



## **Presence Attributes**

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**Open Mobile Alliance**

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# Contents

1. SCOPE .....	6
2. REFERENCES.....	7
2.1 NORMATIVE REFERENCES.....	7
2.2 INFORMATIVE REFERENCES.....	7
3. TERMINOLOGY AND CONVENTIONS.....	8
3.1 CONVENTIONS .....	8
3.2 DEFINITIONS.....	8
3.3 ABBREVIATIONS .....	8
4. INTRODUCTION .....	9
5. CLASSIFICATION OF PRESENCE ATTRIBUTES.....	10
6. CLIENT BEHAVIOR .....	11
7. SERVER BEHAVIOR .....	12
8. PRESENCE ATTRIBUTES .....	13
8.1 GENERAL STRUCTURE OF PRESENCE ATTRIBUTES.....	13
8.1.1 Name .....	13
8.1.2 Qualifier .....	14
8.1.3 Value .....	14
8.2 CLIENT STATUS.....	14
8.2.1 OnlineStatus.....	14
8.2.2 Registration .....	15
8.2.3 ClientInfo .....	15
8.2.4 TimeZone.....	20
8.2.5 GeoLocation.....	20
8.2.6 Address .....	22
8.2.7 FreeTextLocation .....	23
8.2.8 PLMN .....	24
8.2.9 Communication capabilities.....	24
8.3 USER STATUS.....	25
8.3.1 UserAvailability .....	25
8.3.2 PreferredContacts .....	26
8.3.3 PreferredLanguage .....	28
8.3.4 StatusText .....	28
8.3.5 StatusMood .....	28
8.3.6 Alias .....	29
8.3.7 StatusContent .....	29
8.3.8 ContactInfo .....	30
8.3.9 InfoLink .....	31
8.4 EXTENDED PRESENCE INFORMATION .....	32
APPENDIX A. CHANGE HISTORY (INFORMATIVE).....	33
A.1 APPROVED VERSION HISTORY .....	33
APPENDIX B. STATIC CONFORMANCE REQUIREMENTS (NORMATIVE).....	34
B.1 PRESENCE ATTRIBUTE REQUIREMENTS .....	34
B.1.1 Clients .....	34
B.1.2 Servers .....	36

## Tables

Table 1: Structure of presence attributes .....	13
Table 2: Names of presence attributes .....	14
Table 3: Qualifier.....	14
Table 4: OnlineStatus .....	15

Table 5: Registration .....	15
Table 6: ClientInfo.....	16
Table 7: ClientContentLimit.....	17
Table 8: AcceptedContentType .....	18
Table 9: ClientType .....	19
Table 10: DevManufacturer.....	19
Table 11: ClientProducer .....	19
Table 12: Model .....	19
Table 13: ClientVersion.....	19
Table 14: Language .....	20
Table 15: ClientIMPriority .....	20
Table 16: Application-ID.....	20
Table 17: TimeZone.....	20
Table 18: GeoLocation .....	21
Table 19: Longitude.....	21
Table 20: Latitude.....	21
Table 21: Altitude .....	21
Table 22: Accuracy .....	21
Table 23: Address .....	22
Table 24: Country.....	22
Table 25: City.....	22
Table 26: Street.....	22
Table 27: Crossing1 .....	22
Table 28: Crossing2 .....	23
Table 29: Building.....	23
Table 30: NamedArea.....	23
Table 31: Accuracy .....	23
Table 32: FreeTextLocation.....	23
Table 33: PLMN .....	24
Table 34: CommCap.....	24
Table 35: CommC.....	24
Table 36: Cap.....	24
Table 37: Status.....	25
Table 38: Contact.....	25
Table 39: Note .....	25

Table 40: UserAvailability .....	26
Table 41: PreferredContacts.....	26
Table 42: AddrPref.....	26
Table 43: Cstatus .....	27
Table 44: Cname .....	27
Table 45: Cpriority .....	27
Table 46: PrefC .....	27
Table 47: CAddr .....	28
Table 48: PreferredLanguage.....	28
Table 49: StatusText.....	28
Table 50: StatusMood.....	29
Table 51: Alias.....	29
Table 52: StatusContent.....	29
Table 53: DirectContent.....	30
Table 54: ReferredContent .....	30
Table 55: ContentType.....	30
Table 56: Structure of ContactInfo .....	30
Table 57: ContactInfo.....	30
Table 58: ContainedvCard.....	31
Table 59: ReferredvCard .....	31
Table 60: InfoLink.....	31
Table 61: Inf_Link.....	31
Table 62: Link.....	31
Table 63: Text .....	31
Table 64: ContentType.....	32

# 1. Scope

The Instant Messaging and Presence Service (IMPS) includes four primary features:

- Presence
- Instant Messaging
- Groups
- Shared Content

Presence is the key enabling technology for IMPS. It includes client device availability (my phone is on/off, in a call), user status (available, unavailable, in a meeting), location, client device capabilities (voice, text, GPRS, multimedia) and searchable personal statuses such as mood (happy, angry) and hobbies (football, fishing, computing, dancing). Since presence information is personal, it is only made available according to the user's wishes - access control features put the control of the user presence information in the users' hands.

Instant Messaging (IM) is a familiar concept in both the mobile and desktop worlds. Desktop IM clients, two-way SMS and two-way paging are all forms of Instant Messaging. Wireless Village IM will enable interoperable mobile IM in concert with other innovative features to provide an enhanced user experience.

Groups or chat are a fun and familiar concept on the Internet. Both operators and end-users are able to create and manage groups. Users can invite their friends and family to chat in group discussions. Operators can build common interest groups where end-users can meet each other online.

Shared Content allows users and operators to setup their own storage area where they can post pictures, music and other multimedia content while enabling the sharing with other individuals and groups in an IM or chat session.

These features, taken in part or as a whole, provide the basis for innovative new services that build upon a common interoperable framework.

## 2. References

### 2.1 Normative References

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- [PA XMLS] “Presence Attribute DTD and Examples”, Version 1.3, Open Mobile Alliance™, OMA-TS-IMPS\_PA\_XMLS-V1\_3, URL: <http://www.openmobilealliance.org>
- [RFC2119] “Key words for use in RFCs to Indicate Requirement Levels”. S. Bradner. March 1997. URL: <http://www.ietf.org/rfc/rfc2119.txt>
- [RFC2822] “Internet Message Format”, April 2001. URL: <http://www.ietf.org/rfc/rfc2822.txt?number=2822>

### 2.2 Informative References

- [Arch] “IMPS Architecture”, Version 1.3, Open Mobile Alliance™, OMA-AD-IMPS-V1\_3, URL: <http://www.openmobilealliance.org>
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- [SSP] “Server-Server Protocol Semantics”, Version 1.3, Open Mobile Alliance™, OMA-TS-IMPS\_SSP-V1\_3, URL: <http://www.openmobilealliance.org>
- [SSP Syntax] “Server-Server Protocol XML Syntax”, Version 1.3, Open Mobile Alliance™, OMA-TS-IMPS\_SSP\_XMLS-V1\_3, URL: <http://www.openmobilealliance.org>
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## 3. Terminology and Conventions

### 3.1 Conventions

The key words “MUST”, “MUST NOT”, “REQUIRED”, “SHALL”, “SHALL NOT”, “SHOULD”, “SHOULD NOT”, “RECOMMENDED”, “MAY”, and “OPTIONAL” in this document are to be interpreted as described in [RFC2119].

All sections and appendixes, except “Scope” and “Introduction”, are normative, unless they are explicitly indicated to be informative.

### 3.2 Definitions

**Consumer**     The user who receives presence information.

**Publisher**    The user that owns the presence information.

### 3.3 Abbreviations

**OMA**           Open Mobile Alliance

**WAP**           Wireless Application Protocol

**WV**            Wireless Village



## 4. Introduction

The purpose of defining a set of presence attributes is to maximize interoperability between manufacturers. However, the presence attributes themselves do not define a presence service or application, which may vary between manufacturers.

A presence attribute in general contains presence information intended for the user. A presence attribute may contain also meta-information for machine-to-machine communication between the publishing client and receiving clients.

A *client originated* presence attribute is one that has its value field filled in by the publishing client. A *server originated* presence attribute is one that has its value field filled in by the publisher server. A presence attribute is *client-server originated* when a part of the value field is filled in by the client and the rest by the publisher server.

There may be at least the following different kinds of presence related service elements in the network: presence service element that is the home service element for the publisher (*publisher server*) and presence service element that is the home for the subscribing or requesting client (*subscriber server*).

## 5. Classification of presence attributes

The presence attributes can be divided in the following classes:

**Client Status:** Presence attributes describing the availability of the client for communication, location information and capabilities of the client

**User Status:** Presence attributes describing the availability of the user for communication, personal user status and user information.

**Extended Presence Information:** Vendor specific or service provider dynamically defined non-standard presence attributes, which, however, need to be passed through standard presence servers. Also extension fields to standard presence attributes.

## 6. Client Behavior

The IMPS client MUST support all the presence attributes described in this document. The support means:

- The IMPS client MAY be able to update one or more attributes from the set of attributes described in this document.
- The IMPS client MUST be able to receive and handle all of the attributes described in this document.
- The IMPS client MUST be able to present one or more attributes from the set of attributes described in this document.
- The IMPS client MAY rely on the semantics of the presence attributes described in this document.

## 7. Server Behavior

The IMPS server shall follow the requirements below:

1. The publisher server **MUST** be able to accept and pass to clients all presence attributes defined in this document.
2. The server **MAY** but need not, understand the semantics of any client- or server-originated presence attributes.
3. The server **MUST** process the access control (authorization) rules defined by the publisher before passing the attributes to the client. The access control rules are defined in the [CSP] document in the “Authorization of Presence Attributes” section.

The server **MUST** pass the client-originated presence attributes unmodified, with two exceptions. The two exception cases are described below:

1. There **MAY** exist a content adaptation mechanism implemented in the IMPS server. Content adaptation addresses the issue of modifying a presence attribute in such a way that it matches the client capabilities of receiving client and at the same time keeping the user perceived semantic meaning of the attribute. Content adaptation is not within the scope of the IIMPS specifications and implementation of any such a mechanism is proprietary.
2. When the publisher server receives partial presence attributes in which the value part does not contain all the sub fields defined for the attribute, the server **MAY** pass such partial attributes unmodified or it **MAY** fill in one or more of the missing sub fields.

When an IMPS client requests a presence attribute the subscriber server **MUST** pass the attribute with the value currently stored in the publisher server. For subscribing clients the presence notification can be triggered by three mechanisms:

1. For client originated or client-server originated presence attributes when the publisher server gets an update from the publisher.
2. For any attribute when the publisher server detects a change in the attribute value.
3. For server and client-server originated values having implementation-specific internal triggers updating the value.

When a consumer’s client requests the ClientInfo/ClientContentLimit presence attribute, the servers – where this particular attribute passes through – **MAY** alter the content of the presence attribute. See ClientInfo/ClientContentLimit in 8.2.3.

Those servers that filter IMs based on content type **MUST** verify ClientInfo/ClientContentLimit attribute upon reception, and **MUST** remove those content types – or alter the related content-type-specific limitations – that the server is filtering out. It means that the passed on ClientInfo/ClientContentLimit attribute **MUST** contain the common subset of the received ClientInfo/ClientContentLimit attribute and the passing server’s supported content types/limitations. The servers **MAY** offer transcoding of various content types – these servers are **NOT REQUIRED** to update the ClientInfo/ClientContentLimit presence attribute, but **MUST** transcode the content of the instant messages as they pass IMs through.

Those servers that do not filter IMs based on content type **SHOULD NOT** verify the ClientInfo/ClientContentLimit attribute upon reception, and **MUST** pass it on without changes.

The behavior described above guarantees that when the ClientInfo/ClientContentLimit attribute reaches the consumer’s client, it will include all content types and limitations that are supported by both the publisher’s client as well as through the entire server route to the publisher’s client. The consumer’s client **MUST** verify the received ClientInfo/ClientContentLimit attribute versus its own limitations since the received ClientInfo/ClientContentLimit will not include the limitations of the consumer’s client.

## 8. Presence Attributes

### 8.1 General structure of Presence attributes

Following table shows the overall structure of presence attributes.

Information Element	Req	Single/Multiple	Type	Description
Name	M	S	Enum. String	Name of the attribute
Qualifier	O	S	Boolean	Validity of Value field
Value	C	S	Multipl. types	Value of the attribute
Various structured presence information	C	S	Structure	Some presence information includes structures instead of Value. This element is the placeholder for such structures.
Client-ID	C	S	String	The Client-ID of the client to whom the presence attribute belongs. Applicable only to Client Status attributes, see 8.2. The client SHOULD NOT include it during presence update – the server MUST ignore it and update the presence value for the client that owns the session from which the update was requested, and the server MUST publish the related Client-ID along with the updated attribute. This behavior presents the clients from updating presence attributes that do not belong to them.

**Table 1: Structure of presence attributes**

#### 8.1.1 Name

Each presence attribute has a Name. The Names of the attributes are defined in this document and are shown in the table below. The column 'Suggested' is provided to guide manufactures to provide support for a minimal common set of attributes. Even though not mandatory, the suggested attributes aim to provide a basic interoperability between clients from different manufactures. All client and server implementations that support the presence feature MUST support those presence attributes that are marked 'M' (mandatory).

Attribute Name	Description	Suggested
OnlineStatus(S)	Shows if the client is logged on a IMPS server	Y
Registration	Shows if the client is registered in mobile network	N
ClientInfo	Information about the client and the device	M
TimeZone	Local time zone of the client	N
GeoLocation	Geographical location of the client	N
Address	Address of the client	N
FreeTextLocation	Free text description of the location of the client	N
PLMN	PLMN code of the network the client is registered to	N
CommCap	Communication capabilities of the client	N
UserAvailability(S)	Availability of the user for communication	Y

PreferredContacts	Contact preferences of the user	N
PreferredLanguage	Language preference of the user	N
StatusText(S)	User specified status text	Y
StatusMood	Mood of the user	N
Alias	Alias name for the user	N
StatusContent	Media info for user status	N
ContactInfo	A vCard for the user	N
InfoLink	One or more URLs to extra information	N

**Table 2: Names of presence attributes**

The attribute names are case sensitive.

## 8.1.2 Qualifier

The Qualifier field indicates if an attribute contains valid value(s). An attribute value is invalid when:

- An attribute is authorized but not yet updated for the first time
- The user wants to indicate that the value of the attribute is unknown.

Information element	Qualifier
Data type	Boolean
Format	Following values: T – The Value part of the attribute contains valid information F – The Value part of the attribute is unknown or undetermined. Any previous value stored in client terminal is out-of-date.
Description	The validity of the Value field of an attribute, or – when the presence attribute includes a structure instead of a single value – the validity of the entire presence structure.
Range	

**Table 3: Qualifier**

The server passes the Qualifier to the requesting or subscribing clients. A change in Qualifier is treated same way as a change in Value i.e. it may trigger a notification. The Qualifier value has impact on the server behavior for server-originated attributes. For example if the GeoLocation attribute for a publisher is agreed to be server originated and the publisher sends a client originated update with Qualifier indicating the value to be invalid, then the server MUST accept the new Qualifier and MUST keep it in the invalid state until the publisher client sends a new update for this attribute with Qualifier indicating that the value is valid.

## 8.1.3 Value

The attribute value fields are described in the following sections.

## 8.2 Client Status

The meaning of term 'client' in the context of Client Status is the client application that has established and maintains the IMPS session. The IMPS protocol allows multiple concurrent sessions from the same user using multiple clients, however each client MUST have exactly one set of Client Status presence attributes only. Clients MAY publish their own Client Status presence information, but it MUST be possible to distinguish the Client Status published presence attributes, thus each published presence attribute listed in this section MUST include the Client-ID for identification purposes – see 8.1. The Client-ID MUST be the same Client-ID that the client used to establish the session (was used during login phase).

### 8.2.1 OnlineStatus

This indicates whether the client is logged on to the IMPS SAP or not.

Originator: Presence Server

Mobile network support needed: No

Defined information elements are:

Information element	OnlineStatus
Data type	Boolean
Format	Following values: T – The client is logged on to the IMPS SAP. F – The client is not logged on to the IMPS SAP.
Description	The login status of the client
Range	

**Table 4: OnlineStatus**

## 8.2.2 Registration

This information indicates the registration status of the client in the network. Originator: Presence Server

Mobile network support needed: Yes

Defined information elements are:

Information element	Registration
Data type	Boolean
Format	Following values: T – The client is registered in mobile network F – the client is not registered in mobile network or out of coverage
Description	The registration status of the client
Range	

**Table 5: Registration**

## 8.2.3 ClientInfo

This indicates to the subscriber information about this particular client. This information includes manufacturer, model, a user-defined name, the current language, the IM priority, the Application-ID and a description of the client.

Originator: Generally the client, but ClientIMPriority and Application-IDList MUST originate from the server.. ClientContentLimit originates from the publisher's Service Access Point, and MAY be updated by each server – that filter the IMs based on content type – where the attribute passes through.

Mobile network support needed: No

Defined information elements are:

ClientInfo	Req	Single/Multiple	Description
ClientContentLimit	M	S	Describes the content limitations of the publisher's client and the entire route of servers towards the publisher's client. Originates from the Service Access Point based on client capability negotiation – see [CSP]. Each of the servers – that filter the IMs based on content type – where this presence attribute passes through MUST verify the included limitations against their own limitation settings and update this attribute on the way to the consumer at by removing the non-supported content type(s) and decreasing the limitation(s) if necessary – ultimately resulting in a presence attribute on the consumer side that indicates all content types and limitations that are supported by the publisher and via the entire server route to the publisher. The pass-thru servers MAY offer transcoding of various content types – these pass-thru servers are NOT REQUIRED to update the

			ClientContentLimit presence attribute, but MUST transcode the content of the instant messages as they pass through The originator server MUST maintain this attribute throughout the whole session, and it SHOULD maintain it for an undefined period of time after the session is terminated in order to avoid revealing the OnlineStatus of the client via this presence attribute.
ClientType	O	S	Describes the device type, if PC, Mobile, Command Line Interface (CLI) etc. Originates from the Client Application. The server MAY set this presence attribute on behalf of some clients; however, the only value the server is allowed to set is 'CLI'.
DevManufacturer	O	S	Name of the device manufacturer. Originates from the Client Application.
ClientProducer	O	S	Name of the producer of the client. Originates from the Client Application.
Model	O	S	Model of the device. Originates from the Client Application.
ClientVersion	O	S	Version of the client. Originates from the Client Application.
Language	O	S	Language setting of the client device. Originates from the Client Application.
ClientIMPriority	O	S	IM priority of the client. Originates from the Service Access Point based on client capability negotiation - see SessionPriority in [CSP]
Application-ID	O	S	The Application-ID that the client used during login.

Table 6: ClientInfo

ClientContentLimit	Req	Single/Multiple	Description
AcceptedContentType	C	M	The list of accepted media objects – and the related credentials – per MIME type except plain text that the client – and all of the servers where the presence attributes pass through – allows. The sender SHOULD NOT send media types that are not listed here. AcceptedContentType MUST NOT be present when AnyContent indicates ‘T’.
AnyContent	C	S	A Boolean value indicating that the client accepts any content types. AnyContent MUST NOT be present if there is any AcceptedContentType. When the value is ‘T’, any of the servers where the presence attribute passes through MAY remove this attribute, but if they do so then they MUST include all of the available AcceptedContentType attributes with proper credentials.
AcceptedTextContentLength	M	S	An integer number in character count that indicates the length of the text messages that the client – and all of the servers where the presence attributes pass through – allows. The sender MUST NOT send plain text messages that are longer than this.



AcceptedTransferEncoding	O	M	The list of supported transfer-encoding methods in the client device – and all of the servers where the presence attributes pass through –, such as “BASE64”.
MaxPullLength	M	S	An integer number in character count that indicates the maximum length of content (either plain text or multimedia object) that the client – and all of the servers where the presence attributes pass through – accepts using the notify/get mechanism. A value of zero indicates that the client does not support notify/get-based message delivery. The sender MUST NOT send messages with plain text or media content that are longer than this value unless MaxPushLength indicates a higher value.
MaxPushLength	M	S	An integer number in character count that indicates the maximum length of content (either plain text or multimedia object) that the client – and all of the servers where the presence attributes pass through – accepts using the push mechanism. A value of zero indicates that the client does not support push-based message delivery. The sender MUST NOT send messages with plain text or media content that are longer than this unless MaxPullLength indicates a higher value.
PlainTextCharset	M	M	The list of supported character sets for plain text documents in the client device – and all of the servers where the presence attributes pass through. At least one character set MUST be supported. Integer number assigned by IANA (see MIBenum numbers in [IANA]).

Table 7: ClientContentLimit

AcceptedContentType	Req	Single/Multiple	Description
ContentType	M	S	The MIME type of the media object.
AcceptedRichContentLength	M	S	An integer number in character count that indicates the length of this particular media type that the client - and all of the servers where the presence attribute passes through - allows without special conditions. See ContentPolicy for special conditions. The sender SHOULD NOT send media objects that are longer than this.
ContentPolicy	M	S	An enumerated value that indicates whether if there is a special handling policy active regarding this media type. It is one of the following values: <ul style="list-style-type: none"> <li>• C – one of the servers where the IMs pass through – will add extra cost to the customer based on the extra size of the media content when the size of the media</li> </ul>

			<p>content is higher than the size defined in ContentPolicyLimit. The ContentPolicyLimit MUST be present.</p> <ul style="list-style-type: none"> <li>• N – No active policy meaning that only those limitations MUST be obeyed that are described in MaxPullLength and MaxPushLength. The ContentPolicyLimit MUST NOT be present.</li> <li>• R – one of the servers where the IMs pass through – will reject the instant message when the size of the media content is higher than the size defined in ContentPolicyLimit. The ContentPolicyLimit MUST be present.</li> </ul> <p>As the presence attribute gets updated when it passes through a server, only the following updates are permitted to this value:</p> <ul style="list-style-type: none"> <li>• N → C and add ContentPolicyLimit.</li> <li>• N → R and add ContentPolicyLimit.</li> <li>• C → R and update ContentPolicyLimit.</li> </ul>
ContentPolicyLimit	C	S	<p>An integer value that indicates the special handling policy limitation regarding this media type.</p> <p>ContentPolicyLimit MUST be higher than the AcceptedRichContentLength value.</p> <p>When the policy is ‘R’, the sender MUST NOT send media objects that are longer than this.</p> <p>When the policy is ‘C’, the sender SHOULD NOT send media objects that are longer than this.</p>

**Table 8: AcceptedContentType**

Information element	ClientType
Data type	An enumerated String
Format	One of the following values: MOBILE_PHONE - a mobile phone COMPUTER - a computer PDA - a handheld computer CLI - Command Line Interface OTHER
Description	Type of the device. The CLI means a client that supports (a) content that is plain text only (b) content of limited length, and (c) SMS.
Range	MOBILE_PHONE   COMPUTER   PDA   CLI   OTHER

**Table 9: ClientType**

Information element	DevManufacturer
Data type	String
Format	Free text
Description	Name of the device manufacturer.
Range	

**Table 10: DevManufacturer**

Information element	ClientProducer
Data type	String
Format	Free text
Description	Name of the producer of the client.
Range	

**Table 11: ClientProducer**

Information element	Model
Data type	String
Format	Free text
Description	Model of the device.
Range	

**Table 12: Model**

Information element	ClientVersion
Data type	String
Format	Free text
Description	Version of the client.
Range	

**Table 13: ClientVersion**

Information element	Language
Data type	Enumerated String
Format	ISO 639-2/T (three letter language code)
Description	Language setting of the device.
Range	

**Table 14: Language**

Information element	ClientIMPriority
Data type	Integer
Format	
Description	IM priority of the client. It MUST be set by server during client capability negotiation based on the agreed value, and MAY be updated during the session whenever the server changes the priority of the session. See “Client Capability Negotiation” in [CSP].
Range	

**Table 15: ClientIMPriority**

Information element	Application-ID
Data type	String
Format	Application-ID as described in [CSP DataType].
Description	When the client provided Application-ID during login, then the server MUST set this value.
Range	

**Table 16: Application-ID**

## 8.2.4 TimeZone

This gives the offset from UTC of the local time of the client..

Originator: Client or Presence Server

Mobile network support needed: Conditionally

Defined information elements are:

Information element	TimeZone
Data type	String
Format	Offset of the local time from the UTC expressed in format defined by ISO 8601 in basic format Example: a positive difference of two hours between local time and the UTC time is given as +0200 or simply +02
Description	This is the time zone of the client.
Range	

**Table 17: TimeZone**

## 8.2.5 GeoLocation

This gives the measured position of the client. The measurements may be either sensor based (e.g. GPS) or network based or combination of both. The attribute can be originated from the publisher server or from the client. The attribute Accuracy gives indication of the average positioning accuracy achieved by the method. The content includes at least the latitude/longitude lateral position but may include also the vertical position.

Originator: Client or Presence Server

Mobile network support needed: Conditionally

Defined information elements are:

GeoLocation	Req	Single/Multiple	Description
Longitude	M	S	Longitude
Latitude	M	S	Latitude
Altitude	O	S	Altitude
Accuracy	O	S	Accuracy of location information

**Table 18: GeoLocation**

Information element	Longitude
Data type	String
Format	LL_format DMS3 as described in [MLP] 5.14 with the restriction that the output direction indicator can be only in the end of the string and can only have values (W E). For example: 35 24 15.652W indicates 35 degrees 24 minutes and 15.652 seconds longitude west.
Description	The longitudinal position defined as the angle between a reference plane and a plane passing through the point with both planes being perpendicular to the equatorial plane. The datum is WGS-84.
Range	

**Table 19: Longitude**

Information element	Latitude
Data type	String
Format	LL_format DMS3 as described in [MLP] 5.14 with the restriction that the output direction indicator can be only in the end of the string and can only have values (N S). For example: 12 36 22.5N indicates 12 degrees 36 minutes and 22.5 seconds latitude north.
Description	The latitude position defined as angle from the equatorial plane to the vertical direction of a line passing through the point and normal to the reference ellipsoid (WGS-84).
Range	

**Table 20: Latitude**

Information element	Altitude
Data type	Integer
Format	
Description	The altitude of a point in meters in respect of the ellipsoid, which is used to define the coordinates.
Range	

**Table 21: Altitude**

Information element	Accuracy
Data type	Integer
Format	
Description	This is the accuracy of location information in meters. It represents the biggest uncertainty in supplied data (either longitude, latitude or altitude).
Range	

**Table 22: Accuracy**

## 8.2.6 Address

This attribute gives the location of the client in a human understandable text form such as the address (street, city, state), or highway, or community etc.

Originator: Client or Presence server

Mobile network support needed: No

Defined information elements are:

Address	Req	Single/Multiple	Description
Country	O	S	Country
City	O	S	City
Street	O	S	Street
Crossing1	O	S	Crossing
Crossing2	O	S	Crossing
Building	O	S	Building
NamedArea	O	S	Named area
Accuracy	O	S	Accuracy

**Table 23: Address**

Information element	Country
Data type	Enumerated String
Format	The two letter Alpha-2 format as defined in the ISO 3166-1 specification
Description	This is the country of the current client location
Range	

**Table 24: Country**

Information element	City
Data type	String
Format	Free text format
Description	This is the city of the current client location
Range	

**Table 25: City**

Information element	Street
Data type	String
Format	Free text format
Description	This is the street of the current client location
Range	

**Table 26: Street**

Information element	Crossing1
Data type	String
Format	Free text format
Description	This is the first street in a crossing of two streets
Range	

**Table 27: Crossing1**

Information element	Crossing2
Data type	String
Format	Free text format
Description	This is the second street in a crossing of two streets
Range	

**Table 28: Crossing2**

Information element	Building
Data type	String
Format	Free text format
Description	This is a building name or number for current client location
Range	

**Table 29: Building**

Information element	NamedArea
Data type	String
Format	Free text format
Description	This is any named area for current client location
Range	

**Table 30: NamedArea**

Information element	Accuracy
Data type	Integer
Format	
Description	This is the accuracy in meters for current client location
Range	

**Table 31: Accuracy**

## 8.2.7 FreeTextLocation

This is the location of the client as stated by the publisher himself. The content is a short text string.

Originator: Client or Presence server

Mobile network support needed: No

Defined information elements are:

Information element	FreeTextLocation
Data type	String
Format	Free text format
Description	This is the free text form of client location
Range	

**Table 32: FreeTextLocation**

## 8.2.8 PLMN

This gives the PLMN name or code of the mobile network where the client is currently registered.

Originator: Presence Server or Client

Mobile network support needed: Yes

Defined information elements are:

Information element	PLMN
Data type	String
Format	Free text
Description	A PLMN code or name
Range	

**Table 33: PLMN**

## 8.2.9 Communication capabilities

The client communication capabilities in the context of presence mean the capability of the client for various types of user-to-user communication.

Originator: Client-Server

Mobile network support needed: Optionally

Defined information elements are:

CommCap	Req	Single/Multiple	Description
CommC	M	M	List of communication capabilities

**Table 34: CommCap**

CommC	Req	Single/Multiple	Description
Cap	M	S	Communication capability of the communication client
Status	M	S	Status of the communication client
Contact	O	S	Contact address of the communication client
Note	O	S	Free text describing the communication client

**Table 35: CommC**

Information element	Cap
Data type	An enumerated String
Format	CALL – a phone client SMS – an SMS client MMS – an MMS client IM – an IM client EMAIL – an e-mail client
Description	The communication clients represented with a predefined value.
Range	CALL   SMS   MMS   IM   EMAIL

**Table 36: Cap**



Information element	Status
Data type	An enumerated String
Format	OPEN – the communication client can establish a connection with a remote client or a server CLOSED – the communication client cannot establish a connection with a remote client or server
Description	The current status of a communication client represented with a predefined value.
Range	OPEN   CLOSED

Table 37: Status

Information element	Contact
Data type	An enumerated String
Format	When phone number see E.163 When mobile number see E.164 When MMS address see the WAP specifications When UserID: see User-ID in the data types document When email address: see RFC2822
Description	Contact address depends on the value of Cap in the following way: Cap=Call – in this case Contact is a phone number Cap= SMS – in this case Contact is a mobile number (see E.164) Cap=MMS – in this case Contact is an MMS address Cap=IM – in this case the Contact is a UserID Cap=EMAIL – in this case the Contact is an e-mail address
Range	As defined in the appropriate reference: see Format.

Table 38: Contact

Information element	Note
Data type	String
Format	Free text format
Description	This is a user readable description of the communication client
Range	Max. 40 characters.

Table 39: Note

## 8.3 User Status

The meaning of term 'user' in the context of User Status is the end user who uses the IMPS services. The IMPS protocol allows multiple concurrent sessions from the same user, however since all of these sessions belong to the same user, the server MUST maintain only one set of User Status presence attributes per user. It is up to the server implementation to decide how the different sets of User Status presence information are merged into a single User Status set, however the set MUST contain the up-to-date User Status presence information.

### 8.3.1 UserAvailability

This indicates the current status of the publisher in terms of amount of distraction he is willing to accept. The attribute indicates the availability of the publisher for telephony or messaging.

An example use case is the following:

User goes to the meeting. In the meeting he indicates his UserAvailability as DISCREET and answers only for instant messaging and SMS communication for urgent matters. During the meeting the user gives a presentation. During the

presentation the user indicates his UserAvailability as NOT\_AVAILABLE. After the meeting the user indicates his UserAvailability as AVAILABLE.

Originator: Client application

Mobile network support needed: No

Defined information elements are:

Information element	UserAvailability
Data type	An enumerated String
Format	One of the following values: AVAILABLE – User is available for all forms of communication NOT_AVAILABLE– User is not available for instant (e.g. call and IM) communication. Trying to contact this user with any instant means is discouraged and will not likely result in answer. An example of situation where this value may be used is when the user is preoccupied and does not want to be disturbed. DISCREET – The communication with the publisher is left at the discretion of the user. Informative Note: Existing non-IMPS implementations may map presence values such as ‘busy’ and ‘do not disturb’ into DISCREET.
Description	Defines the availability attribute
Range	AVAILABLE   NOT_AVAILABLE   DISCREET

**Table 40: UserAvailability**

### 8.3.2 PreferredContacts

This indicates the current preferred contact method for the publisher. The address of the contact is also available. All phone numbers shall be in international format.

Originator: Client application

Mobile network support needed: No

Defined information elements are:

PreferredContacts	Req	Single/Multiple	Description
AddrPref	M	M	List of preferences and addresses.

**Table 41: PreferredContacts**

AddrPref	Req	Single/Multiple	Description
PrefC	M	S	A communication preference
CAddr	M	S	A contact address
Cstatus	M	S	Status of the communication preference
Cname	O	S	Human-readable name of a communication preference
Cpriority	O	S	Priority of the communication preference

**Table 42: AddrPref**

Information element	Cstatus
Data type	An enumerated String
Format	OPEN – user is available to use the associated communication address CLOSED – user is no available to use the associated communication address
Description	The status of communication preference
Range	OPEN   CLOSED

**Table 43: Cstatus**

Information element	Cname
Data type	String
Format	Free text format
Description	User defined name of the communication preference
Range	

**Table 44: Cname**

Information element	Cpriority
Data type	Integer
Format	An integer in the range from 0 to 255.
Description	The priority the user may set for the communication preference. The smallest number indicates the highest preference. There may be more than one contact preference having the same priority value.
Range	0 to 255

**Table 45: Cpriority**

Information element	PrefC
Data type	An enumerated String
Format	CALL – the publisher prefers to be called SMS – the publisher prefers to get an SMS MMS – the publisher prefers to get an MMS IM – the publisher prefers to get an IM EMAIL – the publisher prefers to get EMAIL
Description	The user preference
Range	CALL   SMS   MMS   IM   EMAIL

**Table 46: PrefC**

Information element	CAddr
Data type	An enumerated String
Format	When phone number see E.163 When mobile number see E.164 When MMS address see the WAP specifications When UserID: see User-ID in the data types document When email address: see RFC2822

Description	Contact address depends on the value of PrefC in the following way: PrefC=Call – in this case CAddr is the phone number PrefC= SMS – in this case CAddr is the mobile number (see E.164) PrefC=MMS – in this case CAddr is the MMS address PrefC=IM – in this case the CAddr is the UserID PrefC=EMAIL – in this case the CAddr is the email address
Range	

Table 47: CAddr

### 8.3.3 PreferredLanguage

This indicates the preferred language for the publisher.

Originator: Client application

Mobile network support needed: No

Defined information elements are:

Information element	PreferredLanguage
Data type	String
Format	ISO 639-2/T (three letter language code)
Description	Language preference of the user
Range	

Table 48: PreferredLanguage

### 8.3.4 StatusText

This is a short text string that gives a free form description of user status.

Originator: Client application

Mobile network support needed: No

Defined information elements are:

Information element	StatusText
Data type	String
Format	Free text format
Description	A personal status given as a free text
Range	

Table 49: StatusText

### 8.3.5 StatusMood

This is the personal mood of the user. It communicates the mood of a user to other users and is intended to be catalyst to further interactions between users, for example instant messages “Why are you angry?”

Originator: Client application

Mobile network support needed: No

Defined information elements are:

Information element	StatusMood
Data type	An enumerated String
Format	One of the following values: HAPPY – publisher feels happy SAD – publisher feels sad ANGRY – publisher feels angry JEALOUS – publisher feels jealous ASHAMED – publisher feels ashamed INVINCIBLE – publisher feels invincible IN_LOVE – publisher feels being in love SLEEPY – publisher feels sleepy BORED – publisher feels bored EXCITED – publisher feels excited ANXIOUS – publisher feels anxious
Description	A personal mood of the publisher given as an enumerated string
Range	HAPPY   SAD   ANGRY   JEALOUS   ASHAMED   INVINCIBLE   IN_LOVE   SLEEPY   BORED   EXCITED   ANXIOUS

Table 50: StatusMood

### 8.3.6 Alias

This is a short text with the alias of the user

Originator: Client application

Mobile network support needed: No

Defined information elements are:

Information element	Alias
Data type	String
Format	Free text format
Description	Alias name for the publisher
Range	

Table 51: Alias

### 8.3.7 StatusContent

Multimedia object content or URL to the multimedia content that the user has selected as personal status information.

Originator: Client application

Mobile network support needed: No

Defined information elements are:

StatusContent	Req	Description
DirectContent	C	A media object included into the attribute in transfer encoded form
ReferredContent	C	An URL to the multimedia content
ContentType	M	MIME type of the media object

Table 52: StatusContent

Information element	DirectContent
Data type	String
Format	BASE64
Description	A BASE64 encoded media object
Range	

Table 53: DirectContent

Information element	ReferredContent
Data type	String
Format	URL
Description	An URL to the multimedia content
Range	

Table 54: ReferredContent

Information element	ContentType
Data type	String
Format	MIME type indicator token
Description	MIME type of the media object
Range	

Table 55: ContentType

### 8.3.8 ContactInfo

Contact information (vCard) or link to the contact information of the user.

Originator: Client application

Mobile network support needed: No

Defined information elements are:

Information element	ContactInfo
Data type	Structure
Format	
Description	See below
Range	

Table 56: Structure of ContactInfo

ContactInfo	Req	Description
ContainedvCard	C	A vCard included into the attribute in transfer encoded form
ReferredvCard	C	An URL to the vCard

Table 57: ContactInfo

Information element	ContainedvCard
Data type	String
Format	vCard (version TBD)
Description	A vCard as the ContactInfo attribute
Range	

Table 58: ContainedvCard

Information element	ReferredvCard
Data type	String
Format	URL
Description	An URL to resource having type vCard
Range	

Table 59: ReferredvCard

### 8.3.9 InfoLink

InfoLink is a set of URLs that the user has selected as extra information. The extra information can be any content type.

Originator: Client application

Mobile network support needed: No

Defined information elements are:

InfoLink	Req	Single/Multiple	Description
Inf_Link	O	M	One or more link elements

Table 60: InfoLink

Inf_link	Req	Single/Multiple	Description
Link	M	S	URL to extra information
Text	O	S	A description of the link
ContentType	O	S	MIME type of the document referred by the Link.

Table 61: Inf\_Link

Information element	Link
Data type	String
Format	URL
Description	An URL to user's extra information
Range	

Table 62: Link

Information element	Text
Data type	String
Format	Free text format
Description	A textual description of the link
Range	

Table 63: Text

Information element	ContentType
Data type	String
Format	MIME type
Description	MIME type of the document referred to by the link
Range	

**Table 64: ContentType**

## 8.4 Extended Presence Information

This is a set of manufacturer, vendor or service provider specific extension attributes and/or extension fields.

The extension attributes are specified in their own PresenceSubList (see [PA XMLS]). A client or server that does not understand the extension attributes **MUST** ignore all of the unsupported extension attributes.

The extension fields are XML elements prefixed with 'Ext'. The document [PA XMLS] shows an example of using extension fields. A client or server that does not understand the extension fields **MUST** ignore all of the unsupported extension fields and use only those fields that it understands.



## Appendix A. Change History

(Informative)

### A.1 Approved Version History

Reference	Date	Description
OMA-TS-IMPS_PA-V1_3	23 Jan 2007	Status changed to Approved by TP TP Doc ref# OMA-TP-2006-0453R02

## Appendix B. Static Conformance Requirements (Normative)

The notation used in this section is specified in [IOPPROC].

### B.1 Presence attribute requirements

#### B.1.1 Clients

Item	Function	Reference	Status	Requirement
IMPS-PA-C-001	Support for OnlineStatus presence attribute	Section 8.2.1	O	
IMPS-PA-C-002	Support for Registration presence attribute	Section 8.2.2	O	
IMPS-PA-C-003	Support for ClientInfo presence attribute	Section 8.2.3	M	
IMPS-PA-C-004	The ClientInfo attribute includes ClientContentLimit	Section 8.2.3	M	
IMPS-PA-C-005	The ClientInfo attribute includes ClientType	Section 8.2.3	O	
IMPS-PA-C-006	The ClientInfo attribute includes DevManufacturer	Section 8.2.3	O	
IMPS-PA-C-007	The ClientInfo attribute includes ClientProducer	Section 8.2.3	O	
IMPS-PA-C-008	The ClientInfo attribute includes Model	Section 8.2.3	O	
IMPS-PA-C-009	The ClientInfo attribute includes ClientVersion	Section 8.2.3	O	
IMPS-PA-C-010	The ClientInfo attribute includes Language	Section 8.2.3	O	
IMPS-PA-C-011	The ClientInfo attribute includes ClientIMPriority	Section 8.2.3	O	
IMPS-PA-C-012	The ClientInfo attribute includes Application-ID	Section 8.2.3	O	
IMPS-PA-C-013	Support for TimeZone presence attribute	Section 8.2.4	O	
IMPS-PA-C-014	Support for GeoLocation presence attribute	Section 8.2.5	O	IMPS-PA-C-015 AND IMPS-PA-C-016
IMPS-PA-C-015	The GeoLocation attribute includes Longitude	Section 8.2.5	O	IMPS-PA-C-014
IMPS-PA-C-016	The GeoLocation attribute includes Latitude	Section 8.2.5	O	IMPS-PA-C-014
IMPS-PA-C-017	The GeoLocation attribute includes Altitude	Section 8.2.5	O	IMPS-PA-C-014
IMPS-PA-C-018	The GeoLocation attribute includes Accuracy	Section 8.2.5	O	IMPS-PA-C-014
IMPS-PA-C-019	Support for Address presence attribute	Section 8.2.6	O	IMPS-PA-C-020 OR IMPS-PA-C-021 OR IMPS-PA-C-022 OR IMPS-PA-C-023 OR IMPS-PA-C-024 OR IMPS-PA-C-025 OR IMPS-PA-C-026
IMPS-PA-C-020	The Address attribute includes Country	Section 8.2.6	O	IMPS-PA-C-019
IMPS-PA-C-021	The Address attribute includes City	Section 8.2.6	O	IMPS-PA-C-019
IMPS-PA-C-022	The Address attribute includes Street	Section 8.2.6	O	IMPS-PA-C-019

Item	Function	Reference	Status	Requirement
IMPS-PA-C-023	The Address attribute includes Crossing1	Section 8.2.6	O	IMPS-PA-C-019
IMPS-PA-C-024	The Address attribute includes Crossing2	Section 8.2.6	O	IMPS-PA-C-019
IMPS-PA-C-025	The Address attribute includes Building	Section 8.2.6	O	IMPS-PA-C-019
IMPS-PA-C-026	The Address attribute includes NamedArea	Section 8.2.6	O	IMPS-PA-C-019
IMPS-PA-C-027	The Address attribute includes Accuracy	Section 8.2.6	O	IMPS-PA-C-019
IMPS-PA-C-028	Support for FreeTextLocation presence attribute	Section 8.2.7	O	
IMPS-PA-C-029	Support for PLMN presence attribute	Section 8.2.8	O	
IMPS-PA-C-030	Support for CommCap presence attribute	Section 8.2.9	O	IMPS-PA-C-031
IMPS-PA-C-031	The CommCap attribute includes one or more CommC	Section 8.2.9	O	IMPS-PA-C-030 AND IMPS-PA-C-032 AND IMPS-PA-C-033
IMPS-PA-C-032	The CommC includes Cap	Section 8.2.9	O	IMPS-PA-C-030
IMPS-PA-C-033	The CommC includes Status	Section 8.2.9	O	IMPS-PA-C-030
IMPS-PA-C-034	The CommC includes Contact	Section 8.2.9	O	IMPS-PA-C-030
IMPS-PA-C-035	The CommC includes Note	Section 8.2.9	O	IMPS-PA-C-030
IMPS-PA-C-036	Support for UserAvailability presence attribute	Section 8.3.1	O	
IMPS-PA-C-037	Support for PreferredContacts presence attribute	Section 8.3.2	O	IMPS-PA-C-038
IMPS-PA-C-038	The PreferredContacts attribute includes one or more AddrPref	Section 8.3.2	O	IMPS-PA-C-037 AND IMPS-PA-C-039 AND IMPS-PA-C-040 AND IMPS-PA-C-041
IMPS-PA-C-039	The AddrPref includes PrefC	Section 8.3.2	O	IMPS-PA-C-037
IMPS-PA-C-040	The AddrPref includes CAddr	Section 8.3.2	O	IMPS-PA-C-037
IMPS-PA-C-041	The AddrPref includes Cstatus	Section 8.3.2	O	IMPS-PA-C-037
IMPS-PA-C-042	The AddrPref includes Cname	Section 8.3.2	O	IMPS-PA-C-037
IMPS-PA-C-043	The AddrPref includes Cpriority	Section 8.3.2	O	IMPS-PA-C-037
IMPS-PA-C-044	Support for PreferredLanguage presence attribute	Section 8.3.3	O	
IMPS-PA-C-045	Support for StatusText presence attribute	Section 8.3.4	O	
IMPS-PA-C-046	Support for StatusMood presence attribute	Section 8.3.5	O	
IMPS-PA-C-047	Support for Alias presence attribute	Section 8.3.6	O	
IMPS-PA-C-048	Support for StatusContent presence attribute	Section 8.3.7	O	((IMPS-PA-C-049 AND NOT IMPS-PA-C-050) OR (NOT IMPS-PA-C-049 AND IMPS-PA-C-050)) AND IMPS-PA-C-051

Item	Function	Reference	Status	Requirement
IMPS-PA-C-049	The StatusContent attribute includes DirectContent	Section 8.3.7	O	IMPS-PA-C-048
IMPS-PA-C-050	The StatusContent attribute includes ReferredContent	Section 8.3.7	O	IMPS-PA-C-048
IMPS-PA-C-051	The StatusContent attribute includes ContentType	Section 8.3.7	O	IMPS-PA-C-048
IMPS-PA-C-052	Support for ContactInfo presence attribute	Section 8.3.8	O	(IMPS-PA-C-053 AND NOT IMPS-PA-C-054) OR (NOT IMPS-PA-C-053 AND IMPS-PA-C-054)
IMPS-PA-C-053	The ContactInfo attribute includes ContainedvCard	Section 8.3.8	O	IMPS-PA-C-052
IMPS-PA-C-054	The ContactInfo attribute includes ReferredvCard	Section 8.3.8	O	IMPS-PA-C-052
IMPS-PA-C-055	Support for InfoLink presence attribute	Section 8.3.9	O	IMPS-PA-C-056
IMPS-PA-C-056	The InfoLink attribute includes one or more Inf_Link	Section 8.3.9	O	IMPS-PA-C-055 AND IMPS-PA-C-057
IMPS-PA-C-057	The Inf_Link includes Link	Section 8.3.9	O	IMPS-PA-C-055
IMPS-PA-C-058	The Inf_Link includes Text	Section 8.3.9	O	IMPS-PA-C-055
IMPS-PA-C-059	The Inf_Link includes ContentType	Section 8.3.9	O	IMPS-PA-C-055
IMPS-PA-C-060	Support for extension presence attributes	Section 8.4	O	
IMPS-PA-C-061	The client understands that a presence attribute with Qualifier 'T' (True) is valid and reliable and treats it accordingly.	Section 8.1.2	M	
IMPS-PA-C-062	The client understands that a presence attribute with Qualifier 'F' (False) is invalid and unreliable and treats it accordingly	Section 8.1.2	M	
IMPS-PA-C-063	Unsupported standard and extension presence attributes/extension fields are silently ignored without generating any kind of error.	Section 8.4	M	
IMPS-PA-C-064	Presence attribute encoding	[CSP XMLS]	M	[PA-XMLS]:IMPS-PA-XML-C-010

## B.1.2 Servers

Item	Function	Reference	Status	Requirement
IMPS-PA-S-001	Support for OnlineStatus presence attribute	Section 8.2.1	O	IMPS-PA-S-002
IMPS-PA-S-002	The PRSE maintains the value of OnlineStatus presence attribute	Section 8.2.1	O	IMPS-PA-S-001
IMPS-PA-S-003	Support for Registration presence attribute	Section 8.2.2	O	IMPS-PA-S-004
IMPS-PA-S-004	The PRSE maintains the value of the Registration presence attribute	Section 8.2.2	O	IMPS-PA-S-003

Item	Function	Reference	Status	Requirement
IMPS-PA-S-005	Support for ClientInfo presence attribute	Section 8.2.3	O	
IMPS-PA-S-006	The ClientInfo attribute includes ClientContentLimit	Section 8.2.3	O	
IMPS-PA-S-007	The SAP initializes the values included in ClientType/ClientContentLimit presence attribute based on client capability negotiation	Section 8.2.3	O	
IMPS-PA-S-008	Any server – that filters the IMs based on content type – where the ClientType/ClientContentLimit presence attribute passes though verifies the values against its own limitations and removes the content types that it does not allow and decreases the limitations according to its own.	Section 8.2.3	M	
IMPS-PA-S-009	Any server that does not filter the IMs based on content type passes the ClientType/ClientContentLimit presence though without changes.	Section 8.2.3	M	
IMPS-PA-S-010	The ClientInfo attribute includes ClientType	Section 8.2.3	O	
IMPS-PA-S-011	The ClientInfo attribute includes DevManufacturer	Section 8.2.3	O	
IMPS-PA-S-012	The ClientInfo attribute includes ClientProducer	Section 8.2.3	O	
IMPS-PA-S-013	The ClientInfo attribute includes Model	Section 8.2.3	O	
IMPS-PA-S-014	The ClientInfo attribute includes ClientVersion	Section 8.2.3	O	
IMPS-PA-S-015	The ClientInfo attribute includes Language	Section 8.2.3	O	
IMPS-PA-S-016	The ClientInfo attribute includes ClientIMPriority	Section 8.2.3	O	
IMPS-PA-S-017	The ClientInfo attribute includes Application-ID	Section 8.2.3	O	
IMPS-PA-S-018	Support for TimeZone presence attribute	Section 8.2.4	O	
IMPS-PA-S-019	Support for GeoLocation presence attribute	Section 8.2.5	O	IMPS-PA-S-020 AND IMPS-PA-S-021
IMPS-PA-S-020	The GeoLocation attribute includes Longitude	Section 8.2.5	O	IMPS-PA-S-019
IMPS-PA-S-021	The GeoLocation attribute includes Latitude	Section 8.2.5	O	IMPS-PA-S-019
IMPS-PA-S-022	The GeoLocation attribute includes Altitude	Section 8.2.5	O	IMPS-PA-S-019
IMPS-PA-S-023	The GeoLocation attribute includes Accuracy	Section 8.2.5	O	IMPS-PA-S-019
IMPS-PA-S-024	Support for Address presence attribute	Section 8.2.6	O	IMPS-PA-S-025 OR IMPS-PA-S-026 OR IMPS-PA-S-027 OR IMPS-PA-S-028 OR IMPS-PA-S-

Item	Function	Reference	Status	Requirement
				029 OR IMPS-PA-S-030 OR IMPS-PA-S-031
IMPS-PA-S-025	The Address attribute includes Country	Section 8.2.6	O	IMPS-PA-S-024
IMPS-PA-S-026	The Address attribute includes City	Section 8.2.6	O	IMPS-PA-S-024
IMPS-PA-S-027	The Address attribute includes Street	Section 8.2.6	O	IMPS-PA-S-024
IMPS-PA-S-028	The Address attribute includes Crossing1	Section 8.2.6	O	IMPS-PA-S-024
IMPS-PA-S-029	The Address attribute includes Crossing2	Section 8.2.6	O	IMPS-PA-S-024
IMPS-PA-S-030	The Address attribute includes Building	Section 8.2.6	O	IMPS-PA-S-024
IMPS-PA-S-031	The Address attribute includes NamedArea	Section 8.2.6	O	IMPS-PA-S-024
IMPS-PA-S-032	The Address attribute includes Accuracy	Section 8.2.6	O	IMPS-PA-S-024
IMPS-PA-S-033	Support for FreeTextLocation presence attribute	Section 8.2.7	O	
IMPS-PA-S-034	Support for PLMN presence attribute	Section 8.2.8	O	
IMPS-PA-S-035	Support for CommCap presence attribute	Section 8.2.9	O	IMPS-PA-S-036
IMPS-PA-S-036	The CommCap attribute includes one or more CommC	Section 8.2.9	O	IMPS-PA-S-035 AND IMPS-PA-S-037 AND IMPS-PA-S-038
IMPS-PA-S-037	The CommC includes Cap	Section 8.2.9	O	IMPS-PA-S-035
IMPS-PA-S-038	The CommC includes Status	Section 8.2.9	O	IMPS-PA-S-035
IMPS-PA-S-039	The CommC includes Contact	Section 8.2.9	O	IMPS-PA-S-035
IMPS-PA-S-040	The CommC includes Note	Section 8.2.9	O	IMPS-PA-S-035
IMPS-PA-S-041	Support for UserAvailability presence attribute	Section 8.3.1	O	
IMPS-PA-S-042	Support for PreferredContacts presence attribute	Section 8.3.2	O	IMPS-PA-S-043
IMPS-PA-S-043	The PreferredContacts attribute includes one or more AddrPref	Section 8.3.2	O	AND IMPS-PA-S-044 AND IMPS-PA-S-045 AND IMPS-PA-S-046
IMPS-PA-S-044	The AddrPref includes PrefC	Section 8.3.2	O	IMPS-PA-S-042
IMPS-PA-S-045	The AddrPref includes CAddr	Section 8.3.2	O	IMPS-PA-S-042
IMPS-PA-S-046	The AddrPref includes Cstatus	Section 8.3.2	O	IMPS-PA-S-042
IMPS-PA-S-047	The AddrPref includes Cname	Section 8.3.2	O	IMPS-PA-S-042
IMPS-PA-S-048	The AddrPref includes Cpriority	Section 8.3.2	O	IMPS-PA-S-042
IMPS-PA-S-049	Support for PreferredLanguage presence attribute	Section 8.3.3	O	
IMPS-PA-S-050	Support for StatusText presence attribute	Section 8.3.4	O	

Item	Function	Reference	Status	Requirement
IMPS-PA-S-051	Support for StatusMood presence attribute	Section 8.3.5	O	
IMPS-PA-S-052	Support for Alias presence attribute	Section 8.3.6	O	
IMPS-PA-S-053	Support for StatusContent presence attribute	Section 8.3.7	O	((IMPS-PA-S-054 AND NOT IMPS-PA-S-055) OR (NOT IMPS-PA-S-054 AND IMPS-PA-S-055)) AND IMPS-PA-S-056
IMPS-PA-S-054	The StatusContent attribute includes DirectContent	Section 8.3.7	O	IMPS-PA-S-053
IMPS-PA-S-055	The StatusContent attribute includes ReferredContent	Section 8.3.7	O	IMPS-PA-S-053
IMPS-PA-S-056	The StatusContent attribute includes ContentType	Section 8.3.7	O	IMPS-PA-S-053
IMPS-PA-S-057	Support for ContactInfo presence attribute	Section 8.3.8	O	(IMPS-PA-S-058 AND NOT IMPS-PA-S-059) OR (NOT IMPS-PA-S-058 AND IMPS-PA-S-059)
IMPS-PA-S-058	The ContactInfo attribute includes ContainedvCard	Section 8.3.8	O	IMPS-PA-S-057
IMPS-PA-S-059	The ContactInfo attribute includes ReferredvCard	Section 8.3.8	O	IMPS-PA-S-057
IMPS-PA-S-060	Support for InfoLink presence attribute	Section 8.3.9	O	IMPS-PA-S-061 AND IMPS-PA-S-062
IMPS-PA-S-061	The InfoLink attribute includes one or more Inf_Link	Section 8.3.9	O	IMPS-PA-S-060
IMPS-PA-S-062	The Inf_Link includes Link	Section 8.3.9	O	IMPS-PA-S-060
IMPS-PA-S-063	The Inf_Link includes Text	Section 8.3.9	O	IMPS-PA-S-060
IMPS-PA-S-064	The Inf_Link includes ContentType	Section 8.3.9	O	IMPS-PA-S-060
IMPS-PA-S-065	Support for extension presence attributes	Section 8.4	O	
IMPS-PA-S-066	The server understands that a presence attribute with Qualifier 'T' (True) is valid and reliable and treats it accordingly.	Section 8.1.2	M	
IMPS-PA-S-067	The server understands that a presence attribute with Qualifier 'F' (False) is invalid and unreliable and treats it accordingly	Section 8.1.2	M	
IMPS-PA-S-068	Unsupported standard and extension presence attributes are silently ignored without generating any kind of error.	Section 8.4	M	
IMPS-PA-S-069	Presence attribute encoding	[CSP XMLS]	M	[PA-XMLS]:IMPS-PA-XML-S-010