

Source: TSG CN WG1
Title: CRs on Rel-6 WI PRESNC towards TS 24.141 and TS 24.229
Agenda item: 9.2
Document for: APPROVAL

This document contains **13 CRs on Rel-6 Work Item "PRESNC"**, that have been agreed by TSG CN WG1 CN#35 meeting and forwarded to TSG CN Plenary meeting #25 for approval.

TDoc #	Tdoc Title	Spec	CR #	Rev	CAT	Current version	WI	Rel
N1-041388	Editorial issues	24.141	3	2	D	6.0.0	PRESNC	Rel-6
N1-041329	Watcher cleanup and alignment with PUA	24.141	4	1	F	6.0.0	PRESNC	Rel-6
N1-041330	PUA clause restructuring	24.141	5	3	D	6.0.0	PRESNC	Rel-6
N1-041566	GAA impacts	24.141	6	1	F	6.0.0	PRSNCR	Rel-6
N1-041567	XCAP roles	24.141	7	1	C	6.0.0	PRSNCR	Rel-6
N1-041568	XCAP Change	24.141	8	1	F	6.0.0	PRSNCR	Rel-6
N1-041411	Policy Capability References	24.141	9		C	6.0.0	PRESNC	Rel-6
N1-041413	Filter criteria update	24.141	11		F	6.0.0	PRESNC	Rel-6
N1-041569	Enhanced partial publication description	24.141	14	1	D	6.0.0	PRESNC	Rel-6
N1-041571	Publication Rate Limiting	24.141	15	1	C	6.0.0	PRESNC	Rel-6
N1-041572	Correction to processing PUBLISH with the "multipart/related" content type	24.141	17	1	F	6.0.0	PRESNC	Rel-6
N1-041499	XML document corrections of message flows	24.141	18		F	6.0.0	PRESNC	Rel-6
N1-041344	Correction of User identity verification at the AS	24.229	658		F	6.3.0	PRESNC	Rel-6

CR-Form-v7

CHANGE REQUEST

⌘ **24.141 CR 004** ⌘ rev **1** ⌘ Current version: **6.0.0** ⌘

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:	⌘ Watcher cleanup and alignment with PUA		
Source:	⌘ Ericsson		
Work item code:	⌘ PRESNC	Date:	⌘ 12/08/2004
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:	⌘ Misalignment between the PUA and the Watcher roles		
Summary of change:	⌘ Alignment with text for prescaps for the PUA and further corrections due to faulty implementation of previous changes.		
Consequences if not approved:	⌘ Faulty specification		

Clauses affected:	⌘ 5.3.2.1, 5.3.2.2										
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="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><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										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 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.

5.3.2 Watcher

5.3.2.1 General

A watcher is an entity that is [subscribed or requests presence information about a presentity from the PS.](#)

~~subpresence tuple. The watcher application may include filters in the body of the SUBSCRIBE request in accordance with draft-ietf-simple-filter-format-00 [30] and draft-ietf-simple-event-filter-funct-00 [31].~~

~~The watcher application may indicate its support for partial notification using the Accept header field in accordance with draft-ietf-simple-partial-notify-01 [24].~~

~~The watcher application shall interpret the received presence information according to the following:~~

~~a) a tuple including a <contact-type> element as defined in draft-ietf-simple-rpid-03 [26] with the value "presentity" means general information about the preseribed or requests presence information about a presentity from the PS.~~

In addition to the procedures specified in subclause 5.3.2, the watcher shall support the procedures specified in 3GPP TS 24.229 [9] appropriate to the functional entity in which the watcher is implemented.

5.3.2.2 Subscription for presence information state changes and notification acceptance

When the watcher application intends to subscribe for presence information state changes of a presentity, it shall generate a SUBSCRIBE request in accordance with RFC 3265 [19] and draft-ietf-simple-presence-10 [27].

The watcher application shall implement the "application/pidf+xml" content type as described in draft-ietf-imp-pim-pidf-08 [21] together with the PIDF extensions defined in draft-ietf-simple-rpid-03 [26].

The watcher application may implement the PIDF extensions defined in draft-ietf-simple-cipid-01 [32].

~~The watcher application shall implement draft-ietf-simple-prescaps-ext-00 [25] in order to be able to understand SIP user agent capabilities extensions included in the presence document. The extension may be used by the watcher application for interpreting the type of the service described by the prentity;~~

[The watcher application shall implement draft-ietf-simple-prescaps-ext-00 \[25\] if it wants to make use of SIP user agent capabilities extensions included in the presence document. The extension may be used by the watcher application for interpreting the type of the service described by the presence tuple.](#)

[The watcher application may include filters in the body of the SUBSCRIBE request in accordance with draft-ietf-simple-filter-format-00 \[30\] and draft-ietf-simple-event-filter-funct-00 \[31\].](#)

[The watcher application may indicate its support for partial notification using the Accept header field in accordance with draft-ietf-simple-partial-notify-01 \[24\].](#)

[The watcher application shall interpret the received presence information according to the following:](#)

[a\) a tuple including a <contact-type> element as defined in draft-ietf-simple-rpid-03 \[26\] with the value "presentity" means general information about the presentity;](#)

b) a tuple including a <relationship> element and <contact-type> element with the value "presentity" as defined in draft-ietf-simple-rpid-03 [26] means information about an alternate contact to the presentity;

c) a tuple including a <contact-type> element as defined in draft-ietf-simple-rpid-03 [26] with the value "service" means communication mean specific information. The communication mean described by the tuple is deduced from the URI scheme of the contact address information present in the <contact> element as defined in draft-ietf-imp-pim-pidf-08 [21]. If the URI scheme of the contact address information provides ambiguous information about the communication means, the watcher application shall further examine other elements of the tuple to decide the communication mean. Such elements can be the <methods> element, any of the different media type specific elements as defined in draft-ietf-simple-prescaps-ext-00 [25], or the <relationship> element as defined in draft-ietf-simple-rpid-03 [26].

Additional extensions can be used to express application specific attributes, but their usage is outside the scope of this version of the specification.

CR-Form-v7

CHANGE REQUEST

⌘ **24.141 CR 005** ⌘ rev **3** ⌘ Current version: **6.0.0** ⌘

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

Title:	⌘ PUA clause restructuring		
Source:	⌘ Ericsson		
Work item code:	⌘ PRESNC	Date:	⌘ 12/08/2004
Category:	⌘ D	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:	⌘ Logical split of subclause 5.3.1.2		
Summary of change:	⌘ Restructuring is subclauses		
Consequences if not approved:	⌘ Less readable specification		

Clauses affected:	⌘ 5.3.1.2, 5.3.1.3, 5.3.1.4, 5.3.1.5., 5.3.1.6										
Other specs affected:	<table border="1" style="display: inline-table; vertical-align: middle;"> <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	⌘
Y	N										
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<input type="checkbox"/>	<input checked="" type="checkbox"/>										
		Test specifications									
		O&M Specifications									
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.

5.3.1 Presence User Agent (PUA)

5.3.1.1 General

A PUA is an entity that provides presence information to a PS.

In addition to the procedures specified in subclause 5.3.1, the PUA shall support the procedures specified in 3GPP TS 24.229 [9] appropriate to the functional entity in which the PUA is implemented.

Editor's Note: There is a need for a mechanism to let the IMS network and/or PS control the rate at which PUAs generate PUBLISH requests. Unless referenced IETF specifications provide support for implementation of this kind of control, such a mechanism or guidance on max rates must be identified and described here.

5.3.1.2 Publication of presence information

When the PUA intends to publish its own view of the presentity's presence information it shall generate a PUBLISH request by acting as an Event Publication Agent (EPA) in accordance with draft-ietf-sip-publish-03 [23].

The PUA shall implement the "application/pidf+xml" content type as described in draft-ietf-impp-cpim-pidf-08 [21] together with the Presence Information Data Format (PIDF) extensions defined in draft-ietf-simple-rpid-03 [26].

The PUA may implement the PIDF extensions defined in draft-ietf-simple-cipid-01 [32].

The PUA may implement location information according to the format defined in draft-ietf-geopriv-pidf-lo-01 [37].

NOTE 1: The categorization of presence attributes to generic information attributes and communication address specific attributes is done using the <contact-type> element. The value of the <contact-type> element categorizes the content of the tuple in such a way that the value "presentity" denotes general information about the presentity and the value "service" denotes the communication mean specific information. The presence document consists of one or more tuples describing the presentity related information and one or more tuples describing information about different communication means.

~~The eXtensible Markup Language (XML) Schema Definition of the "application/pidf+xml" format or the "application/pidf-partial+xml" format cover the definition of the 3GPP subscriber's presence attributes and the PUA shall perform the following mapping:~~

- ~~— the communication address (containing communication means, status and contact address) attribute and the priority attribute are represented by a <tuple> element including a basic <status> element and one or more <contact> elements containing a priority attribute as defined in draft-ietf-impp-cpim-pidf-08 [21].~~
- ~~— The PUA represents the subscriber's status by including a <contact-type> element defined in draft-ietf-simple-rpid-03 [26] with the value "presentity" and a basic <status> element defined in draft-ietf-impp-cpim-pidf-08 [21]. In order to express more granularity in values, <activity> and <privacy> elements both defined in draft-ietf-simple-rpid-03 [26] can be used inside the <status> elements. Further PIDF extensions as defined in draft-ietf-simple-cipid-01 [32] can also be used.~~
- ~~— In case of including multiple presentity related tuples in the presence document, all the presentity related tuples except one contains information about an alternate contact related to the presentity; the type of the alternate contact shall be indicated using the <relationship> element defined in draft-ietf-simple-rpid-03 [26];~~

~~**NOTE 2:** draft-ietf-simple-rpid-03 [26] defines also other values of the <contact-type> element. Those values can be used to create additional categories.~~

- ~~— the text attribute is represented by the <note> element as defined in draft-ietf-impp-cpim-pidf-08 [21]; and~~
- ~~— the location attribute is represented by the elements defined in draft-ietf-geopriv-pidf-lo-01 [37] and the <placetype> element defined in draft-ietf-simple-rpid-03 [26].~~

~~**NOTE 3:** Only information elements relevant for the application is included in the PUBLISH request. Attributes not relevant or available (e.g. the text attribute or the location attribute) are omitted.~~

~~Additional extensions can be used to express application specific attributes, but their usage is outside the scope of this version of the specification.~~

The PUA shall implement draft-ietf-simple-prescaps-ext-00 [25] if it wants to make use of SIP user agent capabilities in the presence document. The extension may be used for describing the type of the service described by the presence tuple.

~~The PUA shall implement the "multipart/related" content type as described in RFC 2387 [14] if it wants to aggregate other Multipurpose Internet Mail Extensions (MIME) objects with the "application/pdf+xml" content type.~~

~~When a presence attribute has a value of a MIME object, the PUA shall either:~~

- ~~a) publish the presence document and the MIME object utilizing the "multipart/related" content type in the PUBLISH request; or~~
- ~~b) make use of content indirection.~~

~~When the PUA decides to use the content indirection mechanism for publishing an initial or modified value of a presence attribute the PUA shall follow the following procedure:~~

- ~~a) either store the MIME object behind an HTTP URI on the PS or ensure that the MIME object and a HTTP URL pointing to that MIME object already exists on the PS;~~
- ~~b) use the "multipart/related" content type as described in RFC 2387 [14] with the content indirection mechanism as specified in draft-ietf-sip-content-indirect-mech-03 [40] for the publication of presence information format as follows:~~
 - ~~— set a CID URI referencing to other MIME multipart body which contains the content indirection information as the value of the XML element whose value is delivered as an indirect content;~~
 - ~~— include the presence document of the format "application/pdf+xml" or "application/pdf-partial+xml" in the root of the body of the "multipart/related" content;~~
 - ~~— specify the part having information about the MIME object by using the "message/external-body" content type, defining the HTTP URI, versioning information and other information about the MIME object as described in draft-ietf-sip-content-indirect-mech-03 [40].~~

~~NOTE 4: The versioning information is used for determining whether or not the MIME object indirectly referenced by a URI has changed or not;~~

~~When storing a MIME object on the PS the PUA shall:~~

- ~~a) construct as many HTTP URIs as many objects to be stored; and~~
- ~~b) formulate every HTTP URI according to a predefined directory structure.~~

~~NOTE 5: The PUA has the root directory for storing the MIME objects on the PS preconfigured.~~

~~NOTE 6: The PUA needs to store the MIME objects on the PS behind the HTTP URI(s) created previously using standard HTTP procedures as defined in RFC 2616 [15].~~

The PUA may indicate its support for partial publishing by including the "application/pdf-partial+xml" content type as described in draft-ietf-simple-partial-pdf-format-00 [38]. The initial PUBLISH request shall contain the full publication, where the state attribute is set to value "full".

On successful response from the PS, the PUA in subsequent PUBLISH requests shall generate partial publications, where the state attribute is set to value 'partial'.

If the PUA receives a 415 (Unsupported Media Type) response to the PUBLISH request with "application/pdf+xml" in the Accept header field, the PUA shall send a PUBLISH request including the "application/pdf+xml".content type.

Editor's Note: The above procedures on partial publishing will be replaced by references to the IETF draft-lonnfors-simple-publish-partial-00 once the draft has been discussed in IETF.

The PUA shall update the presence information, either 600 s before the publication expiration time if the publication period indicated from the PS in the response to the PUBLISH request was for greater than 1 200 s, or when half of the time has expired if the publication period was for 1 200 s or less, unless the UE has determined that an update to the presence information is not required.

When the PUA intends to show different value of the same presence attribute to different watchers, the PUA shall publish a tuple for every value it intends to show, all including a different value of the same presence attribute. The PUA shall label different information with different value of the <class> element in every published tuple as defined in draft-ietf-simple-rpid-03 [26]. The PUA shall also authorize different tuples to different watchers or watcher groups by manipulating the subscription authorization policy as defined in subclause 6.3.1.2.

5.3.1.3 Mapping of presence attributes

The eXtensible Markup Language (XML) Schema Definition of the "application/pidf+xml" format or the "application/pidf-partial+xml" format cover the definition of the 3GPP subscriber's presence attributes and the PUA shall perform the following mapping:

- the communication address (containing communication means, status and contact address) attribute and the priority attribute are represented by a <tuple> element including a basic <status> element and one or more <contact> elements containing a priority attribute as defined in draft-ietf-impp-cpim-pidf-08 [21].

The PUA represents the subscriber's status by including a <contact-type> element defined in draft-ietf-simple-rpid-03 [26] with the value "presentity" and a basic <status> element defined in draft-ietf-impp-cpim-pidf-08 [21]. In order to express more granularity in values, <activity> and <privacy> elements both defined in draft-ietf-simple-rpid-03 [26] can be used inside the <status> elements. Further PIDE extensions as defined in draft-ietf-simple-cipid-01 [32] can also be used.

In case of including multiple presentity related tuples in the presence document, all the presentity related tuples except one contains information about an alternate contact related to the presentity; the type of the alternate contact shall be indicated using the <relationship> element defined in draft-ietf-simple-rpid-03 [26];

NOTE 1: draft-ietf-simple-rpid-03 [26] defines also other values of the <contact-type> element. Those values can be used to create additional categories.

- the text attribute is represented by the <note> element as defined in draft-ietf-impp-cpim-pidf-08 [21]; and
- the location attribute is represented by the elements defined in draft-ietf-geopriv-pidf-lo-01 [37] and the <placetype> element defined in draft-ietf-simple-rpid-03 [26].

NOTE 2: Only information elements relevant for the application is included in the PUBLISH request. Attributes not relevant or available (e.g. the text attribute or the location attribute) are omitted.

Additional extensions can be used to express application specific attributes, but their usage is outside the scope of this version of the specification.

5.3.1.4 Storing presence attributes by multipart/related or content indirection

The PUA shall implement the "multipart/related" content type as described in RFC 2387 [14] if it wants to aggregate other Multipurpose Internet Mail Extensions (MIME) objects with the "application/pidf+xml" content type.

When a presence attribute has a value of a MIME object, the PUA shall either:

- a) publish the presence document and the MIME object utilizing the "multipart/related" content-type in the PUBLISH request; or
- b) make use of content indirection.

When the PUA decides to use the content indirection mechanism for publishing an initial or modified value of a presence attribute the PUA shall follow the following procedure:

- a) either store the MIME object behind an HTTP URI on the PS or ensure that the MIME object and a HTTP URL pointing to that MIME object already exists on the PS;

b) use the "multipart/related" content type as described in RFC 2387 [14] with the content indirection mechanism as specified in draft-ietf-sip-content-indirect-mech-03 [40] for the publication of presence information format as follows:

- set a CID URI referencing to other MIME multipart body which contains the content indirection information as the value of the XML element whose value is delivered as an indirect content;
- include the presence document of the format "application/pidf+xml" or "application/pidf-partial+xml" in the root of the body of the "multipart/related" content;
- specify the part having information about the MIME object by using the "message/external-body" content type, defining the HTTP URI, versioning information and other information about the MIME object as described in draft-ietf-sip-content-indirect-mech-03 [40].

NOTE 1: The versioning information is used for determining whether or not the MIME object indirectly referenced by a URI has changed or not;

When storing a MIME object on the PS the PUA shall:

- a) construct as many HTTP URIs as many objects to be stored; and
- b) formulate every HTTP URI according to a predefined directory structure.

NOTE 2: The PUA has the root directory for storing the MIME objects on the PS preconfigured.

NOTE 3: The PUA needs to store the MIME objects on the PS behind the HTTP URI(s) created previously using standard HTTP procedures as defined in RFC 2616 [15].

5.3.1.53 Subscription for the watcher information event template package

Upon activation of the presence service, the PUA application shall subscribe for the watcher information state changes in accordance with draft-ietf-simple-winfo-package-05 [28] and draft-ietf-simple-winfo-format-04 [29].

The PUA application may include filters in the body of the SUBSCRIBE request in accordance with draft-ietf-simple-filter-format-00 [30] and draft-ietf-simple-event-filter-funct-00 [31].

5.3.1.64 Subscription for the xcap-change package

In order to get notifications of changes to XML documents manipulated via the Ut reference point the PUA may generate a SUBSCRIBE request in accordance with draft-ietf-simple-xcap-package-01 [39].

CR-Form-v7

CHANGE REQUEST

⌘ **24.229 CR 658** ⌘ rev **-** ⌘ Current version: **6.3.0** ⌘

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 of User Identity verification at the AS		
Source:	⌘ Infineon Technologies		
Work item code:	⌘ PRESNC	Date:	⌘ 16/07/2004
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:	⌘ The "User identity verification at the AS" subsection still contains information that is specific for the presence service. This subsection should be made generic as it shall be applicable to other services and not only to the presence service.
Summary of change:	⌘ The expression "SUBSCRIBE request" within the user identity verification procedure is replaced by the generic expression "initial or standalone request".
Consequences if not approved:	⌘ "User identity verification at the AS" subsection is not generic

Clauses affected:	⌘ 5.7.1.4						
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="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><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 checked="" type="checkbox"/>	<input type="checkbox"/>						
Other comments: ⌘							

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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.

----- PROPOSED CHANGE: Procedures at the AS -----

5.7.1.4 User identify verification at the AS

The procedures at the AS to accomplish user identity verification are described with the help of figure 5-1.

When the AS receives a SIP initial or standalone request that does not contain credentials, the AS shall:

Editor's Note: it is not clear what are the mechanisms available to transport the credentials. These mechanisms can include, among others, P-Asserted-Identity, Authorization header, digital signatures, S/MIME body, etc.

- a) if a Privacy header is present in the initial or standalone request and the Privacy header value is set to "id" or "user", then the user and the request are considered as anonymous, and no further actions are required. The AS shall consider the request as authenticated;
- b) if there is no Privacy header present in the initial or standalone request, or if the Privacy header contains a value other than "id" or "user", then the AS shall check for the presence of a P-Asserted-Identity header in the initial or standalone request. Two cases exists:
 - i) the initial or standalone request contains a P-Asserted-Identity header. This is typically the case when the user is located inside a trusted domain as defined by subclause 4.4. In this case, the AS is aware of the identity of the user and no extra actions are needed. The AS shall consider the request as authenticated.
 - ii) the initial or standalone request does not contain a P-Asserted-Identity header. This is typically the case when the user is located outside a trusted domain as defined by subclause 4.4. In this case, the AS does not have a verified identity of the user. The AS shall check the From header of the initial or standalone request. If the From header value in the **SUBSCRIBE**-initial or standalone request is set to "Anonymous", then the user and the request are considered as anonymous and no further actions are required. If the From header value does not indicate anonymity, then the AS shall challenge the user by issuing a 401 (Unauthorized) response including a challenge as per procedures described in RFC 3261 [26].

When the AS receives a SIP initial or standalone request that contains credentials but it does not contain a P-Asserted-Identity header the AS shall check the correctness of the credentials as follows:

- a) If the credentials are correct, then the AS shall consider the identity of the user verified, and the AS shall consider the request as authenticated;
- b) If the credentials are not correct, the AS may either rechallenge the user by issuing a 401 (Unauthorized) response including a challenge as per procedures described in RFC 3261 [26] (up to a predetermined maximum number of times predefined in the AS configuration data), or consider the user as anonymous. If the user is considered anonymous, the PS shall consider the request as authenticated.

*Editor's Note: It needs to be investigated whether the *maximum number of times predefined in the AS configuration data* creates a potential denial of service attack, as it requires the AS to keep states between different authentications trials.*

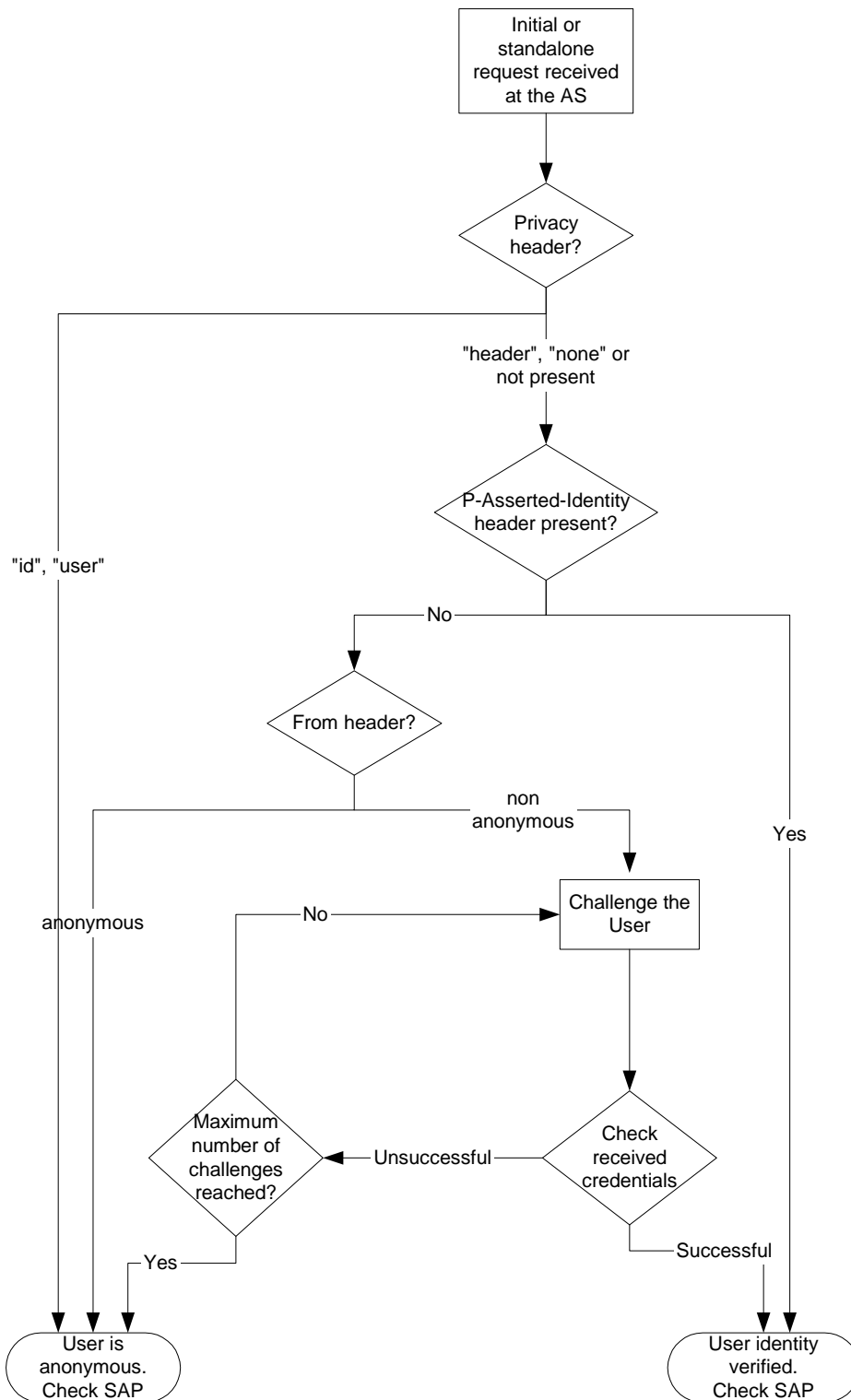


Figure 5-1: User identity verification flow at the AS

CR-Form-v7

CHANGE REQUEST

⌘ **24.141 CR 003** ⌘ rev **2** ⌘ Current version: **6.0.0** ⌘

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:	⌘ Editorial issues
Source:	⌘ Lucent Technologies, Siemens
Work item code:	⌘ PRESNC
Date:	⌘ 07/06/2004
Category:	⌘ D
<p>Use <u>one</u> of the following categories:</p> <p>F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification of feature) D (editorial modification)</p> <p>Detailed explanations of the above categories can be found in 3GPP TR 21.900.</p>	
Release:	⌘ Rel-6
<p>Use <u>one</u> of the following releases:</p> <p>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)</p>	

Reason for change: ⌘ A number of editorial issues require correction in 24.141

Summary of change: ⌘

- Incorrect order of statements in scope
- The abbreviation "TLS" is used within the document, but never defined in the abbreviations. Appropriate modifications are made to subclause 3.1 and 6.2.1 to cover this.
- Editor's note on the role of SIP and the role of Ut procedures in clause 4 is obsolete as these roles are clearly defined in clause 5 and 6.
- In subclause 5.2.2, it is indicated which subclauses contain procedures for the PUA, PS and RLS. Such a reference is missing for the PNA, and this is inserted.
- PNA is a role and is therefore renumbered to the role sub-clauses under 5.3
- In subclause 5.3.3.3, 4th paragraph, the introduction to the bullet list indicates "the PS shall". These words are wrongly repeated in the 1st and 2nd bullet items, and are therefore deleted.
- In subclause 5.4.1, "as follows" are inappropriate for what is now a reference to the material in subclause 5.4.2 (the CR inputting this material was split into two subclauses from the original proposal). A subclause reference is inserted instead.
- In subclause 6.2.2 and 6.2.3, appropriate references are inserted for HTTP digest.
- In subclause A.3.3.1, A.3.3.2, A.3.4.1, A.4.3.1, the word "are" is inserted as it is obviously missing from the sense.
- In subclause A.7, the word "signalling" is inserted in front of "flow" to distinguish it from other flows that may appear in stage 2, and for consistency with the remainder of the document.

Consequences if not approved:	⌘	None									
Clauses affected:	⌘	1, 3.1, 4, 5.2.2, 5.3, 5.3.3.3, 5.4, 6.2.1, 6.2.2, 6.2.3, A.3.3.1, A.3.3.2, A.3.4.1, A.4.3.1, A.7									
Other specs affected:	⌘	<table border="1"> <thead> <tr> <th>Y</th> <th>N</th> </tr> </thead> <tbody> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> <tr> <td></td> <td>X</td> </tr> </tbody> </table>	Y	N		X		X		X	Other core specifications ⌘ Test specifications O&M Specifications
		Y	N								
			X								
	X										
	X										
Other comments:	⌘	This CR takes over all changes proposed in 24.141 CR 002 (see N1-041278) due to an interaction between the CRs.									

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.

PROPOSED CHANGE

1 Scope

The present document provides the protocol details for the presence service within the IP Multimedia (IM) Core Network (CN) subsystem based on the Session Initiation Protocol (SIP) and SIP Events as defined in 3GPP TS 24.229 [9]. ~~Requirements for manipulation of presence data are defined by use of a protocol at the Ut reference point based on XML Configuration Access Protocol (XCAP) (draft-rosenberg-simple-xcap-00).~~

Where possible the present document specifies the requirements for this protocol by reference to specifications produced by the IETF within the scope of SIP and SIP Events, either directly, or as modified by 3GPP TS 24.229 [9].

[Requirements for manipulation of presence data are defined by use of a protocol at the Ut reference point based on XML Configuration Access Protocol \(XCAP\) \(draft-ietf-simple-xcap-02 \[33\]Error! Bookmark not defined.\)](#).

The present document is applicable to Application Servers (ASs) and User Equipment (UE) providing presence functionality.

PROPOSED CHANGE

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

AS	Application Server
AUID	Application Usage ID
CN	Core Network
CPIM	Common Profile for Instant Messaging
CSCF	Call Session Control Function
DM	Data Manipulator
DMS	Data Manipulation Server
EPA	Event Publication Agent
ESC	Event State Compositor
HSS	Home Subscriber Server
HTTP	HyperText Transfer Protocol
I-CSCF	Interrogating - CSCF
IM	IP Multimedia
IOI	Inter Operator Identifier
IP	Internet Protocol
MIME	Multipurpose Internet Mail Extensions
P-CSCF	Proxy - CSCF
PIDF	Presence Information Data Format
PNA	Presence Network Agent
PS	Presence Server
PSI	Public Service Identity
PUA	Presence User Agent
RLMI	Resource List Meta-Information
RLS	Resource List Server
RPID	Rich Presence Information Data
S-CSCF	Serving - CSCF
SIP	Session Initiation Protocol
TLS	Transport Layer Security
UE	User Equipment
URI	Universal Resource Identifier

XCAP XML Configuration Access Protocol
XML Extensible Markup Language

PROPOSED CHANGE

4 Presence service overview

The presence service provides the ability for the home network to manage presence information of a user's device, service or service media even whilst roaming. A user's presence information may be obtained through input from the user, information supplied by network entities or information supplied by elements external to the home network. Consumers of presence information, watchers, may be internal or external to the home network. The architecture for the 3GPP presence service is specified in 3GPP TS 23.141 [4].

~~Editor's note: Include information about the difference between the data manipulation protocol defined at the Ut reference point, and that functionality occurring at the SIP level.~~

[SIP and XCAP provide means to manipulate the presence status of a user. For details on the differences between those means refer to draft-ietf-sip-publish-03 \[23\] and draft-isomaki-simple-xcap-pidf-manipulation-usage-00 \[34\]. For details on the relationship of DMS to other roles see subclause 6.2.2.](#)

Editor's note: It may be appropriate to include text in this clause pointing to the stage 1 on group management.

PROPOSED CHANGE

5.2.2 Application Server (AS)

An AS may implement either of the roles of a PUA (see subclause 5.3.1), watcher (see subclause 5.3.2), PS (see subclause 5.3.3), RLS (see subclause 5.3.4), or PNA ([see subclause 5.3.5](#)).

For this version of the present document, the interface between the PNA and the PS is not defined.

PROPOSED CHANGE

5.3.3.3 Publication acceptance of presence information

The PS shall act as an Event State Compositor (ESC).

When the PS receives a PUBLISH request, the PS shall first verify the identity of the source of the PUBLISH request as described in 3GPP TS 24.229 [9] subclause 5.7.1.4, then perform authorization according to 3GPP TS 24.229 [9] subclause 5.7.1.5. In case of successful authentication and authorization, the PS shall process the PUBLISH request in accordance with draft-ietf-sip-publish-03 [23].

If the PUBLISH request indicated support for partial publishing using the "application/pidf-partial+xml" content-type described in draft-ietf-simple-pidf-format-00 [38] and if the PS supports partial publishing, the PS shall process the PUBLISH request in accordance with draft-ietf-sip-publish-03 [23]. If the PS does not support partial publishing, then the PS shall send a 415 (Unsupported Media Type) response with "application/pidf+xml" in the Accept header field.

Editor's Note: The above procedures on partial publishing will be replaced by references to the IETF draft-lonnfors-simple-publish-partial-00 once the draft has been discussed in IETF.

If the PUBLISH request contained the "multipart/related" content type and the PS supports the content type, the PS shall process the content as follows:

- if a MIME multipart contains a MIME object of a content type supported by the PS, ~~the PS shall~~ either store the MIME object in case of initial publication or replace an existing content in case of modify operation;
- if a multipart includes the "message/external-body" content type and the content indirection is supported by the PS, ~~the PS shall~~ ensure that it has access to the MIME object indicated by the URI and that the MIME object is existing; and
- associate the value of the presence attribute referring to one of the MIME multipart with the MIME object and additional information about it.

If the PS does not support the content type used for publishing MIME objects then the PS shall send a 415 (Unsupported Media Type) response and indicate the supported content types in the Accept header.

NOTE: If the PS receives a HTTP request for storing a MIME object on the PS meaning that the HTTP URI points to a predefined directory reserved for storing MIME objects and the request is an HTTP PUT request, the PS replaces any existing content referenced by the Request-URI with the content of the request. If the Request-URI points to an uncreated directory, the PS creates the directory, stores the content there and associates the content with the Request-URI. For all requests, i.e. HTTP PUT, HTTP GET and HTTP DELETE requests, the PS generates an appropriate response in accordance with RFC 2616 [15].

PROPOSED CHANGE

~~5.3.5~~5.4 Presence Network Agent (PNA)

~~5.3.5~~5.4.1 General

~~For this version of the present document, the interface between the PNA and the PS is not defined.~~

In addition to the procedures specified in subclause ~~5.4~~5.3.5, the PNA shall support the procedures specified in 3GPP TS 24.229 [9] appropriate to the functional entity in which the PNA is implemented.

The PNA can collect presence information about the presentity from a number of core network entities. The PNA can combine information from various core network entities to form more complete presence information.

Among these core network entities, the S-CSCF uses SIP to deliver presence information to the PNA over the Pi reference point as ~~follows~~specified in subclause 5.3.5.2.

NOTE: As part of the configuration of AS to provide a presence system, appropriate settings are downloaded to the initial filter criteria in the S-CSCF to ensure this occurs. The PNA will receive third-party REGISTER requests as specified in 3GPP TS 24.229 [9] subclauses 5.4.1.7 and 5.7.1.1.

~~5.3.5~~5.4.2 Subscription to reg event package

On receiving a third-party REGISTER request which contains an Expires header with a non-zero value, the PNA shall, if no subscription already exists, subscribe to the reg event package for a particular user at the S-CSCF, as described in 3GPP TS 24.229 [9] subclause 5.7.1.1. As a result, the S-CSCF will then provide the presence-related information as reg event packages in NOTIFY requests to the PNA.

On receiving a third-party REGISTER request, the PNA may, if a subscription already exists, resubscribe to the reg event package for a particular user at the S-CSCF, as described in 3GPP TS 24.229 [9] subclause 5.7.1.1. As a result, the S-CSCF will then provide the presence-related information as reg event packages in NOTIFY requests to the PNA.

PROPOSED CHANGE

6.2 Functional entities

6.2.1 User Equipment (UE)

The UE implements the Data Manipulator (DM) role as described in subclause 6.3.1.

The UE shall implement HTTP digest AKA (see RFC 3310 [20]) and it shall initiate a bootstrapping procedure with the bootstrapping server function located in the home network, as described in 3GPP TS 24.109 [7].

The UE shall acquire the subscriber's certificate from PKI portal by using a bootstrapping procedure, as described in 3GPP TS 24.109 [7].

The UE and the authentication proxy shall both implement [Transport Layer Security \(TLS\)](#) (see RFC 2246 [13]). The UE shall be able to authenticate the authentication proxy based on the received certificate during TLS handshaking phase.

6.2.2 Application Server (AS)

If an AS implements the role of a PS (see subclause 5.3.3) or of a RLS (see subclause 5.3.4), then the AS shall also implement the role of a Data Manipulation Server (DMS) (see subclause 6.3.2).

If there is no authentication proxy in the network, then the AS shall also implement the role of a network application function, as described in 3GPP TS 24.109 [7] and it shall support HTTP digest authentication ([see RFC 3310 \[20\]](#)) and certificate authentication.

Editor's note: It needs to be clarified what physical entities can contain the Authentication Proxy and its relationship with the IMS architecture.

6.2.3 Authentication proxy

The authentication proxy shall implement the role of a network application function, as described in 3GPP TS 24.109 [7] and it shall support HTTP Digest Authentication ([see RFC 3310 \[20\]](#)) and certificate authentication.

The Authentication Proxy shall authenticate the UE and integrity protect the messages sent towards the UE.

Editor's note: It is FFS how the Authentication Proxy passes the user's identity to the Application Server (AS).

PROPOSED CHANGE

A.3.3.1 Watcher subscribing to his own resource list, UE in visited network - Successful subscription

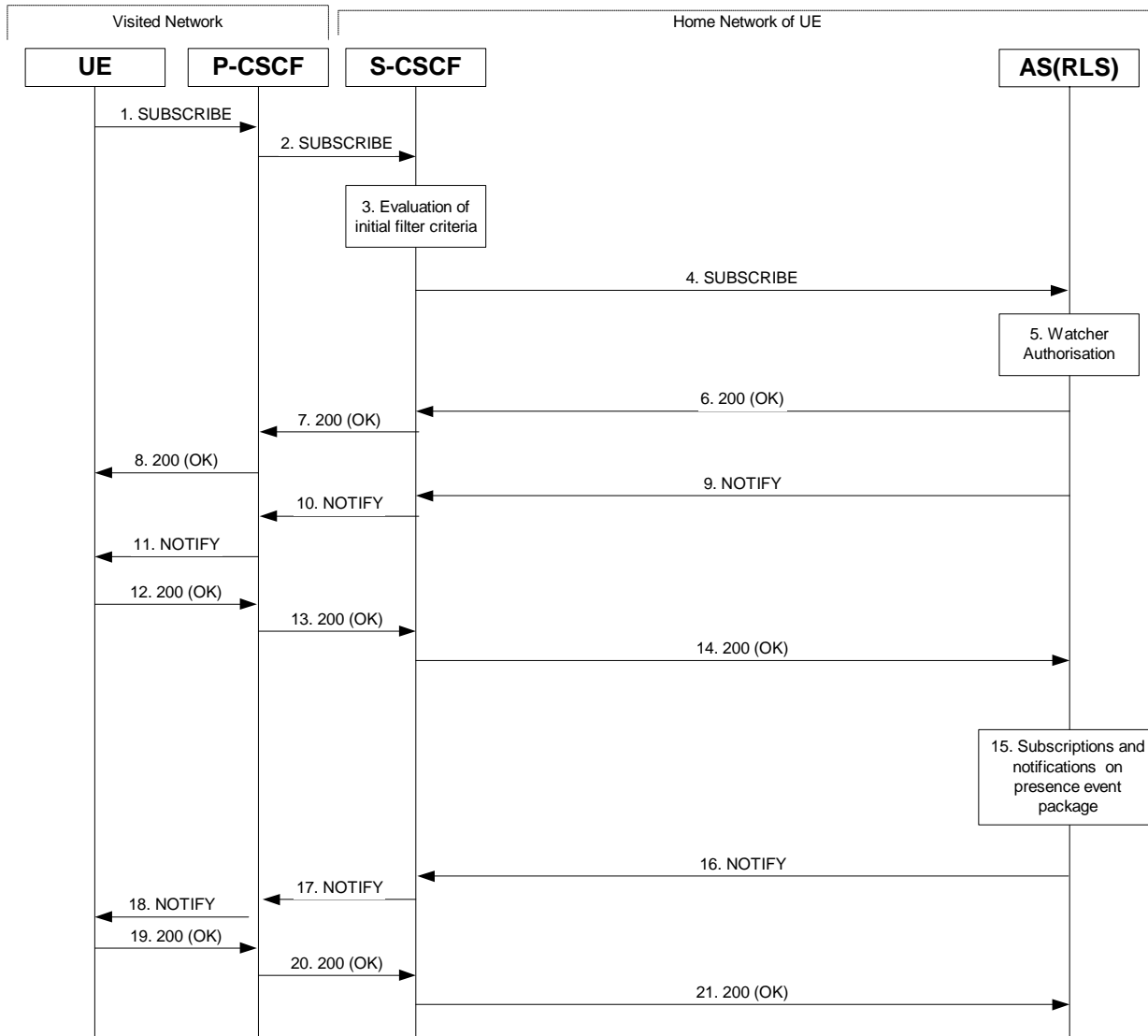


Figure A.3.3.1-1: Watcher subscribing to resource list

Figure A.3.3.1-1 shows a watcher subscribing to resource list event notification. The details of the signalling flows [are](#) as follows:

1. SUBSCRIBE request (UE to P-CSCF) – see example in table A.3.3.1-1

A watcher agent in a UE wishes to watch a number of presentities, or certain presence tuples of these presentities. The list of presentities are identified by a SIP URI. In order to initiate a subscription to the RLS, the UE generates a SUBSCRIBE request indicating support for "eventlist", together with an indication of the length of time this periodic subscription should last.

Remainder of subclause not shown.

PROPOSED CHANGE

A.3.3.2 Watcher subscribing to a resource list, UE in visited network - successful subscription

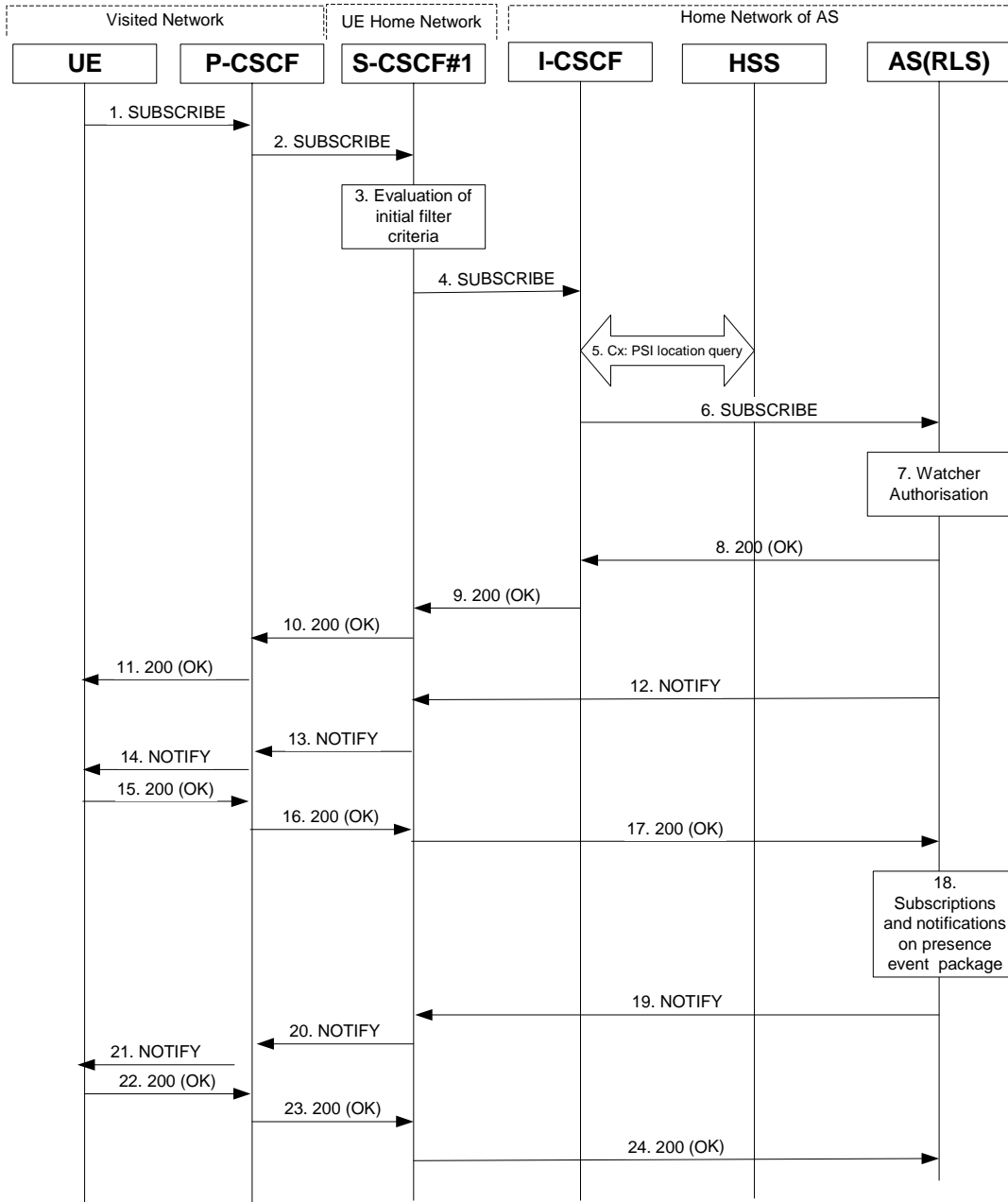


Figure A.3.3.2-1 Watcher subscribing to resource list

Figure A.3.3.2-1 shows a watcher subscribing to resource list event notification. The details of the signalling flows are as follows:

1. **SUBSCRIBE request (UE to P-CSCF)** - see example in table A.3.3.2-1

A watcher agent in a UE wishes to watch a number of presentities, or certain presence tuples of these presentities. The list of presentities are identified by a SIP URI. In order to initiate a subscription to the RLS, the UE generates a SUBSCRIBE request indicating support for 'eventlist', together with an indication of the length of time this periodic subscription should last.

Remainder of subclause not shown.

PROPOSED CHANGE

A.3.4 RLS subscribing to presentities in different network

A.3.4.1 Successful subscription

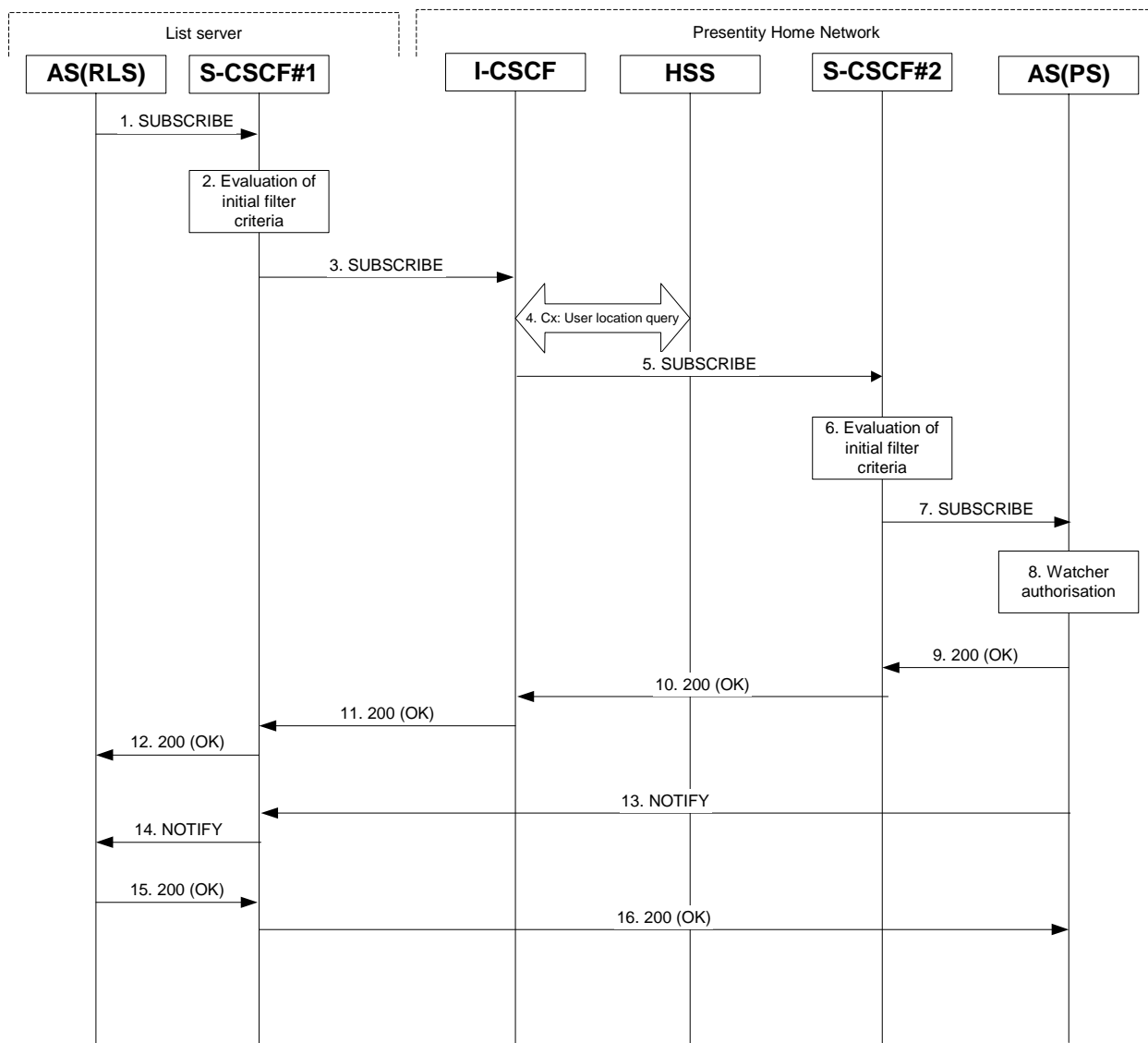


Figure A.3.4.1-1 RLS subscribing to presentities in different network

Figure A.3.4.1-1 shows the RLS subscribing to presence event notification about a presentity. The presentity is in a different IM CN subsystem. The details of the signalling flows [are](#) as follows:

1. **SUBSCRIBE request (RLS to S-CSCF) – see example in table A.3.4.1-1**

The RLS resolves the watcher's resource address (the address is received according to subclause A.3.3) and subscribes to presence event notification at all the presentities that are represented by the resource list SIP URI. The home network of these presentities can be different or in the same network, as the RLS. In this example only a single subscription is shown where the home network of the presentity is another network. Subscriptions to other presentities follow a similar procedure. To initiate a subscription, the RLS generates a SUBSCRIBE request containing the "presence" event that it wishes to be notified of, together with an indication of the length of time this periodic subscription should last. The RLS sends the SUBSCRIBE request to the S-CSCF of "sip:user1_public1@home1.net" (S-CSCF#1). The address of S-CSCF#1 is either remembered from previous transactions (when "sip:user1_public1@home1.net" has subscribed for the resource list) or queried by the RLS using the Sh interface.

Remainder of subclause not shown.

PROPOSED CHANGE

A.4.3 Refreshing of presence information by UE

A.4.3.1 Successful refresh

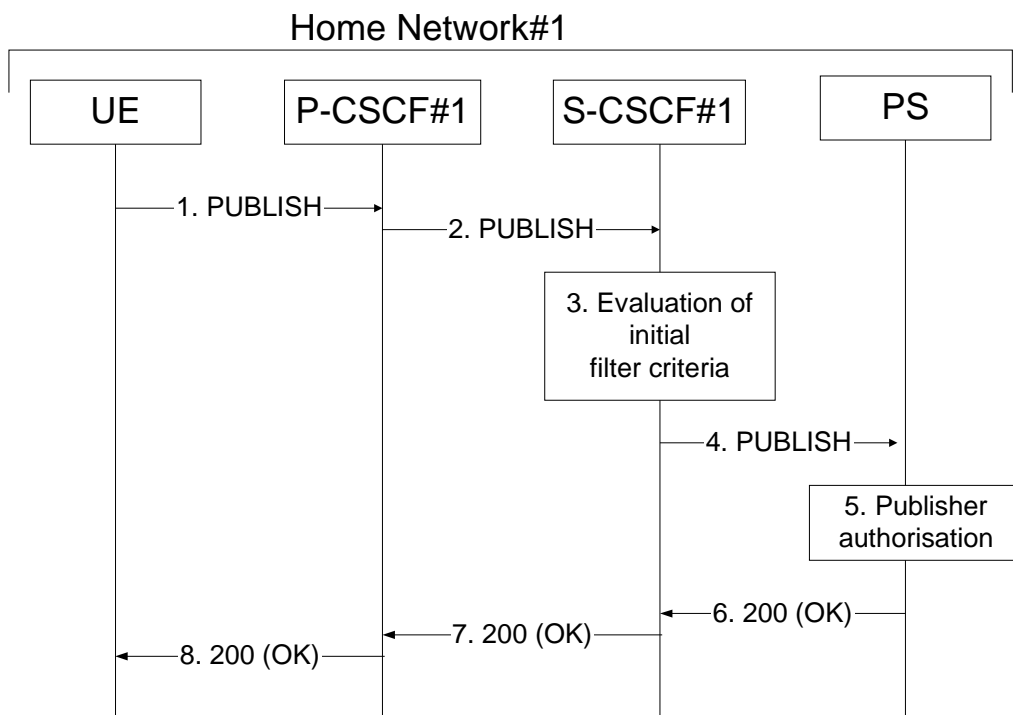


Figure A.4.3.1-1: UE updating presence information

Figure A.4.3.1-1 shows an UE refreshing the presence information about a presentity. The details of the signalling flows [are](#) as follows:

1. **PUBLISH request (UE to P-CSCF) – see example in table A.4.3.1-1**

A PUA in a UE wishes to refresh already existing presence information. To initiate the publication, the UE generates a PUBLISH request according to draft-ietf-sip-publish-03 [23].

Remainder of subclause not shown.

PROPOSED CHANGE

A.7 PNA subscription for the reg-event package

Figure A.7-1 shows the registration signalling flow for the scenario when the user is not registered. For the purpose of this registration signalling flow, the subscriber is considered to be roaming. This [signalling](#) flow also shows the authentication of the private user identity.

This is followed by the subscription procedure for the reg-event package, whereby the PNA requests to be notified by the S-CSCF when a registration event has occurred. This is done using the 'reg-event' package as described in 3GPP TS 24.229 [9].

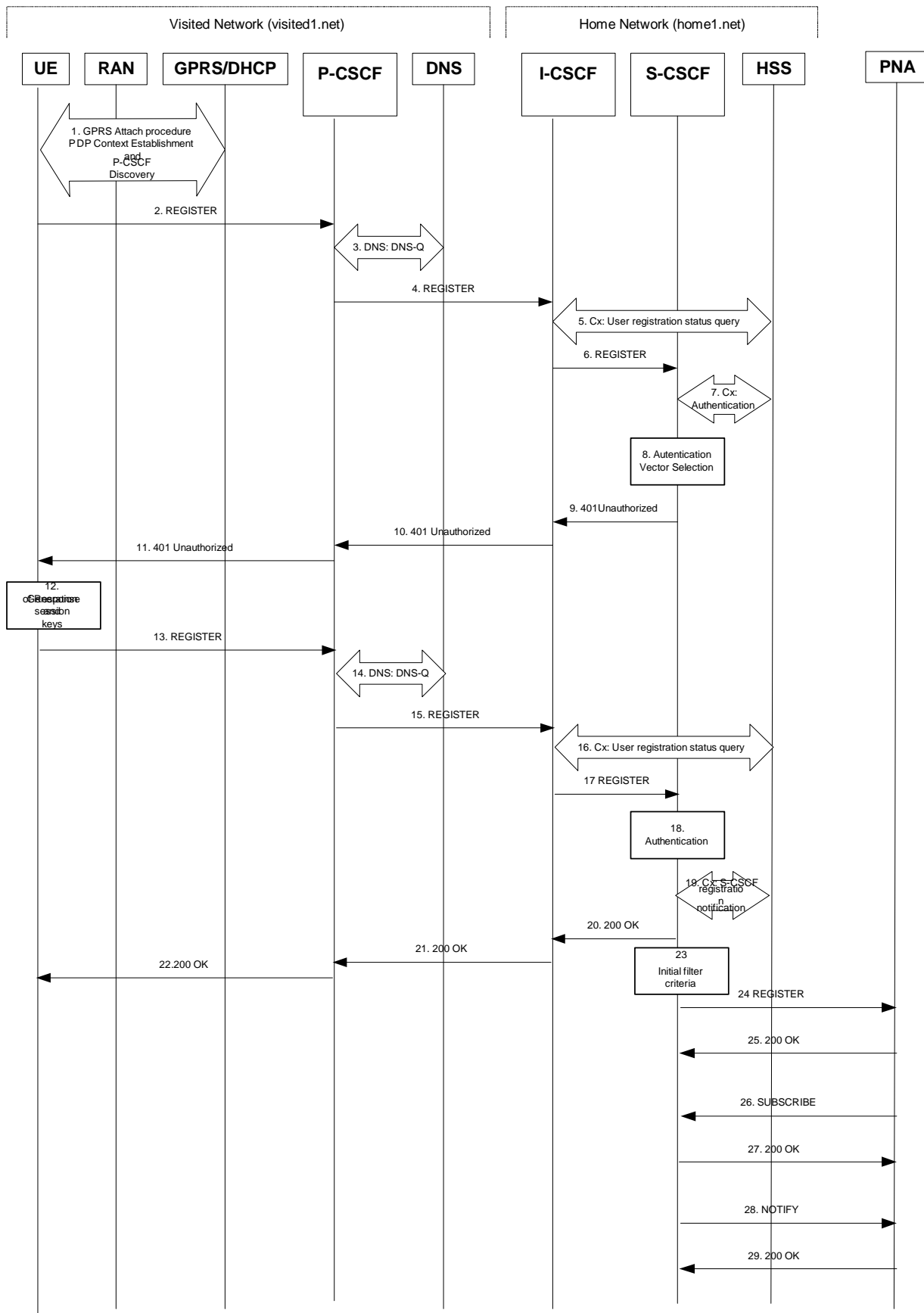


Figure A.7-1: Registration signalling: user not registered

Remainder of subclause not shown.

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CR-Form-v7.1

CHANGE REQUEST

⌘ **24.141 CR 009** ⌘ rev **-** ⌘ Current version: **6.0.0** ⌘

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:	⌘ Policy Capability References		
Source:	⌘ Nokia		
Work item code:	⌘ PRESNC	Date:	⌘ 07/08/2004
Category:	⌘ C	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> Ph2 (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) Rel-7 (Release 7)

Reason for change:	⌘ A mechanism for allowing clients to determine which capabilities of authorization are supported by the server is missing from the TS. This is important for several reasons, e.g., for increasing interoperability between clients and servers, for determining which common policy extensions a server supports, and for supporting vendor specific proprietary features. Also the draft-ietf-simple-presence-rules advises the clients to check the capabilities of the server before uploading a new authorization document.
Summary of change:	⌘ The CR proposes to add missing authorization specific references to TS. The "common-policy-caps" defines the structure of capability documents and capabilities of the Common Policy. The "pres-policy-caps" extends the "common-policy-caps" by capabilities of the Presence Authorization Rules.
Consequences if not approved:	⌘ A client is unaware of which authorization policies a server supports (note that the set of supported policies may also change), and thus may use unsupported policies. Also support for vendor specific policies and new extensions is more difficult.

Clauses affected:	⌘ 2; 6.3.1.3; 6.3.2.3										
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										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										
<input type="checkbox"/>	<input checked="" type="checkbox"/>										

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.

**** 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: "3G Vocabulary".
- [2] 3GPP TS 22.141: "Presence Service; Stage 1".
- [3] 3GPP TS 23.002: "Network architecture".
- [4] 3GPP TS 23.141: "Presence Service; Architecture and Functional Description".
- [5] 3GPP TS 23.218: "IP Multimedia (IM) Session Handling; IM call model".
- [6] 3GPP TS 23.228: "IP multimedia subsystem; Stage 2".
- [7] 3GPP TS 24.109: "Bootstrapping interface (Ub) and Network application function interface (Ua); Protocol details".
- [8] 3GPP TS 24.228: "Signalling flows for the IP multimedia call control based on SIP and SDP; Stage 3".
- [9] 3GPP TS 24.229: "IP Multimedia Call Control Protocol based on SIP and SDP; Stage 3".
- [10] 3GPP TS 29.228: "IP Multimedia (IM) Subsystem Cx Interface; Signalling flows and message contents".
- [11] 3GPP TS 33.141: "Presence Service; Security".
- [12] RFC 1594 (March 1994): "FYI on Questions and Answers to Commonly asked "New Internet User" Questions".
- [13] RFC 2246: "The TLS Protocol Version 1.0".
- [14] RFC 2387 (Aug 1998): "The MIME Multipart/Related Content Type".
- [15] RFC 2616 (June 1999): "Hypertext Transfer Protocol -- HTTP/1.1".
- [16] RFC 2778: "A Model for Presence and Instant Messaging".
- [17] RFC 3261 (June 2002): "SIP: Session Initiation Protocol".
- [18] RFC 3263 (June 2002): "Session Initiation Protocol (SIP): Locating SIP Servers".
- [19] RFC 3265 (March 2002): "Session Initiation Protocol Specific Event Notification".
- [20] RFC 3310: "Hypertext Transfer Protocol (HTTP) Digest Authentication Using Authentication and Key Agreement (AKA)".
- [21] draft-ietf-imp-pim-pidf-08 (May 2003): "Common Presence and Instant Messaging (CPIM) Presence Information Data Format".

- [22] draft-ietf-simple-event-list-04 (June 2003): "A Session Initiation Protocol (SIP) Event Notification Extension for Resource Lists".
- [23] draft-ietf-sip-publish-04 (May 2004): "An Event State Publication Extension to the Session Initiation Protocol (SIP)".
- [24] draft-ietf-simple-partial-notify-02 (April 2004): "Partial Notification of Presence Information".
- [25] draft-ietf-simple-prescaps-ext-01 (May 2004): "User Agent Capability Extension to Presence Information Data Format (PIDF)".
- [26] draft-ietf-simple-rpid-03 (March 2004): "RPID: Rich Presence Extensions to the Presence Information Data Format (PIDF)".
- [27] draft-ietf-simple-presence-10 (January 2003): "A Presence Event Package for the Session Initiation Protocol (SIP)".
- [28] draft-ietf-simple-winfo-package-05 (January 2003): "A Session Initiation Protocol (SIP) Event Template-Package for Watcher Information".
- [29] draft-ietf-simple-winfo-format-04 (January 2003): "An Extensible Markup Language (XML) Based Format for Watcher Information".
- [30] draft-ietf-simple-filter-format-00 (February 2004): "An Extensible Markup Language (XML) Based Format for Event Notification Filtering".
- [31] draft-ietf-simple-event-filter-funct-00 (February 2003): "Functional Description of Event Notification Filtering".
- [32] draft-ietf-simple-cipid-01 (March 2004): "CIPID: Contact Information in Presence Information Data Format".
- [33] draft-ietf-simple-xcap-02 (February 2004): "The Extensible Markup Language (XML) Configuration Access Protocol (XCAP)".
- [34] draft-ietf-simple-xcap-pidf-manipulation-usage-00 (May 2004): "An Extensible Markup Language (XML) Configuration Access Protocol (XCAP) Usage for Manipulating Presence Document Contents".
- [35] draft-ietf-simple-xcap-presence-rules-00 (May 2004): "Extensible Markup Language (XML) Configuration Access Protocol (XCAP) Usages for Setting Presence Authorization".
- [36] draft-ietf-simple-xcap-list-usage-02 (February 2004): "An Extensible Markup Language (XML) Format for Representing Resource Lists".
- [37] draft-ietf-geopriv-pidf-lo-01 (February 2004): "A Presence-based GEOPRIV Location Object Format".
- [38] draft-ietf-simple-partial-pidf-format-01 (April 2004): "Presence Information Data format (PIDF) Extension for Partial Presence".
- [39] draft-ietf-simple-xcap-package-01 (February 2004): "A Session Initiation Protocol (SIP) Event Package for Modification Events for the Extensible Markup Language (XML) Configuration Access Protocol (XCAP) Managed Documents".
- [40] draft-ietf-sip-content-indirect-mech-03 (June 2003): "A Mechanism for Content Indirection in Session Initiation Protocol (SIP) Messages".
- [\[ref-CPC\]](#) [draft-rosenberg-simple-common-policy-caps-01 \(July 2004\): "An Extensible Markup Language \(XML\) Representation for Expressing Policy Capabilities".](#)
- [\[ref-PPC\]](#) [draft-rosenberg-simple-pres-policy-caps-01 \(July 2004\): "An Extensible Markup Language \(XML\) Representation for Expressing Presence Policy Capabilities".](#)

**** next change ****

6.3.1.3 Manipulating the subscription authorisation policy

When the DM intends to manipulate the subscription authorization policy, it shall generate an HTTP PUT, HTTP GET or HTTP DELETE request in accordance with RFC 2616 [15], draft-ietf-simple-xcap-02 [33] and draft-ietf-simple-presence-rules-00 [35].

[The DM may use an HTTP GET in accordance with RFC 2616 \[15\], draft-ietf-simple-xcap-02 \[33\] and draft-rosenberg-simple-common-policy-caps-01 \[ref-CPC\] for fetching of the authorization policy capabilities which the DMS supports.](#)

When the DM intends to authorize a different value of the same presence attribute to different watchers or watcher groups, the DM shall authorize a single tuple including one of the different values of the same presence attribute to every watcher or watcher groups by using a specific "inclusion set" as specified in draft-ietf-simple-presence-rules-00 [35].

**** next change ****

6.3.2 Data Manipulation Server (DMS)

6.3.2.1 Introduction

The Data Manipulation Server (DMS) is a logical function which can store data such as user groups, subscription authorization policy, resource lists, hard state presence information, MIME objects referenced from the hard state presence information, etc.

6.3.2.2 Resource list manipulation acceptance

When the data manipulation server receives an HTTP PUT, HTTP GET or HTTP DELETE request for manipulating or fetching a resource list, the DMS shall first authenticate the request in accordance with 3GPP TS 24.109 [7] and then perform authorization. Afterwards the DMS shall perform the requested action and generate a response in accordance with RFC 2616 [15], draft-ietf-simple-xcap-02 [33] and draft-ietf-simple-xcap-list-usage-02 [36].

6.3.2.3 Subscription authorization policy manipulation acceptance

When the DMS receives an HTTP PUT, HTTP GET or HTTP DELETE request for manipulating or fetching of the subscription authorization policy, the data manipulation server shall first authenticate the request in accordance with 3GPP TS 24.109 [7] and then perform authorization. Afterwards the DMS shall perform the requested action and generate a response in accordance with RFC 2616 [15], draft-ietf-simple-xcap-02 [33] and draft-ietf-simple-xcap-presence-rules-00 [35].

[When the DMS receives an HTTP GET request for fetching of the authorization policy capabilities information, the DMS shall generate a response in accordance with RFC 2616 \[15\], draft-ietf-simple-xcap-02 \[33\] and draft-rosenberg-simple-pres-policy-caps-01 \[ref-PPC\].](#)

CR-Form-v7.1

CHANGE REQUEST

⌘ **24.141 CR 011** ⌘ rev **-** ⌘ Current version: **6.0.0** ⌘

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:	⌘ Filter criteria update		
Source:	⌘ Nokia		
Work item code:	⌘ PRESNC	Date:	⌘ 07/08/2004
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> Ph2 (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) Rel-7 (Release 7)

Reason for change:	⌘ The filter criteria related text in the flows is not up-to-date
Summary of change:	⌘ Text has been updated
Consequences if not approved:	⌘ Inconsistent information

Clauses affected:	⌘ A.3.2.1 – only part of the subclause shown A.3.4.1 – only part of the subclause shown A.3.5 – only part of the subclause shown						
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"/>	⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<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> Test specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<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> O&M Specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
Other comments:	⌘						

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 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.

A.3.2.1 Successful subscription

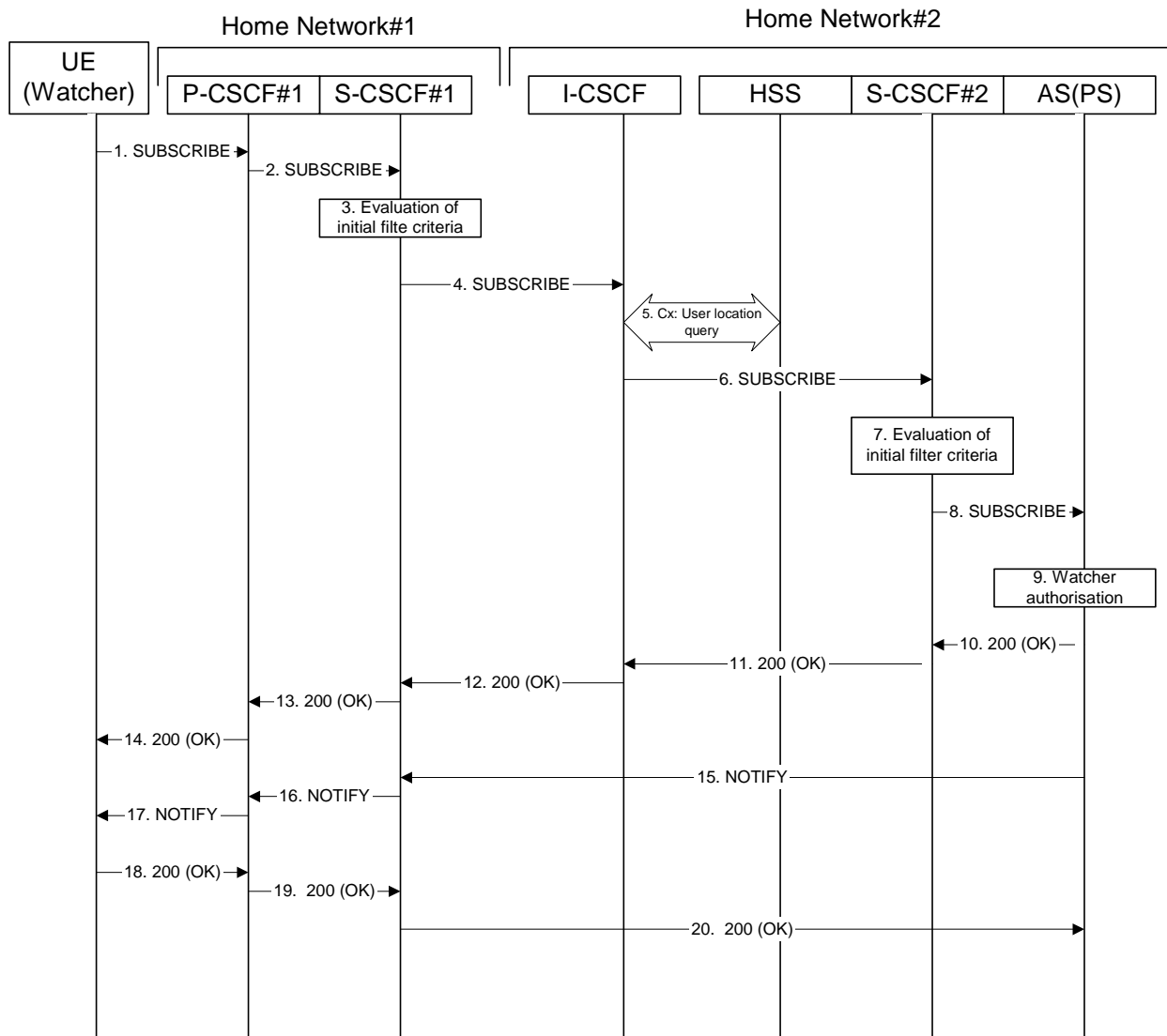


Figure A.3.2.1-1: Watcher subscribing for presence information

Figure A.3.2.1-1 shows a watcher subscribing to presence event notification about a presentity. The presentity is in a different IM CN subsystem. The details of the signalling flows are as follows:

1. SUBSCRIBE request (UE (watcher) to P-CSCF) – see example in table A.3.2.1-1

A watcher agent in a UE wishes to watch a presentity, or certain presence tuples of the presentity. To initiate a subscription, the UE generates a SUBSCRIBE request containing the 'presence' event that it wishes to be notified of, together with an indication of the length of time this periodic subscription should last and the support for partial notification.

Table A.3.2.1-1: SUBSCRIBE request (UE (watcher) to P-CSCF)

```

SUBSCRIBE sip:user2_public1@home2.net SIP/2.0
Via: SIP/2.0/UDP [5555::aaa:bbb:ccc:ddd]:1357;comp=sigcomp;branch=z9hG4bKnashds7
Max-Forwards: 70
P-Access-Network-Info: 3GPP-UTRAN-TDD; utran-cell-id-3gpp=234151D0FCE11
Route: <sip:pcscf1.visited1.net:7531;lr;comp=sigcomp>, <sip:orig@scscf1.home1.net;lr>
P-Preferred-Identity: <sip:user1_public1@home1.net>
Privacy: none
From: <sip:user1_public1@home1.net>;tag=31415
To: <sip:user2_public1@home2.net>
Call-ID: b89rjhnedlrfjflslj40a222
CSeq: 61 SUBSCRIBE
Require: sec-agree
Proxy-Require: sec-agree
Security-Verify: ipsec-3gpp; q=0.1; alg=hmac-sha-1-96; spi-c=98765432; spi-s=87654321; port-
c=8642; port-s=7531
Event: presence
Expires: 7200
Accept: application/pidf+xml;q=0.3, application/pidf-partial+xml;q=1
Contact: <sip:[5555::aaa:bbb:ccc:ddd]:1357;comp=sigcomp>
Content-Length: 0

```

Request-URI: Public user identity whose events the subscriber subscribes to.

Event: This field is populated with the value 'presence' to specify the use of the presence package.

Accept: This field is populated with the value 'application/pidf+xml' and 'application/pidf-partial+xml', latter one with higher preference.

To: Same as the Request-URI.

2. SUBSCRIBE request (P-CSCF to S-CSCF) – see example in table A.3.2.1-2

The P-CSCF looks up the serving network information for the public user identity that was stored during the registration procedure. The SUBSCRIBE request is forwarded to S-CSCF. A Route header is inserted into SUBSCRIBE request. The information for the Route header is taken from the service route determined during registration.

Table A.3.2.1-2: SUBSCRIBE request (P-CSCF to S-CSCF)

```

SUBSCRIBE sip:user2_public1@home2.net SIP/2.0
Via: SIP/2.0/UDP pcscf1.home1.net;branch=z9hG4bK240f34.1, SIP/2.0/UDP
[5555::aaa:bbb:ccc:ddd]:1357;comp=sigcomp;branch=z9hG4bKnashds7
P-Access-Network-Info:
Max-Forwards: 69
P-Asserted-Identity: <sip:user1_public1@home1.net>
P-Charging-Vector: icid-value="AyretyU0dm+602IrT5tAFrbHLso=023551024"
Privacy:
Route: <sip:orig@scscf1.home1.net;lr>
Record-Route: <sip:pcscf1.home1.net;lr>
From:
To:
Call-ID:
CSeq:
Event:
Expires:
Accept:
Contact:
Content-Length:

```

3. Evaluation of initial filter criteria

S-CSCF#1 validates the service profile of this subscriber and evaluates the initial filter criteria. For this example, assume no Application Server involvement.

4. SUBSCRIBE request (S-CSCF to I-CSCF) – see example in table A.3.2.1-4

S-CSCF#1 performs an analysis of the destination address, and determines the network operator to whom the destination subscriber belongs. Since the originating operator does not desire to keep their internal configuration hidden, S-CSCF#1 forwards the SUBSCRIBE request directly to the I-CSCF in the destination network.

Table A.3.2.1-4: SUBSCRIBE (S-CSCF to I-CSCF)

```
SUBSCRIBE sip:user2_public1@home2.net SIP/2.0
Via: SIP/2.0/UDP scscf1.home1.net;branch=z9hG4bK351g45.1, SIP/2.0/UDP
    pcscf1.home1.net;branch=z9hG4bK240f34.1, SIP/2.0/UDP
    [5555::aaa:bbb:ccc:ddd]:1357;comp=sigcomp;branch=z9hG4bKdashds7
Max-Forwards: 68
P-Asserted-Identity: <sip:user1_public1@home1.net>, <tel:+1-212-555-1111>
P-Charging-Vector: icid-value="AyretyU0dm+602IrT5tAFrbHLso=023551024"; orig-ioi=home1.net
Privacy:
Record-Route: <sip:scscf1.home1.net;lr>, <sip:pcscf1.home1.net;lr>
From:
To:
Call-ID:
CSeq:
Event:
Expires:
Accept:
Contact:
Content-Length:
```

5. Cx: User Location Query procedure

The I-CSCF sends a query to the HSS to find out the S-CSCF of the called user. The HSS responds with the address of the current S-CSCF for the terminating subscriber.

For detailed message flows see 3GPP TS 29.228 [10].

Table A.3.2.1-5a provides the parameters in the SIP SUBSCRIBE request (flow 4), which are sent to the HSS.

Table A.3.2.1-5a: Cx: User registration status query procedure (I-CSCF to HSS)

Message source & destination	Cx: Information element name	Information source in SIP SUBSCRIBE	Description
I-CSCF to HSS	User Public Identity	Request-URI	This information element indicates the public user identity

Table A.3.2.1-5b provides the parameters sent from the HSS that need to be mapped to the SIP SUBSCRIBE request (flow 6) and sent to the S-CSCF.

Table A.3.2.1-5b: Cx: User registration status query procedure (HSS to I-CSCF)

Message source & destination	Cx: Information element name	Mapping to SIP header in SIP SUBSCRIBE	Description
HSS to I-CSCF	S-CSCF name	Route header field	This information indicates the serving CSCF's name of that user

6. SUBSCRIBE request (I-CSCF to S-CSCF) – see example in table A.3.2.1-6

The I-CSCF forwards the SUBSCRIBE request to the S-CSCF (S-CSCF#2) that will handle the termination.

Table A.3.2.1-6: SUBSCRIBE request (I-CSCF to S-CSCF)

```

SUBSCRIBE sip:user2_public1@home2.net SIP/2.0
Via: SIP/2.0/UDP icscf2_s.home2.net;branch=z9hG4bK871y12.1, SIP/2.0/UDP
      scscf1.home1.net;branch=z9hG4bK351g45.1, SIP/2.0/UDP
      pcscf1.home1.net;branch=z9hG4bK240f34.1, SIP/2.0/UDP
      [5555::aaa:bbb:ccc:ddd]:1357;comp=sigcomp;branch=z9hG4bKnashds7
Max-Forwards: 67
P-Asserted-Identity:
P-Charging-Vector:
Privacy:
Route: <sip:scscf2.home2.net;lr>
Record-Route:
From:
To:
Call-ID:
CSeq:
Event:
Expires:
Accept:
Contact:
Content-Length:

```

NOTE: The I-CSCF does not add itself to the Record-Route header, as it has no need to remain in the signalling path for the subsequent requests.

7. Evaluation of initial filter criteria

S-CSCF#2 validates the service profile of this subscriber and evaluates the initial filter criteria. For sip:user2_public1@home2.net S-CSCF#2 has termination initial filter criteria with service points of interest of Method = SUBSCRIBE and Event = 'presence' ~~and action = 'create Record Route entry: no'~~ that informs the S-CSCF to route the SUBSCRIBE request to the Application Server ps.home2.net ~~and not to create a Record-Route entry for the request.~~ The S-CSCF#2 has preconfigured information not to record route this request.

A.3.4.1 Successful subscription

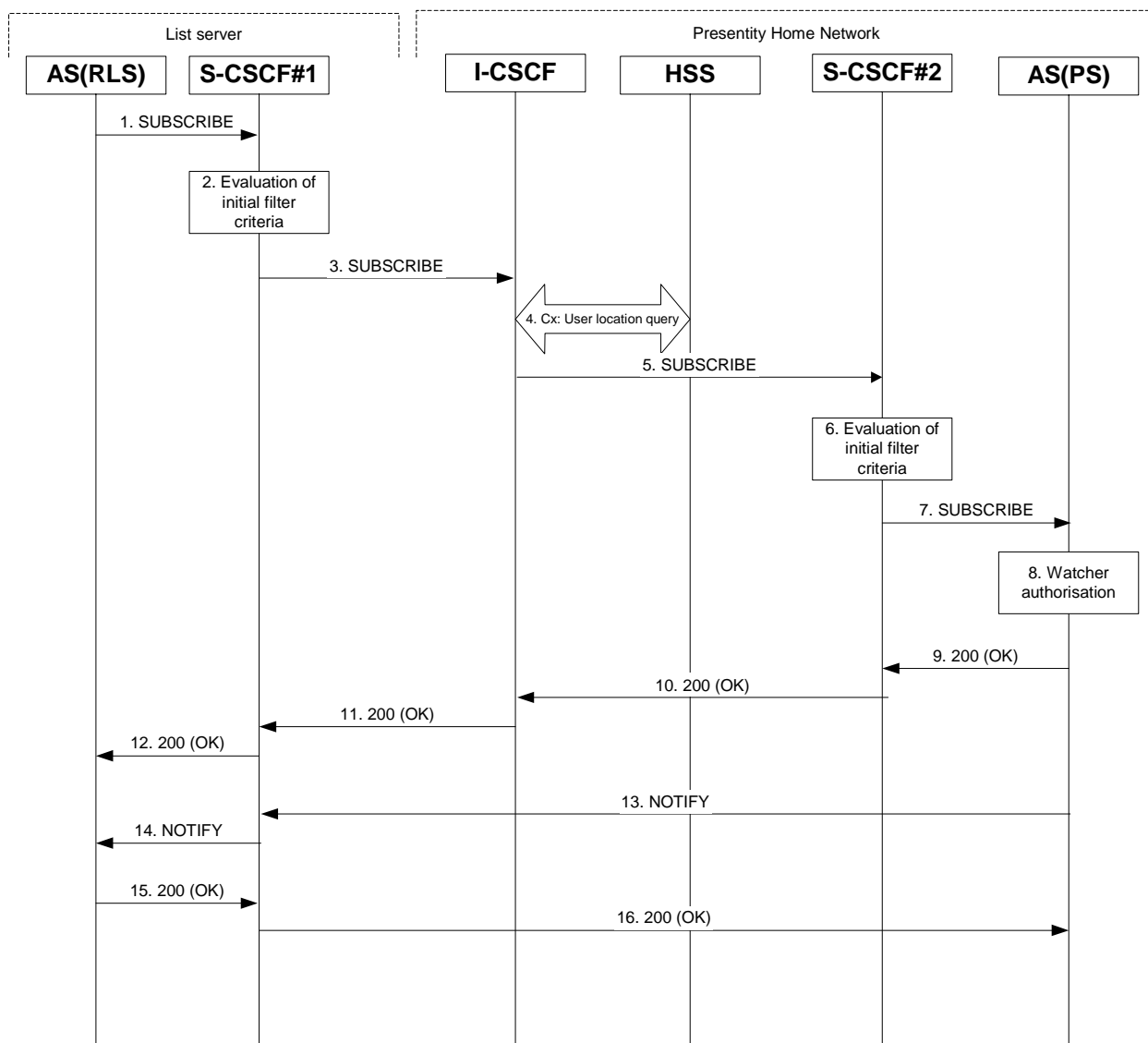


Figure A.3.4.1-1 RLS subscribing to presentities in different network

Figure A.3.4.1-1 shows the RLS subscribing to presence event notification about a presentity. The presentity is in a different IM CN subsystem. The details of the signalling flows as follows:

1. SUBSCRIBE request (RLS to S-CSCF) – see example in table A.3.4.1-1

The RLS resolves the watcher's resource address (the address is received according to subclause A.3.3) and subscribes to presence event notification at all the presentities that are represented by the resource list SIP URI. The home network of these presentities can be different or in the same network, as the RLS. In this example only a single subscription is shown where the home network of the presentity is another network. Subscriptions to other presentities follow a similar procedure. To initiate a subscription, the RLS generates a SUBSCRIBE request containing the 'presence' event that it wishes to be notified of, together with an indication of the length of time this periodic subscription should last. The RLS sends the SUBSCRIBE request to the S-CSCF of 'sip:user1_public1@home1.net' (S-CSCF#1). The address of S-CSCF#1 is either remembered from previous transactions (when 'sip:user1_public1@home1.net' has subscribed for the resource list) or queried by the RLS using the Sh interface.

Table A.3.4.1-1 SUBSCRIBE request (RLS to S-CSCF)

```

SUBSCRIBE sip:user2_public1@home2.net SIP/2.0
Via: SIP/2.0/UDP rls.home1.net;branch=z9hG4bKehuefdam
Max-Forwards: 70
Route: <sip:scscf1.home1.net;lr>
P-Asserted-Identity: <sip:user1_public1@home1.net>
P-Charging-Vector: icid-value="AyretyU0dm+602IrT5tAFrbHLso=323551024"; orig-ioi=home1.net
P-Charging-Function-Addresses: ccf=[5555::b99:c88:d77:e66]; ccf=[5555::a55:b44:c33:d22];
    ecf=[5555::1ff:2ee:3dd:4ee]; ecf=[5555::6aa:7bb:8cc:9dd]
From: <sip:user1_public1@home1.net>;tag=31415
To: <sip:user2_public1@home2.net>
Call-ID: q987a9a87g087abgf7qyg7ag
CSeq: 123 SUBSCRIBE
Event: presence
Expires: 7200
Accept: application/pidf+xml
Contact: <sip:rls.home1.net>
Content-Length: 0

```

Request-URI: Public user identity whose events the RLS subscribes to.

P-Charging-Vector: The RLS populates the icid parameter with a new globally unique value and populates the originating Inter Operator Identifier (IOI) parameter with the identifier of its own network of RLS.

P-Charging-Function-Addresses: The RLS populates the P-Charging-Function-Addresses header field to be passed to the S-CSCF.

To: Same as the Request-URI.

Event: This field is populated with the value 'presence' to specify the use of the presence package.

Accept: This field is populated with the value 'application/pidf+xml'.

2. Evaluation of initial filter criteria

S-CSCF#1 validates the service profile of this subscriber and evaluates the initial filter criteria. For this example, assume no application server involvement.

3. SUBSCRIBE request (S-CSCF to I-CSCF) – see example in table A.3.4.1-3

S-CSCF#1 performs an analysis of the destination address, and determines the network operator to whom the destination subscriber belongs. S-CSCF#1 forwards the request to the I-CSCF.

Table A.3.4.1-3 SUBSCRIBE request (S-CSCF to I-CSCF)

```

SUBSCRIBE sip:user2_public1@home2.net SIP/2.0
Via: SIP/2.0/UDP scscf1.home1.net;branch=z9hG4bKehuehjgt, SIP/2.0/UDP
    rls.home1.net;branch=z9hG4bKehuefdam
Max-Forwards: 69
Record-Route: <sip:orig@scscf1.home1.net;lr>
P-Asserted-Identity:
P-Charging-Vector:
From:
To:
Call-ID:
CSeq:
Event:
Expires:
Accept:
Contact:
Content-Length:

```

P-Charging-Vector: The S-CSCF stores the originating Inter Operator Identifier (IOI) parameter received.

4. Cx: User Location Query procedure

The I-CSCF sends a query to the HSS to find out the S-CSCF of the presentity. The HSS responds with the address of the current S-CSCF for the presentity.

For detailed message flows see 3GPP TS 29.228 [10].

Table A.3.4.1-4a provides the parameters in the SIP SUBSCRIBE request (flow 3), which are sent to the HSS.

Table A.3.4.1-4a: Cx: User registration status query procedure (I-CSCF to HSS)

Message source & destination	Cx: Information element name	Information source in SIP SUBSCRIBE	Description
I-CSCF to HSS	User Public Identity	Request-URI	This information element indicates the public user identity

Table A.3.4.1-4b provides the parameters sent from the HSS that need to be mapped to SIP SUBSCRIBE request (flow 5) and sent to the S-CSCF.

Table A.3.4.1-4b: Cx: User registration status query procedure (HSS to I-CSCF)

Message source & destination	Cx: Information element name	Mapping to SIP header in SIP SUBSCRIBE	Description
HSS to I-CSCF	S-CSCF name	Route header field	This information indicates the serving CSCF's name of that user

5. **SUBSCRIBE request (I-CSCF to S-CSCF) – see example in table A.3.4.1-5**

The I-CSCF forwards the SUBSCRIBE request to the S-CSCF#2 that will handle the termination.

Table A.3.4.1-5: SUBSCRIBE request (I-CSCF to S-CSCF)

```
SUBSCRIBE sip:user2_public1@home2.net SIP/2.0
Via: SIP/2.0/UDP icscf2_s.home2.net;branch=z9hG4bKj5hgrr2o, SIP/2.0/UDP
      scscf1.home1.net;branch=z9hG4bKehuehjgt, SIP/2.0/UDP
      rls.home1.net;branch=z9hG4bKehuefdam
Max-Forwards: 68
P-Asserted-Identity:
P-Charging-Vector: icid-value="AyretyU0dm+602IrrT5tAFrbHLso=323551024"; orig-ioi=home1.net;
Route: <sip:scscf2.home2.net;lr>
Record-Route:
From:
To:
Call-ID:
CSeq:
Event:
Expires:
Accept:
Contact:
Content-Length:
```

6. **Evaluation of initial filter criteria**

S-CSCF#2 validates the service profile of this subscriber and evaluates the initial filter criteria. For sip:user2_public1@home2.net the S-CSCF has Termination initial Filter Criteria with Service Points of Interest of Method = SUBSCRIBE AND Event = 'presence' ~~and action = 'create Record Route entry: no'~~ that informs the S-CSCF to route the SUBSCRIBE request to the Application Server ps.home2.net ~~and do not create a Record Route entry for the request.~~ The S-CSCF#2 has preconfigured information not to record route for this request.

A.3.5 Network based watcher subscribing on behalf of IMS watcher to IMS presentities

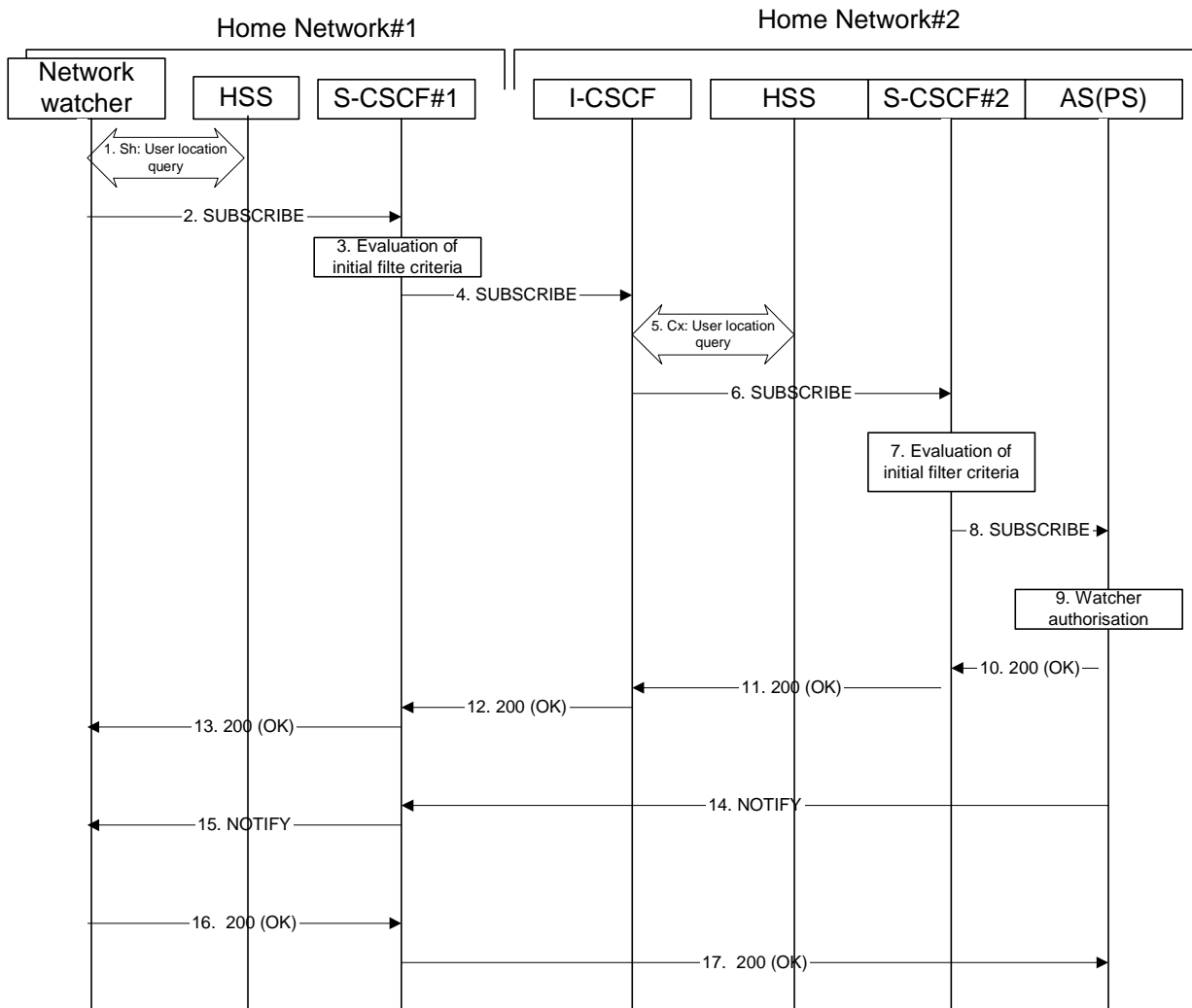


Figure A.3.5-1: Network based watcher subscribing on behalf of IMS watcher for presence information of IMS presentities

Figure A.3.5-1 shows a trusted network based watcher subscribing on behalf of an IMS watcher to presence event notification about an IMS based presentity. The presentity is in a different IM CN subsystem than the network based watcher and the signalling flow assumes that the IMS watcher on whose behalf the network based watcher subscribes is registered to the IMS network. The details of the signalling flows are as follows:

1. Sh: User Location Query procedure

The network based watcher sends a query to the HSS to find out the S-CSCF of the user on whose behalf the subscription is initiated. The HSS responds with the address of the current S-CSCF for the originating subscriber.

2. SUBSCRIBE request (Network based watcher to S-CSCF) – see example in table A.3.5-2

The SUBSCRIBE request is constructed and forwarded to S-CSCF. The S-CSCF is inserted into the Route header of the SUBSCRIBE request.

Table A.3.5-2: SUBSCRIBE request (network watcher to S-CSCF)

```

SUBSCRIBE sip:user2_public1@home2.net SIP/2.0
Via: SIP/2.0/UDP watcher.home1.net;branch=z9hG4bK240f34.1
P-Access-Network-Info:
Max-Forwards: 69
P-Asserted-Identity: <sip:user1_public1@home1.net>
Privacy: none
Route: <sip:scscf1.home1.net;lr;orig>
From: <sip:user1_public1@home1.net>;tag=31415
To: <sip:user2_public1@home2.net>
Call-ID: b89rjhnedlrfjflslj40a222
CSeq: 61 SUBSCRIBE
Event: PRESENCE
Expires: 7200
Accept: application/pidf+xml;q=0.3, application/pidf-partial+xml;q=1
Contact: <sip:[5555::aaa:bbb:ccc:ddd]:1357;comp=sigcomp>
Content-Length: 0

```

Request-URI: Public user identity of the user to whose events the subscriber subscribes to.

P-Asserted-Identity: The network based watcher inserts the public user identity of the watcher on whose behalf the subscription is made into the P-Asserted-Identity header field..

Route: The Route header is populated with the address of the S-CSCF obtained from the response to the user location query performed by the network based watcher on the Sh interface.

Event: This field is populated with the value 'presence' to specify the use of the presence package.

Contact: The contact information of the network based watcher.

3. Evaluation of initial filter criteria

S-CSCF#1 validates the service profile of the subscriber identified in the P-Asserted-Identity header field and evaluates the initial filter criteria. For this example, assume no Application Server involvement.

4. SUBSCRIBE request (S-CSCF to I-CSCF) – see example in table A.3.5-4

S-CSCF#1 performs an analysis of the destination address, and determines the network operator to whom the destination subscriber belongs. Since the originating operator does not desire to keep their internal configuration hidden, S-CSCF#1 forwards the SUBSCRIBE request directly to the I-CSCF in the destination network.

Table A.3.5-4: SUBSCRIBE (S-CSCF to I-CSCF)

```

SUBSCRIBE sip:user2_public1@home2.net SIP/2.0
Via: SIP/2.0/UDP scscf1.home1.net;branch=z9hG4bK351g45.1, SIP/2.0/UDP
    network.home1.net;branch=z9hG4bK240f34.1,
Max-Forwards: 68
P-Asserted-Identity: <sip:user1_public1@home1.net>
Privacy:
Record-Route: <sip:scscf1.home1.net;lr>
From:
To:
Call-ID:
CSeq:
Event:
Expires:
Accept:
Contact:
Content-Length:

```

5. Cx: User Location Query procedure

The I-CSCF sends a query to the HSS to find out the S-CSCF of the called user. The HSS responds with the address of the current S-CSCF for the terminating subscriber.

For detailed message flows see 3GPP TS 29.228 [10].

Table A.3.5-5a provides the parameters in the SIP SUBSCRIBE request (flow 4), which are sent to the HSS.

Table A.3.5-5a: Cx: User registration status query procedure (I-CSCF to HSS)

Message source & destination	Cx: Information element name	Information source in SIP SUBSCRIBE	Description
I-CSCF to HSS	User Public Identity	Request-URI	This information element indicates the public user identity

Table A.3.5-5b provides the parameters sent from the HSS that need to be mapped to the SIP SUBSCRIBE request (flow 6) and sent to the S-CSCF.

Table A.3.5-5b: Cx: User registration status query procedure (HSS to I-CSCF)

Message source & destination	Cx: Information element name	Mapping to SIP header in SIP SUBSCRIBE	Description
HSS to I-CSCF	S-CSCF name	Route header field	This information indicates the serving CSCF's name of that user

6. SUBSCRIBE request (I-CSCF to S-CSCF) – see example in table A.3.5-6

The I-CSCF forwards the SUBSCRIBE request to the S-CSCF (S-CSCF#2) that will handle the termination.

Table A.3.5-6: SUBSCRIBE request (I-CSCF to S-CSCF)

```

SUBSCRIBE sip:user2_public1@home2.net SIP/2.0
Via: SIP/2.0/UDP icscf2_s.home2.net;branch=z9hG4bK871y12.1, SIP/2.0/UDP
    scscf1.home1.net;branch=z9hG4bK351g45.1, SIP/2.0/UDP
    network.home1.net;branch=z9hG4bK240f34.1
Max-Forwards: 67
P-Asserted-Identity:
Privacy:
Route: <sip:scscf2.home2.net;lr>
Record-Route:
From:
To:
Call-ID:
CSeq:
Event:
Expires:
Accept:
Contact:
Content-Length:
    
```

NOTE: The I-CSCF does not add itself to the Record-Route header, as it has no need to remain in the signalling path for the subsequent requests.

7. Evaluation of initial filter criteria

S-CSCF#2 validates the service profile of this subscriber and evaluates the initial filter criteria. For sip:user2_public1@home2.net S-CSCF#2 has termination initial filter criteria with service points of interest of Method = SUBSCRIBE and Event = 'presence' ~~and action = 'create Record-Route entry: no'~~ that informs the S-CSCF to route the SUBSCRIBE request to the Application Server ps.home2.net ~~and not to create a Record-Route entry for the request.~~ The S-CSCF#2 has preconfigured information not to record route this request.

CR-Form-v7

CHANGE REQUEST

⌘ **24.141 CR 018** ⌘ rev - ⌘ Current version: **6.0.0** ⌘

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:	⌘ XML document corrections of message flows		
Source:	⌘ Nokia		
Work item code:	⌘ PRESNC	Date:	⌘ 10/08/2004
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:	⌘ The location of CIPID elements in some Presence XML documents is incorrect.
Summary of change:	⌘ CIPID elements are moved to be before the contact and note elements. Also a couple of minor corrections to XML examples concerning partial notifications have been made.
Consequences if not approved:	⌘ The XML examples are not valid PIDF documents.

Clauses affected:	⌘ A 3.2.1-15, A 3.3.2-19, A 3.4.1-13, A 3.5-14, A 4.2.1-1, A 5.2.1-1, A 5.3.1-1, A 5.3.1-5										
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;">⌘</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> </table>	Y	N	⌘	X	⌘	X	⌘	X	Other core specifications	⌘
Y	N										
⌘	X										
⌘	X										
⌘	X										
		Test specifications									
		O&M Specifications									
Other comments:	⌘										

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 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.

*** 1st change ***

15. **NOTIFY request (PS to S-CSCF) - see example in table A.3.2.1-15**

As soon as the PS sends a 200 (OK) response to accept the subscription, it sends a NOTIFY request with the current state of the presentity's presence tuples that the watcher has subscribed and been authorized to. The NOTIFY request is sent to S-CSCF#1. Based on the Accept header field of the SUBSCRIBE request, the PS decides to use the 'application/pdf-partial+xml' content type in the NOTIFY request.

Table A.3.2.1-15: NOTIFY request (PS to S-CSCF)

```

NOTIFY sip:[5555::aaa:bbb:ccc:ddd]:1357;comp=sigcomp SIP/2.0
Via: SIP/2.0/UDP ps.home2.net;branch=z9hG4bK348923.1
Max-Forwards: 70
P-Charging-Vector: icid-value="AyretyU0dm+602IrT5tAFrbHLso=123551024"; orig-ioi=home2.net
P-Charging-Function-Addresses: ccf=[5555::b99:c88:d77:e66]; ccf=[5555::a55:b44:c33:d22];
    ecf=[5555::1ff:2ee:3dd:4ee]; ecf=[5555::6aa:7bb:8cc:9dd]
Route: <sip:scscf1.home1.net;lr>, <sip:pcscf1.home1.net;lr>
From: <sip:user2_public1@home2.net>;tag=151170
To: <sip:user1_public1@home1.net>;tag=31415
Call-ID: b89rjhnedlrfjflslj40a222
CSeq: 42 NOTIFY
Subscription-State: active ;expires=7200
Event: presence
Contact: <sip:ps.home2.net>
Content-Type: application/pidf-partial+xml
Content-Length: (...)

<?xml version="1.0" encoding="UTF-8"?>
  <pidf-part:presence xmlns="urn:ietf:params:xml:ns:-pidf"
    xmlns:pidf-part="urn:ietf:params:xml:ns:pidf-partial"
    xmlns:es="urn:ietf:params:xml:ns:pidf:status:rp-id-status"
    xmlns:et="urn:ietf:params:xml:ns:pidf:rp-id-tuple"
    xmlns:pcp="urn:ietf:params:xml:ns:simple-prescaps-ext"
    xmlns:ci="urn:ietf:params:xml:ns:pidf:cipid"
    entity="pres:user2_public1@home2.net" pidf-part:version="0" pidf-part:state="full">

    <tuple id="a8098a.672364762364">
      <status>
        <basic>open</basic>
        <es:activity>meeting</es:activity>
        <es:placetype until="2003-08-27T17:30:00Z">office</es:placetype>
        <es:privacy>private</es:privacy>
        <es:idle since="2003-08-27T10:43:00Z"/>
        <pcp:prescaps>
          <pcp:video negated="false"></pcp:video>
          <pcp:mobility>mobile</pcp:mobility>
          <pcp:audio negated="true"></pcp:audio>
        </pcp:prescaps>
      </status>
      <et:class>sip</et:class>
      <et:contact-type>service</et:contact-type>
      <contact priority="0.8">sip:user2_public1@home2.net</contact>
      <note xml:lang="en">Don't Disturb Please!</note>
      <note xml:lang="fr">Ne derangez pas, s'il vous plait</note>
      <timestamp>2003-08-27T11:49:29Z</timestamp>
    </tuple>

    <tuple id="sfdds74.78">
      <status>
        <basic>open</basic>
      </status>
      <et:class>presentity</et:class>
      <et:contact-type>presentity</et:contact-type>
      <ci:homepage>http://example.com/~user2</ci:homepage>
      <ci:icon>http://example.com/~user2/icon.gif</ci:icon>
      <ci:card>http://example.com/~user2/card.vcd</ci:card>
      <note xml:lang="en">I'm in a boring meeting</note>
      <note xml:lang="en">I'll be in Tokyo next week</note>
      <del ci:homepage>http://example.com/~user2</del>
      <del ci:icon>http://example.com/~user2/icon.gif</del>
      <del ci:card>http://example.com/~user2/card.vcd</del>
      <timestamp>2003-08-27T11:49:29Z</timestamp>
    </tuple>

    <tuple id="jklhgf9788934774.78">
      <status>
        <basic>open</basic>
      </status>
      <et:class>assistant</et:class>
      <et:contact-type>presentity</et:contact-type>
      <et:relationship>assistant</et:relationship>
      <contact priority="1.0">tel:+1-212-555-2222</contact>
      <note xml:lang="en">She's my secretary</note>
      <timestamp>2003-08-27T11:49:29Z</timestamp>
    </tuple>

```

```
</pidf-part:presence>
```

P-Charging-Vector: The PS populates the icid parameter with a globally unique identifier and adds the identifier of its own network to the originating Inter Operator Identifier (IOI) parameter of this header.

P-Charging-Function-Addresses: The PS populates the P-Charging-Function-Addresses header field to be passed to the S-CSCF.

Content-Type: Set to the preferred value of the Accept header received in the SUBSCRIBE request.

The message body in the NOTIFY request that carries the presence information of the presentity is formed as indicated in draft-ietf-impp-cpim-pidf-08 [21], draft-ietf-simple-rpid-03 [26], draft-ietf-simple-prescaps-ext-00 [25], draft-ietf-simple-cipid-01 [32] draft-ietf-simple-partial-notify-01 [24] and draft-ietf-simple-partial-pidf-format-00 [38].

*** next change ***

19. NOTIFY request (RLS to S-CSCF) – see example in table A.3.3.2-19

The RLS copies the body of the incoming NOTIFY request(s) into the body of the outgoing NOTIFY request using MIME type multipart/related. Further notification sent by the RLS contain may contain either the full or the partial set of presence information (only the presence information that has changed since the last notification) as described in draft-ietf-simple-event-list-04 [22].

In this example it is assumed that the RLS receives two NOTIFY requests from presentities sip:user2_public1@home2.net and sip:user3_public1@home3.net before generating the NOTIFY request in subclause A.3.3.2-23 to the UE.

Table A.3.3.2-19: NOTIFY request (RLS to S-CSCF)

```

NOTIFY sip:[5555::aaa:bbb:ccc:ddd]:1357;comp=sigcomp SIP/2.0
Via: SIP/2.0/UDP rls.home2.net;branch=z9hG4bK240f34.1
Max-Forwards: 70
P-Charging-Vector: icid-value="AyretyU0dm+602IrT5tAFrbHLso=223551024"; orig-ioi=home1.net
Route: <sip:scscf1.home1.net;lr>, <sip:pcscf1.visited1.net;lr>
From: <sip:user2_list1@home1.net>;tag=151170
To: <sip:user1_public1.home1.net>;tag=31415
Call-ID: b89rjhnedlrfjflslj40a222
CSeq: 89 NOTIFY
Subscription-State: active;expires=5000
Require: eventlist
Event: presence
Contact: <sip:rls.home2.net>
Content-Type: multipart/related;type="application/rlmi+xml";
    start="<nXYxAE@rls.home2.net>";boundary="50UBfW7LSCVltggUPe5z"
Content-Length: (...)

--50UBfW7LSCVltggUPe5z
Content-Transfer-Encoding: binary
Content-ID: <nXYxAE@rls.home2.net>
Content-Type: application/rlmi+xml; charset="UTF-8"

<?xml version="1.0" encoding="UTF-8"?>
  <list xmlns="urn:ietf:params:xml:ns:rli"
    uri="sip:user1_list1@home1.net" version="1" fullState="true">
    <resource uri="pres:user2_public1@home2.net" name="Kovacs Janos">
      <instance id="hqzsuxtfyq" state="active" cid="ZvSvkz@rls.home2.net"/>
    </resource>
    <resource uri="pres:user3_public1@home3.net" name="Szabo Bela">
      <instance id="aakdsjklsa" state="active" cid="HJjbssk@rls.home2.net"/>
    </resource>
  </list>

--50UBfW7LSCVltggUPe5z
Content-Transfer-Encoding: binary
Content-ID: <ZvSvkz@rls.home2.net>
Content-Type: application/pidf+xml; charset="UTF-8"

<?xml version="1.0" encoding="UTF-8"?>
  <presence xmlns="urn:ietf:params:xml:ns:pidf"
    xmlns:es="urn:ietf:params:xml:ns:pidf:status:rp-id-status"
    xmlns:et="urn:ietf:params:xml:ns:pidf:rp-id-tuple"
    xmlns:pcp="urn:ietf:params:xml:ns:simple-prescaps-ext"
    xmlns:ci="urn:ietf:params:xml:ns:pidf:cipid"
    entity="pres:user2_public1@home2.net">

    <tuple id="a8098a.672364762364">
      <status>
        <basic>open</basic>
        <es:activity>meeting</es:activity>
        <es:placetype until="2003-08-27T17:30:00Z">office</es:placetype>
        <es:privacy>private</es:privacy>
        <es:idle since="2003-08-27T10:43:00Z"/>
        <pcp:prescaps>
          <pcp:video negated="false"></pcp:video>
          <pcp:mobility>mobile</pcp:mobility>
          <pcp:audio negated="true"></pcp:audio>
        </pcp:prescaps>
      </status>
      <et:class>sip</et:class>
      <et:contact-type>service</et:contact-type>
      <contact priority="0.8">sip:user2_public1@home2.net</contact>
    </tuple>
  </presence>

```

```

    <note xml:lang="en">Don't Disturb Please!</note>
    <note xml:lang="fr">Ne derangez pas, s'il vous plait</note>
    <timestamp>2003-08-27T11:49:29Z</timestamp>
  </tuple>

  <tuple id="sfdds74.78">
    <status>
      <basic>open</basic>
    </status>
    <et:class>presentity</et:class>
    <et:contact-type>presentity</et:contact-type>
    <ci:homepage>http://example.com/~user2</ci:homepage>
    <ci:icon>http://example.com/~user2/icon.gif</ci:icon>
    <ci:card>http://example.com/~user2/card.vcd</ci:card>
    <note xml:lang="en">I'm in a boring meeting</note>
    <note xml:lang="en">I'll be in Tokyo next week</note>
    <del><ci:homepage>http://example.com/~user2</ci:homepage>
    <del><ci:icon>http://example.com/~user2/icon.gif</ci:icon>
    <del><ci:card>http://example.com/~user2/card.vcd</ci:card>
    <timestamp>2004-10-10T12:00:30Z</timestamp>
  </tuple>

  <tuple id="jklhgf9788934774.78">
    <status>
      <basic>open</basic>
    </status>
    <et:class>assistant</et:class>
    <et:contact-type>presentity</et:contact-type>
    <et:relationship>assistant</et:relationship>
    <contact priority="1.0">tel:+1-212-555-2222</contact>
    <note xml:lang="en">She's my secretary</note>
    <timestamp>2003-08-27T11:49:29Z</timestamp>
  </tuple>

</presence>

--50UbfW7LSCVltggUPe5z
Content-Transfer-Encoding: binary
Content-ID: <ZvSvkz@pres.example.com>
Content-Type: application/pidf+xml;charset="UTF-8"

<?xml version="1.0" encoding="UTF-8"?>
  <presence xmlns="urn:ietf:params:xml:ns:pidf"
    xmlns:es="urn:ietf:params:xml:ns:pidf:status:rp-id-status"
    xmlns:et="urn:ietf:params:xml:ns:pidf:rp-id-tuple"
    xmlns:pcp="urn:ietf:params:xml:ns:simple-prescaps-ext"
    xmlns:ci="urn:ietf:params:xml:ns:pidf:cidid"
    entity="pres:user3_public1@home3.net">

    <tuple id="h7833hjjk.dsajfjdsaf">
      <status>
        <basic>closed</basic>
        <es:activity>vacation</es:activity>
        <es:placetype until="2003-09-10T17:30:00Z">ship</es:placetype>
        <es:privacy>private</es:privacy>
        <es:idle since="2003-06-27T10:43:00Z"/>
        <pcp:prescaps>
          <pcp:video negated="false"></pcp:video>
          <pcp:mobility>mobile</pcp:mobility>
          <pcp:audio negated="true"></pcp:audio>
        </pcp:prescaps>
      </status>
      <et:class>sip</et:class>
      <et:content-type>service</et:content-type>
      <contact priority="0.8">sip:user3_public1@home3.net</contact>
      <note xml:lang="en">Don't Disturb Please!</note>
      <note xml:lang="hu">Senki se merjen zavarni!</note>
      <timestamp>2003-08-27T11:48:59Z</timestamp>
    </tuple>

    <tuple id="sfdds74.78">
      <status>
        <basic>open</basic>
      </status>
      <et:class>presentity</et:class>
      <et:contact-type>presentity</et:contact-type>
      <del><note xml:lang="en">I'm on vacation</note>
      <ci:homepage>http://example.com/~user3</ci:homepage>

```

```

<ci:icon>http://example.com/~user3/icon.gif</ci:icon>
<ci:card>http://example.com/~user3/card.vcd</ci:card>
<note xml:lang="en">I'm on vacation</note>
<timestamp>2004-10-10T12:00:30Z</timestamp>
</tuple>

<tuple id="sajdhdsahjh75vvc774.78">
  <status>
    <basic>open</basic>
  </status>
  <et:class>supervisor</et:class>
  <et:contact-type>presentity</et:contact-type>
  <et:relationship>supervisor</et:relationship>
  <contact priority="1.0">tel:+1-858-204-9141</contact>
  <note xml:lang="en">He's my supervisor</note>
  <timestamp>2003-08-27T11:48:59Z</timestamp>
</tuple>

</presence>

--50UBfW7LSCVltggUPe5z--

```

P-Charging-Vector: The RLS populates the icid parameter with a globally unique value and populates the identifier of its own network to the originating Inter Operator Identifier (IOI) parameter of this header.

Content-Type: Set to the value of the Accept: header received in the SUBSCRIBE request.

The message body in the NOTIFY request that carries the presence information of the presentity is formed as indicated in draft-ietf-simple-event-list-04 [22], draft-ietf-simple-rpid-03 [26], draft-ietf-simple-cipid-01 [32] and draft-ietf-simple-prescaps-ext-00 [25].

*** next change ***

13. NOTIFY request (PS to S-CSCF) - see example in table A.3.4.1-13

As soon as the PS sends a 200 (OK) response to accept the subscription, it sends a NOTIFY request with the current state of the presentity's presence tuples that the watcher has subscribed and been authorized to. The NOTIFY request is sent to S-CSCF#1. Further notification sent by the PS may either contain the complete set of presence information, or only those presence tuples that have changed since the last notification.

Table A.3.4.1-13: NOTIFY request (PS to S-CSCF)

```
NOTIFY sip:rls.home1.net SIP/2.0
Via: SIP/2.0/UDP ps.home2.net;branch=z9hG4bK348923.1
Max-Forwards: 70
Route: <sip:scscf1.home1.net;lr>
P-Charging-Vector: icid-value="AyretyU0dm+602IrT5tAFrbHLso=423551024"; orig-ioi=home2.net
From: <sip:user1_public1@home2.net>;tag=151170
To: <sip:rls.home1.net>;tag=31415
Call-ID: q987a9a87g087abgf7qyg7ag
CSeq: 42 NOTIFY
Subscription-State:active;expires=7200
Event: presence
Contact: <sip:ps.home2.net>
Content-Type: application/pidf+xml
Content-Length: (...)

<?xml version="1.0" encoding="UTF-8"?>
  <presence xmlns="urn:ietf:params:xml:ns:pidf"
    xmlns:es="urn:ietf:params:xml:ns:pidf:status:rp-id-status"
    xmlns:et="urn:ietf:params:xml:ns:pidf:rp-id-tuple"
    xmlns:pcp="urn:ietf:params:xml:ns:simple-prescaps-ext"
    xmlns:ci="urn:ietf:params:xml:ns:pidf:cidid"
    entity="pres:user2_public1@home2.net" >
    <tuple id="a8098a.672364762364">
      <status>
        <basic>open</basic>
        <es:activity>meeting</es:activity>
        <es:placetype until="2003-08-27T17:30:00Z">office</es:placetype>
        <es:privacy>private</es:privacy>
        <es:idle since="2003-08-27T10:43:00Z"/>
        <pcp:prescaps>
          <pcp:video negated="false"></pcp:video>
          <pcp:mobility>mobile</pcp:mobility>
          <pcp:audio negated="true"></pcp:audio>
        </pcp:prescaps>
      </status>
      <et:class>sip</et:class>
      <et:contact-type>service</et:contact-type>
      <contact priority="0.8">im:user2_public1@home2.net</contact>
      <note xml:lang="en">Don't Disturb Please!</note>
      <note xml:lang="fr">Ne derangez pas, s'il vous plait</note>
      <timestamp>2003-08-27T11:49:29Z</timestamp>
    </tuple>

    <tuple id="sfdds74.78">
      <status>
        <basic>open</basic>
      </status>
      <et:class>presentity</et:class>
      <et:contact-type>presentity</et:contact-type>
      <ci:homepage>http://example.com/~user2</ci:homepage>
      <ci:icon>http://example.com/~user2/icon.gif</ci:icon>
      <ci:card>http://example.com/~user2/card.vcd</ci:card>
      <note xml:lang="en">I'm in a boring meeting</note>
      <note xml:lang="en">I'll be in Tokyo next week</note>
      <ci:homepage>http://example.com/~user2</ci:homepage>
      <ci:icon>http://example.com/~user2/icon.gif</ci:icon>
      <ci:card>http://example.com/~user2/card.vcd</ci:card>
      <timestamp>2004-10-10T12:00:30Z</timestamp>
    </tuple>

    <tuple id="jklhgf9788934774.78">
      <status>
        <basic>open</basic>
      </status>
      <et:class>assistant</et:class>
      <et:contact-type>presentity</et:contact-type>
```

```
<et:relationship>assistant</et:relationship>
<contact priority="1.0">tel:+1-212-555-2222</contact>
<note xml:lang="en">She's my secretary</note>
<timestamp>2003-08-27T11:49:29Z</timestamp>
</tuple>

</presence>
```

P-Charging-Vector: The PS populates the icid parameter with a globally unique value and populates the identifier of its own network to the originating Inter Operator Identifier (IOI) parameter of this header.

Content-Type: Set to the value of the Accept header received in the SUBSCRIBE request or "application/pidf+xml".

The message body in the NOTIFY request that carries the subscriber's registration state is formed as indicated in draft-ietf-impp-cpim-pidf-08 [21], draft-ietf-simple-rpid-03 [26], draft-ietf-simple-cipid-01 [32] and draft-ietf-simple-prescaps-ext-00 [25].

*** next change ***

14. NOTIFY request (PS to S-CSCF) - see example in table A.3.5-14

As soon as the PS sends a 200 (OK) response to accept the subscription, it sends a NOTIFY request with the current state of the presentity's presence information that the watcher has subscribed and been authorized to. The NOTIFY request is sent to S-CSCF#1. Based on the Accept header field of the SUBSCRIBE request, the PS decides to use the 'application/pidf-partial+xml' content type in the NOTIFY request.

Table A.3.5-14: NOTIFY request (PS to S-CSCF)

```
NOTIFY sip: network.home1.net;branch=z9hG4bK240f34.1 SIP/2.0
Via: SIP/2.0/UDP ps.home2.net;branch=z9hG4bK348923.1
Max-Forwards: 70
Route: <sip:scscf1.home1.net;lr>
From: <sip:user2_public1@home2.net>;tag=151170
To: <sip:user1_public1@home1.net>;tag=31415
Call-ID: b89rjhnedlrfjflslj40a222
CSeq: 42 NOTIFY
Subscription-State: active; expires=7200
Event: presence
Contact: <sip:ps.home2.net>
Content-Type: application/pidf-partial+xml
Content-Length: (...)

<?xml version="1.0" encoding="UTF-8"?>
  <pidf-part:presence xmlns="urn:ietf:params:xml:ns:pidf-partial"
    xmlns:pidf="urn:ietf:params:xml:ns:pidf-partial"
    xmlns:es="urn:ietf:params:xml:ns:pidf:status:rp-id-status"
    xmlns:et="urn:ietf:params:xml:ns:pidf:rp-id-tuple"
    xmlns:pcp="urn:ietf:params:xml:ns:simple-prescaps-ext"
    xmlns:ci="urn:ietf:params:xml:ns:pidf:cipid"
    entity="pres:user2_public1@home2.net" pidf-part+version="01" pidf-
part:state="full">

    <tuple id="a8098a.672364762364">
      <status>
        <basic>open</basic>
        <es:activity>meeting</es:activity>
        <es:placetype until="2003-08-27T17:30:00Z">office</es:placetype>
        <es:privacy>private</es:privacy>
        <es:idle since="2003-08-27T10:43:00Z"/>
        <pcp:prescaps>
          <pcp:video negated="false"></pcp:video>
          <pcp:mobility>mobile</pcp:mobility>
          <pcp:audio negated="true"></pcp:audio>
        </pcp:prescaps>
      </status>
      <et:class>sip</et:class>
      <et:contact-type>service</et:contact-type>
      <contact priority="0.8">sip:user2_public1@home2.net</contact>
      <note xml:lang="en">Don't Disturb Please!</note>
      <note xml:lang="fr">Ne derangez pas, s'il vous plait</note>
      <timestamp>2003-08-27T11:49:29Z</timestamp>
    </tuple>

    <tuple id="sfdds74.78">
      <status>
        <basic>open</basic>
      </status>
      <et:class>presentity</et:class>
      <et:contact-type>presentity</et:contact-type>
      <ci:homepage>http://example.com/~user2</ci:homepage>
      <ci:icon>http://example.com/~user2/icon.gif</ci:icon>
      <ci:card>http://example.com/~user2/card.vcd</ci:card>
      <note xml:lang="en">I'm in a boring meeting</note>
      <note xml:lang="en">I'll be in Tokyo next week</note>
      <del><ci:homepage>http://example.com/~user2</ci:homepage>
      <ci:icon>http://example.com/~user2/icon.gif</ci:icon>
      <ci:card>http://example.com/~user2/card.vcd</ci:card>
      </del>
      <timestamp>2004-10-10T12:00:30Z</timestamp>
    </tuple>

    <tuple id="jklhgf9788934774.78">
      <status>
        <basic>open</basic>
      </status>
      <et:class>assistant</et:class>
```



```
<et:contact-type>presentity</et:contact-type>
<et:relationship>assistant</et:relationship>
<contact priority="1.0">tel:+1-212-555-2222</contact>
<note xml:lang="en">She's my secretary</note>
<timestamp>2003-08-27T11:49:29Z</timestamp>
</tuple>

</pidf-part:presence>
```

From: The tag of this field matches that of the To field in the received 200 (OK) response for the SUBSCRIBE request.

Content-Type: Set to the preferred value of the Accept header received in the SUBSCRIBE request.

The message body in the NOTIFY request that carries the presence information of the presentity is formed as indicated in draft-ietf-impp-cpim-pidf-08 [21], draft-ietf-simple-rpid-03 [26], draft-ietf-simple-cipid-01 [32], draft-ietf-simple-prescaps-ext-00 [25] and draft-ietf-simple-partial-notify-01 [24] and draft-ietf-simple-partial-pidf-format-00 [38].

*** next change ***

1. PUBLISH request (UE to P-CSCF) - see example in table A.4.2.1-1

A PUA in a UE wishes to publish presence information. To initiate the publication, the UE generates a PUBLISH request according to draft-ietf-sip-publish-03 [23] containing the presence information that it wishes to publish.

The message body in the PUBLISH request that carries the publisher's presence update state is formed as indicated in draft-ietf-imp-pim-pidf-08 [21], draft-ietf-simple-rpid-03 [26], draft-ietf-simple-cipid-01 [32], and draft-ietf-simple-prescaps-ext-00 [25].

Table A.4.2.1-1: PUBLISH request (UE to P-CSCF)

```
PUBLISH sip:user1_public1@home1.net SIP/2.0
Via: SIP/2.0/UDP [5555::aaa:bbb:ccc:ddd]:1357;comp=sigcomp;branch=z9hG4bKnashds7
Max-Forwards: 70
P-Access-Network-Info: 3GPP-UTRAN-TDD; utran-cell-id-3gpp=234151D0FCE11
Route: <sip:pcscf1.visited1.net:7531/lr;comp=sigcomp>, <sip:orig@scscf1.home1.net/lr>
P-Preferred-Identity: <sip:user1_public1@home1.net>
Privacy: none
From: <sip:user1_public1@home1.net>;tag=31415
To: <sip:user1_public1@home1.net>
Call-ID: b89rjhnedlrfjflslj40a222
CSeq: 61 PUBLISH
Require: sec-agree
Proxy-Require: sec-agree
Security-Verify: ipsec-3gpp; q=0.1; alg=hmac-sha-1-96; spi-c=98765432; spi-s=87654321; port-
c=8642; port-s=7531
Event: presence
Expires: 7200
Content-Type: application/pidf+xml
Content-Length: (...)

<?xml version="1.0" encoding="UTF-8"?>
  <presence xmlns="urn:ietf:params:xml:ns:pidf"
    xmlns:es="urn:ietf:params:xml:ns:pidf:status:rpid-status"
    xmlns:et="urn:ietf:params:xml:ns:pidf:rpid-tuple"
    xmlns:ci="urn:ietf:params:xml:ns:pidf:cipid"
    xmlns:pcp="urn:ietf:params:xml:ns:simple-prescaps-ext"
    entity="pres:user2_public1@home2.net">

    <tuple id="a8098a.672364762364">
      <status>
        <basic>open</basic>
        <es:activity>meeting</es:activity>
        <es:placetype until="2003-08-27T17:30:00Z">office</es:placetype>
        <es:privacy>private</es:privacy>
        <es:idle since="2003-08-27T10:43:00Z"/>
        <pcp:prescaps>
          <pcp:video negated="false"></pcp:video>
          <pcp:mobility>mobile</pcp:mobility>
          <pcp:audio negated="true"></pcp:audio>
        </pcp:prescaps>
      </status>
      <et:class>sip</et:class>
      <et:contact-type>service</et:contact-type>
      <contact priority="0.8">sip:user2_public1@home2.net</contact>
      <note xml:lang="en">Don't Disturb Please!</note>
      <note xml:lang="fr">Ne derangez pas, s'il vous plait</note>
      <timestamp>2003-08-27T11:49:29Z</timestamp>
    </tuple>

    <tuple id="sfdds74.78">
      <status>
        <basic>open</basic>
      </status>
      <et:class>presentity</et:class>
      <et:contact-type>presentity</et:contact-type>
      <ci:homepage>http://example.com/~user2</ci:homepage>
      <ci:icon>http://example.com/~user2/icon.gif</ci:icon>
      <ci:card>http://example.com/~user2/card.vcd</ci:card>
      <note xml:lang="en">I'm in a boring meeting</note>
      <note xml:lang="en">I'll be in Tokyo next week</note>
      <del><ci:homepage>http://example.com/~user2</ci:homepage>
      <ci:icon>http://example.com/~user2/icon.gif</ci:icon>
      <ci:card>http://example.com/~user2/card.vcd</ci:card>
      </del>
      <timestamp>2004-10-10T12:00:30Z</timestamp>
    </tuple>
  </presence>
```

```

</tuple>

<tuple id="jklhgf9788934774.78">
  <status>
    <basic>open</basic>
  </status>
  <et:class>assistant</et:class>
  <et:contact-type>presentity</et:contact-type>
  <et:relationship>assistant</et:relationship>
  <contact priority="1.0">tel:+1-212-555-2222</contact>
  <note xml:lang="en">She's my secretary</note>
  <timestamp>2003-08-27T11:49:29Z</timestamp>
</tuple>

</presence>

```

Request-URI: Public user identity whose presence information the PUA intends to publish.

Event: This field is populated with the value "presence" to specify the use of the presence package.

To: Same as the Request-URI.

Content-Type: Set to the value 'application/pidf+xml'.

*** next change ***

1. NOTIFY request (PS to S-CSCF) – see example in table A.5.2.1-1

The PS determines which authorized watchers are entitled to receive the updates of the presence information for this presentity. For each appropriate watcher, the PS sends a NOTIFY request that contains the updated state of presence information. The NOTIFY request may either contain the complete set of presence information, or only the information that has changed since the last notification. In this example, the watcher indicated preference for partial notification in the SUBSCRIBE request, so the NOTIFY request is formulated according to draft-ietf-simple-partial-notify-01 [24] and draft-ietf-simple-partial-pidf-format-00 [38] by including only the information that has changed since the last notification.

Table A.5.2.1-1: NOTIFY request (PS to S-CSCF)

```

NOTIFY sip:[5555::aaa:bbb:ccc:ddd]:1357;comp=sigcomp SIP/2.0
Via: SIP/2.0/UDP ps.home2.net;branch=z9hG4bK240f34.1
Max-Forwards: 70
P-Charging-Vector: icid-value="AyretyU0dm+602IrT5tAFrbHLso=523551024"; orig-ioi=home2.net
Route: <sip:scscf1.home1.net;lr>, <sip:pcscf1.home1.net;lr>
From: <sip:user2_public1@home2.net>;tag=151170
To: <sip:user1_public1@home1.net>;tag=31415
Call-ID: b89rjhnedlrfjflslj40a222
CSeq: 43 NOTIFY
Subscription-State: active;expires=5000
Event: presence
Contact: <sip:ps.home2.net>
Content-Type: application/pidf-partial+xml
Content-Length: (...)

<?xml version="1.0" encoding="UTF-8"?>
<pidf-part:presence xmlns="urn:ietf:params:xml:ns:pidf"
  xmlns:part="urn:ietf:params:xml:ns:pidf-partial"
  xmlns:es="urn:ietf:params:xml:ns:pidf:status:rp-id-status"
  xmlns:et="urn:ietf:params:xml:ns:pidf:rp-id-tuple"
  xmlns:ci="urn:ietf:params:xml:ns:pidf:cid"
  xmlns:pcp="urn:ietf:params:xml:ns:simple-prescaps-ext"
  entity="pres:user2_public1@home2.net" version="2" state="partial">

  <tuple id="a8098a.672364762364">
    <status>
      <basic>open</basic>
      <es:placetype until="2003-08-27T18:30:00Z">office</es:placetype>
      <es:privacy>public</es:privacy>

```

```

    <pcp:prescaps>
      <pcp:video negated="false"></pcp:video>
      <pcp:mobility>mobile</pcp:mobility>
      <pcp:audio negated="true"></pcp:audio>
    </pcp:prescaps>
  </status>
  <et:class>sip</et:class>
  <et:contact-type>service</et:contact-type>
  <contact priority="1.0">sip:user2_public1@home2.net</contact>
  <timestamp>2003-08-27T17:35:29Z</timestamp>
</tuple>

<tuple id="sfdds74.78">
  <status>
    <basic>open</basic>
  </status>
  <et:class>presentity</et:class>
  <et:contact-type>presentity</et:contact-type>
  <ci:homepage>http://example.com/~user2</ci:homepage>
  <ci:icon>http://example.com/~user2/icon.gif</ci:icon>
  <ci:card>http://example.com/~user2/card.vcd</ci:card>
  <note xml:lang="en">I'm in a boring meeting</note>
  <note xml:lang="en">I'll be in Tokyo next week</note>
  <del ci:homepage>http://example.com/~user2</del>
  <del ci:icon>http://example.com/~user2/icon.gif</del>
  <del ci:card>http://example.com/~user2/card.vcd</del>
  <timestamp>2003-08-27T12:00:30Z</timestamp>
</tuple>

<pidf-part:removed>
  <pidf-part:t_id>jklhgf9788934774.78</pidf-part:t_id>
</pidf-part:removed>
</pidf-part:presence>

```

P-Charging-Vector: The PS populates the icid parameter with a globally unique value and populates the identifier of its own network to the originating Inter Operator Identifier (IOI) parameter of this header.

*** next change ***

1. NOTIFY request (PS to S-CSCF) - see example in table A.5.3.1-1

The PS determines which authorized watchers are entitled to receive presence information. For each appropriate watcher, the PS sends a NOTIFY request that contains the updated state of presence information. In this example the notification is only sent to the RLS.

The NOTIFY request may either contain the complete set of presence information, or only those presence tuples that have changed since the last notification. For this example, the complete set of presence information is sent.

Table A.5.3.1-1: NOTIFY request (PS to S-CSCF)

```

NOTIFY sip:rls.home1.net SIP/2.0
Via: SIP/2.0/UDP ps.home2.net;branch=z9hG4bK240f34.1
Max-Forwards: 70
P-Charging-Vector: icid-value="AyretyU0dm+602IrT5tAFrbHLso=623551024"; orig-ioi=home12.net
P-Charging-Function-Addresses: ccf=[5555::b99:c88:d77:e66]; ccf=[5555::a55:b44:c33:d22];
    ecf=[5555::1ff:2ee:3dd:4ee]; ecf=[5555::6aa:7bb:8cc:9dd]
Route: <sip:scscf1.home1.net;lr>
From: <sip:user2_public1@home2.net>;tag=151170
To: <sip:user1_public1@home1.net>;tag=31415
Call-ID: gahjt393yhakfh83hfasl98a
CSeq: 43 NOTIFY
Subscription-State: active;expires=5000
Event: presence
Contact: <sip:ps.home2.net>
Content-Type: application/pidf+xml
Content-Length: (...)

<?xml version="1.0" encoding="UTF-8"?>
  <presence xmlns="urn:ietf:params:xml:ns:pidf"
    xmlns:es="urn:ietf:params:xml:ns:pidf:status:rp-id-status"
    xmlns:et="urn:ietf:params:xml:ns:pidf:rp-id-tuple"
    xmlns:ci="urn:ietf:params:xml:ns:pidf:cipid"
    xmlns:pcp="urn:ietf:params:xml:ns:simple-prescaps-ext"
    entity="pres:user2_public1@home2.net" >

    <tuple id="a8098a.672364762364">
      <status>
        <basic>closed</basic>
        <es:placetype until="2003-08-27T18:30:00Z">office</es:placetype>
        <es:privacy>public</es:privacy>
        <pcp:prescaps>
          <pcp:video negated="false"></pcp:video>
          <pcp:mobility>mobile</pcp:mobility>
          <pcp:audio negated="true"></pcp:audio>
        </pcp:prescaps>
      </status>
      <et:class>sip</et:class>
      <et:contact-type>service</et:contact-type>
      <contact priority="1.0">sip:user2_public1@home2.net</contact>
      <timestamp>2003-08-27T17:35:29Z</timestamp>
    </tuple>

    <tuple id="sfdds74.78">
      <status>
        <basic>open</basic>
      </status>
      <et:class>presentity</et:class>
      <et:contact-type>presentity</et:contact-type>
      <ci:homepage>http://example.com/~user2</ci:homepage>
      <ci:icon>http://example.com/~user2/icon.gif</ci:icon>
      <ci:card>http://example.com/~user2/card.vcd</ci:card>
      <note xml:lang="en">I'm in a boring meeting</note>
      <note xml:lang="en">I'll be in Tokyo next week</note>
      <del><ci:homepage>http://example.com/~user2</ci:homepage>
      <ci:icon>http://example.com/~user2/icon.gif</ci:icon>
      <ci:card>http://example.com/~user2/card.vcd</ci:card>
      </del>
      <timestamp>2003-08-27T12:00:30Z</timestamp>
    </tuple>

  </presence>

```

P-Charging-Vector:

The PS populates the icid parameter with a globally unique value and populates the identifier of its own network to the originating Inter Operator Identifier (IOI) parameter of this header.

P-Charging-Function-Addresses:

The PS populates the P-Charging-Function-Addresses header field to be passed to the S-CSCF.

*** next change ***

5. NOTIFY request (RLS to S-CSCF#1) - see example in table A.5.3.1-5

The RLS may decide to wait for other notifications and combine them in a single notification towards the UE or it sends the notification to the UE without any waiting. In this example, the RLS does not wait for other notifications.

Table A.5.3.1-5: NOTIFY request (RLS to S-CSCF)

```
NOTIFY sip:[5555::aaa:bbb:ccc:ddd]:1357;comp=sigcomp SIP/2.0
Via: SIP/2.0/UDP rls.home1.net;branch=z9hG4bK240f34.1
Max-Forwards: 70
P-Charging-Vector: icid-value="AyretyU0dm+602IrT5tAFrbHLso=723551024"; orig-ioi=home1.net
P-Charging-Function-Addresses: ccf=[5555::b99:c88:d77:e66]; ccf=[5555::a55:b44:c33:d22];
    ecf=[5555::1ff:2ee:3dd:4ee]; ecf=[5555::6aa:7bb:8cc:9dd]
Route: <sip:scscf1.home1.net;lr>, <sip:pcscf1.visited1.net;lr>
From: <sip:user1_list1@home1.net>;tag=151170
To: <sip:user1_public1@home1.net>;tag=31415
Call-ID: gahjt393yhakfh83hfas198a
CSeq: 90 NOTIFY
Subscription-State: active;expires=4500
Require: eventlist
Event: presence
Contact: <sip:rls.home1.net>
Content-Type: multipart/related;type="application/rlmi+xml";
    start="<njhhsdhj@rls.home1.net>";boundary="70UBfW7L78hjgfgUPe5z"
Content-Length: (...)

--70UBfW7L78hjgfgUPe5z
Content-Transfer-Encoding: binary
Content-ID: <njhhsdhj@rls.home1.net>
Content-Type: application/rlmi+xml;charset="UTF-8"

<?xml version="1.0" encoding="UTF-8"?>
  <list xmlns="urn:ietf:params:xml:ns:rmi"
    uri="sip:user1_list1@home1.net"
    version="2"
    fullState="false"
    <resource uri="pres:user2_public1@home2.net" name="Kovacs Janos">
      <instance id="hqzsuxtfyq" state="active" cid="uhjgfd@rls.home1.net"/>
    </resource>
  </list>

--70UBfW7L78hjgfgUPe5z
Content-Transfer-Encoding: binary
Content-ID: <uhjgfd@rls.home1.net>
Content-Type: application/pidf+xml;charset="UTF-8"

<?xml version="1.0" encoding="UTF-8"?>
  <presence xmlns="urn:ietf:params:xml:ns:pidf"
    xmlns:es="urn:ietf:params:xml:ns:pidf:status:rp-id-status"
    xmlns:et="urn:ietf:params:xml:ns:pidf:rp-id-tuple"
    xmlns:ci="urn:ietf:params:xml:ns:pidf:cipid"
    xmlns:pcp="urn:ietf:params:xml:ns:simple-prescaps-ext"
    entity="pres:user2_public1@home2.net">

    <tuple id="a8098a.672364762364">
      <status>
        <basic>closed</basic>
        <es:placetype until="2003-08-27T18:30:00Z">office</es:placetype>
        <es:privacy>public</es:privacy>
        <pcp:prescaps>
          <pcp:video negated="false"></pcp:video>
          <pcp:mobility>mobile</pcp:mobility>
          <pcp:audio negated="true"></pcp:audio>
        </pcp:prescaps>
      </status>
      <et:class>sip</et:class>
      <et:contact-type>service</et:contact-type>
      <contact priority="1.0">sip:user2_public1@home2.net</contact>
      <timestamp>2003-08-27T17:35:29Z</timestamp>
    </tuple>

    <tuple id="sfdds74.78">
      <status>
```

```

    <basic>open</basic>
  </status>
  <et:class>presentity</et:class>
  <et:contact-type>presentity</et:contact-type>
  <ci:homepage>http://example.com/~user2/</ci:homepage>
  <ci:icon>http://example.com/~user2/icon.gif</ci:icon>
  <ci:card>http://example.com/~user2/card.vcd</ci:card>
  <note xml:lang="en">I'm in a boring meeting</note>
  <note xml:lang="en">I'll be in Tokyo next week</note>
  <del><ci:homepage>http://example.com/~user2/</ci:homepage>
  <del><ci:icon>http://example.com/~user2/icon.gif</ci:icon>
  <del><ci:card>http://example.com/~user2/card.vcd</ci:card>
  <timestamp>2003-08-27T12:00:30Z</timestamp>
  </tuple>

</presence>

--70UBfW7L78hjgfgUPe5z

```

P-Charging-Vector:

The RLS populates the icid parameter with a globally unique value and populates the identifier of its own network to the originating Inter Operator Identifier (IOI) parameter of this header.

P-Charging-Function-Addresses:

The RLS populates the P-Charging-Function-Addresses header field to be passed to the S-CSCF.

CR-Form-v7

CHANGE REQUEST

⌘ **24.141 CR 006** ⌘ rev **1** ⌘ Current version: **6.0.0** ⌘

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:	⌘ GAA impacts		
Source:	⌘ Siemens		
Work item code:	⌘ PRSNC	Date:	⌘ 17/08/2004
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:	⌘ The UE authenticats the NAF and not the authentication proxy. Ambiguous condition when an AS has to implement the role of a NAF. Correct condition is that no authentication proxy in the network and the AS implements the role of a DMS. Missing statement that AS has to implement TLS.
Summary of change:	⌘ See reason for change
Consequences if not approved:	⌘ Incorrect specification

Clauses affected:	⌘ 6.2.1, 6.2.2						
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;">⌘</td> <td style="text-align: center;">X</td> </tr> </table>	Y	N	⌘	X	Other core specifications	⌘
Y	N						
⌘	X						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> </table>	⌘	X	Test specifications			
⌘	X						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">⌘</td> <td style="text-align: center;">X</td> </tr> </table>	⌘	X	O&M Specifications			
⌘	X						
Other comments:	⌘						

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 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.

6 Protocol for data manipulation at the Ut reference point

6.1 Introduction

Hypertext Transfer Protocol (HTTP) and XML Configuration Access Protocol (XCAP) are used to store, alter and delete data related to the presence service. The general information that can be manipulated is user groups, subscription authorization policy, resource lists, hard state presence publication, MIME objects referenced from the hard state presence information, etc. Soft state presence information manipulated with a PUBLISH request is not manipulated by the mechanism provided over the Ut reference point.

6.2 Functional entities

6.2.1 User Equipment (UE)

The UE implements the Data Manipulator (DM) role as described in subclause 6.3.1.

The UE shall implement HTTP digest AKA (see RFC 3310 [20]) and it shall initiate a bootstrapping procedure with the bootstrapping server function located in the home network, as described in 3GPP TS 24.109 [7].

The UE shall acquire the subscriber's certificate from PKI portal by using a bootstrapping procedure, as described in 3GPP TS 24.109 [7].

The UE shall implement HTTP digest authentication (see RFC 2617 [13]).

The UE ~~and the authentication proxy~~ shall ~~both~~ implement TLS (see RFC 2246 [13]). The UE shall be able to authenticate the ~~authentication proxy~~ network application function based on the received certificate during TLS handshaking phase.

6.2.2 Application Server (AS)

If an AS implements the role of a PS (see subclause 5.3.3) or of a RLS (see subclause 5.3.4), then the AS shall also implement the role of a Data Manipulation Server (DMS) (see subclause 6.3.2).

If there is no authentication proxy in the network, then the AS shall ~~also~~

- 1) implement the role of a network application function, as described in 3GPP TS 24.109 [7]; ~~and it shall~~
- 2) implement TLS (see RFC 2246 [13]);
- 3) ~~support~~ implement HTTP digest authentication (see RFC 2617 [13]); and-
- 4) support certificate authentication.

Editor's note: It needs to be clarified what physical entities can contain the Authentication Proxy and its relationship with the IMS architecture.

6.2.3 Authentication proxy

The authentication proxy shall implement the role of a network application function, as described in 3GPP TS 24.109 [7] and it shall support HTTP Digest Authentication and certificate authentication.

The Authentication Proxy shall authenticate the UE and integrity protect the messages sent towards the UE.

Editor's note: It is FFS how the Authentication Proxy passes the user's identity to the Application Server (AS).

CHANGE REQUEST

⌘ **24.141 CR 007** ⌘ rev **1** ⌘ Current version: **6.0.0** ⌘

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:	⌘ XCAP roles				
Source:	⌘ Siemens				
Work item code:	⌘ PRSNC	Date:	⌘ 22/07/2004		
Category:	⌘ C	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:	⌘	Current definition of Data Manipulation Server and Data Manipulator do not reference the corresponding definitions in draft-ietf-simple-xcap-03.
Summary of change:	⌘	Reference to XCAP client and XCAP server introduced. Update of reference version of draft-ietf-simple-xcap
Consequences if not approved:	⌘	Incomplete specification

Clauses affected:	⌘	2, 3.1, 6.3.1, 6.3.2								
Other specs affected:	⌘	<table border="1" style="display: inline-table; vertical-align: middle;"> <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;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> <tr> <td style="text-align: center;"> </td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	Y	N		X		X		X
Y	N									
	X									
	X									
	X									
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.

*** 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] 3GPP TS 23.002: "Network architecture".
- [4] 3GPP TS 23.141: "Presence service; Architecture and functional description; Stage 2".
- [5] 3GPP TS 23.218: "IP Multimedia (IM) session handling; IM call model; Stage 2".
- [6] 3GPP TS 23.228: "IP Multimedia Subsystem (IMS); Stage 2".
- [7] 3GPP TS 24.109: "Bootstrapping interface (U_b) and Network application function interface (U_a); Protocol details".
- [8] 3GPP TS 24.228: "Signalling flows for the IP multimedia call control based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3".
- [9] 3GPP TS 24.229: "Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3".
- [10] 3GPP TS 29.228: "IP Multimedia (IM) Subsystem Cx and Dx Interfaces; Signalling flows and message contents".
- [11] 3GPP TS 33.141: "Presence service; Security".
- [12] IETF RFC 2664 (1999): "FYI on Questions and Answers - Answers to Commonly asked New Internet User Questions".
- [13] IETF RFC 2246 (1999): "The TLS Protocol Version 1.0".
- [14] IETF RFC 2387 (August 1998): "The MIME Multipart/Related Content-type".
- [15] IETF RFC 2616 (June 1999): "Hypertext Transfer Protocol -- HTTP/1.1".
- [16] IETF RFC 2778 (2000): "A Model for Presence and Instant Messaging".
- [17] IETF RFC 3261 (June 2002): "SIP: Session Initiation Protocol".
- [18] IETF RFC 3263 (June 2002): "Session Initiation Protocol (SIP): Locating SIP Servers".
- [19] IETF RFC 3265 (March 2002): "Session Initiation Protocol (SIP)-Specific Event Notification".
- [20] IETF RFC 3310 (2002): "Hypertext Transfer Protocol (HTTP) Digest Authentication Using Authentication and Key Agreement (AKA)".
- [21] draft-ietf-impp-cpim-pidf-08 (May 2003): "Presence Information Data Format (PIDF)".

- [22] draft-ietf-simple-event-list-04 (June 2003): "A Session Initiation Protocol (SIP) Event Notification Extension for Resource Lists".
- [23] draft-ietf-sip-publish-03 (February 2004): "An Event State Publication Extension to the Session Initiation Protocol (SIP)".
- [24] draft-ietf-simple-partial-notify-01 (January 2004): "Partial Notification of Presence Information".
- [25] draft-ietf-simple-prescaps-ext-00 (February 2004): "Device capability PIDF status extension".
- [26] draft-ietf-simple-rpid-03 (March 2004): "RPID: Rich Presence: Extensions to the Presence Information Data Format (PIDF)".
- [27] draft-ietf-simple-presence-10 (January 2003): "A Presence Event Package for the Session Initiation Protocol (SIP)".
- [28] draft-ietf-simple-winfo-package-05 (January 2003): "A Session Initiation Protocol (SIP) Event Template-Package for Watcher Information".
- [29] draft-ietf-simple-winfo-format-04 (January 2003): "An Extensible Markup Language (XML) Based Format for Watcher Information".
- [30] draft-ietf-simple-filter-format-00 (February 2004): "An Extensible Markup Language (XML) Based Format for Event Notification Filtering".
- [31] draft-ietf-simple-event-filter-funct-00 (February 2003): "Functional Description of Event Notification Filtering".
- [32] draft-ietf-simple-cipid-01 (March 2004): "CIPID: Contact Information in Presence Information Data Format".
- [33] draft-ietf-simple-xcap-02-03 (February-July 2004): "The Extensible Markup Language (XML) Configuration Access Protocol (XCAP)".
- [34] draft-isomaki-simple-xcap-pidf-manipulation-usage-00 (February 2004): "An Extensible Markup Language (XML) Configuration Access Protocol (XCAP) Usage for Manipulating Presence Document Contents".
- [35] draft-ietf-simple-xcap-presence-rules-00 (May 2004): "Extensible Markup Language (XML) Configuration Access Protocol (XCAP) Usages for Setting Presence Authorization".
- [36] draft-ietf-simple-xcap-list-usage-02 (February 2004): "An Extensible Markup Language (XML) Format for Representing Resource Lists".
- [37] draft-ietf-geopriv-pidf-lo-01 (February 2004): "A Presence-based GEOPRIV Location Object Format".
- [38] draft-ietf-simple-partial-pidf-format-00 (January 2004): "Presence Information Data Format (PIDF) Extension for Partial Presence".
- [39] draft-ietf-simple-xcap-package-01 (February 2004): "A Session Initiation Protocol (SIP) Event Package for Modification Events for the Extensible Markup Language (XML) Configuration Access Protocol (XCAP) Managed Documents".
- [40] draft-ietf-sip-content-indirect-mech-03 (June 2003): "A Mechanism for Content Indirection in Session Initiation Protocol (SIP) Messages".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [1] and the following apply:

subscription authorization policy: a policy that determines which watchers are allowed to subscribe to a presentity's presence information
The subscription authorization policy also determines to which presence tuples of the presentity's presence information the watcher has access.

For the purposes of the present document, the following terms and definitions given in 3GPP TS 23.141 [4] apply:

Presence list server
Presence Network Agent (PNA)
Presence Server (PS)
Presence User Agent (PUA)

For the purposes of the present document, the following terms and definitions from RFC 2778 [16] apply:

Presence tuple
Presentity

For the purposes of the present document, the following terms and definitions from draft-ietf-sip-publish-03 [23] apply:

Event Publication Agent (EPA)
Event State Compositor (ESC)

[For the purposes of the present document, the following terms and definitions from draft draft-ietf-simple-xcap-03 \[33\] apply:](#)

[XCAP client](#)
[XCAP server](#)

For the purposes of the present document, the following terms and definitions from draft-ietf-simple-event-list-04 [22] apply:

Resource List Server (RLS)

For the purposes of the present document, the following terms and definitions given in RFC 1594 [12].

Fully-Qualified Domain Name (FQDN)

For the purposes of the present document, the following terms and definitions given in RFC 3261 [17] apply (unless otherwise specified see clause 6).

Final response
Header
Header field
Method
Request
Response
(SIP) transaction
Status-code (see RFC 3261 [17], subclause 7.2)
Tag (see RFC 3261 [17], subclause 19.3)

For the purposes of the present document, the following terms and definitions given in 3GPP TS 23.002 [3], subclauses 4.1.1.1 and 4a.7 apply:

Call Session Control Function (CSCF)
Home Subscriber Server (HSS)

For the purposes of the present document, the following terms and definitions given in 3GPP TS 23.218 [5], subclause 3.1 apply:

Filter criteria
Initial filter criteria
Subsequent request

For the purposes of the present document, the following terms and definitions given in 3GPP TS 23.228 [6], subclauses 4.3.3.1 and 4.6 apply:

Interrogating-CSCF (I-CSCF)
Proxy-CSCF (P-CSCF)
Serving-CSCF (S-CSCF)

For the purposes of the present document, the following terms and definitions given in 3GPP TR 21.905 [1] apply:

User Equipment (UE)

For the purposes of the present document, the following terms and definitions from 3GPP TS 33.141 [11] apply:

Authentication Proxy

**** next change ****

6.3 Roles

6.3.1 Data Manipulator (DM)

6.3.1.1 Introduction

The DM is a logical function that [implements the requirements of a XCAP client as defined in draft-ietf-simple-xcap-03 \[33\]](#). The DM provides the means to manipulate the general data such as user groups, subscription authorization policy, resource lists, hard state presence publication, MIME objects referenced from the hard state presence information, etc.

NOTE: In order to be able to manipulate data stored on the DMS, the DM has the root directory on the DMS pre-configured or use some means to discover it. Discovery mechanisms are outside the scope of the present document.

6.3.1.2 Manipulating a presencelist

When the DM intends to manipulate a presencelist, it shall generate an HTTP PUT, GET or DELETE request in accordance with RFC 2616 [15], draft-ietf-simple-xcap-~~02~~-03 [33] and draft-ietf-simple-xcap-list-usage-02 [36].

6.3.1.3 Manipulating the subscription authorization policy

When the DM intends to manipulate the subscription authorization policy, it shall generate an HTTP PUT, HTTP GET or HTTP DELETE request in accordance with RFC 2616 [15], draft-ietf-simple-xcap-~~02~~-03 [33] and draft-ietf-simple-xcap-presence-rules-00 [35].

When the DM intends to authorize a different value of the same presence attribute to different watchers or watcher groups, the DM shall authorize a single tuple including one of the different values of the same presence attribute to every watcher or watcher groups by using a specific "inclusion set" as specified in draft-ietf-simple-xcap-presence-rules-00 [35].

6.3.1.4 Publishing hard state presence information

The DM shall implement draft-isomaki-simple-xcap-pidf-manipulation-usage-00 [34] in order to be able to manipulate hard state presence information. Hard state presence information uses the same format as soft state information, namely "application/pidf+xml" content type as described in draft-ietf-imp-pim-pidf-08 [21] together with any of its extensions.

When the hard state presence information contains one or more MIME objects to be aggregated with the "application/pidf+xml" content type and any of its extensions, the DM shall:

- a) construct as many HTTP URIs as many objects to be stored and formulate every HTTP URI according a predefined directory structure;

NOTE: In order to be able to manipulate data stored on the DMS, the DM has the root directory on the DMS pre-configured or use some means to discover it. Discovery mechanisms are outside the scope of the present document.

- b) store the objects on the data manipulation server behind the HTTP URI(s) created in the previous step using standard HTTP procedures as defined in RFC 2616 [15];
- c) include every HTTP URI as a value of the corresponding XML element in the published "application/pidf+xml" presence document referencing the stored object(s) in the previous step; and
- d) publish the hard state presence information according to draft-isomaki-simple-xcap-pidf-manipulation-usage-00 [34].

6.3.2 Data Manipulation Server (DMS)

6.3.2.1 Introduction

The Data Manipulation Server (DMS) is a logical function [that implements the requirements of a XCAP server as defined in draft-ietf-simple-xcap-03 \[33\]](#). The DMS ~~which~~ can store data such as user groups, subscription authorization policy, resource lists, hard state presence information, MIME objects referenced from the hard state presence information, etc.

6.3.2.2 Resource list manipulation acceptance

When the data manipulation server receives an HTTP PUT, HTTP GET or HTTP DELETE request for manipulating or fetching a resource list, the DMS shall first authenticate the request in accordance with 3GPP TS 24.109 [7] and then perform authorization. Afterwards the DMS shall perform the requested action and generate a response in accordance with RFC 2616 [15], draft-ietf-simple-xcap-~~02-03~~ [33] and draft-ietf-simple-xcap-list-usage-02 [36].

6.3.2.3 Subscription authorization policy manipulation acceptance

When the DMS receives an HTTP PUT, HTTP GET or HTTP DELETE request for manipulating or fetching of the subscription authorization policy, the data manipulation server shall first authenticate the request in accordance with 3GPP TS 24.109 [7] and then perform authorization. Afterwards the DMS shall perform the requested action and generate a response in accordance with RFC 2616 [15], draft-ietf-simple-xcap-~~02-03~~ [33] and draft-ietf-simple-xcap-presence-rules-00 [35].

6.3.2.4 Publication acceptance of hard state presence information

When the DMS receives an HTTP PUT, HTTP GET or HTTP DELETE request for publishing, fetching or deleting of hard state presence information, the DMS shall first authenticate the request in accordance with 3GPP TS 24.109 [7] and then perform authorization. Afterwards the DMS shall:

- a) if the HTTP URI points to a predefined directory reserved for storing MIME objects and the request is an HTTP PUT request, replace any existing content referenced by the Request-URI with the content of the request;
- b) if the Request-URI points to an uncreated directory, create the directory, store the content there and associate the content with the Request-URI. For all requests, i.e. HTTP PUT, HTTP GET and HTTP DELETE requests, generate an appropriate response in accordance with RFC 2616 [15]; or
- c) if the HTTP URI points to an XCAP directory and the Application Usage ID (AUID) part of the HTTP URI is set to "pidf-manipulation", process the request and generate an appropriate response in accordance with draft-ietf-simple-xcap-~~02-03~~ [33], draft-isomaki-simple-xcap-pidf-manipulation-usage-00 [34] and RFC 2616 [15].

CR-Form-v7

CHANGE REQUEST

⌘ **24.141 CR 008** ⌘ rev **1** ⌘ Current version: **6.0.0** ⌘

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:	⌘ XCAP change				
Source:	⌘ Siemens				
Work item code:	⌘ PRSNC	Date:	⌘ 27/07/2004		
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:	⌘	The concept of the XCAP change procedure has changed with draft-ietf-simple-xcap-package-02. The draft just describes the XML change document while the package that is used for the subscription is defined in draft-ietf-sipping-config-framework-03.
Summary of change:	⌘	
Consequences if not approved:	⌘	Change notification for XCAP documents does not work

Clauses affected:	⌘	2, 5.3.1.4, 5.3.2.5, 5.3.3.5, 5.3.4.4				
Other specs affected:	⌘	<table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="width: 20px;">Y</td> <td style="width: 20px;">N</td> </tr> <tr> <td style="text-align: center;">X</td> <td style="text-align: center;">X</td> </tr> </table> Other core specifications ⌘ Test specifications ⌘ O&M Specifications ⌘	Y	N	X	X
Y	N					
X	X					
Other comments:	⌘					

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**** 1st change ****

2 References

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- [1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [2] 3GPP TS 22.141: "Presence Service; Stage 1".
- [3] 3GPP TS 23.002: "Network architecture".
- [4] 3GPP TS 23.141: "Presence service; Architecture and functional description; Stage 2".
- [5] 3GPP TS 23.218: "IP Multimedia (IM) session handling; IM call model; Stage 2".
- [6] 3GPP TS 23.228: "IP Multimedia Subsystem (IMS); Stage 2".
- [7] 3GPP TS 24.109: "Bootstrapping interface (Ua) and Network application function interface (Ua); Protocol details".
- [8] 3GPP TS 24.228: "Signalling flows for the IP multimedia call control based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3".
- [9] 3GPP TS 24.229: "Internet Protocol (IP) multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3".
- [10] 3GPP TS 29.228: "IP Multimedia (IM) Subsystem Cx and Dx Interfaces; Signalling flows and message contents".
- [11] 3GPP TS 33.141: "Presence service; Security".
- [12] IETF RFC 2664 (1999): "FYI on Questions and Answers - Answers to Commonly asked New Internet User Questions".
- [13] IETF RFC 2246 (1999): "The TLS Protocol Version 1.0".
- [14] IETF RFC 2387 (August 1998): "The MIME Multipart/Related Content-type".
- [15] IETF RFC 2616 (June 1999): "Hypertext Transfer Protocol -- HTTP/1.1".
- [16] IETF RFC 2778 (2000): "A Model for Presence and Instant Messaging".
- [17] IETF RFC 3261 (June 2002): "SIP: Session Initiation Protocol".
- [18] IETF RFC 3263 (June 2002): "Session Initiation Protocol (SIP): Locating SIP Servers".
- [19] IETF RFC 3265 (March 2002): "Session Initiation Protocol (SIP)-Specific Event Notification".
- [20] IETF RFC 3310 (2002): "Hypertext Transfer Protocol (HTTP) Digest Authentication Using Authentication and Key Agreement (AKA)".

- [21] draft-ietf-impp-cpim-pidf-08 (May 2003): "Presence Information Data Format (PIDF)".
- [22] draft-ietf-simple-event-list-04 (June 2003): "A Session Initiation Protocol (SIP) Event Notification Extension for Resource Lists".
- [23] draft-ietf-sip-publish-03 (February 2004): "An Event State Publication Extension to the Session Initiation Protocol (SIP)".
- [24] draft-ietf-simple-partial-notify-01 (January 2004): "Partial Notification of Presence Information".
- [25] draft-ietf-simple-prescaps-ext-00 (February 2004): "Device capability PIDF status extension".
- [26] draft-ietf-simple-rpid-03 (March 2004): "RPID: Rich Presence: Extensions to the Presence Information Data Format (PIDF)".
- [27] draft-ietf-simple-presence-10 (January 2003): "A Presence Event Package for the Session Initiation Protocol (SIP)".
- [28] draft-ietf-simple-winfo-package-05 (January 2003): "A Session Initiation Protocol (SIP) Event Template-Package for Watcher Information".
- [29] draft-ietf-simple-winfo-format-04 (January 2003): "An Extensible Markup Language (XML) Based Format for Watcher Information".
- [30] draft-ietf-simple-filter-format-00 (February 2004): "An Extensible Markup Language (XML) Based Format for Event Notification Filtering".
- [31] draft-ietf-simple-event-filter-funct-00 (February 2003): "Functional Description of Event Notification Filtering".
- [32] draft-ietf-simple-cipid-01 (March 2004): "CIPID: Contact Information in Presence Information Data Format".
- [33] draft-ietf-simple-xcap-02 (February 2004): "The Extensible Markup Language (XML) Configuration Access Protocol (XCAP)".
- [34] draft-isomaki-simple-xcap-pidf-manipulation-usage-00 (February 2004): "An Extensible Markup Language (XML) Configuration Access Protocol (XCAP) Usage for Manipulating Presence Document Contents".
- [35] draft-ietf-simple-xcap-presence-rules-00 (May 2004): "Extensible Markup Language (XML) Configuration Access Protocol (XCAP) Usages for Setting Presence Authorization".
- [36] draft-ietf-simple-xcap-list-usage-02 (February 2004): "An Extensible Markup Language (XML) Format for Representing Resource Lists".
- [37] draft-ietf-geopriv-pidf-lo-01 (February 2004): "A Presence-based GEOPRIV Location Object Format".
- [38] draft-ietf-simple-partial-pidf-format-00 (January 2004): "Presence Information Data Format (PIDF) Extension for Partial Presence".
- [39] draft-ietf-simple-xcap-package-~~01-02~~ (February-July 2004): "A Session Initiation Protocol (SIP) Event Package for Modification Events for the Extensible Markup Language (XML) Configuration Access Protocol (XCAP) Managed Documents".
- [40] draft-ietf-sip-content-indirect-mech-03 (June 2003): "A Mechanism for Content Indirection in Session Initiation Protocol (SIP) Messages".
- [41] [draft-ietf-sipping-config-framework-04 \(July 2004\): "A Framework for Session Initiation Protocol User Agent Profile Delivery"](#).

**** next change ****

5.3.1.4 Subscription for ~~the~~xcap-change package

In order to get notifications of changes to XML documents manipulated via the Ut reference point the PUA may generate a SUBSCRIBE request in accordance with draft-ietf-simple-xcap-package-~~01-02~~ [39] [and draft-ietf-sipping-config-framework-04 \[41\]](#).

**** next change ****

5.3.2.5 Subscription for ~~the~~xcap-change package

In order to get notifications of changes to XML documents manipulated via the Ut reference point the watcher may generate a SUBSCRIBE request in accordance with draft-ietf-simple-xcap-package-~~01-02~~ [39] [and draft-ietf-sipping-config-framework-04 \[41\]](#).

**** next change ****

5.3.3.5 Subscription acceptance to xcap-change and notification of state changes

When the PS receives a SUBSCRIBE request having the Event header value '~~xcap-change~~sip-profile', the PS shall first verify the identity of the source of the SUBSCRIBE request as described in 3GPP TS 24.229 [9] subclause 5.7.1.4, then it shall perform authorization as described in 3GPP TS 24.229 [9] subclause 5.7.1.5. Afterwards, the PS shall generate a response to the SUBSCRIBE request and notifications in accordance with draft-ietf-simple-xcap-package-~~01-02~~ [39] [and draft-ietf-sipping-config-framework-04 \[41\]](#).

**** next change ****

5.3.4.4 Subscription acceptance to xcap-change and notification of state changes

When the RLS receives a SUBSCRIBE request having the Event header value "~~sip-profile~~xcap-change", the RLS shall first verify the identity of the source of the SUBSCRIBE request as described in 3GPP TS 24.229 [9] subclause 5.7.1.4, then it shall perform authorization as described in 3GPP TS 24.229 [9] subclause 5.7.1.5. Afterwards, the RLS shall generate a response to the SUBSCRIBE request and notifications in accordance with draft-ietf-simple-xcap-package-~~01-02~~ [39] [and draft-ietf-sipping-config-framework-04 \[41\]](#).

CR-Form-v7.1

CHANGE REQUEST

⌘ **24.141 CR 014** ⌘ rev **1** ⌘ Current version: **6.0.0** ⌘

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:	⌘ Enhanced partial publication description		
Source:	⌘ Nokia		
Work item code:	⌘ PRESNC	Date:	⌘ 17/08/2004
Category:	⌘ D	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> Ph2 (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) Rel-7 (Release 7)

Reason for change:	⌘ It is currently unclear whether a solution for partial publication will be produced by IETF SIMPLE WG. If IETF does not provide the solution the TS texts needs to be more specific.
Summary of change:	⌘ Partial publication described in more detail
Consequences if not approved:	⌘ Partial publication is weakly described if IETF won't provide the solution (e.g., draft-lonnfors-simple-publish-partial).

Clauses affected:	⌘ 5.3.1.2, 5.3.3.3						
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="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
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	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;"><input type="checkbox"/></td> </tr> </table> Test specifications	<input checked="" type="checkbox"/>	<input type="checkbox"/>				
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<input checked="" type="checkbox"/>	<input type="checkbox"/>						

Other comments: ⌘

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 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.

*** 1st change ***

5.3.1.2 Publication of presence information

When the PUA intends to publish its own view of the presentity's presence information it shall generate a PUBLISH request by acting as an Event Publication Agent (EPA) in accordance with draft-ietf-sip-publish-03 [23].

The PUA shall implement the "application/pidf+xml" content type as described in draft-ietf-impp-cpim-pidf-08 [21] together with the Presence Information Data Format (PIDF) extensions defined in draft-ietf-simple-rpid-03 [26].

The PUA may implement the PIDF extensions defined in draft-ietf-simple-cipid-01 [32].

The PUA may implement location information according to the format defined in draft-ietf-geopriv-pidf-lo-01 [37].

NOTE 1: The categorization of presence attributes to generic information attributes and communication address specific attributes is done using the <contact-type> element. The value of the <contact-type> element categorizes the content of the tuple in such a way that the value "presentity" denotes general information about the presentity and the value "service" denotes the communication mean specific information. The presence document consists of one or more tuples describing the presentity related information and one or more tuples describing information about different communication means.

The eXtensible Markup Language (XML) Schema Definition of the "application/pidf+xml" format or the "application/pidf-partial+xml" format cover the definition of the 3GPP subscriber's presence attributes and the PUA shall perform the following mapping:

- the communication address (containing communication means, status and contact address) attribute and the priority attribute are represented by a <tuple> element including a basic <status> element and one or more <contact> elements containing a priority attribute as defined in draft-ietf-impp-cpim-pidf-08 [21].

The PUA represents the subscriber's status by including a <contact-type> element defined in draft-ietf-simple-rpid-03 [26] with the value "presentity" and a basic <status> element defined in draft-ietf-impp-cpim-pidf-08 [21]. In order to express more granularity in values, <activity> and <privacy> elements both defined in draft-ietf-simple-rpid-03 [26] can be used inside the <status> elements. Further PIDF extensions as defined in draft-ietf-simple-cipid-01 [32] can also be used.

In case of including multiple presentity related tuples in the presence document, all the presentity related tuples except one contains information about an alternate contact related to the presentity; the type of the alternate contact shall be indicated using the <relationship> element defined in draft-ietf-simple-rpid-03 [26];

NOTE 2: draft-ietf-simple-rpid-03 [26] defines also other values of the <contact-type> element. Those values can be used to create additional categories.

- the text attribute is represented by the <note> element as defined in draft-ietf-impp-cpim-pidf-08 [21]; and
- the location attribute is represented by the elements defined in draft-ietf-geopriv-pidf-lo-01 [37] and the <placetype> element defined in draft-ietf-simple-rpid-03 [26].

NOTE 3: Only information elements relevant for the application is included in the PUBLISH request. Attributes not relevant or available (e.g. the text attribute or the location attribute) are omitted.

Additional extensions can be used to express application specific attributes, but their usage is outside the scope of this version of the specification.

The PUA shall implement draft-ietf-simple-prescaps-ext-00 [25] if it wants to make use of SIP user agent capabilities in the presence document. The extension may be used for describing the type of the service described by the presence tuple.

The PUA shall implement the "multipart/related" content type as described in RFC 2387 [14] if it wants to aggregate other Multipurpose Internet Mail Extensions (MIME) objects with the "application/pidf+xml" content type.

When a presence attribute has a value of a MIME object, the PUA shall either:

- a) publish the presence document and the MIME object utilizing the "multipart/related" content-type in the PUBLISH request; or
- b) make use of content indirection.

When the PUA decides to use the content indirection mechanism for publishing an initial or modified value of a presence attribute the PUA shall follow the following procedure:

- a) either store the MIME object behind an HTTP URI on the PS or ensure that the MIME object and a HTTP URL pointing to that MIME object already exists on the PS;
- b) use the "multipart/related" content type as described in RFC 2387 [14] with the content indirection mechanism as specified in draft-ietf-sip-content-indirect-mech-03 [40] for the publication of presence information format as follows:
 - set a CID URI referencing to other MIME multipart body which contains the content indirection information as the value of the XML element whose value is delivered as an indirect content;
 - include the presence document of the format "application/pidf+xml" or "application/pidf-partial+xml" in the root of the body of the "multipart/related" content;
 - specify the part having information about the MIME object by using the "message/external-body" content type, defining the HTTP URI, versioning information and other information about the MIME object as described in draft-ietf-sip-content-indirect-mech-03 [40].

NOTE 4: The versioning information is used for determining whether or not the MIME object indirectly referenced by a URI has changed or not;

When storing a MIME object on the PS the PUA shall:

- a) construct as many HTTP URIs as many objects to be stored; and
- b) formulate every HTTP URI according to a predefined directory structure.

NOTE 5: The PUA has the root directory for storing the MIME objects on the PS preconfigured.

NOTE 6: The PUA needs to store the MIME objects on the PS behind the HTTP URI(s) created previously using standard HTTP procedures as defined in RFC 2616 [15].

The PUA may indicate its support for partial publishing by including the "application/pidf-partial+xml" content type as described in draft-ietf-simple-partial-pidf-format-00 [38]. The ~~first partial~~ PUBLISH request shall contain the full publication, where the state attribute is set to value "full" and the value of the 'version' attribute is initialized.

On successful response from the PS, the PUA in subsequent PUBLISH requests shall generate partial publications, where the state attribute is set to value 'partial' and the value of the 'version' attribute is incremented by one. The partial publication should contain only the new and changed tuples, information about the removed tuples and presence information outside the tuple elements.

If the PUA receives a 415 (Unsupported Media Type) response to the PUBLISH request with "application/pidf+xml" in the Accept header field, the PUA shall send a PUBLISH request including the "application/pidf+xml" content type.

Editor's Note: The above procedures on partial publishing will be replaced by references to the IETF draft-lonnfors-simple-publish-partial-00 once the draft has been discussed in IETF. If IETF defines another solution for partial publishing or indicate the reuse of existing procedures as a solution, then the above procedures on partial publishing will be revised.

The PUA shall update the presence information, either 600 s before the publication expiration time if the publication period indicated from the PS in the response to the PUBLISH request was for greater than 1 200 s, or when half of the time has expired if the publication period was for 1 200 s or less, unless the UE has determined that an update to the presence information is not required.

When the PUA intends to show different value of the same presence attribute to different watchers, the PUA shall publish a tuple for every value it intends to show, all including a different value of the same presence attribute. The PUA shall label different information with different value of the <class> element in every published tuple as defined in draft-ietf-simple-rpid-03 [26]. The PUA shall also authorize different tuples to different watchers or watcher groups by manipulating the subscription authorization policy as defined in subclause 6.3.1.2.

*** next change ***

5.3.3.3 Publication acceptance of presence information

The PS shall act as an Event State Compositor (ESC).

When the PS receives a PUBLISH request, the PS shall first verify the identity of the source of the PUBLISH request as described in 3GPP TS 24.229 [9] subclause 5.7.1.4, then perform authorization according to 3GPP TS 24.229 [9] subclause 5.7.1.5. In case of successful authentication and authorization, the PS shall process the PUBLISH request in accordance with draft-ietf-sip-publish-03 [23].

If the PUBLISH request indicated support for partial publishing using the "application/pidf-partial+xml" content-type described in draft-ietf-simple-partial-pidf-format-00 [38] and if the PS supports partial publishing, the PS shall process the PUBLISH request in accordance with draft-ietf-sip-publish-03 [23] and as follows:

if the state attribute's value is "full" the PS shall store the received presence and version information;

if the state attribute's value is "partial" the PS shall ensure that the version information is correct compared to the stored one; combine the received presence information with the stored one by replacing presence information outside the tuples, replacing changed tuples, adding new tuples and removing tuples which id attributes' values have been listed in the <removed> element defined in draft-ietf-simple-partial-pidf-format-00 [38]; and store the received version information.

If the PS does not support partial publishing, then the PS shall send a 415 (Unsupported Media Type) response with "application/pidf+xml" in the Accept header field.

Editor's Note: The above procedures on partial publishing will be replaced by references to the IETF draft-lonnfors-simple-publish-partial-00 once the draft has been discussed in IETF. If IETF defines another solution for partial publishing or indicate the reuse of existing procedures as a solution, then the above procedures on partial publishing will be revised.

CR-Form-v7.1

CHANGE REQUEST

⌘ **24.141 CR 015** ⌘ rev **1** ⌘ Current version: **6.0.0** ⌘

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:	⌘ Publication Rate Limiting		
Source:	⌘ Nokia		
Work item code:	⌘ PRESNC	Date:	⌘ 17/08/2004
Category:	⌘ C	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> Ph2 (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) Rel-7 (Release 7)

Reason for change:	⌘ Rate limiting of PUBLISH requests is currently one of the open issues in the TS, and this CR tries to resolve it.
Summary of change:	⌘ The CR proposes that the maximum frequency for sequential publications from a PUA is locally configured.
Consequences if not approved:	⌘ The open issue of publication rate limiting is still unsolved.

Clauses affected:	⌘ 5.3.1						
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="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> </tr> </table> Other core specifications	Y	N	<input type="checkbox"/>	<input checked="" type="checkbox"/>	⌘	
Y	N						
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	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;"></td> </tr> </table> Test specifications	<input checked="" type="checkbox"/>		⌘			
<input checked="" type="checkbox"/>							
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="padding: 2px;"><input checked="" type="checkbox"/></td> <td style="padding: 2px;"></td> </tr> </table> O&M Specifications	<input checked="" type="checkbox"/>		⌘			
<input checked="" type="checkbox"/>							
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.

5.3.1 Presence User Agent (PUA)

5.3.1.1 General

A PUA is an entity that provides presence information to a PS.

In addition to the procedures specified in subclause 5.3.1, the PUA shall support the procedures specified in 3GPP TS 24.229 [9] appropriate to the functional entity in which the PUA is implemented.

~~Editor's Note: There is a need for a mechanism to let the IMS network and/or PS control the rate at which PUAs generate PUBLISH requests. Unless referenced IETF specifications provide support for implementation of this kind of control, such a mechanism or guidance on max rates must be identified and described here.~~

5.3.1.2 Publication of presence information

When the PUA intends to publish its own view of the presentity's presence information it shall generate a PUBLISH request by acting as an Event Publication Agent (EPA) in accordance with draft-ietf-sip-publish-03 [23].

The PUA shall implement the "application/pidf+xml" content type as described in draft-ietf-impp-cpim-pidf-08 [21] together with the Presence Information Data Format (PIDF) extensions defined in draft-ietf-simple-rpid-03 [26].

The PUA may implement the PIDF extensions defined in draft-ietf-simple-cipid-01 [32].

The PUA may implement location information according to the format defined in draft-ietf-geopriv-pidf-lo-01 [37].

NOTE 1: The categorization of presence attributes to generic information attributes and communication address specific attributes is done using the <contact-type> element. The value of the <contact-type> element categorizes the content of the tuple in such a way that the value "presentity" denotes general information about the presentity and the value "service" denotes the communication mean specific information. The presence document consists of one or more tuples describing the presentity related information and one or more tuples describing information about different communication means.

The eXtensible Markup Language (XML) Schema Definition of the "application/pidf+xml" format or the "application/pidf-partial+xml" format cover the definition of the 3GPP subscriber's presence attributes and the PUA shall perform the following mapping:

- the communication address (containing communication means, status and contact address) attribute and the priority attribute are represented by a <tuple> element including a basic <status> element and one or more <contact> elements containing a priority attribute as defined in draft-ietf-impp-cpim-pidf-08 [21].

The PUA represents the subscriber's status by including a <contact-type> element defined in draft-ietf-simple-rpid-03 [26] with the value "presentity" and a basic <status> element defined in draft-ietf-impp-cpim-pidf-08 [21]. In order to express more granularity in values, <activity> and <privacy> elements both defined in draft-ietf-simple-rpid-03 [26] can be used inside the <status> elements. Further PIDF extensions as defined in draft-ietf-simple-cipid-01 [32] can also be used.

In case of including multiple presentity related tuples in the presence document, all the presentity related tuples except one contains information about an alternate contact related to the presentity; the type of the alternate contact shall be indicated using the <relationship> element defined in draft-ietf-simple-rpid-03 [26];

NOTE 2: draft-ietf-simple-rpid-03 [26] defines also other values of the <contact-type> element. Those values can be used to create additional categories.

- the text attribute is represented by the <note> element as defined in draft-ietf-impp-cpim-pidf-08 [21]; and
- the location attribute is represented by the elements defined in draft-ietf-geopriv-pidf-lo-01 [37] and the <placetype> element defined in draft-ietf-simple-rpid-03 [26].

NOTE 3: Only information elements relevant for the application is included in the PUBLISH request. Attributes not relevant or available (e.g. the text attribute or the location attribute) are omitted.

Additional extensions can be used to express application specific attributes, but their usage is outside the scope of this version of the specification.

The PUA shall implement draft-ietf-simple-prescaps-ext-00 [25] if it wants to make use of SIP user agent capabilities in the presence document. The extension may be used for describing the type of the service described by the presence tuple.

The PUA shall implement the "multipart/related" content type as described in RFC 2387 [14] if it wants to aggregate other Multipurpose Internet Mail Extensions (MIME) objects with the "application/pdf+xml" content type.

When a presence attribute has a value of a MIME object, the PUA shall either:

- a) publish the presence document and the MIME object utilizing the "multipart/related" content-type in the PUBLISH request; or
- b) make use of content indirection.

When the PUA decides to use the content indirection mechanism for publishing an initial or modified value of a presence attribute the PUA shall follow the following procedure:

- a) either store the MIME object behind an HTTP URI on the PS or ensure that the MIME object and a HTTP URL pointing to that MIME object already exists on the PS;
- b) use the "multipart/related" content type as described in RFC 2387 [14] with the content indirection mechanism as specified in draft-ietf-sip-content-indirect-mech-03 [40] for the publication of presence information format as follows:
 - set a CID URI referencing to other MIME multipart body which contains the content indirection information as the value of the XML element whose value is delivered as an indirect content;
 - include the presence document of the format "application/pdf+xml" or "application/pdf-partial+xml" in the root of the body of the "multipart/related" content;
 - specify the part having information about the MIME object by using the "message/external-body" content type, defining the HTTP URI, versioning information and other information about the MIME object as described in draft-ietf-sip-content-indirect-mech-03 [40].

NOTE 4: The versioning information is used for determining whether or not the MIME object indirectly referenced by a URI has changed or not;

When storing a MIME object on the PS the PUA shall:

- a) construct as many HTTP URIs as many objects to be stored; and
- b) formulate every HTTP URI according to a predefined directory structure.

NOTE 5: The PUA has the root directory for storing the MIME objects on the PS preconfigured.

NOTE 6: The PUA needs to store the MIME objects on the PS behind the HTTP URI(s) created previously using standard HTTP procedures as defined in RFC 2616 [15].

The PUA may indicate its support for partial publishing by including the "application/pdf-partial+xml" content type as described in draft-ietf-simple-partial-pdf-format-00 [38]. The initial PUBLISH request shall contain the full publication, where the state attribute is set to value "full".

On successful response from the PS, the PUA in subsequent PUBLISH requests shall generate partial publications, where the state attribute is set to value 'partial'.

If the PUA receives a 415 (Unsupported Media Type) response to the PUBLISH request with "application/pdf+xml" in the Accept header field, the PUA shall send a PUBLISH request including the "application/pdf+xml" content type.

Editor's Note: The above procedures on partial publishing will be replaced by references to the IETF draft-lonnfors-simple-publish-partial-00 once the draft has been discussed in IETF.

If a local configuration information limiting the rate at which PUA is allowed to generate PUBLISH requests is available, then PUA shall take that information into account. Such local configuration information could be e.g. the shortest time period between consecutive PUBLISH requests.

The PUA shall update the presence information, either 600 s before the publication expiration time if the publication period indicated from the PS in the response to the PUBLISH request was for greater than 1 200 s, or when half of the time has expired if the publication period was for 1 200 s or less, unless the UE has determined that an update to the presence information is not required.

When the PUA intends to show different value of the same presence attribute to different watchers, the PUA shall publish a tuple for every value it intends to show, all including a different value of the same presence attribute. The PUA shall label different information with different value of the <class> element in every published tuple as defined in draft-ietf-simple-rpid-03 [26]. The PUA shall also authorize different tuples to different watchers or watcher groups by manipulating the subscription authorization policy as defined in subclause 6.3.1.2.

CR-Form-v7.1

CHANGE REQUEST

⌘ **24.141 CR 17** ⌘ rev **1** ⌘ Current version: **6.0.0** ⌘

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 to processing PUBLISH with the "multipart/related" content type		
Source:	⌘ Vodafone		
Work item code:	⌘ PRESNC	Date:	⌘ 17/08/2004
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> Ph2 (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) Rel-7 (Release 7)

Reason for change:	⌘ The description of how a presence server processes a SIP PUBLISH method that contains the multipart/related MIME content type in section 5.3.3.3 is unclear.
Summary of change:	⌘ Re-structured the text in 5.3.3.3 that describes processing a SIP PUBLISH method that contains the multipart/related MIME content type to make it clear.
Consequences if not approved:	⌘ Processing of PUBLISH by a presence server might be incorrectly implemented.

Clauses affected:	⌘ 5.3.3.3						
Other specs affected:	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">Y</td> <td style="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"/>	⌘	
Y	N						
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> Test specifications	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> </table> O&M Specifications	<input type="checkbox"/>	<input checked="" type="checkbox"/>				
<input type="checkbox"/>	<input checked="" type="checkbox"/>						
Other comments:	⌘						

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at <http://www.3gpp.org/specs/CR.htm>. Below is a brief summary:

- 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.

5.3.3.3 Publication acceptance of presence information

The PS shall act as an Event State Compositor (ESC).

When the PS receives a PUBLISH request, the PS shall first verify the identity of the source of the PUBLISH request as described in 3GPP TS 24.229 [9] subclause 5.7.1.4, then perform authorization according to 3GPP TS 24.229 [9] subclause 5.7.1.5. In case of successful authentication and authorization, the PS shall process the PUBLISH request in accordance with draft-ietf-sip-publish-03 [23].

If the PUBLISH request indicated support for partial publishing using the "application/pidf-partial+xml" content-type described in draft-ietf-simple-partial-pidf-format-00 [38] and if the PS supports partial publishing, the PS shall process the PUBLISH request in accordance with draft-ietf-sip-publish-03 [23]. If the PS does not support partial publishing, then the PS shall send a 415 (Unsupported Media Type) response with "application/pidf+xml" in the Accept header field.

Editor's Note: The above procedures on partial publishing will be replaced by references to the IETF draft-lonnfors-simple-publish-partial-00 once the draft has been discussed in IETF.

If the PUBLISH request contained the "multipart/related" content type and the PS supports the content type, the PS shall process the content as follows:

- if a MIME multipart contains a MIME object of a content type supported by the PS, the PS shall either store the MIME object in case of initial publication or replace an existing content in case of modify operation; [and](#)
- if a multipart includes the "message/external-body" content type and the content indirection is supported by the PS, the PS shall ensure that it has access to the MIME object indicated by the URI and that the MIME object ~~is~~ exists; [and associate the value of the presence attribute that refers to the MIME object with the MIME object and additional information about it.](#)
- ~~associate the value of the presence attribute referring to one of the MIME multipart with the MIME object and additional information about it.~~

If the PS does not support the content type used for publishing MIME objects then the PS shall send a 415 (Unsupported Media Type) response and indicate the supported content types in the Accept header.

NOTE: If the PS receives a HTTP request for storing a MIME object on the PS meaning that the HTTP URI points to a predefined directory reserved for storing MIME objects and the request is an HTTP PUT request, the PS replaces any existing content referenced by the Request-URI with the content of the request. If the Request-URI points to an uncreated directory, the PS creates the directory, stores the content there and associates the content with the Request-URI. For all requests, i.e. HTTP PUT, HTTP GET and HTTP DELETE requests, the PS generates an appropriate response in accordance with RFC 2616 [15].