Presence Attributes

V1.0

WV Internal Tracking Number: WV-010

Notice

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1. REVISION HISTORY

Date	Issue	Description	Author
February 13th	TBD	Initial release	WV TechComm

2. DEFINITIONS

Publisher The user that owns the presence information.
Consumer The user who receives presence information

3. REFERENCES

[MLP]	"Location Inter-operability Forum (LIF): Mobile Location Protocol, Version 2.0.0 20 Nov 2001"
[RFC2426]	vCard MIME Directory Profile
[VCARD21]	“vCard - The Electronic Business Card”, version 2.1,The Internet Mail Consortium (IMC), September 18, 1996, http://www.imc.org/pdi/vcard-21.doc
[WV-PA-DTD]	Wireless Village – Presence Attributes, DTD and examples

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 which has its value field filled in by the publishing client. A *server originated* presence attribute is one which 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 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.

6. CLIENT BEHAVIOR

The WV client shall support all the presence attributes described in this document. The support means:

1. The WV client may be able to update one or more attributes from the set of attributes described in this document.
2. The WV client shall be able to receive and handle all the attributes described in this document.
3. The WV client shall be able to present one or more attributes from the set of attributes described in this document.
4. The WV client may rely on the semantics of the presence attributes described in this document.

7. SERVER BEHAVIOR

The WV server shall follow the requirements below:

1. The publisher server shall 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 originated presence attributes.
3. The server shall process the access control rules defined by the publisher, before passing the attributes to the client.

The server shall 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 WV 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 first release of WV specifications and implementation of any such a mechanism is proprietary.
2. When the publisher server receives partial presence attributes where 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 a WV client requests a presence attribute the subscriber server passes the attribute with 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.

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	M	S	Multipl. types	Value of the attribute

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.

Attribute Name	Description	Suggested
OnlineStatus(S)	Shows if the client device is logged on a WV server	Y
Registration	Shows if the client device is registered in mobile network	N
ClientInfo	Information about client	N
TimeZone	Local time zone of the client device	N
GeoLocation	Geographical location of the client device	N
Address	Address of the client device	N
FreeTextLocation	Free text description of the location of the user	N
PLMN	PLMN code of the network the client device 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
x.inv-domain.attr-name	A naming convention for extension attributes	N

Table 2. Names of presence attributes

The attribute names are case insensitive. For example 'ClientInfo', 'CLIENTINFO' and 'clientinfo' are equal.

8.1.2 Qualifier

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

- An attribute is authorized but not yet updated for the first time
- When 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
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 shall accept the new Qualifier and shall 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 device rather than the client application unless otherwise stated.

8.2.1 OnlineStatus

This indicates if the client application is logged on to the Wireless Village server or not.

Originator: Server-Client
Mobile network support needed: No
Defined information elements are:

Information element	OnlineStatus
Data type	Boolean
Format	Following values: T – At least one client application of the user is logged on to the WV server F – No client application of the user is logged on to the WV server
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 include manufacturer, model, a user defined name, the current language and a description of the client.

Originator: Client application
Mobile network support needed: No
Defined information elements are:

ClientInfo	Req	Single/Multiple	Description
ClientType	O	S	Describes the client type, if PC, Mobile, HTML etc.
DevManufacturer	O	S	Name of the device manufacture
ClientProducer	O	S	Name of the producer of the client application
Model	O	S	Model of the client device
ClientVersion	O	S	Version of the client application
Language	O	S	Language setting of the client device

Table 6. ClientInfo

Information element	ClientType
Data type	An enumerated String

Format	One of the following values:
	
	`MOBILE_PHONE`
	`COMPUTER`
	`PDA`
	`CLI`
	`OTHER`

Description	Type of the client
Range	MOBILE_PHONE | COMPUTER | PDA | CLI | OTHER

Table 7. ClientType

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

Table 8. DevManufacturer

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

Table 9. ClientProducer

Information element	Model
Data type	String
Format	Free text
Description	Model of the client terminal
Range	

Table 10. Model

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

Table 11. ClientVersion

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

Table 12. Language

8.2.4 TimeZone

This gives the local time of the publisher.

Originator: Client application 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 publisher.
Range	

Table 13. LocalTime

8.2.5 GeoLocation

This gives the measured position of the client device. 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 device. 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 application 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 14. 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 longitudal 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 15. 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 16. 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 be define the coordinates.
Range	

Table 17. 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 18. Accuracy

8.2.6 Address

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

Originator: Client application 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 19. 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 user location
Range	

Table 20. Country

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

Table 21. City

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

Table 22. 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 23. 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 24. Crossing2

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

Table 25. Building

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

Table 26. NamedArea

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

Table 27. Accuracy

8.2.7 FreeTextLocation

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

Originator: Client application 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 user location
Range	

Table28. FreeTextLocation

8.2.8 PLMN

This gives the PLMN name or code of the mobile network where the client device 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 29. PLMN

8.2.9 Communication capabilities

The client communication capabilities in the context of presence mean the capability of the device hosting 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 30. CommCap

Information element	CommC
Data type	An enumerated String
Format	One of the following values: VIDEO_CALL – The terminal can participate in a video call VIDEO_STREAM – the terminal has video streaming capability AUDIO_CALL – the terminal can be called SMS – the terminal can receive a short message MMS – the terminal can receive an MMS IM_ONLINE – the terminal is able to have a IM/Chat session. IM_OFFLINE – the terminal is not able to have a IM/Chat session. IM messages may be stored in WV server. EMAIL – the terminal is able to send/receive emails
Description	Communication capabilities of the terminal
Range	VIDEO_CALL | VIDEOSTREAM | AUDIO_CALL | SMS | MMS | IM_ONLINE | IM_OFFLINE | EMAIL

Table 31. CommC

8.3 User Status

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.

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 communication NOT_AVAILABLE– User is not immediately available for communication DISCREET – User selectively available depending on his personal status (e.g. busy)
Description	Defines the availability attribute
Range	AVAILABLE | NOT_AVAILABLE | DISCREET

Table 32. UserAvailability

8.3.2 PreferredContacts

This indicates what is 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. The order of AddrPref elements indicates the mutual priority of preferences so that the first AddrPref on the list is the most preferred alternative.

Table 33. PreferredContacts

AddrPref	Req	Single/Multiple	Description
PrefC	M	S	A communication preference
CAddr	M	S	A contact address

Table 34. AddrPref

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 35. PrefC

Information element	Caddr
Data type	An enumerated String
Format	1. When phone number see E.163 2. When mobile number see E.164 3. When MMS address see the WAP specifications 4. When UserID: see User-ID in the data types document 5. When email address: see RFC822

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 36. Caddr

8.3.3 PreferredLanguage

This indicates what is 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 37. 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 38. StatusText

8.3.5 StatusMood

This is the mood of the user. 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 39. 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 40. Alias

8.3.7 StatusContent

MMS content or URL to the MMS 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 MMS message included into the attribute in transfer encoded form
ReferredContent	C	An URL to the MMS message

Table 41. StatusContent

Information element	DirectContent
Data type	String
Format	MMS message
Description	A BASE64 encoded MMS message

Range	

Table 42. DirectContent

Information element	ReferredContent
Data type	String
Format	URL
Description	An URL to resource having type MMS message
Range	

Table 43. StatusContent

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 44. 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 45. ContactInfo

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

Table 46. ContainedvCard

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

Table 47. ReferredvCard

8.4 Extended Presence Information

This is a set of manufacturer; vendor or service provider specific extension attributes. The name of an extension attribute is provided by the following convention:

x.inv-domain.attr-name

where:

x is a (case insensitive) prefix

inv-domain is an inverted domain name of the body defining the attribute

attr-name is the name of the extension attribute

For example if company abc.com defines an extension attribute called foo then the full name of the attribute is: x.com.abc.foo

Originator: Client application, presence server or client-server

Mobile network support needed: Conditionally attribute-by-attribute basis