

Open Service Access (OSA); Parlay X Web Services; Part 14: Presence



Reference

DES/TISPAN-01007-14-OSA

Keywords

API, OSA, service

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

Individual copies of the present document can be downloaded from:

<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status. Information on the current status of this and other ETSI documents is available at

<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:

http://portal.etsi.org/chaicor/ETSI_support.asp

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2005.

© The Parlay Group 2005.

All rights reserved.

DECTTM, **PLUGTESTS**TM and **UMTS**TM are Trade Marks of ETSI registered for the benefit of its Members.
TIPHONTM and the **TIPHON logo** are Trade Marks currently being registered by ETSI for the benefit of its Members.
3GPPTM is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

Contents

Intellectual Property Rights	5
Foreword.....	5
1 Scope	6
2 References	6
3 Definitions and abbreviations.....	7
3.1 Definitions	7
3.2 Abbreviations	7
4 Detailed service description	8
5 Namespaces.....	9
6 Sequence diagrams	9
6.1 Interface flow overview.....	9
7 XML Schema data type definition	11
7.1 PresenceAttributeType enumeration	11
7.2 ActivityValue enumeration	11
7.3 PlaceValue enumeration.....	12
7.4 PrivacyValue enumeration	12
7.5 SphereValue enumeration	12
7.6 CommunicationMeansType enumeration.....	13
7.7 CommunicationMeans structure.....	13
7.8 CommunicationValue structure.....	13
7.9 OtherValue structure	13
7.10 PresenceAttribute structure	13
7.11 SubscriptionRequest structure	14
7.12 PresencePermission structure	14
8 Web Service interface definition.....	14
8.1 Interface: PresenceConsumer	14
8.1.1 Operation: subscribePresence	14
8.1.1.1 Input message: subscribePresenceRequest.....	15
8.1.1.2 Output message: subscribePresenceResponse.....	15
8.1.1.3 Referenced faults.....	15
8.1.2 Operation: getUserPresence.....	15
8.1.2.1 Input message: getUserPresenceRequest	15
8.1.2.2 Output message: getUserPresenceResponse	15
8.1.2.3 Referenced faults.....	16
8.1.3 Operation: startPresenceNotification	16
8.1.3.1 Input message: startPresenceNotificationRequest.....	16
8.1.3.2 Output message: startPresenceNotificationResponse.....	16
8.1.3.3 Referenced faults.....	17
8.1.4 Operation: endPresenceNotification	17
8.1.4.1 Input message: endPresenceNotificationsRequest	17
8.1.4.2 Output message: endPresenceNotificationResponse.....	17
8.1.4.3 Referenced faults.....	17
8.2 Interface: PresenceNotification	18
8.2.1 Operation: statusChanged	18
8.2.1.1 Input message: statusChangedRequest.....	18
8.2.1.2 Output message: statusChangedResponse.....	18
8.2.1.3 Referenced faults.....	18
8.2.2 Operation: statusEnd.....	18
8.2.2.1 Input message: statusEndRequest	18
8.2.2.2 Output message: statusEndResponse	18
8.2.2.3 Referenced faults.....	18

8.2.3	Operation: notifySubscription.....	19
8.2.3.1	Input message: notifySubscriptionRequest	19
8.2.3.2	Output message: notifySubscriptionResponse	19
8.2.4	Operation: subscriptionEnded.....	19
8.2.4.1	Input message: subscriptionEndedRequest	19
8.2.4.2	Output message: subscriptionEndedResponse	19
8.3	Interface: PresenceSupplier	19
8.3.1	Operation: publish	19
8.3.1.1	Input message: publishRequest	19
8.3.1.2	Output message: publishResponse	20
8.3.1.3	Referenced faults.....	20
8.3.2	Operation: getOpenSubscriptions	20
8.3.2.1	Input message: getOpenSubscriptionsRequest.....	20
8.3.2.2	Output message: getOpenSubscriptionsResponse.....	20
8.3.2.3	Referenced faults.....	20
8.3.3	Operation: updateSubscriptionAuthorization	20
8.3.3.1	Input message: updateSubscriptionAuthorizationRequest	21
8.3.3.2	Output message updateSubscriptionAuthorizationResponse	21
8.3.3.3	Referenced faults.....	21
8.3.4	Operation: getMyWatchers.....	21
8.3.4.1	Input message: getMyWatchersRequest	21
8.3.4.2	Output message: getMyWatchersResponse	21
8.3.4.3	Referenced faults.....	21
8.3.5	Operation: getSubscribedAttributes.....	22
8.3.5.1	Input message: getSubscribedAttributesRequest	22
8.3.5.2	Output message: getSubscribedAttributesResponse	22
8.3.5.3	Referenced faults.....	22
8.3.6	Operation: blockSubscription	22
8.3.6.1	Input message: blockSubscriptionRequest	22
8.3.6.2	Output message: blockSubscriptionResponse.....	22
8.3.6.3	Referenced faults.....	22
9	Fault definitions.....	23
9.1	ServiceException.....	23
9.1.1	SVC0220: No subscription request.....	23
9.1.2	SVC0221: Not a watcher	23
10	Service policies	23
Annex A (normative):	WSDL for Presence	24
Annex B (informative):	Bibliography.....	25
History		26

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://webapp.etsi.org/IPR/home.asp>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Foreword

This ETSI Standard (ES) has been produced by ETSI Technical Committee Telecommunications and Internet converged Services and Protocols for Advanced Networking (TISPAN).

The present document is part 14 of a multi-part deliverable covering Open Service Access (OSA); Parlay X Web Services, as identified below:

- Part 1: "Common";
- Part 2: "Third Party Call";
- Part 3: "Call Notification";
- Part 4: "Short Messaging";
- Part 5: "Multimedia Messaging";
- Part 6: "Payment";
- Part 7: "Account Management";
- Part 8: "Terminal Status";
- Part 9: "Terminal Location";
- Part 10: "Call Handling";
- Part 11: "Audio Call";
- Part 12: "Multimedia Conference";
- Part 13: "Address List Management";
- Part 14: "Presence".**

The present document has been defined jointly between ETSI, The Parlay Group (<http://www.parlay.org>) and the 3GPP.

The present document is equivalent to 3GPP TS 29.199-14 V6.0.0 (Release 6).

1 Scope

The present document is part 14 of the Stage 3 Parlay X Web Services specification for Open Service Access (OSA).

The OSA specifications define an architecture that enables application developers to make use of network functionality through an open standardized interface, i.e. the OSA APIs.

The present document specifies the Presence Web Service. The following are defined here:

- Name spaces.
- Sequence diagrams.
- Data definitions.
- Interface specification plus detailed method descriptions.
- Fault definitions.
- Service Policies.
- WSDL Description of the interfaces.

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 and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <http://docbox.etsi.org/Reference>.

- [1] ETSI TR 121 905: "Universal Mobile Telecommunications System (UMTS); Vocabulary for 3GPP Specifications (3GPP TR 21.905)".
- [2] W3C Recommendation (2 May 2001): "XML Schema Part 2: Datatypes".
- NOTE: Available at <http://www.w3.org/TR/2001/REC-xmlschema-2-20010502/>.
- [3] ETSI ES 202 391-1: "Open Service Access (OSA); Parlay X Web Services; Part 1: Common".
- [4] ETSI ES 202 915-14: "Open Service Access (OSA); Application Programming Interface (API); Part 14: Presence and Availability Management SCF (Parlay 4)".
- [5] draft-ietf-simple-presence-10: "A Presence Event Package for the Session Initiation Protocol (SIP)". <http://www.ietf.org/proceedings/03nov/I-D/draft-ietf-simple-presence-10.txt>.
- [6] draft-ietf-simple-rpid-05: "RPID: Rich Presence Extensions to the Presence Information Data Format (PIDF)". <http://www.ietf.org/internet-drafts/draft-ietf-simple-rpid-05.txt>.
- [7] ETSI ES 202 391-13: "Open Service Access (OSA); Parlay X Web Services; Part 13: Address List Management".
- [8] IETF RFC 3265: "Session Initiation Protocol (SIP)-Specific Event Notification".

- [9] 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>.
- [10] ETSI ES 202 391-8: "Open Service Access (OSA); Parlay X Web Services; Part 8: Terminal Status".
- [11] ETSI ES 202 391-9: "Open Service Access (OSA); Parlay X Web Services; Part 9: Terminal Location".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in ES 202 391-1 [3] 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 Parlay/OSA PAM identities [4], clause 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 obtain 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 TR 121 905 [1].

watcher and presentity: We use these names to denote the role of the client connected to the presence services. As in Parlay/OSA PAM [4] the watcher and the presentity have to be associated to identities registered to the system, i.e. users, groups of users or organizations.

3.2 Abbreviations

For the purposes of the present document, the abbreviations defined in ES 202 391-1 [3] and the following apply:

IETF	Internet Engineering Task Force
IMS	IP Multimedia Subsystem
ISC	IP multimedia subsystem Service Control interface
MMS	Multimedia Message Service
PAM	Presence and Availability Management
SCF	Service Capability Feature
SIMPLE	SIP for Instant Messaging and Presence Leveraging Extensions
SIP	Session Initiation Protocol
SMS	Short Message Service
XCAP	XML Configuration Access Protocol
XML	eXtensible Markup Language
XMPP	eXtensible Messaging and Presence Protocol
XSD	XML Schema Definition

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 1 shows the architecture of the Presence Web Service and the underlying services. The Parlay/OSA PAM SCF is the straightforward option and implements the presence server with extended identity, device capability, and presence agent management. Parlay/OSA 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.

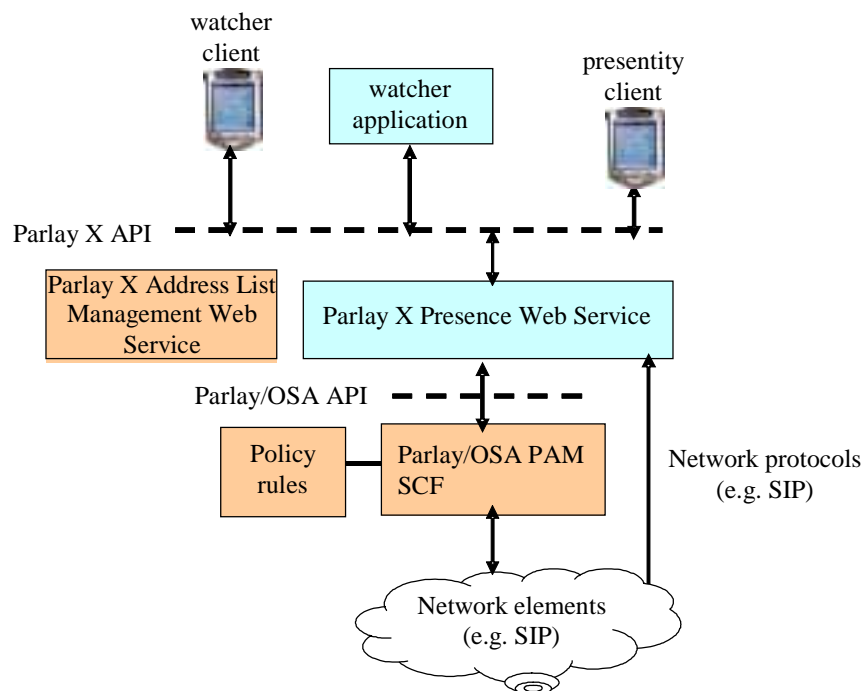


Figure 1: The Presence web service environment

Relationship to Similar or Supplanted Specifications:

The most important relations are to:

- Parlay X Terminal Status Web Service [10] and Parlay X Terminal Location Web Service [11]: 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.
- Parlay/OSA PAM [4]: The Parlay/OSA Presence and Availability specification can be considered the big brother of the present document. While Parlay X Presence stays behind Parlay/OSA PAM in terms of flexibility and power - especially concerning attributes and management interfaces - it also extends PAM by introducing end-to-end authorization. The present document aims to be mappable to Parlay/OSA PAM.
- SIP SIMPLE [5]: The present document aims to be mappable to the SIP/SIMPLE architecture.
- XMPP (Jabber) (see Bibliography): Many principles of XMPP have been adopted, especially the end-to-end authorization.
- IETF Rich Presence [6]. The set of attributes the present document specifies is closely aligned with the IETF's Rich Presence ideas.

- Group Management [7]: Presence of groups is supported by the present document, however their creation and manipulation has to be done using the Parlay X Address List Management Web Service. In the 3GPP presence context, contact lists and group manipulation is done with the XCAP protocol [9].

5 Namespaces

The PresenceConsumer interface uses the namespace:

`www.csapi.org/wsdl/parlayx/presence_consumer/v2_0`

The PresenceNotification interface uses the namespace:

`www.csapi.org/wsdl/parlayx/presence_notification/v2_0`

The PresenceSupplier interface uses the namespace:

`www.csapi.org/wsdl/parlayx/presence_supplier/v2_0`

The 'xsd' namespace is used in the present document to refer to the XML Schema data types defined in XML Schema [2]. The use of the name 'xsd' is not semantically significant.

6 Sequence diagrams

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 is 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 implementer of the API find other solutions preferable, he has to take care of the internal communication himself.

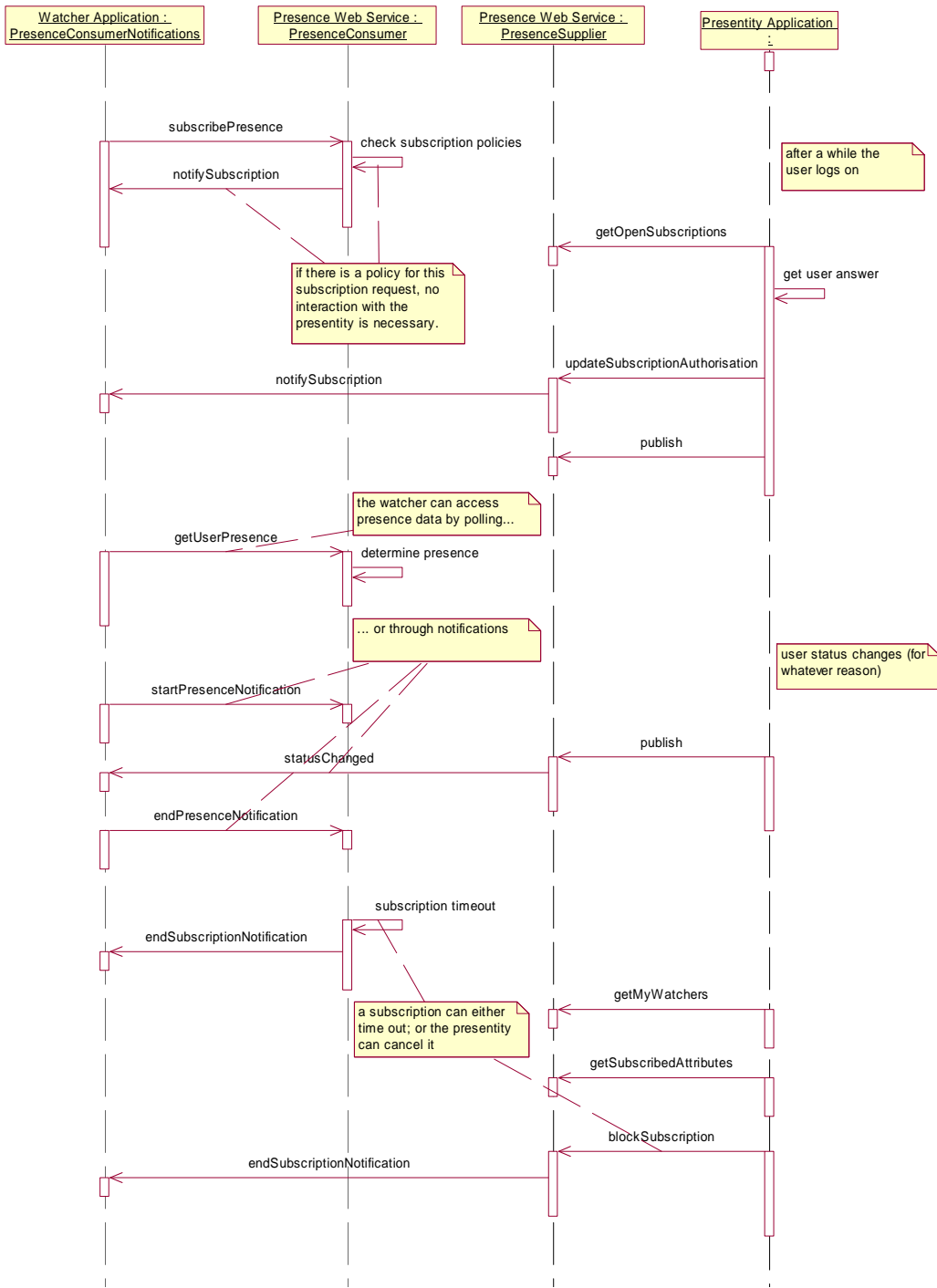


Figure 2: Message interaction overview

7 XML Schema data type definition

Presence attributes are inspired by [6].

7.1 PresenceAttributeType enumeration

The different types of attributes. For each entry in this enumeration there is a separate value type.

Enumeration	Description
Activity	The presentity's activity (available, busy, lunch, etc.)
Place	At what kind of place the presentity is (home, office, etc.)
Privacy	The amount of privacy the user wants (public, quiet, etc.)
Sphere	The user's current environment (work, home)
Communication	The user's means of communication (phone, mail, etc.)
Other	A name - value pair for arbitrary presence information

7.2 ActivityValue enumeration

This enumeration shows the user's current activity. If the activity is unknown, the attribute value will be `ActivityNone`, meaning the attribute was not set. If the user is doing something not in this list, the value will be set to `ActivityOther`.

Enumeration	Description
ActivityNone	Not set.
Available	The user is available for communication.
Busy	The user is busy and is only available for urgent matters.
DoNotDisturb	The user is very busy and does not wish to be disturbed.
OnThePhone	The user is on the phone.
Steering	The user is driving a car / train / airplane, etc.
Meeting	The user is in a meeting.
Away	No idea what the user is doing, but he is away.
Meal	The user is eating.
PermanentAbsence	The user is away and will not return for an extended period.
Holiday	The user is on holidays.
Performance	The user is in a theatre / concert.
InTransit	The user is in the transit area of an (air)port.
Travel	The user is travelling.
Sleeping	The user is sleeping.
ActivityOther	The user is doing something not in this list.

7.3 PlaceValue enumeration

This enumeration shows the type of the user's current location. If the place type is unknown, the attribute value will be `PlaceNone`, meaning the attribute was not set. If the user is in a place not in this list, the value will be set to `PlaceOther`.

Enumeration	Description
<code>PlaceNone</code>	Not set.
<code>Home</code>	The user is at home.
<code>Office</code>	The user is in an office.
<code>PublicTransport</code>	The user is on public transport.
<code>Street</code>	Walking on the street.
<code>Outdoors</code>	Generally outdoors.
<code>PublicPlace</code>	The user is in a public place.
<code>Hotel</code>	The user is in a hotel.
<code>Theater</code>	The user is in a theatre or concert.
<code>Restaurant</code>	The user is in a restaurant / bar / etc.
<code>School</code>	The user is at school.
<code>Industrial</code>	The user is in an industrial building.
<code>Quiet</code>	The user is in a quiet area.
<code>Noisy</code>	The user is in a noisy area.
<code>Aircraft</code>	The user is on an aircraft.
<code>Ship</code>	The user is on a ship.
<code>Bus</code>	The user is in a bus.
<code>Station</code>	The user is in a bus- or railway station.
<code>Mall</code>	The user is in a mall.
<code>Airport</code>	The user is in an airport.
<code>Train</code>	The user is in a train.
<code>PlaceOther</code>	The user is in a kind of place not listed here.

7.4 PrivacyValue enumeration

This enumeration shows the amount of privacy a user currently has. If the privacy is unknown, the attribute value will be `PrivacyNone`, meaning the attribute was not set. If the privacy is not in this list, the value will be set to `PrivacyOther`.

Enumeration	Description
<code>PrivacyNone</code>	Not set.
<code>PrivacyPublic</code>	The user is surrounded by other people and cannot discuss openly.
<code>PrivacyPrivate</code>	The user is alone and able to talk openly.
<code>PrivacyQuiet</code>	The user is in a quiet environment and cannot talk at all.
<code>PrivacyOther</code>	None of the other values applies.

7.5 SphereValue enumeration

This enumeration shows the sphere within which the user acts. If the sphere is unknown, the attribute value will be `SphereNone`, meaning the attribute was not set. If the sphere is not in this list (neither work nor home), the value will be set to `SphereOther`.

Enumeration	Description
<code>SphereNone</code>	Not set.
<code>SphereWork</code>	The user is acting within his work sphere, i.e. as a member of his company.
<code>SphereHome</code>	The user is acting within his home sphere, i.e. as a private person.
<code>SphereOther</code>	The user is acting neither within his work nor within his home sphere.

7.6 CommunicationMeansType enumeration

This enumeration lists communication means. If the communication attribute refers to a means not in this list, it will point to MeansOther.

Enumeration	Description
Phone	The communication attribute refers to a phone (fixed line or mobile or SIP).
Chat	The communication attribute refers to a chat client.
SMS	The communication attribute refers to an SMS client.
Video	The communication attribute refers to a video phone (fixed line or mobile or SIP).
Web	The communication attribute refers to a web client.
EMail	The communication attribute refers to an e-mail client.
MMS	The communication attribute refers to an MMS client.
MeansOther	The communication attribute refers to any other client.

7.7 CommunicationMeans structure

This structure describes on way of reaching the presentity.

Element name	Element type	Description
Priority	xsd:float	The priority of this communication means. Between 0 and 1, the latter meaning the highest priority.
Contact	xsd:anyURI	The presentity's contact address for this communication means.
Type	CommunicationMeansType	The type of this communication means.

7.8 CommunicationValue structure

This structure describes the various ways of reaching a presentity.

Element name	Element type	Description
Means	CommunicationMeans [0..unbounded]	The different ways of reaching the presentity.

7.9 OtherValue structure

This structure can be used for storing arbitrary data about a presentity.

Element name	Element type	Description
Name	xsd:string	Description of the content.
Value	xsd:string	Attribute content.

7.10 PresenceAttribute structure

Presence data published by a presentity and retrieved by watchers.

Element name	Element type	Description
LastChange	xsd:dateTime	The time and date when the attribute was changed last.
Note	xsd:string	An explanatory note. Optional.
Type	PresenceAttributeType	Determines the type of the value field.
Value	One of the six value types; depends on field "type"	The actual value of the attribute.

This data structure is split into two types in the XSD file: A PresenceAttribute contains an AttributeTypeAndValue.

7.11 SubscriptionRequest structure

This structure is returned to the presentity by the Presence Web Service and contains the requesting watcher and the attributes he wants to subscribe.

Element name	Element type	Description
Watcher	xsd:anyURI	The watcher who wants to gain access to data.
Attributes	PresenceAttributeType [0..unbounded]	The attributes the watcher wants to see.
Application	xsd:string	The name of the application running on behalf of the watcher. Note that this field has solely informative purposes, access rights management is based on watcher id only.

7.12 PresencePermission structure

The answer from the service to the watcher in the message `getSubscriptionStatusResponse`.

Element name	Element type	Description
Attribute	PresenceAttributeType	The name of the attribute the watcher wanted to subscribe.
Decision	xsd:boolean	Whether the presentity accepted the subscription. If no, any further fields should be ignored.

8 Web Service interface definition

This API is separated into three interfaces:

- PresenceConsumer interface: watcher methods for requesting and subscribing presence data.
- PresenceNotification interface: is the watcher notification interface for presence events.
- PresenceSupplier interface: presentity methods for supplying presence data and managing subscriptions.

8.1 Interface: PresenceConsumer

Client role: watcher.

This set of methods is used by the watcher to obtain presence data. After the subscription to presence data, the watcher can select between a polling mode or a notification mode in order to receive presence data.

8.1.1 Operation: subscribePresence

We assume that the watcher has been previously authenticated, so that his identity is known and can be associated with the subscription at the server.

The presentity is contacted and requested to authorize the watcher. As this process generally involves user interaction there cannot be an immediate response. The watcher is notified with `notifySubscription()`. If the presentity is a group, every member of the group will be contacted for authorization. The watcher will get one notification for each member.

Only after the subscription is completed (and the presentity has allowed access to attributes) may the watcher will get information when he uses `getUserPresence()` or `startPresenceNotification()`.

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

At this interface level, the subscription has no expiration, although it can be ended from the presentity of the underlying layers (see `subscriptionEnded` method).

8.1.1.1 Input message: subscribePresenceRequest

Part name	Part type	Description
Presentity	xsd:anyURI	A presentity or a group of presentities whose attributes the watcher wants to monitor.
Attributes	PresenceAttributeType [0..unbounded]	The attributes the watcher wants to access. (the same for all the group members). An empty array means subscription of all attributes.
Application	xsd:string	Describes the application the watcher needs the data for.
Reference	common:SimpleReference	The notification interface.

8.1.1.2 Output message: subscribePresenceResponse

Part name	Part type	Description
None		

8.1.1.3 Referenced faults

ServiceException from ES 202 391-1 [3]:

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

PolicyException from ES 202 391-1 [3]:

- POL0006: Groups not allowed.
- POL0007: Nested groups not allowed.

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()`.

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 ES 202 391-1 [3]:

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

PolicyException from ES 202 391-1 [3]. 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.

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 `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 <code>checkImmediate</code> .
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 ES 202 391-1 [3]:

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

PolicyException from ES 202 391-1 [3]. 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.

8.1.4 Operation: endPresenceNotification

Indicates that the watcher does not want further notifications for a specific notification request (identified by the correlator). Note that the subscription to presence data stays active; the caller of this method remains a watcher and can still use getUserPresence() or reactivate the notifications.

8.1.4.1 Input message: endPresenceNotificationsRequest

Part name	Part type	Description
Correlator	xsd:string	The notification the watcher wants to cancel.

8.1.4.2 Output message: endPresenceNotificationResponse

Part name	Part type	Description
None		

8.1.4.3 Referenced faults

ServiceException from ES 202 391-1 [3]:

- SVC0001: Service error.
- SVC0002: Invalid input value.

PolicyException from ES 202 391-1 [3]:

- POL0001: Policy error.

8.2 Interface: PresenceNotification

This client callback interface is used by the presence consumer interface to send notifications.

8.2.1 Operation: statusChanged

The asynchronous operation is called by the Web Service when an attribute for which notifications were requested changes.

8.2.1.1 Input message: statusChangedRequest

Part name	Part type	Description
Correlator	xsd:string	Identifies the notification request.
Presentity	xsd:anyURI	The presentity whose presence status has changed.
ChangedAttributes	PresenceAttribute [0..unbounded]	The new presence data.

8.2.1.2 Output message: statusChangedResponse

Part name	Part type	Description
None		

8.2.1.3 Referenced faults

None.

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 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.

8.2.3 Operation: notifySubscription

This asynchronous method notifies the watcher that the server or the presentity handled the pending subscription.

8.2.3.1 Input message: notifySubscriptionRequest

Part name	Part type	Description
Presentity	xsd:anyURI	The presentity whose attributes the watcher wants to monitor.
Decisions	PresencePermission [0..unbounded]	Denote the attributes the server/presentity accepted to expose.

8.2.3.2 Output message: notifySubscriptionResponse

Part name	Part type	Description
None		

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 [8] and [5]) 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.

8.2.4.1 Input message: subscriptionEndedRequest

Part name	Part type	Description
Presentity	xsd:anyURI	The presentity to which the subscription has terminated.
Reason	xsd:string	Timeout, Blocked.

8.2.4.2 Output message: subscriptionEndedResponse

Part name	Part type	Description
None		

8.3 Interface: PresenceSupplier

These methods are used by the presentity to supply presence data and manage access to the data by its watchers. We assume that the presentity has been previously authenticated, so that his Identity is known.

8.3.1 Operation: publish

The presentity publishes data about herself. This data will then be filtered by the system and forwarded to the watchers who have ordered notifications.

8.3.1.1 Input message: publishRequest

Part name	Part type	Description
Presence	PresenceAttribute [0..unbounded]	The presence attributes the devices of the presentity supports.

8.3.1.2 Output message: publishResponse

Part name	Part type	Description
None		

8.3.1.3 Referenced faults

ServiceException from ES 202 391-1 [3]:

- SVC0001: Service error.
- SVC0002: Invalid input value.

PolicyException from ES 202 391-1 [3]:

- POL0001: Policy error.

8.3.2 Operation: getOpenSubscriptions

Called periodically by the presentity to see if any watcher wants to subscribe to presence data. The client will answer open requests with `updateSubscriptionAuthorization()`.

8.3.2.1 Input message: getOpenSubscriptionsRequest

Part name	Part type	Description
None		

8.3.2.2 Output message: getOpenSubscriptionsResponse

Part name	Part type	Description
OpenRequests	SubscriptionRequest [0..unbounded]	Any open requests.

8.3.2.3 Referenced faults

ServiceException from ES 202 391-1 [3]:

- SVC0001: Service error.

PolicyException from ES 202 391-1 [3]:

- POL0001: Policy error.

8.3.3 Operation: updateSubscriptionAuthorization

The presentity answers with this operation to watcher subscriptions for which no authorization policy exists. The answer consists of the attribute and the watcher involved and the permissions for each attribute. Subscription requests that are not answered are assumed pending.

The operation can be used by the presentity to change anytime the authorization for a certain watcher or group to monitor one or several attributes.

If the watcher did not try to subscribe the attribute - i.e. there is not pending subscription from this watcher to an attribute in the decisions array, a PresenceException will be raised and the entire authorization request ignored.

8.3.3.1 Input message: updateSubscriptionAuthorizationRequest

Part name	Part type	Description
Watcher	xsd:anyURI	watcher or group of watchers.
Decisions	PresencePermission [0..unbounded]	The answers to open requests.

8.3.3.2 Output message updateSubscriptionAuthorizationResponse

Part name	Part type	Description
None		

8.3.3.3 Referenced faults

ServiceException from ES 202 391-1 [3]:

- SVC0001: Service error.
- SVC0002: Invalid input value.
- SVC0004: No valid addresses.
- SVC0220: NoSubscriptionRequest.

PolicyException from ES 202 391-1 [3]:

- POL0001: Policy error.

8.3.4 Operation: getMyWatchers

Returns an array of watching identities that are subscribed to the presentity's attributes. They are not necessarily users of the notification system, the mere fact that they are allowed to see the presentity's attributes is enough to be on this list.

8.3.4.1 Input message: getMyWatchersRequest

Part name	Part type	Description
None		

8.3.4.2 Output message: getMyWatchersResponse

Part name	Part type	Description
Result	xsd:anyURI [0..unbounded]	The list of identities who currently have access to the presentity's attributes.

8.3.4.3 Referenced faults

ServiceException from ES 202 391-1 [3]:

- SVC0001: Service error.

PolicyException from ES 202 391-1 [3]:

- POL0001: Policy error.

8.3.5 Operation: getSubscribedAttributes

Returns an array of attributes that a specific watcher has subscribed.

8.3.5.1 Input message: getSubscribedAttributesRequest

Part name	Part type	Description
Watcher	xsd:anyURI	The watcher whose subscriptions the presentity wants to know.

8.3.5.2 Output message: getSubscribedAttributesResponse

Part name	Part type	Description
Result	PresenceAttributeType [0..unbounded]	The attributes the watcher is subscribed to.

8.3.5.3 Referenced faults

ServiceException from ES 202 391-1 [3]:

- SVC0001: Service error.
- SVC0004: No valid addresses.
- SVC0221: Not a watcher - if the URI in the field watcher is not a watcher of the presentity.

PolicyException from ES 202 391-1 [3]:

- POL0001: Policy error.

8.3.6 Operation: blockSubscription

With this operation the presentity can block entirely the flow of presence information to a certain subscribed watcher by cancelling the subscription. The watcher will be notified with a subscriptionEnded() message.

8.3.6.1 Input message: blockSubscriptionRequest

Part name	Part type	Description
Watcher	xsd:anyURI	The watcher whose subscriptions the presentity wants to cancel.

8.3.6.2 Output message: blockSubscriptionResponse

Part name	Part type	Description
None		

8.3.6.3 Referenced faults

ServiceException from ES 202 391-1 [3]:

- SVC0001: Service error.
- SVC0002: Invalid input value.
- SVC0004: No valid addresses.
- SVC0221: Not a watcher - if the URI in the field watcher is not a watcher of the presentity.

PolicyException from ES 202 391-1 [3]:

- POL0001: Policy error.

9 Fault definitions

9.1 ServiceException

9.1.1 SVC0220: No subscription request

Name	Description
Message Id	SVC0220.
Text	No subscription request from watcher %1 for attribute %2.
Variables	%1 - watcher URI. %2 - type of attribute, from clause 7.1.

9.1.2 SVC0221: Not a watcher

Name	Description
Message Id	SVC0221.
Text	%1 is not a watcher.
Variables	%1 - watcher URI.

10 Service policies

Service policies for this service.

Name	Type	Description
MaximumNotificationFrequency	common:TimeMetric	Maximum rate of notification delivery (also can be considered minimum time between notifications).
MaximumNotificationDuration	common:TimeMetric	Maximum amount of time a notification may be set up for.
DefaultNotificationDuration	common:TimeMetric	Default amount of time for which a notification will be set up.
MaximumCount	xsd:int	Maximum number of notifications that may be requested.
UnlimitedCountAllowed	xsd:boolean	Allowed to specify unlimited notification count (i.e. specify zero in notification count requested).
GroupSupport	xsd:boolean	Groups may be included with addresses.
NestedGroupSupport	xsd:boolean	Are nested groups supported in group definitions.

Annex A (normative): WSDL for Presence

The document/literal WSDL representation of this interface specification is compliant to ES 202 391-1 [3] and is contained in text files (contained in archive es_20239114v010101p0.zip) which accompany the present document.

Annex B (informative): Bibliography

draft-ietf-simple-event-filter-funct-03: "Functional Description of Event Notification Filtering".
<http://www.ietf.org/internet-drafts/draft-ietf-simple-event-filter-funct-04.txt>

ETSI TS 123 141: "Universal Mobile Telecommunications System (UMTS); Presence service; Architecture and functional description; Stage 2 (3GPP TS 23.141)".

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.jabber.org/protocol>.

History

Document history		
V1.1.1	January 2005	Membership Approval Procedure MV 20050318: 2005-01-18 to 2005-03-18
V1.1.1	March 2005	Publication