3GPP TSG CT Plenary Meeting #28 **CP-050162**
01-03 June 2005, Quebec, CANADA

Source: **CT5 (OSA)**

Title: **2 Rel-6 CR 29.199-14**

Agenda item: **9.7 (OSA Enhancements [OSA3])**

Document for: **APPROVAL**

Doc-1st-Level	Spec	CR	Rev	Phase	Subject	Cat	Version-Current	Doc-2nd-Level	Workitem
CP-050162	29.199-14	0002	-	Rel-6	Corrrection of Presence.	F	6.1.0	C5-050287	OSA3
CP-050162	29.199-14	0003	-	Rel-6	Update & Move Informative Document References to Bibliography	D	6.1.0	C5-050304	OSA3

CR-Form-v7.1

CHANGE REQUEST

⌘ **29.199-14** **CR** **0002** ⌘ **rev** **-** ⌘ Current version: **6.1.0** ⌘

*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: ⌘ Corrrection of Presence.

Source: ⌘ CT5 Jin-Young Choi, Yoo-Mi Park, ETRI

Work item code: ⌘ OSA3 ***Date:*** ⌘ 09/05/2005

Category: ⌘ **F**

Use one of the following categories:
- ***F*** *(correction)*
- ***A*** *(corresponds to a correction in an earlier release)*
- ***B*** *(addition of feature),*
- ***C*** *(functional modification of feature)*
- ***D*** *(editorial modification)*

Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Release: ⌘ Rel-6

Use one of the following releases:

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: ⌘ TS 29.199-14(Presence) contains incorrect APIs in sequence diagram and descriptions of some operations as follows.

Summary of change: ⌘

errata		
clauses	correct	error
4	Terminal Location	User Location
6	subscriptionEnded	endSubscriptionNotification
8.1.2, 8.1.3	subscribePresence	requestSubscription
8.2.2	endPresenceNotification	endNotification

Consequences if not approved: ⌘ The Presence web services specification contains incorrect APIs in sequence diagram and descriptions of some operations. They would make developers confused to implement the web services.

Clauses affected: ⌘ 4, 6, 8.1.2, 8.1.3, 8.2.2

Other specs affected: ⌘

Y	N	
	X	Other core specifications
	X	Test specifications
	X	O&M Specifications

⌘

Other comments: ⌘

Change in Clause 4

4 Detailed service description

The presence service allows for presence information to be obtained about one or more users and to register presence for the same. It is assumed that the typical client of these interfaces is either a supplier or a consumer of the presence information. An Instant Messaging application is a canonical example of such a client of this interface.

Figure 4-1 shows the architecture of the presence Web Service and the underlying services. The OSA/Parlay PAM SCF is the straightforward option and implements the presence server with extended identity-, device capability,- and presence agent management. OSA/Parlay PAM allows aggregation of presence information from internet, mobile and enterprise users, etc. using a presence transport network of SIP or XMPP servers. The Presence Web Service can however communicate directly for example with IMS presence network elements (presence and resource list servers) using the ISC (SIP/SIMPLE) protocol interface.

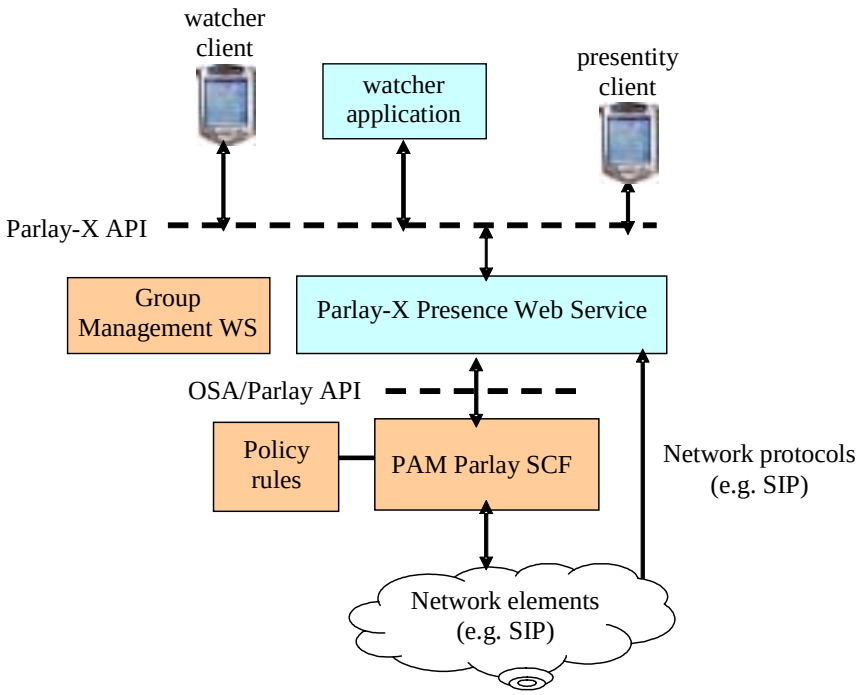

Figure 4-1: The PAM Web Service Environment

Relationship to Similar or Supplanted Specifications:

The most important relations are to:

- Parlay-X Terminal Status and ~~User~~ Termnal Location: Both services deal with information that could be considered part of the user's presence information. Communication abilities can be derived from terminal status information, and the user's placetype can be derived from his location.
- OSA/Parlay PAM: The OSA/Parlay Presence and Availability specification can be considered the big brother of this specification. While ParlayX Presence stays behind OSA PAM in terms of flexibility and power - especially concerning attributes and management interfaces - it also extends PAM by introducing end-to-end authorization. This specification aims to be mappable to OSA PAM.
- SIP SIMPLE [9]: This specification aims to be mappable to the SIP/SIMPLE architecture.

- XMPP (Jabber): Many principles of this specification have been taken from [10], especially the end-to-end authorization.
- IETF Rich Presence [11]. The set of attributes the present document specifies is closely aligned with the IETF's Rich Presence ideas.
- Group Management [13]: Presence of groups is supported by this specification, however their creation and manipulation has to be done using the GM PX Web Service. In the 3GPP presence context, contact lists and group manipulation is done with the XCAP protocol [15].

End of Change in Clause 4

Change in Clause 6

6.1 Interface flow overview

The sequence diagram shows the interactions in case both watcher application and presentity are Web Service clients. Compared to the SIP interactions, the subscription notification is separated from the delivery of presence information itself. Based on the subscription result, the watcher can select the polling or notification mode for presence events. Changes in the authorization of presence attributes are propagated to the watchers via notifySubscription() message, the blocking of a subscription by the presentity are propagated via an endSubscriptionNotification message.

The sequence diagram does not show the internal communication within the presence server. It is assumed that the Presence Consumer and Supplier interfaces are implemented by the same instance. If an implementers of the API find other solutions preferable, he has to take care of the internal communication himself.

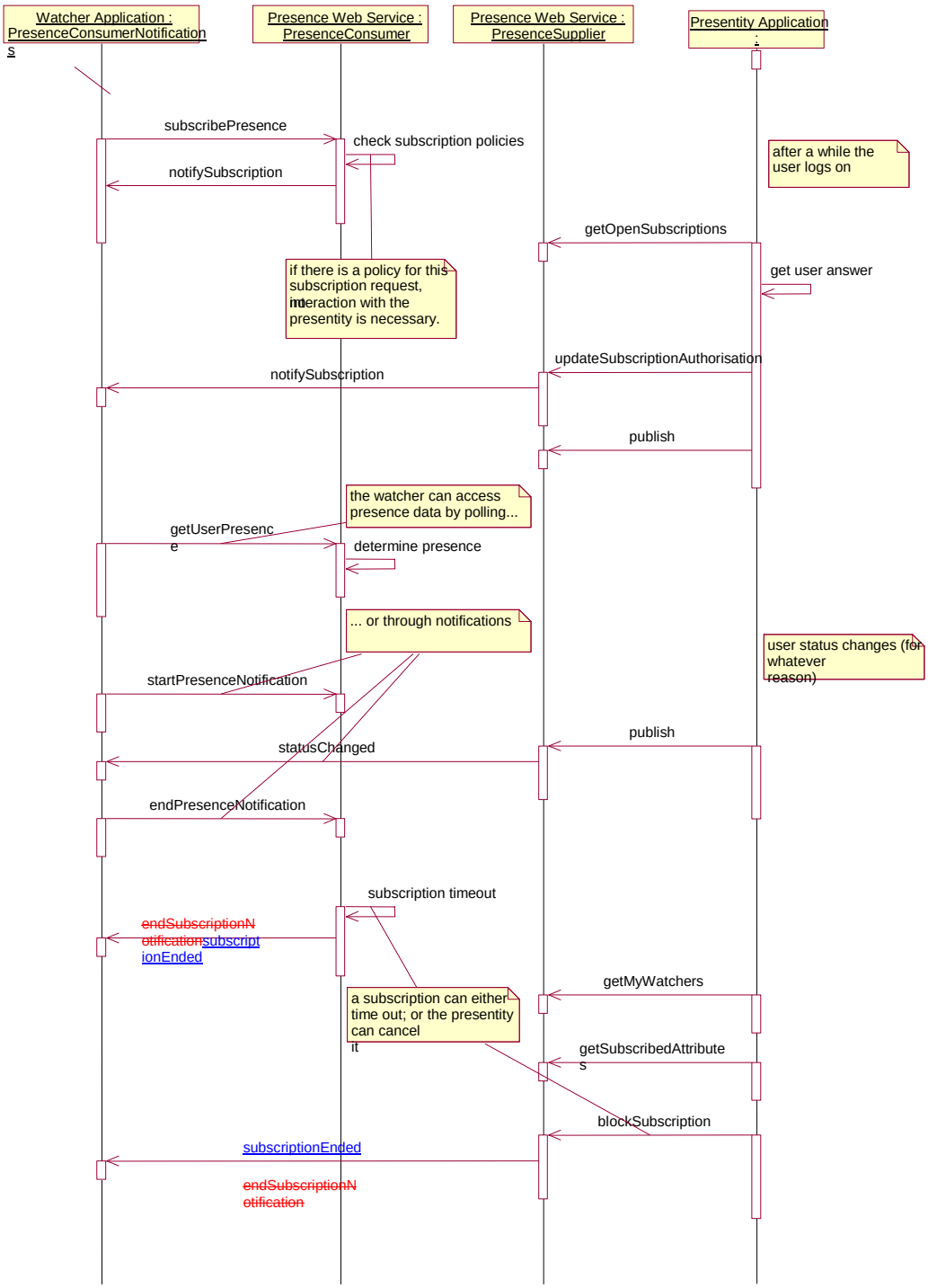

Figure 6-2: Message interaction overview

End of Change in Clause 6

Change in Clause 8.1.2

8.1.2 Operation: getUserPresence

Returns the aggregated presence data of a presentity. Only the attributes which the watcher is entitled to see will be returned. This method does not support group identities.

Before getting these attributes, the watcher has to subscribe to them (see above). The presentity needs not be informed of the access, as he has already consented when the watcher called ~~requestSubscription~~subscribePresence().

8.1.2.1 Input message: getUserPresenceRequest

Part name	Part type	Description
Presentity	xsd:anyURI	The presentity whose data the watcher wants to see.
Attributes	PresenceAttributeType [0..unbounded]	The attributes the watcher wants to see. An empty array means all attributes.

8.1.2.2 Output message: getUserPresenceResponse

Part name	Part type	Description
Result	PresenceAttribute [0..unbounded]	The actual presence data.

8.1.2.3 Referenced faults

ServiceException from 3GPP TS 29.199-1 [6]:

- SVC0001: Service error.
- SVC0002: Invalid input value.
- SVC0004: No valid addresses - if the presentity address does not exist.

PolicyException from 3GPP TS 29.199-1 [6]. The presentity has the possibility to cancel or block a subscription by manipulating the policy rules. The exception informs the watcher about this status change.

- POL0002: Privacy error - if the watcher is not subscribed to the requested data.
- POL0006: Groups not allowed.

End of Change in Clause 8.1.2

Change in Clause 8.1.3

8.1.3 Operation: startPresenceNotification

The notification pattern with correlation is used in order to be able to correlate the notification events with the request. The attributes represent a subset of the attributes subscribed and can be used as filter.

The watcher sets a notification trigger on certain user presence attribute changes. If the list of attributes is empty, the watcher wants to be notified on all subscribed attributes.

In case the presentity is a group the watcher will receive notifications for every single member of the group. The watcher will only get notifications for those attributes and presentities he subscribed successfully prior to the call. The service will return a list of presentities where the notifications could not be set up.

The presentity needs not be informed of the access, as he has already consented when the watcher called subscribePresence~~requestSubscription~~().

Note that the SimpleReference contains the correlator string used in subsequent messages to the notification interface.

8.1.3.1 Input message: startPresenceNotificationRequest

Part name	Part type	Description
Presentity	xsd:anyURI	The presentity or group whose attributes the watcher wants to monitor.
Attributes	PresenceAttributeType [0..unbounded]	The attributes the watcher wants to see.
Reference	common:SimpleReference	The notification interface
Frequency	common:TimeMetric	Maximum frequency of notifications (can also be considered minimum time between notifications). In case of a group subscription the service must make sure this frequency is not violated by notifications for various members of the group, especially in combination with `checkImmediate`.
Duration	common:TimeMetric	Length of time notifications occur for, null to use default notification time defined by service policy.
Count	xsd:int	Maximum number of notifications, zero if no maximum
CheckImmediate	xsd:boolean	Whether to check status immediately after establishing notification.

8.1.3.2 Output message: startPresenceNotificationResponse

Part name	Part type	Description
Presentities	xsd:anyURI [0..unbounded]	The presentities whose attributes the watcher did not subscribe. Empty if all went fine.

8.1.3.3 Referenced faults

ServiceException from 3GPP TS 29.199-1 [6]:

- SVC0001: Service error.
- SVC0002: Invalid input value.
- SVC0004: No valid addresses - if the presentity URI does not exist.
- SVC0005: Duplicate correlator.

PolicyException from 3GPP TS 29.199-1 [6]. The presentity has the possibility to cancel or block a subscription by manipulating the policy rules. The exception informs the watcher about this status change.

- POL0001: Policy error.
- POL0004: Unlimited notifications not supported.
- POL0005: Too many notifications requested.
- POL0006: Groups not allowed.
- POL0007: Nested groups not allowed.

End of Change in Clause 8.1.3

Change in Clause 8.2.2

8.2.2 Operation: statusEnd

The notifications have ended for this correlator. This message will be delivered when the duration or count for notifications have been completed. This message will not be delivered in the case of an error ending the notifications or deliberate ending of the notifications (using ~~endNotification~~ endPresenceNotification operation).

8.2.2.1 Input message: statusEndRequest

Part name	Part type	Description
Correlator	xsd:string	Correlator provided in request to set up this notification

8.2.2.2 Output message: statusEndResponse

Part name	Part type	Description
None		

8.2.2.3 Referenced faults

None.

End of Change in Clause 8.2.2

Annex D (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Sep 2004	CN_25	NP-040360	--	--	Draft v100 submitted to TSG CN#25 for Approval.	1.0.0	6.0.0
Dec 2004	CN_26	NP-040487	001	--	Correct the Presence WSDL source code	6.0.0	6.1.0

Joint-Working-Group (Parlay, ETSI Project OSA, 3GPP TSG_CT WG5) **C5-050304**
Meeting #31, Osaka, Japan, 09-13 May 2005

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CHANGE REQUEST

⌘ **29.199-14** **CR** **0003** ⌘ **rev** **-** ⌘ Current version: **6.1.0** ⌘

*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:	⌘	Update & Move Informative Document References to Bibliography
Source:	⌘	CT5 Julian Richards (The Parlay Group)
Work item code:	⌘	OSA3
Date:	⌘	05/09/2005
Category:	⌘	**D**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
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C *(functional modification of feature)*
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Ph2	*(GSM Phase 2)*
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R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	Correct references to out-of-date IETF documents and move informative references to new Bibliography clause.
Summary of change:	⌘	Some references are to IETF drafts that expire every 6 months, until approved or withdrawn. This CR provides the latest versions of these drafts and a reference to an active 3GPP document tracking IETF dependencies. In addition, all informative reference documents are moved to the new Bibliography clause.
Consequences if not approved:	⌘	

Clauses affected:	⌘	2. References; 3.1 Definitions; 4 Detailed service description; 7XML Schema data type definition; 8.2.4 Operation: subscriptionEnded; Annex B (informative): Bibliography.

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

Other comments:	⌘	

Change in Clause 2

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 22.127: "Service Requirement for the Open Services Access (OSA); Stage 1".

[3] 3GPP TS 23.198: "Open Service Access (OSA); Stage 2".

[4] 3GPP TS 22.101: "Service aspects; Service principles".

[5] W3C Recommendation (2 May 2001): "XML Schema Part 2: Datatypes". http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/.

[6] 3GPP TS 29.199-1: "Open Service Access (OSA); Parlay X Web Services; Part 1: Common".

~~[7] draft-ietf-simple-event-filter-funct-02: "Functional Description of Event Notification Filtering". http://www.ietf.org/internet-drafts/draft-ietf-simple-event-filter-funct-02.txt~~

[~~8~~7] 3GPP TS 29.198-14: "Open Service Access (OSA) Application Programming Interface (API); Part 14: Presence and Availability Management (PAM)".

[~~9~~8] ~~draft-ietf-simple-presence-10~~RFC 3856: "A Presence Event Package for the Session Initiation Protocol (SIP)". http://www.ietf.org/rfc/rfc3856.txt ~~http://www.ietf.org/proceedings/03nov/I-D/draft-ietf-simple-presence-10.txt~~

~~[10] Repository of information about theExtensible Messaging and Presence Protocol (XMPP), which was contributed by theJabber SoftwareFoundation (JSF) to the IETF http://www.jabber.org/ietf/~~

~~[11] draft-ietf-simple-rpid-03: "RPID: Rich Presence: Extensions to the Presence Information Data Format (PIDF)". http://www.ietf.org/internet-drafts/draft-ietf-simple-rpid-03.txt~~

[~~12~~9] 3GPP TS 23.141: "Presence service; Architecture and functional description; Stage 2".

[~~13~~10] 3GPP TS 29.199-13: "Open Service Access (OSA); Parlay X Web Services; Part 13: Address list management".

[~~14~~11] IETF RFC 3265: "Session Initiation Protocol (SIP)-Specific Event Notification".

~~[15] draft-ietf-simple-xcap-03: "The Extensible Markup Language (XML) Configuration Access Protocol (XCAP)". http://www.softarmor.com/wgdb/docs/draft-ietf-simple-xcap-03.txt~~

End of Change in Clause 2

Change in Clause 3.1

3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TS 29.199-1 [6] and the following apply:

applications: for Instant Messaging, Push to Talk, or call control and other purposes may become clients of the presence Web Service
We assume that these applications belong to a watcher and authenticate to the services in the name of the watcher.

identity: represents a user in the real world

NOTE: See OSA/Parlay PAM identities [~~8~~7], section 4.4.1.

presence attributes: contain information about a presentity
An attribute has a name and a value and can be supplied by any device, application or network module that can be associated to the presentity's identity. A watcher can obtains attributes only after he has successfully subscribed to them. Examples for attributes are activity, location type, communication means, etc.

presence information: consists of a set of attributes that characterize the presentity such as current activity, environment, communication means and contact addresses
Only the system and the presentity have direct access to this information, which may be collected and aggregated from **several** devices associated to the presentity.

subscription: before a watcher can access presence data, he has to subscribe to it
One possibility the API provides is an end-to-end subscription concept, in which only identities that have accepted a subscription to their presence can be addressed. Subscriptions can be also automatically handled by server policies edited by the presentity or other authorized users. The service/protocol to manage those policies is out of the scope of the present document.

NOTE: This definition is not related to the term "subscription" in 3GPP TR 21.905 [1].

watcher and presentity: We use these names to denote the role of the client connected to the presence services
Like in OSA/Parlay PAM [~~8~~7] the watcher and the presentity have to be associated to identities registered to the system, i.e. users, groups of users or organizations.

End of Change in Clause 3.1

Change in Clause 4

4 Detailed service description

The presence service allows for presence information to be obtained about one or more users and to register presence for the same. It is assumed that the typical client of these interfaces is either a supplier or a consumer of the presence information. An Instant Messaging application is a canonical example of such a client of this interface.

Figure 4-1 shows the architecture of the presence Web Service and the underlying services. The OSA/Parlay PAM SCF is the straightforward option and implements the presence server with extended identity-, device capability,- and presence agent management. OSA/Parlay PAM allows aggregation of presence information from internet, mobile and enterprise users, etc. using a presence transport network of SIP or XMPP servers. The Presence Web Service can however communicate directly for example with IMS presence network elements (presence and resource list servers) using the ISC (SIP/SIMPLE) protocol interface.

Figure 4-1: The PAM Web Service Environment

Relationship to Similar or Supplanted Specifications:

The most important relations are to:

- Parlay-X Terminal Status and User Location: Both services deal with information that could be considered part of the user's presence information. Communication abilities can be derived from terminal status information, and the user's placetype can be derived from his location.
- OSA/Parlay PAM: The OSA/Parlay Presence and Availability specification can be considered the big brother of this specification. While ParlayX Presence stays behind OSA PAM in terms of flexibility and power - especially concerning attributes and management interfaces - it also extends PAM by introducing end-to-end authorization. This specification aims to be mappable to OSA PAM.
- SIP SIMPLE [~~9~~8]: This specification aims to be mappable to the SIP/SIMPLE architecture.
- XMPP (Jabber): Many principles of this specification (see Bibliography) have been ~~taken from [10]~~adopted, especially the end-to-end authorization.
- IETF Rich Presence ~~[11]~~(see Bibliography). The set of attributes the present document specifies is closely aligned with the IETF's Rich Presence ideas.
- Group Management [1~~3~~0]: Presence of groups is supported by this specification, however their creation and manipulation has to be done using the GM PX Web Service. In the 3GPP presence context, contact lists and group manipulation is done with the XCAP protocol ~~[15]~~(see Bibliography).

End of Change in Clause 4

Change in Clause 7

7 XML Schema data type definition

Presence attributes are inspired by the IETF's Rich Presence ideas ~~[11]~~ (see Bibliography).

End of Change in Clause 7

Change in Clause 8.2.4

8.2.4 Operation: subscriptionEnded

This asynchronous operation is called by the Web Service to notify the watcher (application) that the subscription has terminated. Typical reasons are a timeout of the underlying SIP soft state subscription (in accordance with [~~14~~11] and [~~9~~8]) or the decision of the presentity to block further presence information to that watcher. Since the subscription request has no expiration parameters, the service implementation may provide an inactivity timer that also triggers the subscriptionEnded message.

End of Change in Clause 8.2.4

Addition of Annex B

Annex B (informative): Bibliography

3GPP: "IETF Dependencies and Priorities". http://www.3gpp.org/TB/Other/IETF.pdf

draft-ietf-simple-event-filter-funct-04: "Functional Description of Event Notification Filtering". http://www.ietf.org/internet-drafts/draft-ietf-simple-event-filter-funct-05.txt. This version expires September 16, 2005. Also reference item #42 in 3GPP: "IETF Dependencies and Priorities".

draft-ietf-simple-rpid-04: "RPID: Rich Presence: Extensions to the Presence Information Data Format (PIDF)". http://www.ietf.org/internet-drafts/draft-ietf-simple-rpid-05.txt. This version expires August 19, 2005. Also reference item #54 in 3GPP: "IETF Dependencies and Priorities".

draft-ietf-simple-xcap-06: "The Extensible Markup Language (XML) Configuration Access Protocol (XCAP)". http://www.ietf.org/internet-drafts/draft-ietf-simple-xcap-06.txt. This version expires August 8, 2005. Also reference item #57 in 3GPP: "IETF Dependencies and Priorities".

Repository of information about the Extensible Messaging and Presence Protocol (XMPP), which was contributed by the Jabber Software Foundation (JSF) to the IETF. http://www.xmpp.org/

End of Addition of Annex B

Annex ~~B~~ C (informative): Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Sep 2004	CN_25	NP-040360	--	--	Draft v100 submitted to TSG CN#25 for Approval.	1.0.0	6.0.0
Dec 2004	CN_26	NP-040487	001	--	Correct the Presence WSDL source code	6.0.0	6.1.0