Value .....	158
7.3.217	UE-PC5-AMBR .....	158
7.3.218	Extended eNodeB-ID .....	158
7.3.219	MBSFN-Area .....	159
7.3.220	MBSFN-Area-ID .....	159
7.3.221	Carrier-Frequency .....	159
7.3.222	RDS-Indicator .....	159
7.3.223	Service-Gap-Time .....	159
7.3.224	Aerial-UE-Subscription-Information .....	159
7.3.225	Broadcast-Location-Assistance-Data-Types .....	160
7.3.226	Paging-Time-Window .....	161
7.3.227	Operation-Mode .....	162
7.3.228	Paging-Time-Window-Length .....	162
7.3.229	eDRX-Related-RAT .....	162
7.3.230	Core-Network-Restrictions .....	162
7.3.231	Interworking-5GS-Indicator .....	163
7.4	Result-Code and Experimental-Result Values .....	163
7.4.1	General .....	163
7.4.2	Success .....	163
7.4.3	Permanent Failures .....	163
7.4.3.1	DIAMETER_ERROR_USER_UNKNOWN (5001) .....	163
7.4.3.2	DIAMETER_ERROR_UNKNOWN_EPS_SUBSCRIPTION (5420) .....	163
7.4.3.3	DIAMETER_ERROR_RAT_NOT_ALLOWED (5421) .....	163

7.4.3.4	DIAMETER_ERROR_ROAMING_NOT_ALLOWED (5004) .....	163
7.4.3.5	DIAMETER_ERROR_EQUIPMENT_UNKNOWN (5422) .....	164
7.4.3.6	DIAMETER_ERROR_UNKOWN_SERVING_NODE (5423).....	164
7.4.4	Transient Failures .....	164
7.4.4.1	DIAMETER_AUTHENTICATION_DATA_UNAVAILABLE (4181).....	164
7.4.4.2	DIAMETER_ERROR_CAMEL_SUBSCRIPTION_PRESENT (4182).....	164
8	User identity to HSS resolution.....	164
<b>Annex A (normative):</b>	<b>MME mapping table for S6a and NAS Cause Code values .....</b>	<b>166</b>
<b>Annex B(normative):</b>	<b>SGSN mapping table for S6d and NAS Cause Code values.....</b>	<b>169</b>
<b>Annex C (normative):</b>	<b>Diameter overload control mechanism.....</b>	<b>171</b>
C.1	General .....	171
C.2	S6a/S6d interfaces .....	171
C.2.1	General.....	171
C.2.2	HSS behaviour .....	171
C.2.3	MME/SGSN behaviour.....	171
<b>Annex D (Informative):</b>	<b>Diameter overload control node behaviour .....</b>	<b>172</b>
D.1	Message prioritisation over S6a/d .....	172
<b>Annex E (normative):</b>	<b>Diameter message priority mechanism.....</b>	<b>173</b>
E.1	General .....	173
E.2	S6a/S6d interfaces .....	173
E.2.1	General.....	173
E.2.2	HSS, CSS, EIR behaviour.....	173
E.2.3	MME/SGSN behaviour.....	173
<b>Annex F (normative):</b>	<b>Diameter load control mechanism.....</b>	<b>175</b>
F.1	General .....	175
F.2	S6a/S6d interfaces .....	175
F.2.1	General.....	175
F.2.2	HSS behaviour .....	175
F.2.3	MME/SGSN behaviour.....	175
<b>Annex G (informative):</b>	<b>Change history .....</b>	<b>176</b>
History .....	183	

*Relevant Standard PREVIEW  
https://standards.etsi.org/standards/item.html?item\_id=464-a5c6-cda95782b&etsi\_ts=129-272-v15.10.0-2020-01*

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## Foreword

This Technical Specification has been produced by the 3<sup>rd</sup> Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

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  - 1 presented to TSG for information;
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## 1 Scope

The present document describes the Mobility Management Entity (MME) and Serving GPRS Support Node (SGSN) related diameter-based interfaces towards the Home Subscriber Server (HSS) or the CSG Subscriber Server (CSS), and the MME and the SGSN related diameter-based interface towards the Equipment Identity Register (EIR).

This specification defines the Diameter application for the MME-HSS, S6a reference point, for the MME-CSS, S7a reference point, for the SGSN-HSS, S6d reference point, and for the SGSN-CSS, S7d reference point. The interactions between the HSS/CSS and the MME/SGSN are specified, including the signalling flows.

This specification defines the Diameter application for the MME-EIR, S13 reference point, and for the SGSN-EIR, S13' reference point. The interactions between the MME/SGSN and the EIR are specified, including the signalling flows.

In this specification, if there is no specific indication, the following principles apply:

- "SGSN" refers to an SGSN which at least supports the S4 interface and may support Gn and Gp interfaces.
- "S4-SGSN" refers to an SGSN which supports the S4 interface and does not support Gn and Gp interfaces.
- Gn/Gp-SGSN refers to an SGSN which supports the Gn and Gp interfaces and does not support S4 interface.
- "GPRS subscription data" refers to the parameters in the HLR column in Table 5.2. in 3GPP TS 23.008 [30].
- "EPS subscription data" refers to the parameters in the HSS column in Table 5.2A-1 in 3GPP TS 23.008 [30].

The Evolved Packet System stage 2 description (architecture and functional solutions) is specified in 3GPP TS 23.401 [2] and in 3GPP TS 23.060 [12].

SGSN CAMEL Subscription Data are not supported over S6d interface.

## 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 23.401: "GPRS enhancements for E-UTRAN access".
- [3] 3GPP TS 23.003: "Numbering, addressing and identification".
- [4] Void.
- [5] 3GPP TS 33.401: "3GPP System Architecture Evolution: Security Architecture".
- [6] Void".
- [7] IETF RFC 2234: "Augmented BNF for syntax specifications".
- [8] 3GPP TS 32.299: "Charging management; Diameter charging applications".
- [9] 3GPP TS 29.229: "Cx and Dx interfaces based on the Diameter protocol".
- [10] 3GPP TS 29.212: "Policy and Charging Control (PCC); Reference points".

- [11] 3GPP TS 29.214: "Policy and Charging Control over Rx reference point".
- [12] 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".
- [13] 3GPP TS 22.016: "International Mobile station Equipment Identities (IMEI)".
- [14] IETF RFC 4960: "Stream Control Transmission Protocol".
- [15] Void
- [16] 3GPP TS 33.210: "3G Security; Network Domain Security; IP Network Layer Security" ..
- [17] 3GPP TS 29.228: "IP multimedia (IM) Subsystem Cx and Dx Interfaces; Signalling flows and Message Elements".
- [18] 3GPP TS 33.102: "3G Security; Security Architecture".
- [19] 3GPP TS 36.413: "Evolved Universal Terrestrial Radio Access Network (E-UTRAN); S1 Application Protocol (S1AP)".
- [20] IETF RFC 5778: "Diameter Mobile IPv6: Support for Home Agent to Diameter Server Interaction".
- [21] 3GPP TS 29.061: "Interworking between the Public Land Mobile Network (PLMN) supporting packet based services and Packet Data Networks (PDN)".
- [22] 3GPP TS 32.298: "Charging Management; CDR parameter description".
- [23] 3GPP TS 32.422: "Telecommunication management; Subscriber and equipment trace; Trace control and configuration management".
- [24] 3GPP TS 29.002: "Mobile Application Part (MAP) specification".
- [25] 3GPP TS 29.329: "Sh Interface based on the Diameter protocol".
- [26] IETF RFC 5447: "Diameter Mobile IPv6; Support for Network Access Server to Diameter Server Interaction".
- [27] IETF RFC 4004: "Diameter Mobile IPv4 Application".
- [28] 3GPP A.S0022: "Interoperability Specification (IOS) for Evolved High Rate Packet Data (eHRPD) Radio Access Network Interfaces and Interworking with Enhanced Universal Terrestrial Radio Access Network (E-UTRAN)".
- [29] 3GPP TS 23.011: "Technical realization of Supplementary Services - General Aspects".
- [30] 3GPP TS 23.008: "Organization of subscriber data".
- [31] 3GPP TS 24.008: "Mobile radio interface Layer 3 specification; Core network protocols; Stage 3".
- [32] IETF RFC 5516: "Diameter Command Code Registration for Third Generation Partnership Project (3GPP) Evolved Packet System (EPS)".
- [33] 3GPP TS 32.251: "Telecommunication management; Charging management; Packet Switched (PS) domain charging".
- [34] 3GPP TS 23.292: "IP Multimedia Subsystem (IMS) centralized services ".
- [35] 3GPP TS 23.216: "Single Radio Voice Call Continuity (SRVCC)".
- [36] 3GPP TS 23.015: "Technical realization of Operator Determined Barring (ODB)".
- [37] 3GPP TS 29.173: "Diameter-based SLh interface for Control Plane LCS".
- [38] 3GPP TS 29.303: "Domain Name System Procedures; Stage 3".
- [39] 3GPP TS 29.060: "General Packet Radio Service (GPRS); GPRS Tunnelling Protocol (GTP) across the Gn and Gp Interface".