

Source: TSG SA WG2
Title: CRs on 23.002 (Network Architecture)
Agenda Item: 7.2.3

The following Change Request (CR) has been approved by TSG SA WG2 and is requested to be approved by TSG SA plenary #24.

S2 doc #	Title	Spec	CR #	cat	Version in	REL	WI	S2 meeting	Affected clauses
S2-041240	Introduction of WLAN Interworking functional elements in 23.002	23.002	138r1	F	6.4.0	6	WLAN	S2 #39	4a.13 (new), 4a.13.1 (new), 4a.13.2 (new), 4a.13.3 (new), 4a.13.4 (new), 4a.13.5 (new)
S2-041228	Introduction of WLAN Interworking reference points and configuration in 23.002	23.002	139	F	6.4.0	6	WLAN	S2 #39	2, 5.7 (new), 6a.9 (new), 6a.9.1 (new), 6a.9.2 (new), 6a.9.3 (new), 6a.9.4 (new), 6a.9.5 (new), 6a.9.6 (new), 6a.9.7 (new), 6a.9.8 (new), 6a.9.9 (new), 6a.9.10 (new), 6a.9.11 (new), 7.6 (new), 7.7 (new)
S2-041608	Configuration of Presence Service	23.002	141r2	F	6.4.0	6	PRSNC	S2 #39	2, 5.x(new)
S2-041669	Correction on the scope of the Ut reference point	23.002	142r1	F	6.4.0	6	TEI	S2 #39	5.5 and 6a.7.18
S2-041864	Missing Lr reference point in 23.002	23.002	143	F	6.4.0	6	LCS2	S2 #40	2, 5.2.1, 5.2.2, 6a.3.8, 6a.3.11 (new)

CHANGE REQUEST

⌘ **23.002 CR 138** ⌘ rev **1** ⌘ Current version: **6.4.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Introduction of WLAN Interworking functional elements in 23.002		
Source:	⌘ SA2 (Siemens)		
Work item code:	⌘ WLAN	Date:	⌘ 19/04/2004
Category:	⌘ F	Release:	⌘ Rel-6
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
	B (addition of feature),		R97 (Release 1997)
	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	⌘ TS 23.002 contains currently no functional elements and reference points as defined in TS 23.234 v6.0.0 for 3GPP/WLAN interworking.		
Summary of change:	⌘ Add functional elements to 23.002.		
Consequences if not approved:	⌘ Incomplete 3GPP network architecture description.		

Clauses affected:	⌘ 4a.13 (new), 4a.13.1 (new), 4a.13.2 (new), 4a.13.3 (new), 4a.13.4 (new), 4a.13.5 (new)										
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications Test specifications O&M Specifications	⌘
Y	N										
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Other comments:	⌘										

How to create CRs using this form:

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- 1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under <ftp://ftp.3gpp.org/specs/> For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

***** MODIFIED SECTION *****

4a.11 Application Function (AF)

The Application Function (AF) is an element offering applications the control of IP bearer resources when required. The AF is capable of communicating with the PDF to transfer dynamic QoS-related service information.

One example of an AF is the P-CSCF of the IM CN subsystem.

4a.12 Policy Decision Function (PDF)

The Policy Decision Function (PDF) acts as a policy decision point for service based local policy control of IP bearer resources. The PDF makes decisions about IP bearer resource allocation requests.

4a.13 3GPP/WLAN Interworking entities

4a.13.1 WLAN UE

A WLAN UE is the User Equipment using a UICC card utilized by a 3GPP subscriber to access the WLAN network for 3GPP interworking purpose.

4a.13.2 3GPP AAA Proxy

The 3GPP AAA Proxy represents a AAA proxying and filtering function and resides in the visited 3GPP network. It is involved in access and service authentication and authorization procedures of a WLAN UE.

4a.13.3 3GPP AAA Server

The 3GPP AAA server resides in the 3GPP network and is responsible for access and service authentication and authorization of a WLAN UE.

4a.13.4 WLAN Access Gateway (WAG)

The WLAN access gateway is a gateway between WLAN and 3GPP network. In the roaming case it resides in the visited 3GPP network, otherwise in the home 3GPP network. It provides filtering, policing and charging functionality for the traffic between WLAN UE and 3GPP network.

4a.13.5 Packet Data Gateway (PDG)

The Packet Data Gateway provides access to PS based services for a WLAN UE. It resides either in the home (for access to home services) or in the visited 3GPP network (for access to local services).

CHANGE REQUEST

23.002 CR 139 # rev - # Current version: 6.4.0

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# Introduction of WLAN Interworking reference points and configuration in 23.002		
Source:	# SA2 (Siemens)		
Work item code:	# WLAN	Date:	# 14/04/2004
Category:	# F	Release:	# Rel-6
	<i>Use one of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use one of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	# TS 23.002 contains currently no functional elements and reference points as defined in TS 23.234 v6.0.0 for 3GPP/WLAN interworking.
Summary of change:	# Add reference points and 3GPP/WLAN interworking configuration to 23.002 (except charging reference points Wf and Wo).
Consequences if not approved:	# Incomplete 3GPP network architecture description.

Clauses affected:	# 2, 5.7 (new), 6a.9 (new), 6a.9.1 (new), 6a.9.2 (new), 6a.9.3 (new), 6a.9.4 (new), 6a.9.5 (new), 6a.9.6 (new), 6a.9.7 (new), 6a.9.8 (new), 6a.9.9 (new), 6a.9.10 (new), 6a.9.11 (new), 7.6 (new), 7.7 (new)								
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications # Test specifications # O&M Specifications #	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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Other comments:	#								

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

***** MODIFIED SECTION *****

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"
- [10c] 3GPP TS 23.078: "Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase 3 - Stage 2".
- [10d] 3GPP TS 43.059: "Functional Stage 2 Description of Location Services in GERAN"[11]ITU-T Recommendation Q.1214 (05/1995): "Distributed Functional Plane for Intelligent Network CS-1"
- [11a] 3GPP TS 23.101: "General UMTS Architecture".
- [11b] 3GPP TS 23.110: "UMTS Access Stratum); Services and Functions".
- [12] 3GPP TS 24.002: " GSM - UMTS Public Land Mobile Network (PLMN) access reference configuration".

- [13] 3GPP TS 48.001: " Base Station System - Mobile-services Switching Centre (BSS - MSC) interface; General aspects".
- [14] 3GPP TS 48.002: " Base Station System - Mobile-services Switching Centre (BSS - MSC) interface; Interface principles".
- [14a] 3GPP TS 25.410: "UTRAN Iu Interface: general aspects and principles".
- [15] 3GPP TS 48.004: " Base Station System - Mobile-services Switching Centre (BSS - MSC) interface Layer 1 specification".
- [16] 3GPP TS 48.006: " Signalling transport mechanism specification for the Base Station System - Mobile-services Switching Centre (BSS - MSC) interface".
- [17] 3GPP TS 48.008: " Mobile-services Switching Centre - Base Station System (MSC - BSS) interface; Layer 3 specification".
- [18] [void]
- [19] 3GPP TS 48.051: " Base Station Controller - Base Transceiver Station (BSC - BTS) interface; General aspects".
- [20] 3GPP TS 48.052: " Base Station Controller - Base Transceiver Station (BSC - BTS) interface; Interface principles".
- [21] 3GPP TS 48.054: " Base Station Controller - Base Transceiver Station (BSC - BTS) interface; Layer 1 structure of physical circuits".
- [22] 3GPP TS 48.056: " Base Station Controller - Base Transceiver Station (BSC - BTS) interface; Layer 2 specification".
- [23] 3GPP TS 48.058: " Base Station Controller - Base Transceiver Station (BSC - BTS) interface; Layer 3 specification".
- [24] 3GPP TS 48.060: " In-band control of remote transcoders and rate adaptors for full rate traffic channels".
- [25] 3GPP TS 48.061: " In-band control of remote transcoders and rate adaptors for half rate traffic channels".
- [26] 3GPP TS 29.002: " Mobile Application Part (MAP) specification".
- [27] 3GPP TS 22.228: "Service requirements for the IP Multimedia Core Network Subsystem"
- [28] [void]
- [29] [void]
- [30] [void]
- [31] 3GPP TS 29.007: " General requirements on interworking between the Public Land Mobile Network (PLMN) and the Integrated Services Digital Network (ISDN) or Public Switched Telephone Network (PSTN)".
- [32] 3GPP TS 29.010: " Information element mapping between Mobile Station - Base Station System (MS – BSS) and Base Station System - Mobile-services Switching Centre (BSS - MSC); Signalling procedures and the Mobile Application Part (MAP)".
- [33] 3GPP TS 29.011: " Signalling interworking for supplementary services".
- [34] 3GPP TS 23.228: "IP Multimedia Subsystem (IMS); Stage 2".
- [35] 3GPP TR 41.103: "GSM Release 5 specifications".
- [36] 3GPP TR 43.051: "Technical Specification Group GSM/EDGE Radio Access Network; Overall description, Stage 2".

- [37] 3GPP TS 23.226: "Global Text Telephony (GTT); Stage 2."
- [38] 3GPP TS 26.226: "Cellular Text Telephone Modem; General Description"
- [39] 3GPP TS 23.016: "Subscriber data management; Stage 2"
- [40] 3GPP TS 23.066: "Support of Mobile Number Portability (MNP); Technical realization; Stage 2"
- [41] 3GPP TS 43.068: "Voice Group Call Service (VGCS); Stage 2"
- [42] 3GPP TS 43.069: "Voice Broadcast Service (VBS); Stage 2"
- [43] 3GPP TS 23.205: "Bearer independent circuit switched core network; Stage 2"
- [44] 3GPP TS 48.014: "Base Station System (BSS) – Serving GPRS Support Node (SGSN) interface; Gb interface Layer 1"
- [45] 3GPP TS 48.016: "Base Station System (BSS) – Serving GPRS Support Node (SGSN) interface; Network service"
- [46] 3GPP TS 48.018: "Base Station System (BSS) – Serving GPRS Support Node (SGSN); BSS GPRS Protocol (BSSGP)"
- [47] 3GPP TS 48.031: "Serving Mobile Location Centre – Serving Mobile Location Centre (SMLC – SMLC); SMLCPP specification"
- [48] 3GPP TS 29.016: "Serving GPRS Support Node (SGSN) – Visitor Location Register (VLR); Gs interface network service specification"
- [49] 3GPP TS 29.018: "Serving GPRS Support Node (SGSN) – Visitor Location Register (VLR); Gs interface Layer 3 specification"
- [50] 3GPP TS 49.031: "Network Location Services (LCS); Base Station System Application Part LCS extension (BSSAP-LE)"
- [51] 3GPP TS 29.060: "GPRS Tunnelling Protocol (GTP) across the Gn and Gp Interface"
- [52] ITU-T Recommendation H.248: "Gateway Control Protocol"
- [53] ITU-T Recommendation E.164: "The International public telecommunication numbering plan"
- [54] ITU-T Recommendation H.323: "Packet-based multimedia communications systems "
- [55] 3GPP TS 44.071: " Mobile radio interface layer 3 Location Services (LCS) specification "
- [56] 3GPP TS 23.271: "Functional stage 2 description of LCS"
- [57] ITU-T Recommendation I.363-2 : "B-ISDN ATM Adaptation Layer (AAL) type 2 specification"
- [58] ITU-T Recommendation H.245: "Control protocol for multimedia communication"
- [59] IETF RFC768: "User Datagram Protocol"
- [60] IETF RFC1889: "RTP: A Transport Protocol for Real-Time Applications"
- [61] IETF RFC3261: "SIP: Session Initiation Protocol"
- [62] LIF TS 101 "Mobile Location Protocol Specification"(Location Interoperability Forum 2001) [Available at <http://www.openmobilealliance.org/tech/LIF/>]
- [63] 3GPP TS 29.198: "Open Service Access (OSA) Application Programming Interface (API)"
- [64] 3GPP TS 33.210: "3G Security; Network Domain Security; IP network layer security"
- [65] 3GPP TS 23.236: " Intra Domain Connection of RAN Nodes to Multiple CN Nodes".
- [66] 3GPP TS 25.453: "UTRAN Iupc interface PCAP signalling"

[67] [3GPP TS 23.234: "3GPP system to Wireless Local Area Network \(WLAN\) interworking"](#)

***** MODIFIED SECTION *****

5.6 Configuration of Signalling Gateway Function

The Signalling gateway function is used to interconnect different signalling networks i.e. SCTP/IP based signalling networks and SS7 signalling networks. The application layer (e.g. ISUP, BICC, MAP or CAP) is not affected. The signalling gateway function may be implemented as a stand alone entity or inside another entity.

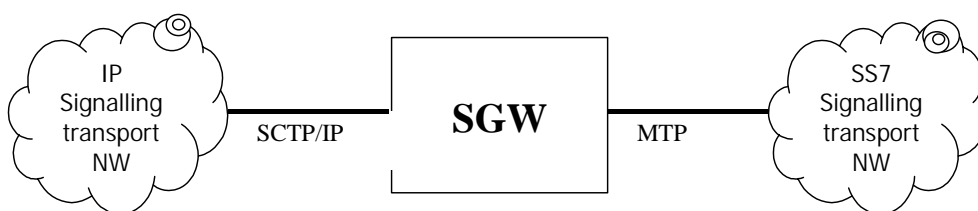


Figure 7: Configuration of a signalling gateway function

Note: SS7 application transport and SCTP/IP adaption protocols are not shown.

[5.7 Configuration of 3GPP/WLAN Interworking](#)

[The configuration of the 3GPP/WLAN interworking function is presented in figure X. The figure shows all network entities and reference point for the roaming scenario when a WLAN UE accesses PS based services in the home network. PS based services in the visited network are accessed via a Packet Data Gateway in the visited 3GPP network. Reference point Ww between WLAN UE and WLAN is outside the scope of 3GPP and only shown for completeness.](#)

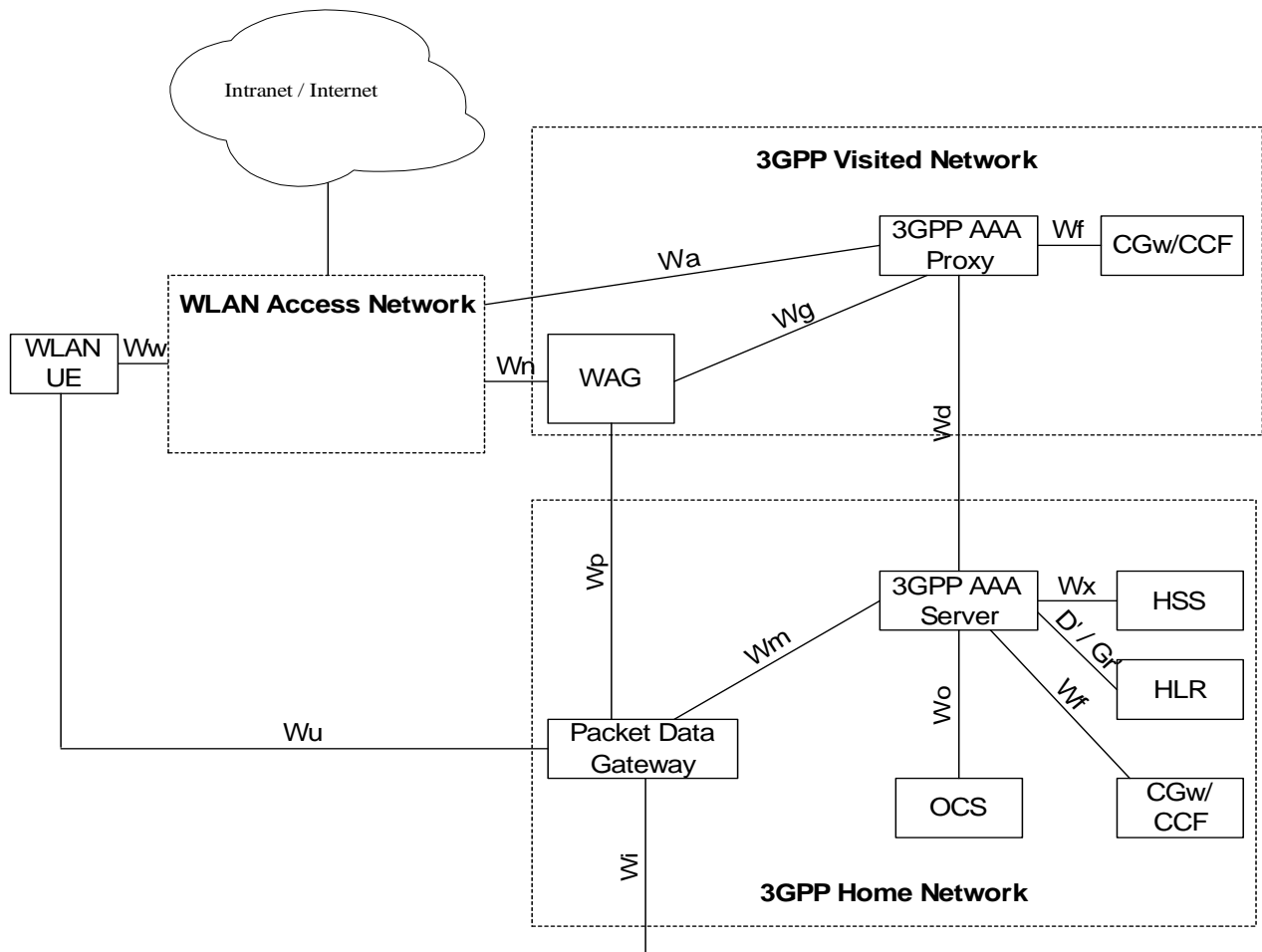


Figure X: Configuration of a 3GPP/WLAN interworking function

***** MODIFIED SECTION *****

6a.8 Reference Points for Service Based Local Policy Control

6a.8.1 Reference Point GGSN – PDF (Go Reference Point)

This interface allows the Policy Decision Function (PDF) to apply policy to the bearer usage in the GGSN.

6a.8.2 Reference Point PDF – Application Function (Gq Reference Point)

This interface allows for dynamic QoS-related service information to be exchanged between the Policy Decision Function (PDF) and the Application Function (AF). This information is used by the PDF for service based local policy decisions.

6a.9 Reference Points for 3GPP/WLAN Interworking

6a.9.1 Reference point 3GPP AAA Server - HLR (D'/Gr' Reference Point)

This is the reference point between the 3GPP AAA server and the pre-Rel6 HLR. The functionality of this reference point is similar to that of the Wx reference point. For more information see TS 23.234 [67].

6a.9.2 Reference point WLAN access network - 3GPP AAA Proxy/Server (Wa Reference Point)

This is the reference point between the WLAN access network and 3GPP AAA Proxy or Server. The AAA protocol on this reference point is used to transport authentication, authorization and charging data.

6a.9.3 Reference point 3GPP AAA Server – 3GPP AAA Proxy (Wd Reference Point)

This is the reference point between the 3GPP AAA Server and Proxy. the purpose of the protocols crossing this reference point is to transport authentication, authorization and related information. For more information see TS 23.234 [67].

6a.9.4 Reference point 3GPP AAA Server/Proxy - PDG (Wg Reference Point)

This is the reference point between the 3GPP AAA server/proxy and PDG. It is used to provide information needed by the WAG to perform policy enforcement functions for authorised users.

6a.9.5 Reference point PDG - packet data networks (Wi Reference Point)

This is the reference point between the PDG and a packet data network. It may be an operator external public or private packet data network or an intra operator packet data network, e.g. for provision of IMS services.

6a.9.6 Reference Point 3GPP AAA Server/Proxy - PDG (Wm Reference Point)

This is the reference point between the 3GPP AAA server/proxy and PDG. The functionality of this reference point is to enable:

- The 3GPP AAA Server/Proxy to retrieve tunneling attributes and WLAN UE's IP configuration parameters from/via Packet Data Gateway
- Carrying messages for service authentication and authorization
- Carrying authentication data for the purpose of tunnel establishment, tunnel data authentication and encryption.

For more information see TS 23.234 [67].

6a.9.7 Reference Point WAG - WLAN access network (Wn Reference Point)

This is the reference point between the WAG and the WLAN access network. It is used to force traffic between a WLAN UE and PDG to go through the WAG.

6a.9.8 Reference Point WAG - PDG (Wp Reference Point)

This is the reference point between WAG and PDG. It is used to transport the Wu reference point protocol data packets.

6a.9.9 Reference point WLAN UE - PDG (Wu Reference Point)

This is the reference point between the 3GPP WLAN UE and PDG. The functionality of this reference point is to establish a tunnel between WLAN UE and PDG and to exchange data packets between WLAN UE and PDG.

6a.9.10 Reference point WLAN UE - WLAN access network (Ww Reference Point)

This is the reference point between the 3GPP WLAN UE and WLAN access network. The functionality of this reference point is specified by IEEE and outside the scope of 3GPP.

6a.9.11 Reference point 3GPP AAA Server - HSS (Wx Reference Point)

This is the reference point between the 3GPP AAA server and HSS. The functionality of this reference point is to enable:

- Retrieval of authentication vectors
- Retrieval of WLAN access-related subscriber information (profile)
- Registration of the 3GPP AAA Server of an authorised WLAN user in the HSS
- Indication of change of subscriber profile
- Retrieval of online charging / offline charging function addresses from HSS.
- Retrieval of service related information

For more information see TS 23.234 [67].

***** MODIFIED SECTION *****

7.4 Reference Point CSCF – Multimedia IP networks (Mm Reference Point)

This is an IP interface between CSCF and IP networks. This interface is used, for example, to receive a session request from another SIP server or terminal. Detailed specifications of the Mm reference point are not provided in this release of specifications.

7.5 (void)

7.6 Reference point PDG - packet data networks (Wi reference point)

This is the reference point between the PDG and a packet data network. It may be an operator external public or private packet data network or an intra operator packet data network, e.g. for provision of IMS services.

7.7 Reference Point WAG – WLAN access network (Wn reference point)

This is the reference point between the WAG and the WLAN access network. It is used to force traffic between a WLAN UE and PDG to go through the WAG.

CHANGE REQUEST

2

⌘ **23.002 CR 141** ⌘ rev **2** ⌘ Current version: **6.4.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Configuration of Presence Service		
Source:	⌘ SA2 (Siemens)		
Work item code:	⌘ PRESNC	Date:	⌘ 22/04/2004
Category:	⌘ F	Release:	⌘ Rel-6
	Use <u>one</u> of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Use <u>one</u> of the following releases: 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ The Presence Service and its configuration are not yet mentioned in TS 23.002.
Summary of change:	⌘ Add a reference to TS 23.141 for the configuration of the Presence service.
Consequences if not approved:	⌘ Presence Service missing in TS 23.002.

Clauses affected:	⌘ 2, 5.x(new)						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
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<input type="checkbox"/>	<input checked="" type="checkbox"/>						
Other comments:	⌘ The architecture of the Presence Service re-uses existing interfaces and functional entities. Therefore a reference to TS 23.141 seems the appropriate way to cover the Presence Service in TS 23.002. Note that ME and CN are affected by Presence, but the CR just aligns specifications and does not affect ME and CN implementations.						

How to create CRs using this form:

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- 3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

*****FIRST CHANGE *****

2 References

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- [1] [void]
- [1a] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
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- [60] IETF RFC1889: "RTP: A Transport Protocol for Real-Time Applications"
- [61] IETF RFC3261: "SIP: Session Initiation Protocol"
- [62] LIF TS 101 "Mobile Location Protocol Specification"(Location Interoperability Forum 2001) [Available at <http://www.openmobilealliance.org/tech/LIF/>]
- [63] 3GPP TS29.198: "Open Service Access (OSA) Application Programming Interface (API)"
- [64] 3GPP TS 33.210: "3G Security; Network Domain Security; IP network layer security"
- [65] 3GPP TS 23.236: "-Intra Domain Connection of RAN Nodes to Multiple CN Nodes"-
- [66] 3GPP TS 25.453: "UTRAN Iupc interface PCAP signalling²²".

[xy] [3GPP TS 23.141: "Presence Service; Architecture and functional description"](#)

*****NEXT CHANGE*****

5.6 Configuration of Signalling Gateway Function

The Signalling gateway function is used to interconnect different signalling networks i.e. SCTP/IP based signalling networks and SS7 signalling networks. The application layer (e.g. ISUP, BICC, MAP or CAP) is not affected. The signalling gateway function may be implemented as a stand alone entity or inside another entity.

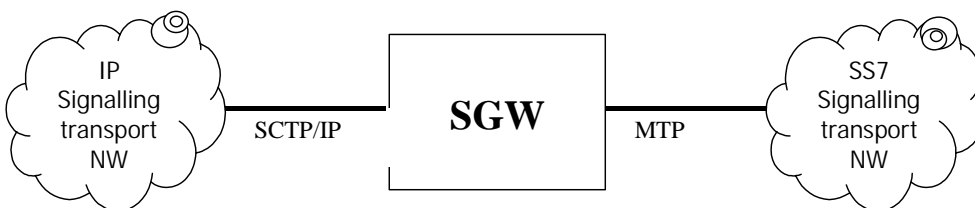


Figure 7: Configuration of a signalling gateway function

Note: SS7 application transport and SCTP/IP adaption protocols are not shown.

[5.x Configuration of Presence service](#)

[The reference architecture model, the reference points and the functional entities to support the Presence Service are described in TS 23.141 \[xy\].](#)

CR-Form-v7

CHANGE REQUEST

⌘ **23.002 CR 142** ⌘ rev **-** ⌘ Current version: **6.4.0** ⌘

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.

Proposed change affects: UICC apps ME Radio Access Network Core Network

Title:	⌘ Correction on the scope of the Ut reference point		
Source:	⌘ SA2 (Ericsson)		
Work item code:	⌘ IMS2	Date:	⌘ 20/4/2004
Category:	⌘ F	Release:	⌘ Rel-6
	<i>Use <u>one</u> of the following categories:</i> F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		<i>Use <u>one</u> of the following releases:</i> 2 (GSM Phase 2) R96 (Release 1996) R97 (Release 1997) R98 (Release 1998) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5) Rel-6 (Release 6)

Reason for change:	⌘ SA2 has received a LS from CN 5 indicating a misunderstanding on the scope of the Ut reference point. Based on the LS exchange between SA2 and CN5, it has been concluded that the Ut reference point is only between the SIP AS and the UE.
Summary of change:	⌘ The Ut reference point has been removed between the UE and the OSA SCS
Consequences if not approved:	⌘ TS 23.002 will be not aligned with the stage 3 specifications

Clauses affected:	⌘ 5.5 and 6a.7.18						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Y</td> <td style="padding: 2px;">N</td> </tr> <tr> <td style="text-align: center; padding: 2px;"><input type="checkbox"/></td> <td style="text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	⌘
	Y	N					
	<input type="checkbox"/>	<input checked="" type="checkbox"/>					
<input checked="" type="checkbox"/>	Test specifications						
<input checked="" type="checkbox"/>	O&M Specifications						
Other comments:	⌘						

How to create CRs using this form:

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<<<<< First Modification >>>>>

5.5 Configuration of IM CN Subsystem entities

The configuration of IM CN Subsystem entities is presented in figure 6. In the figure, all the functions are considered implemented in different logical nodes. If two logical nodes are implemented in the same physical equipment, the relevant interfaces may become internal to that equipment.

Only the interfaces specifically linked to the IM subsystem are shown, i.e. all the SGSN, GGSN and HSS interfaces depicted in figure 1 are still supported by these entities even if not shown.

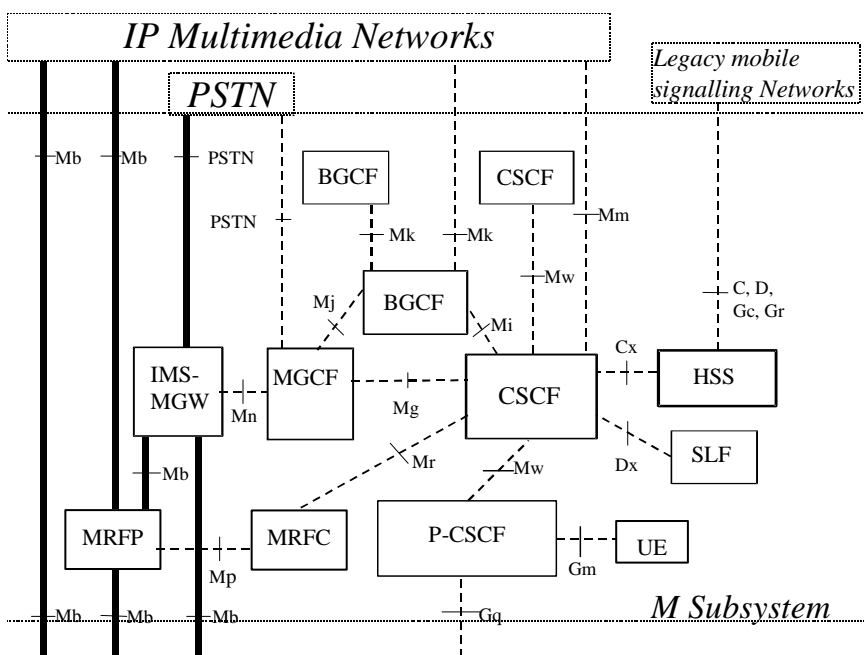


Figure 6: Configuration of IM Subsystem entities

- Legend:
 Bold lines: interfaces supporting user traffic;
 Dashed lines: interfaces supporting only signalling.

The figure below depicts an overall view of the functional architecture for services.

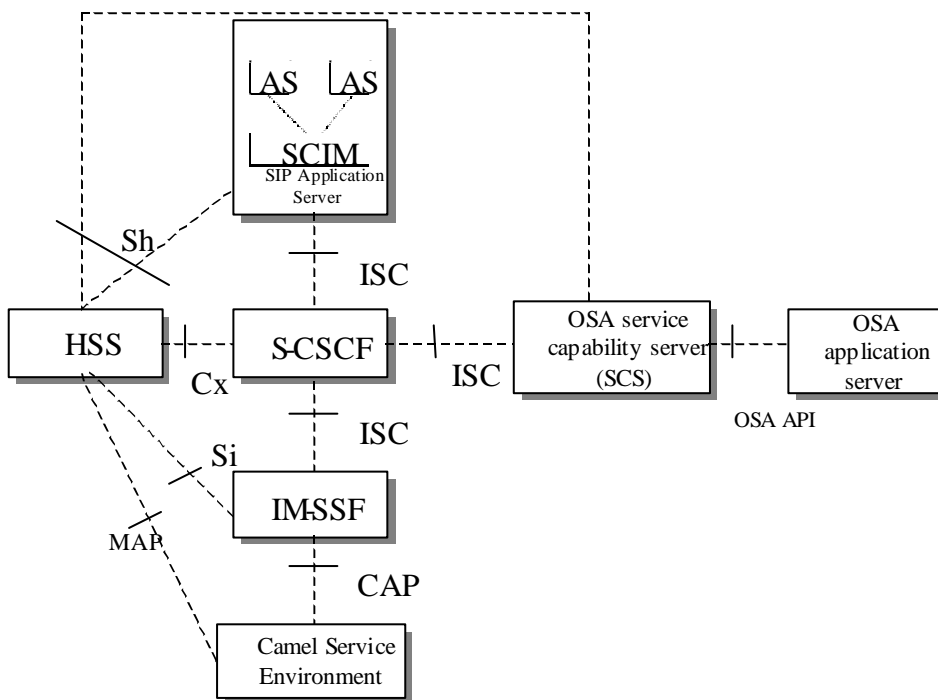


Figure 6a: Functional architecture for the provision of service in the IMS

The purpose of the IM SSF is to host the CAMEL network features (i.e. trigger detection points, CAMEL Service Switching Finite State Machine, etc) and to interwork with CAP.

The IM SSF and the CAP interface support legacy services only.

The application server may contain “service capability interaction manager” (SCIM) functionality and other application servers. The SCIM functionality is an application which performs the role of interaction management. The internal components are represented by the “dotted boxes” inside the SIP application server. The internal structure of the application server is outside the standards. The Sh interface shall have sufficient functionality to enable this scenario.

The figure below depicts an overall view of the functional architecture for enabling the management of the user’s service related information via the Ut interface.

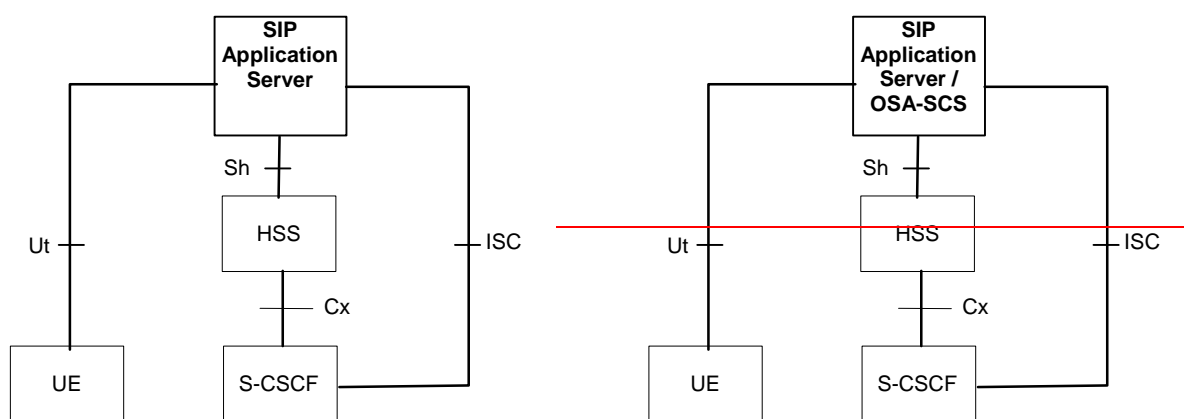


Figure 6b: Functional architecture for the management of the user’s service related information

~~Note: The Application Server in this figure depicts the SIP Application Server and the OSA-SCS.~~

<<<<< End of First Modification >>>>>

<<<<<<<< **Second Modification** >>>>>>>>

6a.7.18 Reference Point UE – AS (Ut Reference Point)

The Ut interface resides between the UE and the [SIP](#) Application Server ~~(i.e. the SIP Application Server, OSA SCS).~~

The Ut interface enables the user to manage information related to his services. Such as creation and assignment of Public Service Identities, management of authorization policies that are used e.g. by Presence service, conference policy management, etc.

The AS may need to exhibit security related functions for the Ut interface, the details of these security functions are described in 3G TS 3x.yzw [??].

For the protocol at the Ut reference point HTTP shall be supported.

<<<<<<<< **End of Second Modification** >>>>>>>>

CHANGE REQUEST

23.002 CR 143 # rev - # Current version: 6.4.0

For **HELP** on using this form, see bottom of this page or look at the pop-up text over the # symbols.

Proposed change affects: UICC apps# ME Radio Access Network Core Network

Title:	# Missing Lr reference point in 23.002		
Source:	# SA2 (Siemens)		
Work item code:	# LCS2	Date:	# 12/05/2004
Category:	# F	Release:	# Rel-6
	Use <u>one</u> of the following categories:		Use <u>one</u> of the following releases:
	F (correction)		2 (GSM Phase 2)
	A (corresponds to a correction in an earlier release)		R96 (Release 1996)
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	C (functional modification of feature)		R98 (Release 1998)
	D (editorial modification)		R99 (Release 1999)
	Detailed explanations of the above categories can be found in 3GPP TR 21.900 .		Rel-4 (Release 4)
			Rel-5 (Release 5)
			Rel-6 (Release 6)

Reason for change:	# TS 23.002 does not contain a description of the Lr reference point.
Summary of change:	# Add Lr reference point description to 23.002.
Consequences if not approved:	# Network architecture description remains incomplete.

Clauses affected:	# 2, 5.2.1, 5.2.2, 6a.3.8, 6a.3.11 (new)						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="width: 20px; text-align: center;">Y</td> <td style="width: 20px; text-align: center;">N</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table>	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other core specifications	#
Y	N						
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<input type="checkbox"/>	<input checked="" type="checkbox"/>						
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***** MODIFIED SECTION *****

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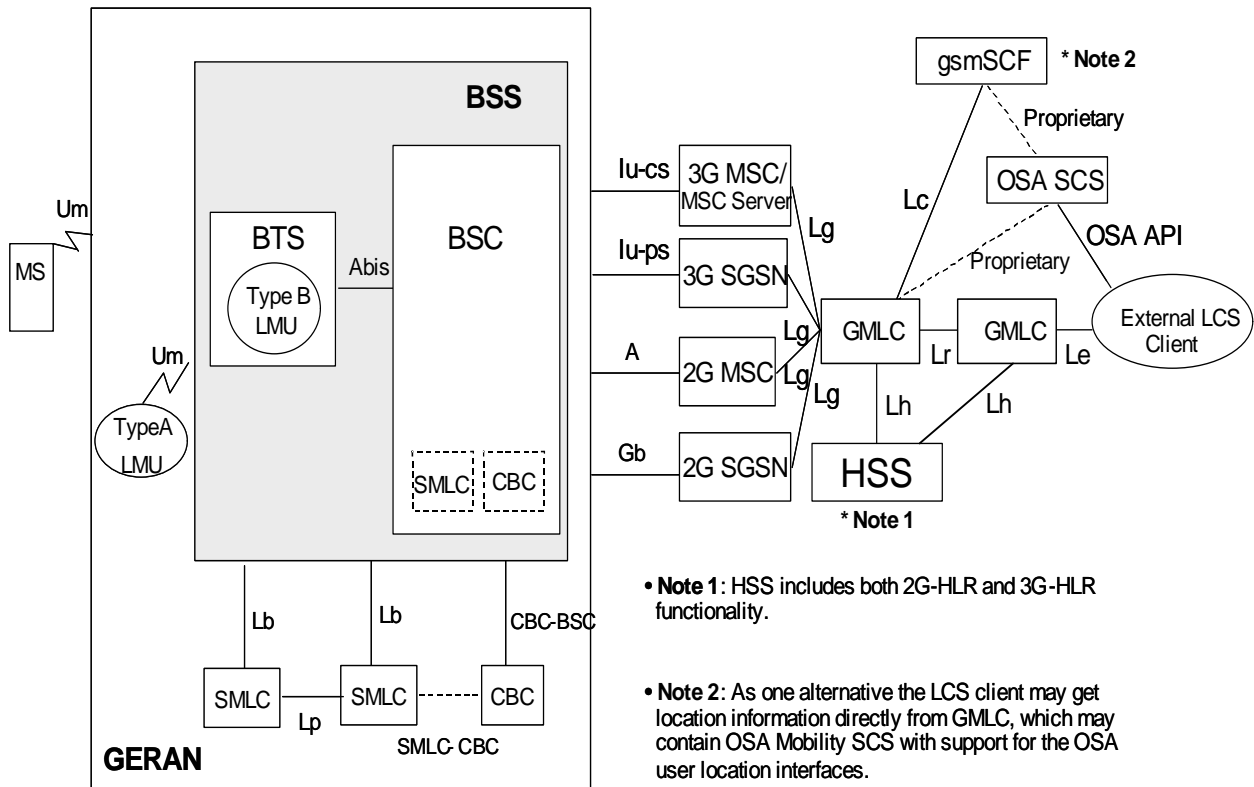
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- [60] IETF RFC1889: "RTP: A Transport Protocol for Real-Time Applications"
- [61] IETF RFC3261: "SIP: Session Initiation Protocol"
- [62] ~~LIF-TS-101-OMA Location Working Group~~ "Mobile Location Protocol Specification", (~~Location-Interoperability Forum-2001~~) [~~Available at~~ <http://www.openmobilealliance.org/tech/LIF/>]
- [63] 3GPP TS 29.198: "Open Service Access (OSA) Application Programming Interface (API)"
- [64] 3GPP TS 33.210: "3G Security; Network Domain Security; IP network layer security"
- [65] 3GPP TS 23.236: " Intra Domain Connection of RAN Nodes to Multiple CN Nodes".
- [66] 3GPP TS 25.453: "UTRAN Iupc interface PCAP signalling"

***** MODIFIED SECTION *****

5.2 Configuration of LCS entities

5.2.1 Configuration of LCS entities for GERAN

The configuration of LCS entities for GERAN is presented in figure 2. In the figure, all the functions are considered implemented in different logical nodes. If two logical nodes are implemented in the same physical equipment, the relevant interfaces may become internal to that equipment.



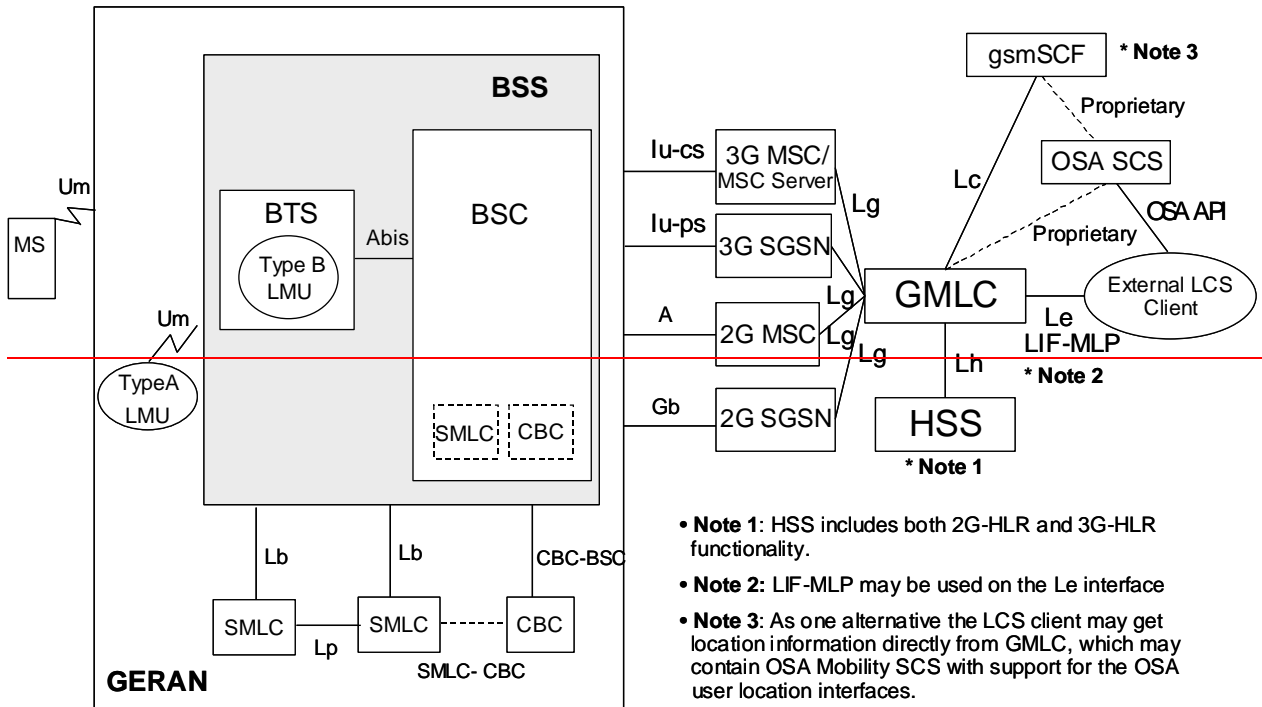
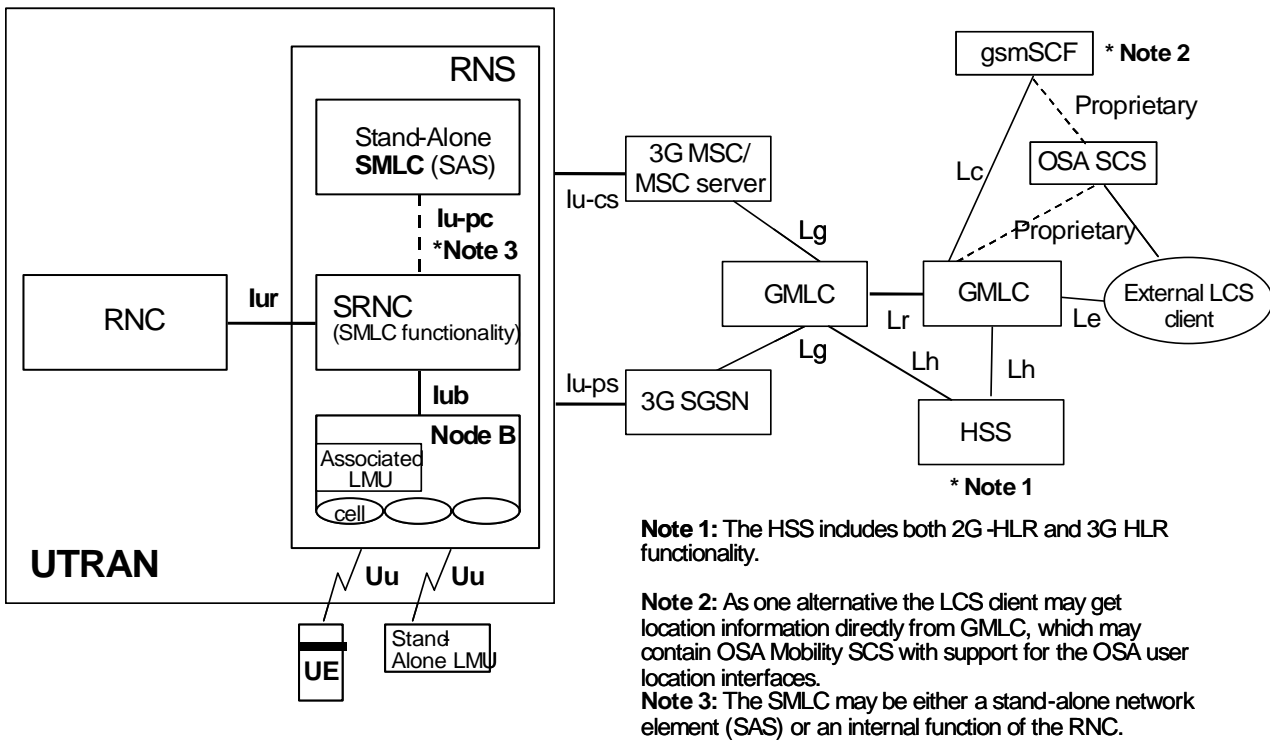


Figure 2: Configuration of LCS entities for a GERAN PLMN

5.2.2 Configuration of LCS entities for UTRAN

The basic configuration of UTRAN LCS is presented in figure 3. The SMLC functionality is integrated in SRNC or, in case a Stand-Alone SMLC entity (SAS) is present, split between SRNC and SMLC.



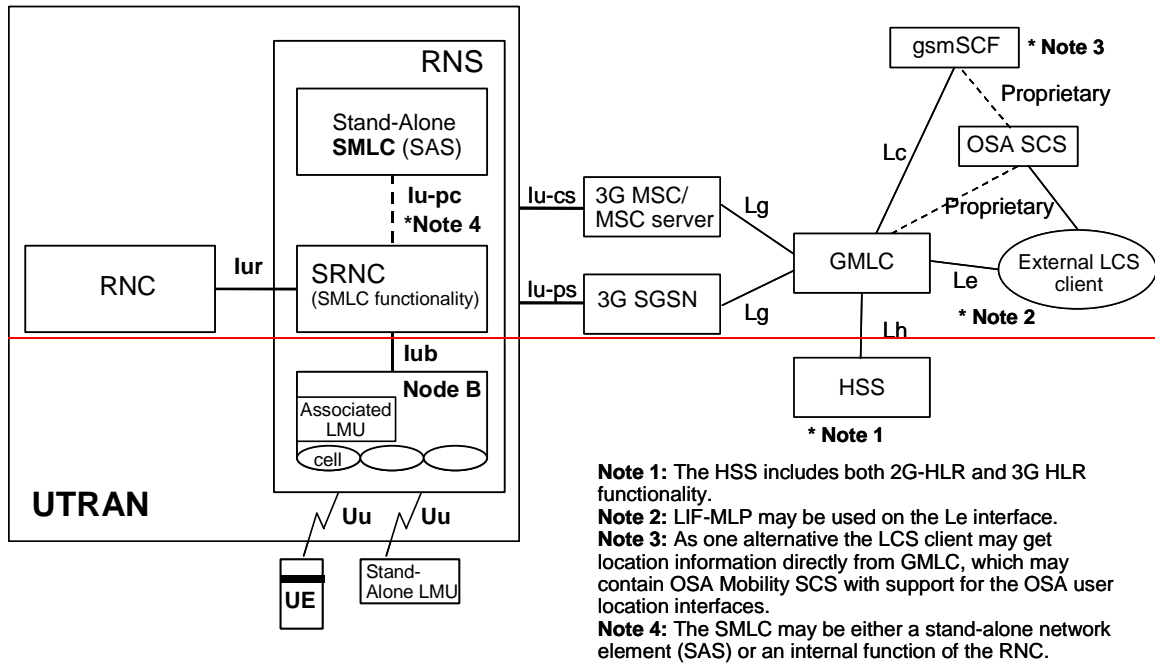


Figure 3: Configuration of LCS entities for a UTRAN PLMN

***** MODIFIED SECTION *****

6a.3.8 Interface between GMLC and External LCS Client (Le-interface)

The Le interface is used by the external LCS client to retrieve location information from the LCS server. Signalling on this interface may use the OMA Mobile Location Protocol (MLP) [62] and Open Service Access Application Programming Interface (OSA-API) [63].

6a.3.9 Interface between RNS and Stand-Alone LMU, UE (Uu-interface)

The Uu interface is used to communicate among the UE Positioning entities associated with the SRNC, the UEs and the stand-alone LMU. –The Uu interface may pass measurement requests and results to and from the UE or the stand-alone LMU. –UE Positioning operations at the Uu interface are generally defined in the 24- and 25-series of 3GPP Technical Specifications. Furthermore, 25.305 describes how a stand-alone LMU may be distinguished from a normal UE.

6a.3.10 Interface between SRNC and SAS (Stand-Alone A-GPS SMLC) (Iu-ps-interface)

The Iu-ps interface defined for LCS is specified in TS 25.453 [66].

6a.3.11 Interface between GMLC and GMLC (Lr-interface)

The Lr interface is used by the GMLC to communicate with other GMLCs. Signalling on this interface may use the OMA Inter-Location Server protocol [67].