

ETSI TS 123 002 V14.1.0 (2017-05)



**Digital cellular telecommunications system (Phase 2+) (GSM);
Universal Mobile Telecommunications System (UMTS);
LTE;
Network architecture
(3GPP TS 23.002 version 14.1.0 Release 14)**



Reference

RTS/TSGS-0223002ve10

Keywords

GSM,LTE,UMTS

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

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Contents

Intellectual Property Rights	2
Foreword.....	2
Modal verbs terminology.....	2
Foreword.....	12
Introduction	12
1 Scope	13
2 References	13
3 Definitions and abbreviations.....	19
3.1 Public Land Mobile Network (PLMN)	19
3.2 Core Network (CN) and Access Network (AN).....	19
3.3 Circuit Switched (CS) and Packet Switched (PS) Domains	19
3.3.1 CS Domain.....	20
3.3.2 PS Domain	20
3.3a IP Multimedia subsystem (IMS).....	20
3.4 Location register.....	20
3.5 Cell	21
3.6 Base Station Controller (BSC) area.....	21
3.7 Radio Network Controller (RNC) area.....	21
3.8 Location Area (LA)	21
3.9 Routing Area (RA)	21
3.9a Tracking Area (TA).....	21
3.10 MSC area.....	21
3.11 VLR area	21
3.12 SGSN area	22
3.13 Zones for Regional Subscription	22
3.14 Service area	22
3.15 Group call area	22
3.15a MME Area.....	22
3.16 Pool-area.....	22
3.17 Serving GW Service Area	22
4 The basic entities of the mobile system.....	23
4.1 The Core Network (CN) entities	23
4.1.1 Entities common to the PS and CS domains.....	23
4.1.1.1 The Home Subscriber Server (HSS)	23
4.1.1.1.1 The Home Location Register (HLR)	24
4.1.1.1.2 The Authentication Centre (AuC)	24
4.1.1.1.3 HSS logical functions	25
4.1.1.2 The Visitor Location Register (VLR)	26
4.1.1.3 (void).....	27
4.1.1.4 The Equipment Identity Register (EIR)	27
4.1.1.5 SMS Gateway MSC (SMS-GMSC)	27
4.1.1.6 SMS Interworking MSC (SMS-IWMSC)	27
4.1.1.7 Subscription Locator Function (SLF).....	27
4.1.2 Entities of the CS domain	28
4.1.2.1 The Mobile-services Switching Centre (MSC)	28
4.1.2.1.1 MSC Server	28
4.1.2.1.2 Circuit Switched - Media Gateway Function (CS-MGW)	29
4.1.2.2 The Gateway MSC (GMSC)	29
4.1.2.2.1 Gateway MSC Server (GMSC Server).....	29
4.1.2.3 The Interworking Function (IWF).....	29
4.1.3 Entities of the GPRS PS domain.....	30
4.1.3.1 Serving GPRS Support Node (SGSN)	30
4.1.3.2 Gateway GPRS Support Node (GGSN).....	30

4.1.3.3	Void.....	31
4.1.4	Entities of the EPC PS Domain	31
4.1.4.1	MME.....	31
4.1.4.2	Gateways.....	32
4.1.4.2.1	Serving GW	32
4.1.4.2.2	PDN GW	32
4.1.4.2.3	Local GW (L-GW)	33
4.1.4.3	SGSN	33
4.1.4.4	Trusted and Untrusted Non-3GPP Access Network	33
4.1.4.5	ePDG.....	34
4.1.4.6	3GPP AAA Server	34
4.1.4.7	3GPP AAA Proxy	34
4.1.4.8	ANDSF	34
4.1.5	Border Gateway (BG)].....	35
4.2	The Access Network (AN) entities.....	35
4.2.1	The Base Station System (BSS).....	35
4.2.1.1	Base Station Controller (BSC)	35
4.2.1.2	Base Transceiver Station (BTS).....	36
4.2.2	The Radio Network System (RNS).....	36
4.2.2.1	Radio Network Controller (RNC)	36
4.2.2.2	Node B	36
4.2.3	Access Network elements for E-UTRAN	36
4.2.3.1	E-UTRAN Node B (eNB).....	36
4.2.3.2	Evolved UTRAN.....	36
4.3	The Mobile Station (MS)	36
4.4	User Equipment (UE).....	37
4a	The specific entities of the 3GPP system	37
4a.1	The Group Call Register (GCR) entity.....	37
4a.2	(void).....	38
4a.3	The Location Services (LCS) entities.....	38
4a.3.1	Location Services (LCS) entities in RAN.....	38
4a.3.2	Gateway Mobile Location Centre (GMLC).....	39
4a.3.3	Location Measurement Unit (LMU).....	39
4a.3.4	Evolved Serving Mobile Location Centre (E-SMLC)	39
4a.4	CAMEL entities	40
4a.4.1	GSM Service Control Function (gsmSCF)	40
4a.4.2	GSM Service Switching Function (gsmSSF).....	40
4a.4.3	GSM Specialised Resource Function (gsmSRF)	40
4a.4.4	GPRS Service Switching Function (gprsSSF)	40
4a.5	CBS-specific entities	40
4a.5.1	Cell Broadcast Centre (CBC).....	40
4a.6	Number Portability Specific entities	40
4a.6.1	IN-based solution: Number Portability Database (NPDB)	40
4a.6.2	Signalling Relay-based solution: Mobile Number Portability/Signalling Relay function (MNP-SRF).....	41
4a.7	IP Multimedia (IM) Core Network (CN) Subsystem entities.....	41
4a.7.1	Call Session Control Function (CSCF).....	41
4a.7.2	Media Gateway Control Function (MGCF).....	41
4a.7.3	IP Multimedia Subsystem - Media Gateway Function (IMS-MGW)	41
4a.7.4	Multimedia Resource Function Controller (MRFC).....	42
4a.7.4a	Multimedia Resource Function Processor (MRFP)	42
4a.7.4b	Media Resource Broker (MRB).....	42
4a.7.5	Void.....	42
4a.7.6	Breakout Gateway Control Function (BGCF)	42
4a.7.7	Application Server (AS)	43
4a.7.8	Interconnection Border Control Function (IBCF).....	43
4a.7.9	Transition Gateway (TrGW).....	43
4a.7.10	Location Retrieval Function (LRF)	43
4a.7.11	Service Centralization and Continuity Application Server (SCC AS).....	44
4a.7.11a	Emergency Access Transfer Function (EATF).....	44
4a.7.12	Access Transfer Control Function (ATCF)	44
4a.7.13	Access Transfer Gateway (ATGW).....	44

4a.8	Signalling Gateway Function (SGW).....	44
4a.9	Global Text Telephony Specific entities	44
4a.10	Security Gateway (SEG).....	44
4a.11	Application Function (AF).....	45
4a.12	Void.....	45
4a.13	3GPP/WLAN Interworking entities	45
4a.13.1	WLAN UE.....	45
4a.13.2	3GPP AAA Proxy.....	45
4a.13.3	3GPP AAA Server.....	45
4a.13.4	WLAN Access Gateway (WAG).....	45
4a.13.5	Packet Data Gateway (PDG).....	45
4a.13.6	Home Agent (HA).....	45
4a.14	Multimedia Broadcast Multicast Service (MBMS) specific entities	45
4a.14.1	General.....	45
4a.14.2	Broadcast-Multicast Service Centre (BM-SC).....	46
4a.14.3	MBMS-GW	46
4a.14.4	Multi-cell/multicast Coordination Entity (MCE).....	46
4a.15	Void.....	46
4a.16	GUP Server	46
4a.17	Policy and Charging Rules Function (PCRF).....	46
4a.18	Policy and Charging Enforcement Function (PCEF)	47
4a.19	Support of Short Message Service over generic 3GPP Internet Protocol access (SMSIP) specific entities.....	47
4a.19.1	General.....	47
4a.19.2	IP-Short-Message-Gateway (IP-SM-GW)	47
4a.20	Subscription Profile Repository (SPR).....	47
4a.21	Service Data Flow Based Credit Control Function	47
4a.22	Offline Charging System (OFCS)	47
4a.23	Online Charging System (OCS)	47
4a.24	Bearer Binding and Event Reporting Function (BBERF).....	47
4a.25	Home (e)NodeB entities	48
4a.25.1	Home NodeB Subsystem (HNS)	48
4a.25.2	Home eNodeB Subsystem (HeNS).....	48
4a.25.3	CSG List Server.....	48
4a.25.4	CSG Subscriber Server (CSS)	48
4a.26	Application Front Ends (AFE)	49
4a.27	User Data Repository (UDR)	49
4a.28	Traffic Detection Function (TDF).....	49
4a.29	Specific entities to facilitate communications with packet data networks and applications.....	49
4a.29.1	Machine Type Communication-InterWorking Function (MTC-IWF).....	49
4a.29.2	Machine Type Communication- Authentication, Authorization and Accounting (MTC-AAA)	49
4a.29.3	Service Capability Exposure Function (SCEF)	50
4a.30	TCP Proxy Function.....	50
4a.31	Specific entities for Packet Switched Streaming (PSS) Service.....	50
4a.31.1	Packet Switched Streaming Service Server (PSS Server).....	50
4a.32	Specific entities for Group Communication System Enablers for LTE (GCSE_LTE).....	50
4a.32.1	Group Communication Service Application Server (GCS AS).....	50
4a.33	Specific entities for Proximity-based Services (ProSe).....	50
4a.33.1	ProSe Function.....	50
4a.34	RAN Congestion Awareness Function (RCAF).....	51
4a.35	Traffic Steering Support Function (TSSF)	51
4a.36	Specific entities for mission critical communication services.....	51
4a.36.1	Mission Critical Push To Talk Application Server (MCPTT AS).....	51
4a.37	Packet Flow Description Function (PFDf)	51
5	Configuration of a Public Land Mobile Network.....	51
5.1	Basic configuration.....	51
5.2	Configuration of LCS entities	56
5.2.1	Configuration of LCS entities for GERAN.....	56
5.2.2	Configuration of LCS entities for UTRAN.....	57
5.2.3	Configuration of LCS entities for E-UTRAN.....	57
5.3	Configuration of CAMEL entities.....	58
5.4	Configuration of CBS entities	59

5.5	Configuration of IM CN Subsystem entities	59
5.5.1	IM CN Subsystem functional entities	59
5.5.2	IM CN Subsystem Service layer	60
5.5.3	Service Centralization and Continuity	62
5.5.4	WebRTC access to IMS	63
5.6	Configuration of Signalling Gateway Function	64
5.7	Configuration of 3GPP/WLAN Interworking	64
5.8	Configuration of Presence service	65
5.9	Configuration of MBMS entities	65
5.10	Configuration of Short Message Service over generic 3GPP Internet Protocol access (SMSIP) entities	67
5.11	Configuration of Policy Control and Charging entities	67
5.12	Configuration of CSFB(CS Fallback)	70
5.13	Configuration of Single Radio Voice Call Continuity (SRVCC)	71
5.13.1	E-UTRAN/UTRAN (HSPA) to UTRAN or GERAN SRVCC architecture	71
5.13.2	UTRAN/GERAN to E-UTRAN or UTRAN (HSPA) SRVCC architecture	72
5.14	Configuration of Security	74
5.15	Configuration of Lawful Intercept related entities	74
5.16	Configuration of Charging related entities	75
5.17	Configuration of Home (e)NodeB entities	76
5.17.1	Configuration of the Home NodeB Subsystem	76
5.17.2	Configuration of the Home eNodeB Subsystem	77
5.18	Configuration for facilitating communications with packet data networks and applications	78
5.19	Configuration of Packet Switched Streaming (PSS) Service	78
5.20	Configuration of Proximity-based Services	79
5.21	Configuration for RAN user plane congestion detection and reporting	79
6	PLMN basic interfaces and reference points	80
6.1	Interfaces between Mobile Station and the Fixed Infrastructure	80
6.1.1	Interface between Mobile Station and Base Station System (Um-interface)	80
6.1.2	Interface between User Equipment and Radio Network System (Uu-interface)	80
6.1.3	Interface between User Equipment and Evolved UTRAN (E-UTRAN Uu-interface)	80
6.2	Interface between the Core Network and the Access Network	80
6.2.1	Interfaces between the CS domain and the Access Network	80
6.2.1.1	Interface between the MSC and Base Station System (A-interface)	80
6.2.1.2	Interface between the MSC and Base Station System (Iu_CS interface)	81
6.2.1.3	Interface between the MSC and RNS (Iu_CS interface)	81
6.2.2	Interfaces between the PS domain and the Access Network	81
6.2.2.1	Interface between SGSN and BSS (Gb-interface)	81
6.2.2.2	Interface between SGSN and BSS (Iu_PS-interface)	81
6.2.2.3	Interface between SGSN and RNS (Iu_PS-interface)	81
6.2.3	Interfaces between the Evolved Packet Core and the Access Network	82
6.2.3.1	Interface between MME and E-UTRAN (S1-MME-interface)	82
6.2.3.2	Interface between S-GW and E-UTRAN (S1-U-interface)	82
6.3	Interfaces internal to the Access Network	82
6.3.1	Interface between BSC and BTS (Abis-interface)	82
6.3.2	Interface between RNC and Node B (Iub-interface)	82
6.3.3	Interface between two RNCs (Iur-interface)	82
6.3.4	Interface between two eNBs (X2-interface)	82
6.3.5	Interface between HNB and HNB-GW (Iuh-interface)	82
6.4	Interfaces internal to the Core Network	82
6.4.1	Interfaces internal to the CS domain	82
6.4.1.1	Interface between the MSC server and its associated VLR (B-interface)	82
6.4.1.2	Interface between the HLR and the MSC server (C-interface)	83
6.4.1.3	Interface between the HLR and the VLR (D-interface)	83
6.4.1.4	Interface between MSC servers or MSC server and IP-SM-GW (E-interface)	83
6.4.1.5	Interface between MSC server and EIR (F-interface)	83
6.4.1.6	Interface between VLRs (G-interface)	84
6.4.1.7	Reference point (G)MSC server – CS-MGW (Mc Reference Point)	84
6.4.1.8	Reference Point MSC Server – GMSC Server (Nc Reference Point)	84
6.4.1.9	Reference Point CS-MGW – CS-MGW (Nb Reference Point)	84
6.4.1.10	Reference Point between the CSS and the VLR (Hv Reference Point)	84
6.4.2	Interfaces internal to the PS domain (GPRS)	84

6.4.2.1	Interface between SGSN and HLR (Gr-interface)	84
6.4.2.2	Interface between SGSN and GGSN (Gn- and Gp-interface)	85
6.4.2.3	Signalling Path between GGSN and HLR (Gc-interface)	85
6.4.2.4	Interface between SGSN and EIR (Gf-interface)	85
6.4.2.5	Reference Point between the CSS and the Gn/Gp SGSN (Ghv Reference Point)	85
6.4.3	Interfaces used by CS and PS domains	85
6.4.3.1	Interface between MSC/VLR and SGSN (Gs-interface) for GPRS	85
6.4.3.2	Interface between HLR/HSS and AuC (H-Interface)	85
6.4.3.3	Interface between SGSN/IP-SM-GW and SMS-GMSC/SMS-IWMSC (Gd/Gdd-Interface) for GPRS	86
6.4.3.4	Interface between MSC/VLR and MME (SGs-interface) for EPC	86
6.4.3.5	Interface between 3GPP MSC Server and MME or SGSN (Sv-interface)	86
6.4.4	Interfaces internal & related to the Evolved Packet Core	86
6.4.4.1	Interface between MME and HSS (S6a-interface)	86
6.4.4.2	Interface between SGSN and HSS (S6d-interface)	86
6.4.4.3	Interface between MME and S-GW (S11-interface)	86
6.4.4.4	Interface between MME and MME (S10-interface)	87
6.4.4.5	Interface between S-GW and PDN GW (S5 and S8-interface)	87
6.4.4.6	Interface between MME and EIR (S13-interface)	87
6.4.4.7	Interface between MME and SGSN (S3-interface)	87
6.4.4.8	Interface between S-GW and SGSN (S4-interface)	87
6.4.4.9	Interface between S-GW and UTRAN (S12-interface)	87
6.4.4.10	Interface between Trusted non-3GPP IP Access and S-GW/PDN GW (S2a-interface)	87
6.4.4.11	Interface between PDN GW/S-GW and ePDG (S2b-interface)	87
6.4.4.12	Interface between PDN GW and UE (S2c-interface)	87
6.4.4.13	Interface between PDN GW and 3GPP AAA Server/proxy (S6b-interface)	87
6.4.4.14	Interface between Untrusted non-3GPP IP Access and 3GPP AAA Server/proxy (SWa-interface)	88
6.4.4.15	Interface between Trusted non-3GPP IP Access and 3GPP AAA Server/proxy (STa-interface)	88
6.4.4.16	Interface between 3GPP AAA Server and 3GPP AAA proxy (SWd-interface)	88
6.4.4.17	Interface between ePDG and 3GPP AAA Server/proxy (SWm-interface)	88
6.4.4.18	Interface between ePDG and Untrusted non-3GPP Access (SWn-interface)	88
6.4.4.19	Interface between ePDG and UE (SWu-interface)	88
6.4.4.20	Interface between HSS and 3GPP AAA Server (SWx-interface)	88
6.4.4.21	Interface between UE and ANDSF (S14-interface)	88
6.4.4.22	Reference point between HRDP AN and MME (S101-reference point)	88
6.4.4.23	Reference point between 3GPP2 IxCS IWS and MME (S102-reference point)	89
6.4.4.24	Interface between HSGW and S-GW (S103-interface)	89
6.4.4.25	Reference point between UE and CSG List Server (Uh reference point)	89
6.4.4.26	Reference Point between the CSS and the S4-SGSN (S7d Reference Point)	89
6.4.4.27	Reference point between the CSS and the MME (S7a reference point)	89
6.4.4.28	Reference point between the MME and the SMS-GMSC/SMS-IWMSC/SMS Router (SGd reference point)	89
6.4.4.29	Reference point between the HSS and the SMS-GMSC/SMS-IWMSC/SMS Router (S6c reference point)	89
6.4.4.30	Reference point between HRPD AN and MME (S121-interface)	89
6a	PLMN specific interfaces	90
6a.1	GCR-specific interface	90
6a.1.1	Interface between the MSC and its associated GCR (I-interface)	90
6a.2	(void)	90
6a.3	LCS-specific interfaces	90
6a.3.1	LCS interfaces using MAP	90
6a.3.2	(void)	90
6a.3.3	(void)	90
6a.3.4	(void)	90
6a.3.5	Interface between BSC and SMLC (Lb-interface)	90
6a.3.6	Interface between Peer SMLCs (Lp-interface)	90
6a.3.7	Interface between BTS and LMU (Um-interface)	91
6a.3.8	Interface between GMLC and External LCS Client (Le-interface)	91
6a.3.9	Interface between RNS and Stand-Alone LMU, UE (Uu-interface)	91
6a.3.10	Interface between SRNC and SAS (Stand-Alone SMLC) (Iupc-interface)	91
6a.3.11	Interface between GMLC and GMLC (Lr-interface)	91

6a.3.12	Interface between GMLC and MME (SLg-interface).....	91
6a.3.13	Interface between MME and E-SMLC (SLs-interface).....	91
6a.3.14	Interface between GMLC and HSS (SLh-interface).....	91
6a.3.15	Interface between GMLC and SGSN (Lgd-interface).....	91
6a.4	CAMEL-specific interfaces.....	92
6a.4.1	GMSC - gsmSSF interface.....	92
6a.4.2	gsmSSF - gsmSCF interface.....	92
6a.4.3	MSC - gsmSSF interface.....	92
6a.4.4	gsmSCF - HLR interface.....	92
6a.4.5	gsmSCF - gsmSRF interface.....	92
6a.4.6	MSC - gsmSCF interface.....	92
6a.4.7	SGSN - gprsSSF interface.....	92
6a.4.8	gprsSSF - gsmSCF interface (Ge Reference Point).....	92
6a.5	CBS-specific interfaces.....	92
6a.5.1	Interface between the CBC and RNS (Iu_BC Interface).....	92
6a.5.2	Interface between the CBC and MME (SBc Interface).....	93
6a.5.3	Interface between the CBC and BSC.....	93
6a.6	Number portability specific interfaces.....	93
6a.6.1	IN-based solution.....	93
6a.6.1.1	NPDB to MSC interface.....	93
6a.6.2	Signalling Relay-based solution.....	93
6a.6.2.1	GMSC to MNP-SRF interface.....	93
6a.6.2.2	MNP-SRF to HLR interface.....	93
6a.7	IM Subsystem Reference Points.....	93
6a.7.1	Reference Point HSS – CSCF (Cx Reference Point).....	93
6a.7.2	Reference Point CSCF – UE (Gm Reference Point).....	94
6a.7.3	Reference Point MGCF – IMS-MGW (Mn Reference Point).....	94
6a.7.4	Reference Point MGCF – CSCF (Mg Reference Point).....	94
6a.7.5	(void).....	94
6a.7.5a	Reference Point AS-MRFC for media control (Cr Reference Point).....	94
6a.7.5b	Reference Point AS-MRFC for session control (Mr' Reference Point).....	94
6a.7.6	Reference Point CSCF - MRFC (Mr Reference Point).....	95
6a.7.6a	Reference Point MRFC – MRFP (Mp Reference Point).....	95
6a.7.7	Reference Point CSCF – CSCF (Mw Reference Point).....	95
6a.7.8	(void).....	95
6a.7.8a	Reference Point CSCF – MRB (ISC Reference Point).....	95
6a.7.9	(void).....	95
6a.7.9a	Reference Point AS – MRB (Rc Reference Point).....	95
6a.7.10	Reference Point CSCF – BGCF (Mi reference point).....	95
6a.7.11	Reference Point BGCF – MGCF (Mj reference point).....	95
6a.7.12	Reference Point BGCF/IBCF – BGCF (Mk reference point).....	96
6a.7.13	Reference Point CSCF- SLF (Dx Reference Point).....	96
6a.7.14	Reference Point to IMS media plane (Mb reference point).....	96
6a.7.15	Reference Point S-CSCF – AS (ISC Reference Point).....	96
6a.7.15a	Reference Point E-CSCF - EATF (I4 Reference Point).....	96
6a.7.15b	Reference Point I-CSCF - EATF (I5 Reference Point).....	96
6a.7.16	Reference Point HSS – SIP AS or OSA SCS (Sh Reference Point).....	96
6a.7.17	Reference Point HSS – CAMEL IM-SSF (Si Reference Point).....	96
6a.7.18	Reference Point UE – AS (Ut Reference Point).....	96
6a.7.19	Reference Point AS- SLF (Dh Reference Point).....	97
6a.7.20	Reference Point CSCF/BGCF - IBCF (Mx Reference Point).....	97
6a.7.21	Reference Point IBCF - TrGW (Ix Reference Point).....	97
6a.7.22	Reference Point I-CSCF – AS (Ma Reference Point).....	97
6a.7.23	Reference Point P-CSCF – IMS Access Gateway (Iq Reference Point).....	97
6a.7.23a	Reference Point E-CSCF - LRF (MI Reference Point).....	97
6a.7.24	Reference Point IBCF - IBCF (Ici Reference Point).....	97
6a.7.25	Reference Point TrGW - TrGW (Izi Reference Point).....	97
6a.7.26	Void.....	98
6a.7.27	Reference Point MSC Server - CSCF (I2 Reference Point).....	98
6a.7.28	Reference Point MSC Server - TAS (I3 Reference Point).....	98
6a.7.29	Reference Point ICS UE – SCC AS (I1 Reference Point).....	98
6a.8	Void.....	98

6a.9	Reference Points for 3GPP/WLAN Interworking	98
6a.9.1	Reference point 3GPP AAA Server - HLR (D'/Gr' Reference Point).....	98
6a.9.2	Reference point WLAN access network - 3GPP AAA Proxy/Server (Wa Reference Point)	98
6a.9.3	Reference point 3GPP AAA Server – 3GPP AAA Proxy (Wd Reference Point).....	99
6a.9.4	Reference point 3GPP AAA Server/Proxy - WAG (Wg Reference Point).....	99
6a.9.5	Reference point PDG - packet data networks (Wi Reference Point)	99
6a.9.6	Reference Point 3GPP AAA Server/Proxy - PDG (Wm Reference Point).....	99
6a.9.7	Reference Point WAG - WLAN access network (Wn Reference Point)	99
6a.9.8	Reference Point WAG - PDG (Wp Reference Point)	99
6a.9.9	Reference point WLAN UE - PDG (Wu Reference Point).....	99
6a.9.10	Reference point WLAN UE - WLAN access network (Ww Reference Point).....	99
6a.9.11	Reference point 3GPP AAA Server - HSS (Wx Reference Point)	100
6a.9.12	Reference point 3GPP AAA Server - SLF (Dw reference point)	100
6a.10	MBMS specific reference points for GPRS	100
6a.10.1	Reference point GGSN – BM-SC (Gmb Reference Point).....	100
6a.10.2	Reference point BM-SC – BM-SC (Mz Reference Point).....	100
6a.10.3	Reference point GGSN – RNS (or BSS Iu mode) (Gmc Reference Point).....	100
6a.11	MBMS specific reference points for EPS.....	100
6a.11.1	Reference point MBMS-GW – BM-SC (SGmb Reference Point).....	100
6a.11.2	Reference point MBMS-GW – BM-SC (SGi-mb Reference Point)	101
6a.11.3	Reference point MBMS-GW - MME (Sm Reference Point).....	101
6a.11.4	Reference point MBMS-GW – SGSN (Sn Reference Point).....	101
6a.11.5	Reference point MBMS-GW – E-UTRAN/UTRAN (M1 Reference Point)	101
6a.11.6	Reference point MME – MCE (M3 Reference Point)	101
6a.11.7	Reference point MCE - eNodeB (M2 Reference Point)	101
6a.11.8	Reference point Content Provider/SCEF - BM-SC (xMB Reference Point)	101
6a.12	Reference Points for 3GPP Generic User Profile (GUP)	101
6a.12.1	Reference Point GUP Server – Applications (Rg Reference Point)	101
6a.12.2	Reference Point GUP Server – HSS and Applications – HSS (Rp Reference Point)	101
6a.13	Reference Points for Policy and Charging Control	102
6a.13.1	Reference Point PCEF - PCRF/H-PCRF/V-PCRF (Gx Reference Point)	102
6a.13.2	Reference Point PCRF - Application Function (Rx Reference Point)	102
6a.13.3	Reference Point SPR – PCRF (Sp Reference Point).....	102
6a.13.4	Reference Point OCS – PCEF (Gy Reference Point).....	102
6a.13.5	Reference Point OFCS – PCEF (Gz Reference Point).....	102
6a.13.6	Reference Point Trusted non-3GPP IP Access and PCRF/VPCRF (Gxa Reference Point)	102
6a.13.7	Reference Point ePDG and PCRF/VPCRF (Gxb Reference Point)	102
6a.13.7a	Reference Point ePDG and PCRF/VPCRF (Gxb* Reference Point)	102
6a.13.8	Reference point between S-GW and PCRF/VPCRF (Gxc-interface)	102
6a.13.9	Reference Point PCRF/VPCRF – BBERF (Gxx Reference Point).....	103
6a.13.10	Reference Point HPCRF - VPCRF (S9- interface)	103
6a.13.11	Reference Point UDR – PCRF (Ud Reference Point).....	103
6a.13.12	Reference Point TDF - PCRF/H-PCRF/V-PCRF (Sd Reference Point)	103
6a.13.13	Reference Point OCS - PCRF/H-PCRF (Sy Reference Point).....	103
6a.13.14	Reference Point HNB GW - PCRF/V-PCRF (S15 Reference Point)	103
6a.13.15	Reference Point BPCF - PCRF/v-PCRF (S9a Reference Point).....	103
6a.13.16	Reference Point OCS - TDF (Gyn Reference Point)	103
6a.13.17	Reference Point OFCS - TDF (Gzn Reference Point)	103
6a.13.18	Void	104
6a.13.19	Reference Point TSSF - PCRF/H-PCRF (St Reference Point)	104
6a.13.20	Reference point between PFDF and PCEF (Gw reference point).....	104
6a.13.21	Reference point between PFDF and TDF (Gwn reference point).....	104
6a.14	SMSIP specific reference points	104
6a.14.1	Reference point IP-SM-GW – HSS (J Reference Point).....	104
6a.15	User Data Convergence specific reference points	104
6a.15.1	Reference point Application Front Ends - UDR (Ud Reference Point)	104
6a.16	Specific reference points for facilitating communications with packet data networks and applications.....	104
6a.16.1	Reference point MTC-IWF - SCS (Tsp reference point).....	104
6a.16.2	Reference point MTC-IWF - HSS/HLR (S6m reference point)	104
6a.16.3	Reference point MTC-AAA - HSS/HLR (S6n reference point)	105
6a.16.4	Reference point MTC-IWF - SMS-SC (T4 reference point)	105
6a.16.5	Reference point between the HSS and the SCEF (S6t reference point).....	105

6a.16.6	Reference point between the MME and the SCEF (T6a reference point).....	105
6a.16.7	Reference point between the SGSN and the SCEF (T6b reference point).....	105
6a.16.8	Reference point between the RCAF and the SCEF (Ns reference point)	105
6a.16.9	Reference point between the PCRF and the SCEF (Nt reference point).....	105
6a.16.10	Reference point between the PPDF and the SCEF (Nu reference point)	106
6a.17	GCSE_LTE specific reference points.....	106
6a.17.1	Reference point GCS AS - BM-SC (MB2 Reference Point)	106
6a.17.2	Reference point GCS AS - UE (GC1 Reference Point).....	106
6a.18	ProSe specific reference points	106
6a.18.1	Reference point UE - ProSe Application Server (PC1 Reference Point).....	106
6a.18.2	Reference point ProSe Function - ProSe Application Server (PC2 Reference Point).....	106
6a.18.3	Reference point UE - ProSe Function (PC3 Reference Point).....	106
6a.18.4	Reference point HSS - ProSe Function (PC4a Reference Point)	106
6a.18.5	Reference point SLP - ProSe Function (PC4b Reference Point)	106
6a.18.6	Reference point UE - UE (PC5 Reference Point)	107
6a.18.7	Reference point ProSe Function - ProSe Function in different PLMNs (PC6 Reference Point)	107
6a.18.8	Reference point ProSe Function in HPLMN - ProSe Function in VPLMN (PC7 Reference Point).....	107
6a.19	Reference points for RAN user plane congestion detection and reporting.....	107
6a.19.1	Reference Point RCAF - PCRF/ V-PCRF (Np Reference Point)	107
6a.19.2	Reference point between MME and RCAF (Nq reference point).....	107
6a.19.3	Reference point between SGSN and RCAF (Nq' reference point)	107
7	Reference points between the PLMN and other networks	108
7.1	Reference point fixed networks - MSC	108
7.2	Reference point GGSN - packet data networks (Gi reference point)	108
7.2a	Reference point PDN GW - packet data networks (SGi reference point)	108
7.3	Reference point GMLC - external LCS Client (Le reference point)	108
7.4	Reference Point CSCF/IBCF – Multimedia IP networks (Mm Reference Point)	108
7.5	(void).....	108
7.6	Reference point PDG - packet data networks (Wi reference point)	108
7.7	Reference Point WAG – WLAN access network (Wn reference point).....	109
7.8	Reference point MTC-IWF - SCS (Tsp reference point)	109
Annex A (informative): Description for GLR-related entities and interfaces		110
A.1	Normative references	110
A.2	Definitions related to Gateway Location Register (GLR).....	110
A.2.1	Gateway Location Register (GLR).....	110
A.2.2	Intermediate Mobile-services Switching Centre (IM-MSC)	110
A.2.3	Intermediate GPRS Serving Node (IM-GSN)	110
A.3	The entities of the mobile system.....	110
A.3.1	Gateway Location Register (GLR).....	110
A.3.2	Intermediate Mobile-services Switching Centre (IM-MSC)	111
A.3.3	Intermediate GPRS Serving Node (IM-GSN)	111
A.4	Configuration of a Public Land Mobile Network.....	111
A.4.1	Basic configuration with GLR introduction	111
A.5	PLMN interfaces	112
A.5.1	Interface between the HLR and the GLR (GLa-interface)	112
A.5.2	Interface between the VLR and the GLR (GLb-interface)	112
A.5.3	Interface between the SGSN and the GLR (GLc-interface).....	112
A.5.4	Interface between the GLR and the IM_MSC (GLd-interface).....	112
A.5.5	Interface between the GLR and the IM_GSN (GLE-interface)	112
A.5.6	Interface between the SMS-GMSC and the GLR (GLf-interface)	113
A.5.7	Interface between the SMS-GMSC and the IM_MSC (GLg-interface)	113
A.5.8	Interface between the MSC and the IM_MSC (GLh-interface)	113
A.5.9	Interface between the GMLC and the IM_MSC (GLi-interface).....	113
A.5.10	Interface between the GGSN and the IM_GSN (GLj-interface).....	113
A.5.11	Interface between the SGSN and the IM_GSN (GLk-interface).....	113
Annex B (informative): Change history		114

History115

Foreword

This Technical Specification (TS) has been produced by the 3rd 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:

Version x.y.z

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- x the first digit:
 - 1 presented to TSG for information;
 - 2 presented to TSG for approval;
 - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

Introduction

This document presents the possible architectures of the 3GPP System covering both UTRAN and GERAN radio access technologies. In addition, this document also includes the Evolved Packet System providing support for E-UTRAN radio access technology in addition to UTRAN and GERAN radio access technologies. As well as providing support for E-UTRAN, UTRAN and GERAN radio access technologies, the Evolved Packet System also provides support for non-3GPP access technologies making it possible for these technologies to interwork with the 3GPP specified Evolved Packet Core network. The configuration of non-3GPP access networks using EPS is not within the scope of 3GPP specification.

This document also presents the architecture for the IP Multimedia Subsystem common to 3GPP and other access systems such as Fixed Broadband and those specified by 3GPP2 and provide architecture for interworking and session continuity between IMS and Circuit Switched systems.

Clause 3 of the document contains the definition of the PLMN entities.

Clause 4 of the document contains the description of the basic entities of the PLMN, and clause 4a contains the description of the specific entities of the PLMN.

Clause 5 of the document contains the configuration of the PLMN.

Clauses 6, 6a and 7 of the document contain the PLMN's basic and specific interfaces and reference points and the PLMN's interfaces towards other networks.

1 Scope

This document offers an overview of the 3GPP PLMN and its architectures and configuration. The configuration and the functional entities of the PLMN and the interfaces between them are described on a general level in order to cope with possible implementations. These descriptions include interfaces between and within the core networks, the access networks, the user equipment, different service platforms, different domains and subsystems, and functional entities within domains and subsystems.

This document covers different architectural aspects with varying level of detail. In general, other specifications shall be referred to for further details; these specifications enable the reader to acquire the full understanding of a system or service feature.

Note that this document does not cover, or even list, all features of PLMNs.

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] Void.
- [1a] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 22.016: "International Mobile station Equipment Identities (IMEI)".
- [2a] 3GPP TS 22.060: "General Packet radio Service (GPRS); Service description; Stage 1".
- [2b] 3GPP TS 22.071: "Location Services (LCS); Service description; Stage 1".
- [2c] 3GPP TS 22.078: "Customised Applications for Mobile network Enhanced Logic (CAMEL); Service description, Stage 1".
- [3] 3GPP TS 23.003: "Numbering, addressing and identification".
- [4] 3GPP TS 22.127: "Open Service Access (OSA)".
- [5] 3GPP TS 23.008: "Organization of subscriber data".
- [6] 3GPP TS 23.009: "Handover procedures".
- [7] 3GPP TS 23.012: "Location Management Procedures".
- [8] 3GPP TS 23.041: "Technical realization of Cell Broadcast Service (CBS)".
- [9] Void.
- [9a] 3GPP TS 23.060: "General Packet Radio Service (GPRS); Service description; Stage 2".
- [10] Void.
- [10a] 3GPP TS 43.064: "Digital cellular telecommunication system (Phase 2+); General Packet Radio service (GPRS); Overall description of the GPRS radio interface; Stage 2".
- [10b] 3GPP TS 25.305: "Stage 2 Functional Specification of UE Positioning in UTRAN".