Source: **TSG SA WG2**
Title: **CRs on 23.141**
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.
Note: the source of all these CRs is now S2, even if the name of the originating company(ies) is still reflected on the cover page of all the attached CRs.

S2 doc #	Title	Spec	CR #	cat	Version in	REL	WI	S2 meeting	Clauses affected
S2-042279	3GPP-WLAN supplier for PRESENCE information	23.141	063r3	B	6.5.0	6	PRESNC	S2 #40	2, 3.2, 4.2, 4.3, 5.2.2.2, Annex B
S2-042263	Level of support in the Presence Network Agent	23.141	064r2	F	6.5.0	6	PRESNC	S2 #40	5.2.2.2
S2-042262	Correction of Pl text referencing Le to reference LIF-MLP directly	23.141	065r2	F	6.5.0	6	PRESNC	S2 #40	2, 4.3.8
S2-042144	Removal of misleading example relating to Pi reference point	23.141	066r1	F	6.5.0	6	PRESNC	S2 #40	4.3.6

revised s2-042264, s2-042145, s2-042069, combined S2-041678

CR-Form-v7

CHANGE REQUEST

| ⌘ | **23.141** CR **063** | ⌘**rev** | **3** | ⌘ | Current version: | **6.5.0** | ⌘ |

*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 ☒X☒

Title:	⌘	3GPP-WLAN IW supplier for PRESENCE information

Source:	⌘	SA2 (Huawei, China Mobile)

Work item code:⌘	PRESNC	**Date:** ⌘	20/05/2004

Category:	⌘	**B**		**Release:** ⌘	Rel-6

Use one 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 one 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:	⌘	As an important component of 3GPP network, 3GPP WLAN network should be considered a Presence information supplier. TS 23.141 Annex B "describes initial concepts for retrieving Presence information from the 3GPP-WLAN interworking architecture" and "parts from this Annex are expected to be moved to the normative part of this Technical Specification" since SA2 #30 (April 2003). However, it has not been moved to the normative section because the 3GPP-WLAN interworking architecture was not considered stable. Now that TS23.234 was approved at SA#23, this feature should be moved to the normative part of the TS. Further more, the PDG is also stable and can provide additional presence information similar with GGSN and Pk interfact, for example: (1) the status of the connected UE tunnels and the coresponding W-APN, (2) the remote IP address of the UE, (3) (MAY)the contact address and means However, the PDG can not provide the general status of the UE, general location information or the roaming locations, and WLAN access authorization information, which are hold by the 3GPP AAA server. So both of the AAA Server and the PDG should be added as the presence provider for 3GPP WLAN interworking system.

Summary of change: ⌘	The 3GPP AAA server and PDG are added as a source of presence information, and a new reference point are added between the 3GPP AAA Server and the Presence Network Agent, PDG and the Presence Network Agent. The content in Annex B is removed.
Consequences if not approved: ⌘	Presence information may not be available directly from the 3GPP-WLAN IW network. Consequently operators may not have the ability to get 3GPP-WLAN IW presence information or the interface itself will not be standardized which could lead to interoperability problems between different implementations.

Clauses affected: ⌘	2, 3.2, 4.2, 4.3, 5.2.2.2, Annex B			

		Y	N	
Other specs affected: ⌘			X	Other core specifications ⌘
			X	Test specifications
			X	O&M Specifications

Other comments: ⌘	This CR replaces the approved CR061rev3 (s2-041678).

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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.

****************** The 1st Change********************

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 22.141: "Presence service; Stage 1".

[3]   Common Presence and Instant Messaging (CPIM) Presence Information Data Format, Internet Draft http://www.ietf.org/internet-drafts/draft-ietf-impp-cpim-pidf-05.txt, May 2002

Editor's note: The above document is not yet published as an RFC, where possible the reference should be converted to an RFC prior to approval of this document.

[4]   Session Initiation Protocol (SIP) Extensions for Presence, Internet-Draft http://www.ietf.org/internet-drafts/draft-ietf-simple-presence-07.txt, May 2002

Editor's note: The above document is not yet published as an RFC, where possible the reference should be converted to an RFC prior to approval of this document.

[5]   3GPP TS 33.203: "3G security; Access security for IP-based services".

[6]   3GPP TS 32.200: "Telecommunication management; Charging management; Charging principles".

[7]   3GPP TS 32.225: "Telecommunication management; Charging management; Charging data description for the IP Multimedia Subsystem (IMS)".

[8]   3GPP TS 33.210: "3G security; Network Domain Security (NDS); IP network layer security".

[9]   3GPP TS 23.228: "IP Multimedia Subsystem (IMS); Stage 2".

[10]   3GPP TS 23.218: "IP Multimedia (IM) session handling; IM call model; Stage 2".

[11]   IETF RFC 3265: "Session Initiation Protocol (SIP) Event Notification"

[12]   A SIP Event Package for List Presence, Internet-Draft, http://search.ietf.org/internet-drafts/draft-ietf-simple-presencelist-package-00.txt, June 2002

Editor's note: The above document is not yet published as an RFC, where possible the reference should be converted to an RFC prior to approval of this document.

[13]   3GPP TS 29.061: "Interworking between the Public Land Mobile Network (PLMN) supporting Packet Based services and Packet Data Networks (PDN)".

[14]   3GPP TS 23.271: "Location Services (LCS); Functional description; Stage 2".

[15]   3GPP TS 23.127: "Virtual Home Environment (VHE) / Open Service Access (OSA); Stage 2".

[16]   IETF RFC 2778: "A Model for Presence and Instant Messaging".

[17]   IETF RFC 2779: "Instant Messaging / Presence Protocol Requirements".

[18]   3GPP TS 23.002: "Network architecture".

[19]   3GPP TS 23.234: "3GPP system to Wireless Local Area Network (WLAN) interworking; System description".

****************** The 2nd Change********************

3.2   Abbreviations

For the purposes of the present document, the abbreviations in 3GPP ~~TS~~ TR 21.905 [1] and 3GPP TS 22.141 [2] and the following apply:

AAA	Authentication, Authorisation and Accounting
CAMEL	Customised Applications for Mobile network Enhanced Logic
CAP	CAMEL Application Part
CGI	Cell Global Identity
CS	Circuit Switched
CSCF	Call Session Control Function
GGSN	Gateway GPRS Support Node
GMLC	Gateway Mobile Location Center
GPRS	General Packet Radio Service
HLR	Home Location Register
HSS	Home Subscriber Server
HTTP	Hyper Text Transport Protocol
I-CSCF	Interrogating CSCF
IETF	Internet Engineering Task Force
IMS	IP Multimedia Subsystem
ISDN	Integrated Service Digital Network
LIF	Location Interoperability Forum
MAP	Mobile Application Part
MSC	Mobile Switching Center
MSISDN	Mobile Subscriber ISDN Number
P-CSCF	Proxy CSCF
PDG	Packet Data Gateway
PLMN	Public Land Mobile Network
PS	Packet Switched
PUA	Presence User Agent
RFC	Request For Comments
SAI	Service Area Identity
S-CSCF	Serving CSCF
SGSN	Serving GPRS Support Node
SIP	Session Initiation Protocol
SMS	Short Message Service
UE	User Equipment
URL	Uniform Resource Locator
WAP	Wireless Access Protocol
WLAN	Wireless Local Area Network
WML	Wireless Markup Language
WV	Wireless Village

****************** The 3rd Change********************

4.2 Reference Architecture Model

The generic reference architectural model for providing presence service is depicted in Figure 4.2-1 below. The details of the elements in the figure (eg agents, proxies) are provided in clause 5.

The mapping of the Presence Service functional elements and reference points to the functional elements and reference points in the 3GPP Network Architecture 3GPP TS 23.002 [18] is defined in clauses 4.3 and clause 5.
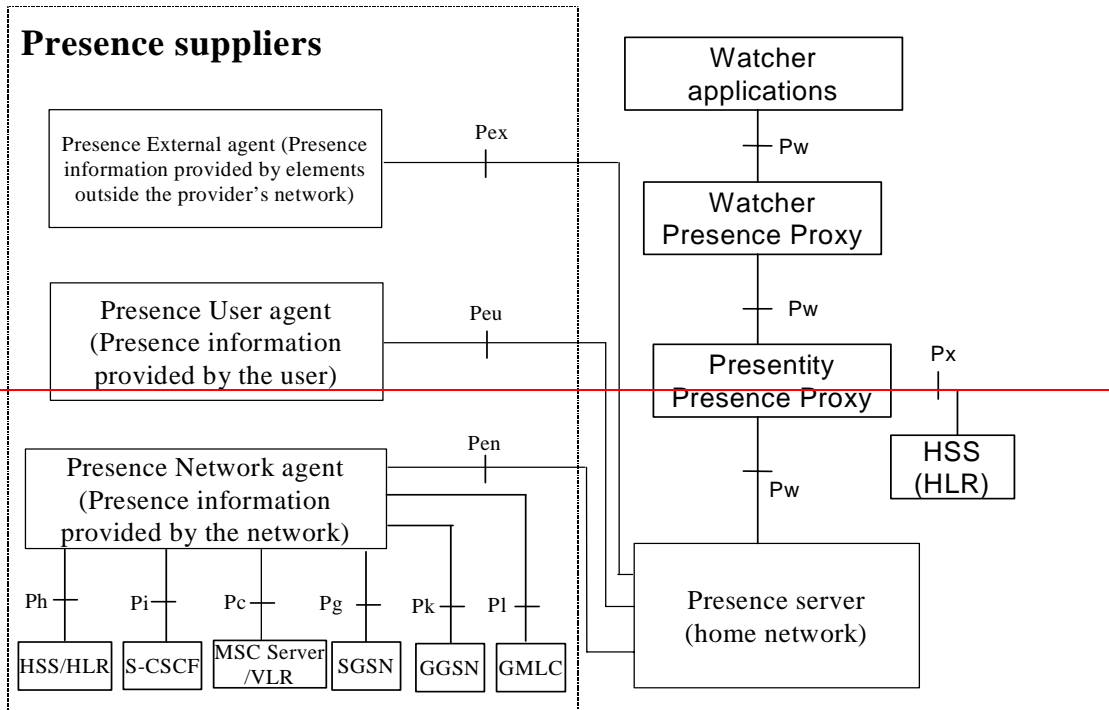
Interfaces Ph, Pi, Pc, Pg, Pk and Pl are based on existing R5 procedures e.g. CAMEL, MAP, CAP, RADIUS, ISC, Cx, Sh.
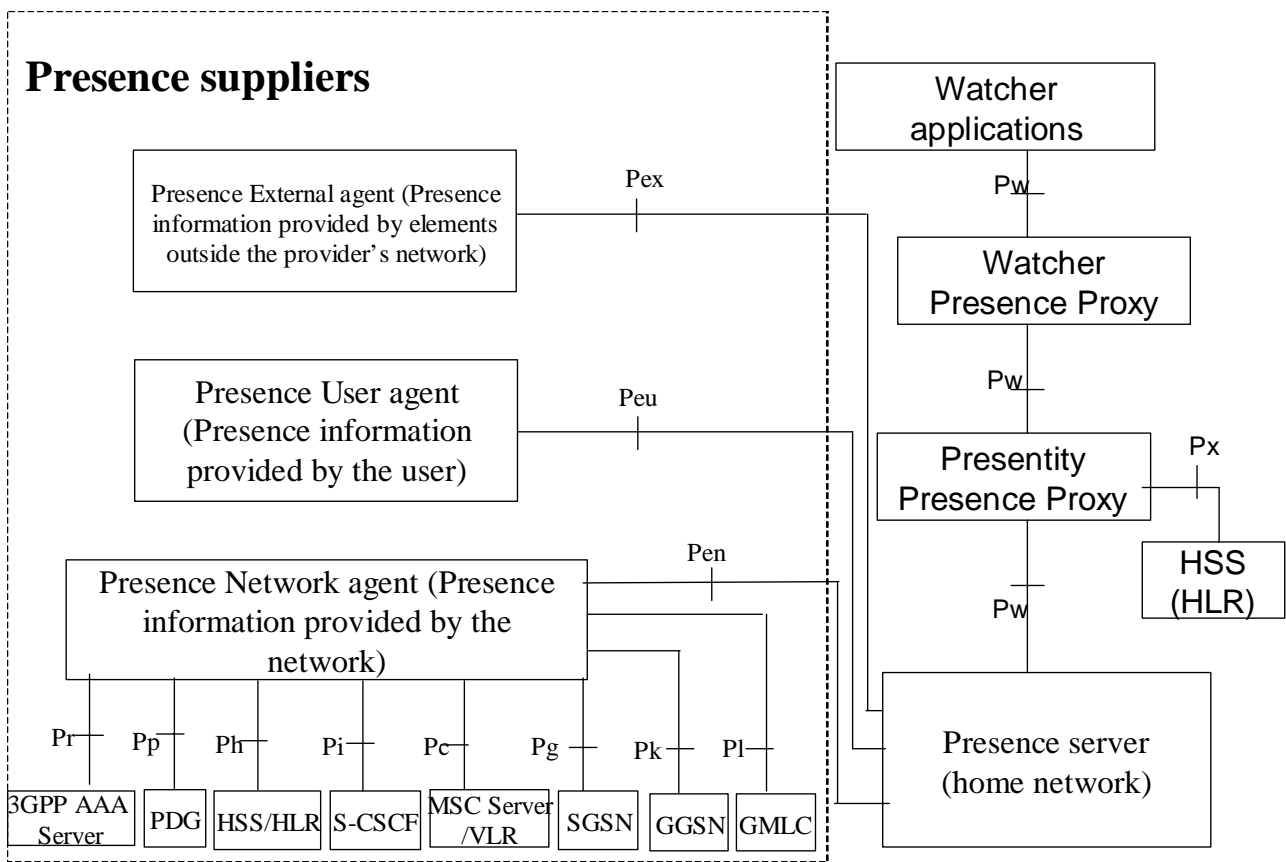
Interfaces Ph, Pi, Pc, Pg, Pk and Pl are based on existing Release 5 procedures e.g. CAMEL, MAP, CAP, RADIUS, ISC, Cx, Sh.
The Pr, Pp interfaces are based on existing Release 6 procedures of the 3GPP-WLAN interworking architecture.

****************** The 4th Change*********************

4.3   Reference points

4.3.1   Reference point Presence User Agent – Presence Server (Peu)

This reference point shall allow a presentity's presence information to be supplied to the Presence Server. [3] provides guidelines for such an interface. The transport on this reference point shall not impose any limitations on the size of the presence information.

Peu shall provide mechanisms for the Presence User Agent to manage subscription authorisation policies.

Peu shall provide mechanisms for the Presence User Agent to obtain information on watcher subscriptions to the Presentities Presence Information.

Peu shall provide mechanisms for the Presence User Agent to supply or update only a certain subset of the presentity's presence information to the Presence Server. It shall also be possible for the Presence User Agent to supply the complete presence document over Peu.

Peu shall support SIP-based communications for publishing presence information, however, in order to provide all the functionalities required on this reference point, a combination of multiple protocols may be used.

IPv6 shall be supported for all functionalities required from a Presence User Agent that supports the Peu reference point. An IPv6 capable 3GPP UE shall use IPv6 when accessing Peu.

4.3.2   Reference point Network Agent – Presence Server (Pen)

This reference point shall allow a presentity's presence information to be supplied to the Presence Server. [3] provides guidelines for such an interface. The transport on this reference point shall not impose any limitations to the size of the presence information.

Pen shall provide mechanisms for the Network Agent to manage subscription authorisation policies.

Pen shall provide mechanisms for the Network Agent to supply or update only a certain subset of the presentity's presence information to the Presence Server.

Pen shall provide mechanisms for activating or deactivating the reporting of Presence Information for a given presentity from the network entities within the PLMN.

In order to provide the all the functionalities required on this reference point, a combination of multiple protocols may be used. The protocols used at the Pen reference point are not standardised.

4.3.3   Reference point Presence External Agent – Presence Server (Pex)

This reference point shall allow a presentity's presence information to be supplied to the Presence Server. [3] provides guidelines for such an interface. The transport on this reference point shall not impose any limitations on the size of the presence information.

Pex shall provide mechanisms for the Presence External Agent to supply or update only a certain subset of the presentity's presence information to the Presence Server.

In order to provide all the functionalities required on this reference point, a combination of multiple protocols may be used. Presence information obtained from an external network by the Presence External Agent is transferred across the Pex reference point to the Presence Server.

4.3.4   Reference point Watcher applications – Presence Server (Pw)

This reference point shall allow a Watcher application to request and obtain presence information. [3] provides guidelines for such an interface.

The transport shall not impose any limitations to the size of the presence information.

In order to provide all the functionalities required on this interface, a combination of multiple protocols may be used.

This reference point shall support both presence monitoring and fetching modes. In the fetching mode, it shall be possible for the watcher to once request all or only a subset of a presentity's presence information (e.g. one or more tuples). The subset of the presence information is defined by the filter that is carried in the presence information subscription.

In the monitoring mode, it shall be possible for the watcher to request monitoring of all or a subset of a presentity's presence information (i.e. one or more tuples) . Watcher shall be able to explicitly indicate the capability to process partial updates. The subset of the presence information is defined by the filter that is carried in the presence information subscription. It shall be possible for the watcher to request the presence server to filter out information when the watcher is equal to the publishing Presence User Agent.

It shall be possible for the notifications containing the presentity's presence information to contain only information as defined by filters. It shall be possible for the notifications containing the presentity's presence information to contain only the modified tuples, i.e. only those tuples which have changed since the last notification.

IPv6 shall be supported for all functionalities required from a Watcher application that supports the Pw reference point. An IPv6 capable 3GPP UE shall use IPv6 when accessing Pw.

4.3.5   Reference point HSS/HLR – Presence Network Agent (Ph)

This reference point shall allow the Presence Network Agent to query HSS/HLR about the state and status of a subscriber (associated with a presentity) from the CS Domain, GPRS and IMS perspective.

This reference point permits the Presence Network Agent to activate and deactivate the reporting of mobility management events from the MSC/VLR and/or the SGSN and/or the IMS-specific reports from the S-CSCF.

This reference point uses capabilities defined for the Sh reference point as defined in 3GPP TS 23.002 [14] as well as the MAP interface.

4.3.6   Reference point S-CSCF – Presence Network Agent (Pi)

The S-CSCF may provide IMS-specific presence information (e.g. about ongoing IMS sessions). This reference point shall use mechanisms defined for the ISC reference point as defined in 3GPP TS 23.002 [18].

4.3.7   Reference point Presentity Presence Proxy – HSS (Px)

This interface shall assist locating the Presence Server of the presentity. This interface is implemented using the mechanisms defined for the Cx and Dx reference points as defined in TS 23.002 [18].

4.3.8   Reference point Presence Network Agent – GMLC (Pl)

This reference point shall be used by the Presence Network Agent to retrieve location information related to a subscriber (associated with the presentity). This reference point is implemented using the mechanisms as defined in 3GPP TS 23.271 [14] for the Le reference point as defined in TS 23.002 [18].

4.3.9   Reference point Presence Network Agent – SGSN (Pg)

This reference point shall allow the SGSN to report mobility management related events (such as attach/not reachable for paging/detach/routing area update) to the Presence Network Agent.

This reference point may allow the SGSN to report Mobility States (such as Detached, Idle and Connected) and Session States (such as PDP context active and inactive).

This reference point is implemented using the existing mechanisms of CAMEL phase 4, 3GPP Release 5.

4.3.10 Reference point Presence Network Agent –MSC Server/VLR (Pc)

This reference point shall allow the MSC Server/VLR to report the mobility management related events to the Network Agent (such as attach/detach/location area update) and may allow the MSC Server/VLR to report call related events (such as call setup with the bearer information and call release).

This reference point may allow the MSC Server/ VLR to report Mobility States (such as Detached, Idle and Connected) and Call States (such as Busy with Bearer information and Idle).

This reference point is implemented using the existing mechanisms of CAMEL phase 4, 3GPP Release 5.

4.3.11 Reference point Presence Network Agent – GGSN (Pk)

This reference point shall allow the GGSN to report presence relevant events to the Presence Network Agent (such as PDP context activation/de-activation). This reference point is implemented using the mechanisms of the RADIUS interface for reporting of access requests on Gi reference point as defined in 3GPP TS 29.061 [13].

4.3.12 Reference point Presence Network Agent – 3GPP AAA Server (Pr)

This reference point shall allow the 3GPP AAA Server to report IP-connectivity related events to the Presence Network Agent (such as WLAN UE attaching/detaching and tunnel establishment/removal). The Pr reference point shall be based on mechanisms of existing interfaces of the 3GPP-WLAN interworking architecture defined in 3GPP TS 23.234 [19].

4.3.13 Reference point Presence Network Agent – PDG (Pp)

This reference point shall allow the PDG to report presence relevant events to the Presence Network Agent (such as tunnel establishment/removal, allocation of the remote IP address for the WLAN UE). This reference point is based on reusing of the Wi reference point.

****************** The 5th Change*********************

5.2.2.2 Suppliers of Presence Information

The Presence Network Agent may receive Presence information from one or more of the following 2G/3G network elements over the specified reference point:

| Network Element supplying Presence Information	Reference Point
HSS/HLR	Ph
S-CSCF	Pi
MSC Server/VLR	Pc
SGSN	Pg
GGSN	Pk
GMLC	Pl
3GPP AAA Server	Pr
PDG	Pp

******************* The 6th Change *********************

Annex B (Informative):
3GPP-WLAN IW architecture as a supplier for Presence informationVoid

This Annex describes initial concepts for retrieving Presence information from the 3GPP-WLAN interworking architecture. These concepts are expected to be further developed, and parts from this Annex are expected to be moved to the normative part of this Technical Specification.

B.1 Reference architecture Model with 3GPP-WLAN supplier

The reference point between AAA and Network Agent is included in the Presence reference architecture below.
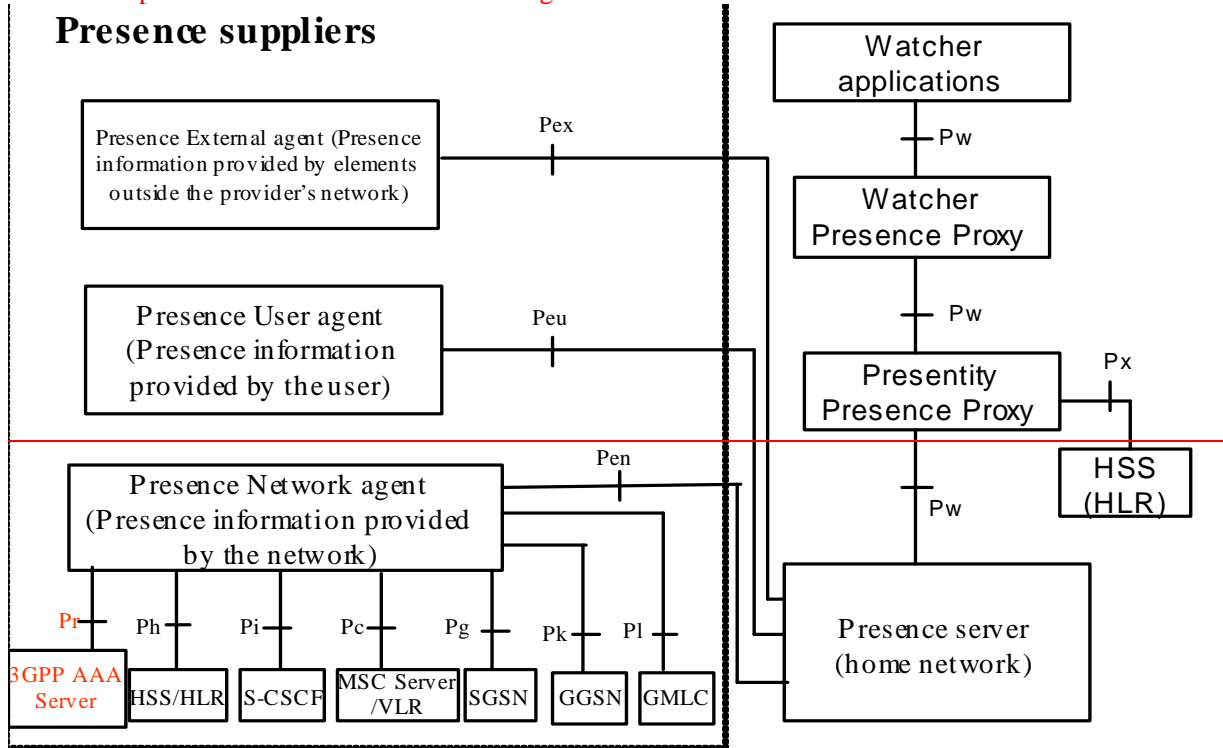
Interfaces Ph, Pi, Pc, Pg, Pk and Pl are based on existing R5 procedures e.g. CAMEL, MAP, CAP, RADIUS, ISC, Cx, Sh. The Pr interface is based on existing R6 procedures of the 3GPP-WLAN interworking architecture.

Figure B.1-1: Reference architecture to support a presence service

B.2 Reference point Presence Network Agent – 3GPP AAA Server (Pr)

This reference point shall allow the 3GPP AAA Server to report IP connectivity related events to the Presence Network Agent (such as connection/disconnection to the WLAN interworking service). The Pr reference point shall be based on mechanisms of existing interfaces of the 3GPP-WLAN interworking architecture defined in 3GPP TS 23.234.

B.3 Suppliers of Presence Information in 3GPP-WLAN IW

The Presence Network Agent may receive Presence information from one or more of the following network elements over the specified reference point:

Network Element supplying Presence Information	Reference Point
3GPP AAA Server	Pr

B.4 3GPP-WLAN Notification process of the Presence Server

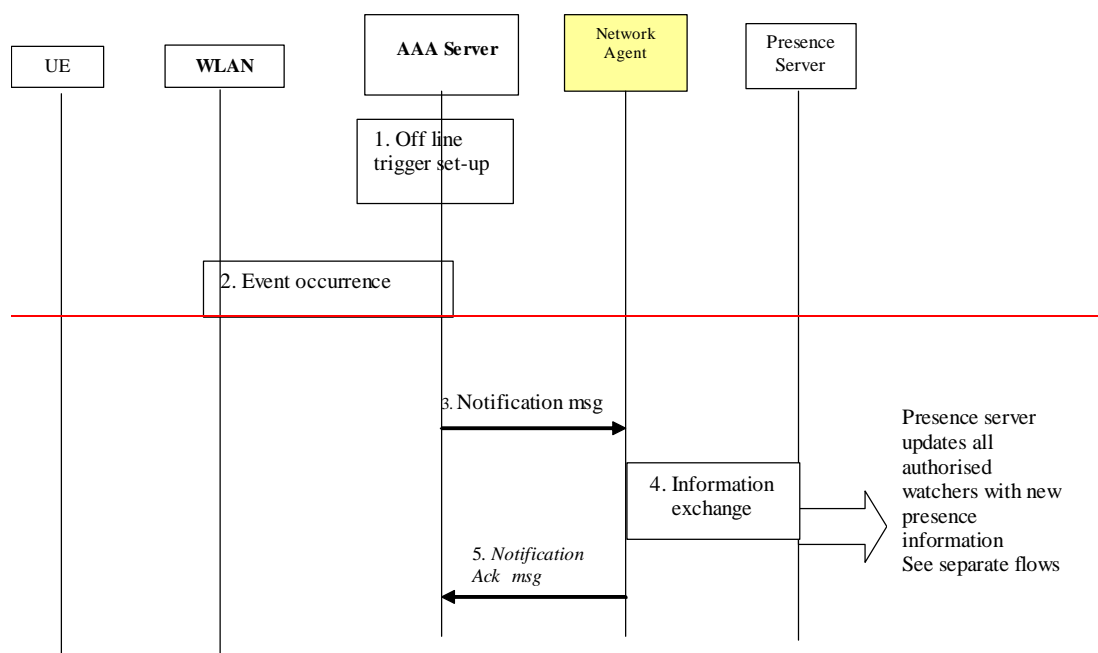The following example flow describes how the presence server is notified of an event by the network elements for a WLAN subscriber.

Figure B.4-1: WLAN Notification procedure for the Presence Server.

6. For network event to be reported on behalf of a WLAN subscriber, the necessary triggers are armed in the AAA SERVER. This takes place off-line and is outside the scope of this TR as to how it is achieved.

7. At the occurrence of an event between the WLAN and the AAA SERVER, (e.g UE connection or disconnection) a notification message is generated.

8. A notification message is sent to the Network Agent via Pr interface on the occurrence of an event, details of this are outside the scope of this flow. There may be some address resolution needed by the network agent to locate the presence server but details of this are also outside the scope of this flow.

9. The Network Agent notify the Presence Server by exchanging messages via the Pen interface.

10. Network Agent sends an acknowledge message to the AAA Server.

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CHANGE REQUEST

| ⌘ | **23.141** CR **064** | ⌘ **rev** **1** | ⌘ Current version: | **6.5.0** | ⌘ |

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Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network **X**

Title: ⌘	Level of support in the Presence Network Agent	
Source: ⌘	SA2 (Ericsson)	
Work item code: ⌘	PRESNC	***Date:*** ⌘ 20/05/2004

Category: ⌘ **F**		***Release:*** ⌘ Rel-6
	Use one of the following categories:	*Use one of the following releases:*
	F *(correction)*	*2 (GSM Phase 2)*
	A *(corresponds to a correction in an earlier release)*	*R96 (Release 1996)*
		R97 (Release 1997)
	B *(addition of feature),*	*R98 (Release 1998)*
	C *(functional modification of feature)*	*R99 (Release 1999)*
	D *(editorial modification)*	*Rel-4 (Release 4)*
	Detailed explanations of the above categories can be found in 3GPP TR 21.900.	*Rel-5 (Release 5)*
		Rel-6 (Release 6)

Reason for change: ⌘	It is not clear which reference points the Presence Network Agent is required to support.	
Summary of change: ⌘	It is clarified that it is a matter of implementation which reference points the Presence Network Agent supports towards suppliers of Presence information.	
Consequences if not approved: ⌘	It remains ambigous of which reference points the Presence Network Agent is required to support	

Clauses affected: ⌘	5.2.2.2	

Other specs ⌘	**Y**	**N**		⌘
Affected:		**X**	Other core specifications	
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘	There is no overlap with CR 061, that affects the same subclause	

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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.

<< Changed section >>

5.2.2 Presence Network Agent

5.2.2.1 Functions of the Presence Network Agent

The Presence Network Agent element shall provide the following functionality:

- The Presence Network Agent shall receive Presence information from network elements within the HPLMN and VPLMN.

- The Presence Network Agent shall be able to send requests to the HSS/HLR to cause other network elements to send (or stop sending) Presence Information to the Presence Network Agent.

- The Presence Network Agent shall associate Presence information with the appropriate Subscriber/Presentity combination.

- The Presence Network Agent shall convert the Presence information into the format standardized for the Pen interface.

- The Presence Network Agent shall publish the Presence information to the Presence Server across the Pen reference point.

5.2.2.2 Suppliers of Presence Information

The Presence Network Agent may receive Presence information from one or more of the following 2G/3G network elements over the specified reference point:

Network Element supplying Presence Information	Reference Point
HSS/HLR	Ph
S-CSCF	Pi
MSC Server/VLR	Pc
SGSN	Pg
GGSN	Pk
GMLC	Pl

It is a matter of implementation and operator choice which reference points the Presence Network Agent supports towards suppliers of Presence information. It should be noted that the Ph reference point is used to activate and deactivate publishing of Presence information via other reference points.

3GPP TSG-SA WG2 #40

Sophia Antipolis, France, 17th – 21st May 2004

Tdoc ⌘ *S2-042262*

<div style="text-align:right">CR-Form-v7</div>

CHANGE REQUEST

| ⌘ | **23.141** CR **065** | ⌘ **rev** | **2-** | ⌘ | Current version: | **6.5.0** | ⌘ |

*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 **X**

Title:	⌘	Correction of PI text referencing Le to reference LIF-MLP directly

Source:	⌘	SA2 (Lucent Technologies)

Work item code: ⌘	PRESNC		**Date:** ⌘	17/05/2004

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 existing description of the PI reference point states that it is implemented using the mechanisms defined for the Le reference point in 23.271. However, 23.271 does not define mechanisms for Le. Instead it states in a note that "LIF-MLP may be used". 23.002 is also referenced by the PI text but again it only states that Le "may use Mobile Location Protocol" (and OSA). Therefore referencing 23.271 and 23.002 doesn't really achieve the desired aim of allowing a protocol to be specified for PI. Having a reference directly to the protocol specification in the Stage 2 document avoids the need to create a Stage 3 specification just to reference LIF-MLP.

Summary of change: ⌘	The OMA protocol LIF-MLP is now referenced directly from the text defining PI.

Consequences if not approved:	⌘	There will be no protocol specified for the PI reference point.

Clauses affected:	⌘	2, 4.3.8

		Y	**N**		
Other specs affected:	⌘		**X**	Other core specifications	⌘
			X	Test specifications	
			X	O&M Specifications	

Other comments:	⌘	

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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.

************* The First Change*************

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 22.141: "Presence service; Stage 1".

[3]   Common Presence and Instant Messaging (CPIM) Presence Information Data Format, Internet Draft http://www.ietf.org/internet-drafts/draft-ietf-impp-cpim-pidf-05.txt, May 2002

Editor's note: The above document is not yet published as an RFC, where possible the reference should be converted to an RFC prior to approval of this document.

[4]   Session Initiation Protocol (SIP) Extensions for Presence, Internet-Draft http://www.ietf.org/internet-drafts/draft-ietf-simple-presence-07.txt, May 2002

Editor's note: The above document is not yet published as an RFC, where possible the reference should be converted to an RFC prior to approval of this document.

[5]   3GPP TS 33.203: "3G security; Access security for IP-based services".

[6]   3GPP TS 32.200: "Telecommunication management; Charging management; Charging principles".

[7]   3GPP TS 32.225: "Telecommunication management; Charging management; Charging data description for the IP Multimedia Subsystem (IMS)".

[8]   3GPP TS 33.210: "3G security; Network Domain Security (NDS); IP network layer security".

[9]   3GPP TS 23.228: "IP Multimedia Subsystem (IMS); Stage 2".

[10]   3GPP TS 23.218: "IP Multimedia (IM) session handling; IM call model; Stage 2".

[11]   IETF RFC 3265: "Session Initiation Protocol (SIP) Event Notification"

[12]   A SIP Event Package for List Presence, Internet-Draft, http://search.ietf.org/internet-drafts/draft-ietf-simple-presencelist-package-00.txt, June 2002

Editor's note: The above document is not yet published as an RFC, where possible the reference should be converted to an RFC prior to approval of this document.

[13]   3GPP TS 29.061: "Interworking between the Public Land Mobile Network (PLMN) supporting Packet Based services and Packet Data Networks (PDN)".

[14]   3GPP TS 23.271: "Location Services (LCS); Functional description; Stage 2".

[15]   3GPP TS 23.127: "Virtual Home Environment (VHE) / Open Service Access (OSA); Stage 2".

[16]   IETF RFC 2778: "A Model for Presence and Instant Messaging".

[17]   IETF RFC 2779: "Instant Messaging / Presence Protocol Requirements".

[18]   3GPP TS 23.002: "Network architecture".

[19]   LIF TS 101: "Mobile Location Protocol Specification"(Location Interoperability Forum 2001) [Available at http://www.openmobilealliance.org]

************* The Second Change*************

4.3.8   Reference point Presence Network Agent – GMLC (Pl)

This reference point shall be used by the Presence Network Agent to retrieve location information related to a subscriber (associated with the presentity). This reference point is an instance of the Le reference point (defined in TS 23.271 [14] and TS 23.002 [18]). In the case of Presence the LCS client (defined in TS 23.271) is the Presence Network Agent and so the protocol implementing Pl needs to be defined. Though normally a stage 3 responsibility in this case the protocol to be used is defined here since it is a reference to an existing protocol. Thus, Pl shall conform to OMA's LIF-MLP specification [19]. ~~This reference point is implemented as defined in 3GPP TS 23.271 [14] for the Le reference point as defined in TS 23.002 [18].~~

CR-Form-v7

CHANGE REQUEST

⌘ **23.141** CR **066** ⌘**rev** **-** ⌘ Current version: **6.5.0** ⌘

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 **X**

Title: ⌘	Update of misleading example relating to Pi reference point
Source: ⌘	SA2 (Lucent Technologies)
Work item code: ⌘	PRESNC **Date:** ⌘ 04/05/2004

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: ⌘	As a result of a liaison exchange with 3GPP WG CN1, it was agreed by SA2 that the presence service would only specify the use of the Pi reference point to provide registration state. Text in subclause 4.3.6 implies that this reference point can provide session state. This is modified to indicate that this reference point can provide registration state.
Summary of change: ⌘	The example in subclause 4.3.6 is modified to refer to registration state.
Consequences if not approved: ⌘	Discrepancy between stage 3 (based on liaison information from SA2) and stage 2.

Clauses affected: ⌘	4.3.6

	Y	N		
Other specs affected: ⌘		X	Other core specifications ⌘	
		X	Test specifications	
		X	O&M Specifications	

Other comments: ⌘	

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.

4.3 Reference points

4.3.1 Reference point Presence User Agent – Presence Server (Peu)

This reference point shall allow a presentity's presence information to be supplied to the Presence Server. [3] provides guidelines for such an interface. The transport on this reference point shall not impose any limitations on the size of the presence information.

Peu shall provide mechanisms for the Presence User Agent to manage subscription authorisation policies.

Peu shall provide mechanisms for the Presence User Agent to obtain information on watcher subscriptions to the Presentities Presence Information.

Peu shall provide mechanisms for the Presence User Agent to supply or update only a certain subset of the presentity's presence information to the Presence Server. It shall also be possible for the Presence User Agent to supply the complete presence document over Peu.

Peu shall support SIP-based communications for publishing presence information, however, in order to provide all the functionalities required on this reference point, a combination of multiple protocols may be used.

IPv6 shall be supported for all functionalities required from a Presence User Agent that supports the Peu reference point. An IPv6 capable 3GPP UE shall use IPv6 when accessing Peu.

4.3.2 Reference point Network Agent – Presence Server (Pen)

This reference point shall allow a presentity's presence information to be supplied to the Presence Server. [3] provides guidelines for such an interface. The transport on this reference point shall not impose any limitations to the size of the presence information.

Pen shall provide mechanisms for the Network Agent to manage subscription authorisation policies.

Pen shall provide mechanisms for the Network Agent to supply or update only a certain subset of the presentity's presence information to the Presence Server.

Pen shall provide mechanisms for activating or deactivating the reporting of Presence Information for a given presentity from the network entities within the PLMN.

In order to provide the all the functionalities required on this reference point, a combination of multiple protocols may be used. The protocols used at the Pen reference point are not standardised.

4.3.3 Reference point Presence External Agent – Presence Server (Pex)

This reference point shall allow a presentity's presence information to be supplied to the Presence Server. [3] provides guidelines for such an interface. The transport on this reference point shall not impose any limitations on the size of the presence information.

Pex shall provide mechanisms for the Presence External Agent to supply or update only a certain subset of the presentity's presence information to the Presence Server.

In order to provide all the functionalities required on this reference point, a combination of multiple protocols may be used.   Presence information obtained from an external network by the Presence External Agent is transferred across the Pex reference point to the Presence Server.

4.3.4 Reference point Watcher applications – Presence Server (Pw)

This reference point shall allow a Watcher application to request and obtain presence information. [3] provides guidelines for such an interface.

The transport shall not impose any limitations to the size of the presence information.

In order to provide all the functionalities required on this interface, a combination of multiple protocols may be used.

This reference point shall support both presence monitoring and fetching modes. In the fetching mode, it shall be possible for the watcher to once request all or only a subset of a presentity's presence information (e.g. one or more tuples). The subset of the presence information is defined by the filter that is carried in the presence information subscription.

In the monitoring mode, it shall be possible for the watcher to request monitoring of all or a subset of a presentity's presence information (i.e. one or more tuples) . Watcher shall be able to explicitly indicate the capability to process partial updates. The subset of the presence information is defined by the filter that is carried in the presence information subscription. It shall be possible for the watcher to request the presence server to filter out information when the watcher is equal to the publishing Presence User Agent.

It shall be possible for the notifications containing the presentity's presence information to contain only information as defined by filters. It shall be possible for the notifications containing the presentity's presence information to contain only the modified tuples, i.e. only those tuples which have changed since the last notification.

IPv6 shall be supported for all functionalities required from a Watcher application that supports the Pw reference point. An IPv6 capable 3GPP UE shall use IPv6 when accessing Pw.

4.3.5   Reference point HSS/HLR – Presence Network Agent (Ph)

This reference point shall allow the Presence Network Agent to query HSS/HLR about the state and status of a subscriber (associated with a presentity) from the CS Domain, GPRS and IMS perspective.

This reference point permits the Presence Network Agent to activate and deactivate the reporting of mobility management events from the MSC/VLR and/or the SGSN and/or the IMS-specific reports from the S-CSCF.

This reference point uses capabilities defined for the Sh reference point as defined in 3GPP TS 23.002 [14] as well as the MAP interface.

4.3.6   Reference point S-CSCF – Presence Network Agent (Pi)

The S-CSCF may provide IMS-specific presence information ~~(e.g. about ongoing IMS sessions)~~ (e.g. about IMS registration state). This reference point shall use mechanisms defined for the ISC reference point as defined in 3GPP TS 23.002 [18].

4.3.7   Reference point Presentity Presence Proxy – HSS (Px)

This interface shall assist locating the Presence Server of the presentity. This interface is implemented using the mechanisms defined for the Cx and Dx reference points as defined in TS 23.002 [18].

4.3.8   Reference point Presence Network Agent – GMLC (Pl)

This reference point shall be used by the Presence Network Agent to retrieve location information related to a subscriber (associated with the presentity). This reference point is implemented using the mechanisms as defined in 3GPP TS 23.271 [14] for the Le reference point as defined in TS 23.002 [18].

4.3.9   Reference point Presence Network Agent – SGSN (Pg)

This reference point shall allow the SGSN to report mobility management related events (such as attach/not reachable for paging/detach/routing area update) to the Presence Network Agent.

This reference point may allow the SGSN to report Mobility States (such as Detached, Idle and Connected) and Session States (such as PDP context active and inactive).

This reference point is implemented using the existing mechanisms of CAMEL phase 4, 3GPP Release 5.

4.3.10 Reference point Presence Network Agent –MSC Server/VLR (Pc)

This reference point shall allow the MSC Server/VLR to report the mobility management related events to the Network Agent (such as attach/detach/location area update) and may allow the MSC Server/VLR to report call related events (such as call setup with the bearer information and call release).

This reference point may allow the MSC Server/ VLR to report Mobility States (such as Detached, Idle and Connected) and Call States (such as Busy with Bearer information and Idle).

This reference point is implemented using the existing mechanisms of CAMEL phase 4, 3GPP Release 5.

4.3.11 Reference point Presence Network Agent – GGSN (Pk)

This reference point shall allow the GGSN to report presence relevant events to the Presence Network Agent (such as PDP context activation/de-activation). This reference point is implemented using the mechanisms of the RADIUS interface for reporting of access requests on Gi reference point as defined in 3GPP TS 29.061 [13].