Technical Specification Group Services and System Aspects
Meeting #15, Cheju Island, Korea, 11-14 March 2002

TSGS#15(02)0056

Source: SA1

Title: CRs to 22.141 Rel-5 on various Presence Service issues

Document for: Approval

Agenda Item: 7.1.3

SA Doc	Spec	CR	Rev	Phase	Cat	Subject	Old Vers	New Vers	SA1 Doc
SP-020056	22.141	009		Rel-5	D	A brief introduction to the Presence Service	5.1.0	5.2.0	S1-020306
SP-020056	22.141	010		Rel-5	D	Correction to the number of roles in the Presence Service	5.1.0	5.2.0	S1-020307
SP-020056	22.141	011		Rel-5	C	CR 22.141 Rel.5 Selective Notifications	5.1.0	5.2.0	S1-020430
SP-020056	22.141	012		Rel-5	F	CR to 22.141 - Clarifications on identifier's hiding	5.1.0	5.2.0	S1-020602
SP-020056	22.141	013		Rel-5	C	CR to 22.141 on Multiple terminal support in presence service	5.1.0	5.2.0	S1-020619
SP-020056	22.141	014		Rel-5	C	Access from external applications	5.1.0	5.2.0	S1-020623

TSG-SA WG 1 (Services) meeting #15 **S1-020306**
Saalfelden, Austria, 11-15th February 2002 **Agenda Item:**

CR-Form-v4

CHANGE REQUEST

⌘ **22.141** **CR** **009** ⌘ ev **-** ⌘ Current version: **5.1.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network ☐ Core Network **X**

Title:	⌘	A brief introduction to the Presence Service
Source:	⌘	SA1
Work item code:	⌘	PRESNC
Date:	⌘	24/1/2002
Category:	⌘	**D**
Release:	⌘	REL-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	An new informative subclause is to be added to provide a simplistic introduction to the basics of the Presence Service.
Summary of change:	⌘	The subclause identifies a user of the presence service and how he is supported by it. It describes (using a series of simplistic figures) how other users may or may not have access to the user's presence information, and how the user can control it depending on the individual watcher. The new subclause is inserted before the existing subclause 4.1
Consequences if not approved:	⌘	None

Clauses affected:	⌘	4.1
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.
2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.
3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4.1 A brief introduction to the Presence Service

This clause attempts to give a simplistic high level informative overview of what presence is from a user's perspective, and how it is used to published to, and accessed by, other users.

Mark's ability and willingness to be reached for communication is defined by a set of information known as presence information. Mark's presence information may be related to his mobile network connection status, however it represents much more than just whether he has network coverage or not. Mark also defines a set of access rules to control access to his presence information. For the presence service, Mark is represented by a presentity (presence entity) associated with Mark's presence information and set of access rules.. In this example, Mark's presence information consists of user status and location information.

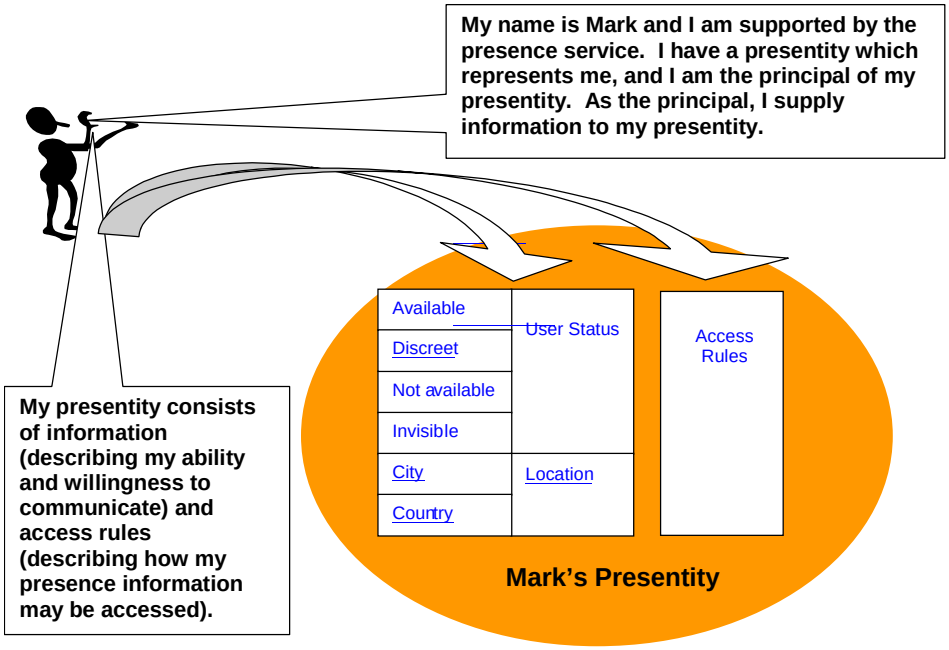

Figure 1: Principal and his representation in the presence information as a presentity

As well as representing a user such as Mark, a presentity may even be created to represent an abstract service or application (e.g. to provide road traffic information, sports results, news headlines etc.). The entity represented by the Presentity (in this case Mark) controls the supply of information for the presentity and is known as the principal; thus Mark is principal of his presentity (see Figure 1).

Paggy, Paul and Jude (e.g. Mark's callers or instant messaging buddies) who want to determine Mark's ability (and willingness) to communicate may do so by checking the status information in Mark's presentity. By doing so, Paggy, Paul and Jude become watchers of Mark (see Figure 2).

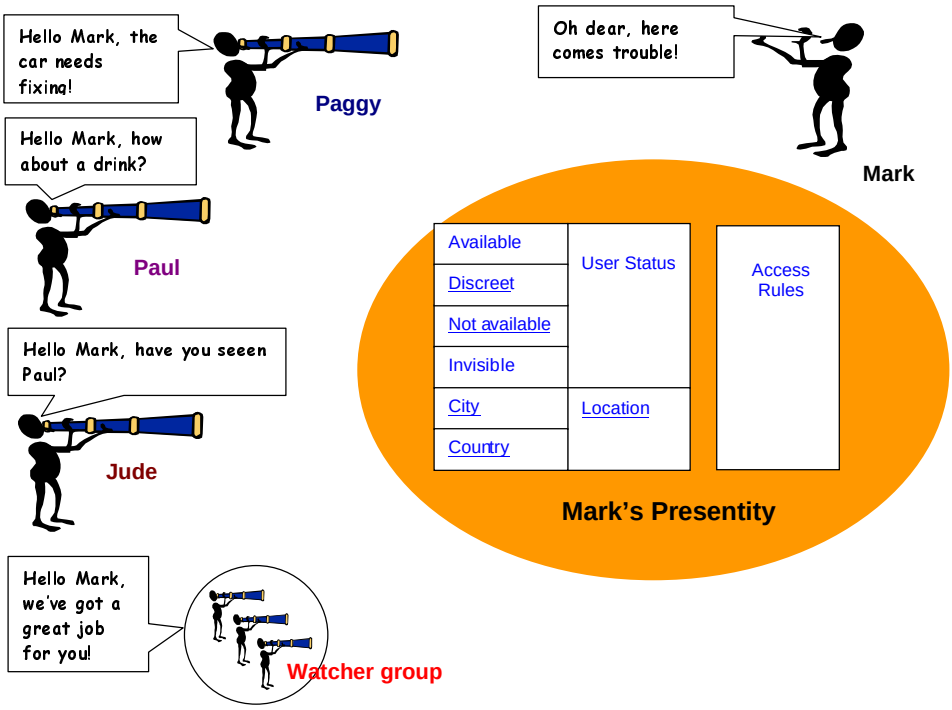

Figure 2: Watchers of Mark

To protect his privacy and confidentiality, Mark has full control over whether Paggy, Paul and Jude, or any other group of watchers, can access his presence information. Mark may give different watchers different levels of access so that, for example Paggy can see all of Mark's of presence information, Paul may only see part of it, and Jude can see none of it. Hence, Mark can control (per watcher) which parts of his presence information may be seen, and he may decide that specific watchers have restricted access, and that some do not have any access at all. Indeed, Mark may also define his presence information and set up his access rules so that some watchers are given different information (e.g. Jude is told that Mark is not available, when in fact he is available), see Figure 3.

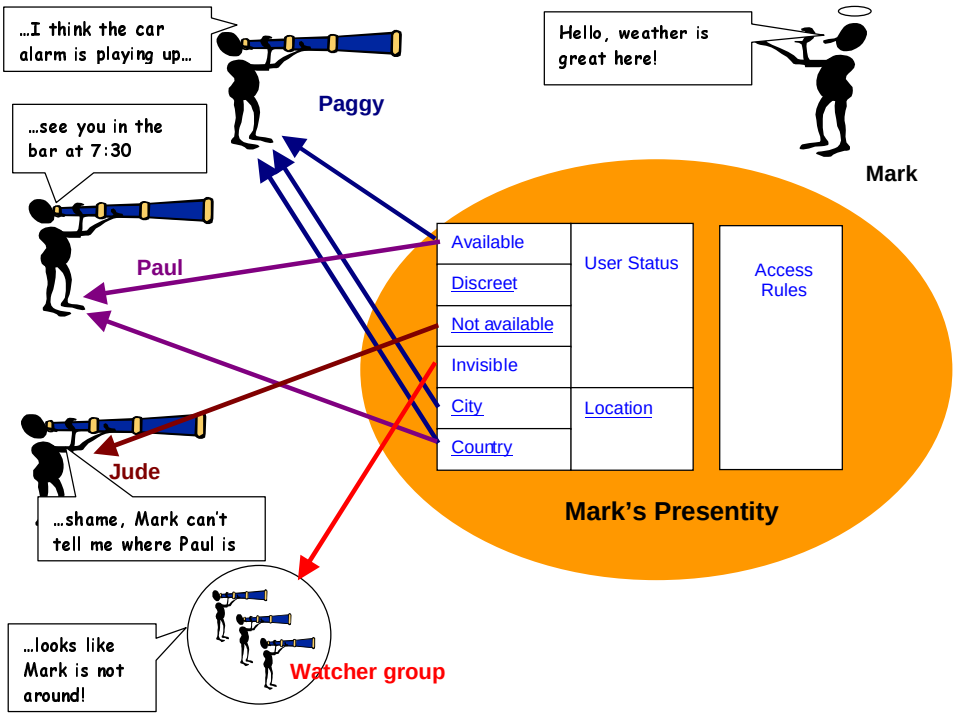

Figure 3: Application of Mark's access rules on watchers

Mark's presentity consists of dynamic and static information supplied directly by himself and/or by the network. Some of the dynamic information may be derived from a number of sources (e.g. equipment login/attachment, roaming status, keyboard activity monitoring, equipment type, location information etc.). An example of the static information could be a fixed telephone number. The network may also add further information to the presentity (e.g. the evening/night times when his mobile is usually switched offderived from his usage patterns) to provide customised presence information.

By supporting a presence service in the network, the operator has the capability to offer an exciting range of advanced presence-based services and applications.

3GPP TSG-SA1 Meeting #15
Saalfelden, Austria, 11th-15th February

Tdoc S1-020623

CR-Form-v5

CHANGE REQUEST

⌘ **22.141** **CR** **014** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☒ Radio Access Network ☐ Core Network ☒

Title:	⌘	Access from external applications
Source:	⌘	SA1
Work item code:	⌘	PRESNC
Date:	⌘	14.2.2002
Category:	⌘	**C**
Release:	⌘	REL-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:
2 (GSM Phase 2)
R96 (Release 1996)
R97 (Release 1997)
R98 (Release 1998)
R99 (Release 1999)
REL-4 (Release 4)
REL-5 (Release 5)

Reason for change:	⌘	At the moment the access of external applications in Home Environment is not clear. The possibility for an external application to be presentity/watcher has been added
Summary of change:	⌘	Access to the presence service from external applications is clarified as a requirement
Consequences if not approved:	⌘	Access to the presence service from external applications may result not clear

Clauses affected:	⌘	5.3
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

5 High level requirements

5.3 General requirements

The following general requirements for the presence service shall be supported:-

a) Presence information

i) presence information for presentities shall be made available in a standardised presence information format to enable interoperability within 3GPP networks.

ii) presence information for presentities shall be made available in a standardised presence information format to enable interoperability with IETF specified presence information formats (e.g. RFC 2778 [3], RFC 2779 [4] and CPIM [5])

iii) presence information for presentities shall be extensible to represent additional information, without undermining the standardised format (e.g. device capabilities)

iv) presence information for presentities shall include a means to uniquely identify the presentity

v) presence information for presentities shall define a particular type of presentity, representing a 3GPP subscriber, with a minimum set of attributes as described below for interoperability within 3GPP networks. The values for these attributes are to be determined in the Stage 2/3 specifications.

In addition to the generic requirements described above, the presence information representing a 3GPP subscriber:

a) may include a subscriber's status attribute describing the subscriber's willingness to communicate (e.g. available, unavailable). It does not identify the status of the device (e.g. registration or attachment to the network) or of any application.

This attribute is controlled by the subscriber. It shall be possible for this subscriber's status to be provided by the subscriber, or by the network on behalf of the subscriber (subject to the subscriber's agreement). For example the subscriber could define that he's unavailable each day between 10 p.m. and 7 a.m., and the network would then be responsible for the subscriber's status update.

The format and values of this attribute shall be standardised.

Note: It is to be determined in the Stage 2/3 specifications how the Status field (in RFC2778 [3]) in notifications is completed, and whether or not the values in the subscriber status attribute, network status attribute or other information are used.

b) may include a network status attribute describing the connectivity of the device used by the 3GPP subscriber. This attribute could for example be defined using the information of the subscriber's connectivity to the network (e.g. CS attached, IMS registered, PDP context information…).

This attribute is controlled by the network.

The format and values of this attribute shall be standardised.

Note: It is to be determined in the Stage 2/3 specifications how the Status field (in RFC2778 [3]) in notifications is completed, and whether or not the values in the subscriber status attribute, network status attribute or other information are used.

c) may include one or more communication means (e.g. SMS, telephone, e-mail, multimedia session…) and their contact addresses (e.g. MSISDN, e-mail address, NULL…) by which the subscriber may be contacted.

This attribute is controlled by the subscriber. It shall be possible for this information to be provided by the subscriber, or by the network on behalf of the subscriber (subject to the subscriber's agreement).

The format and values of the communication means shall be standardised, and the format of the contact address shall be standardised.

d) may include two types of location information, one provided by the network (e.g. geographical co-ordinates) and/or one provided by the subscriber (e.g. “at home”).

The network provided location is controlled by the network, and the subscriber provided location information is controlled by the subscriber. It shall be possible for the subscriber provided location information to be furnished by the subscriber, or by the network on behalf of the subscriber (subject to the subscriber’s agreement).

The format of the network provided location shall be standardised, and the format of the subscriber provided location shall be standardised.

e) may include a priority attribute giving a relative priority for each of the defined communication means and contact address pairs. It is via this priority attribute that the subscriber can indicate his preference for the order in which the communication means and contact address pairs should be used.

This attribute is controlled by the subscriber. It shall be possible for the priority information to be provided by the subscriber, or by the network on behalf of the subscriber (subject to the subscriber’s agreement).

The format and values of this attribute shall be standardised.

f) may include a text attribute (e.g. “In a meeting until 4 p.m.”)

This attribute is controlled by the subscriber. It shall be possible for the text information to be provided by the subscriber, or by the network on behalf of the subscriber (subject to the subscriber’s agreement).

The format of this attribute shall be standardised.

b) A means to uniquely identify the watcher

c) Forward compatible presence service

Presence service shall leverage current and evolving presence technology by re-using existing standards as far as possible and proposing extensions (as necessary) to existing standards.

d) Interoperability with external presence services

External networks (e.g. those in other PLMN’s, the Internet, LANs etc.) currently support several different forms of presence service. The presence service shall enable the wireless network to present a consistent and interoperable support of presence, such that the wireless presence capability users can interwork with one or more other external presence services.

e) Consistent and interoperable presence service

Regardless of the service using presence information, the presence service shall be supported in a consistent and interoperable manner between the UE and the network

f) Transport independence

It shall be possible to use the presence service independent of the bearer or transport mechanism. Restrictions may apply due to the nature of the underlying transport mechanism (e.g. a CS terminal may not be capable to supply the same presence information as a terminal attached to the IM CN Subsystem)

g) Presence service quality of service

i) the Presence Service shall enable a watcher, if required, to request a time after which delivery of the requested information shall not take place.

ii) the Presence Service shall enable a presentity to indicate an expiry time for the presence information, if required.

iii) the Presence Service shall enable presence information delivered to a watcher to be marked with an expiry time, if required.

h) Presence and other user services

The operation of Presence Service may be offered both in parallel and independent of other services, e.g. supplementary services, teleservices, bearer services or any other services.

i) Access to the presence service from external applications

It shall be possible for external applications to be presentities/watchers.

3GPP TSG-SA1 Meeting #15
Saalfelden, Austria, 11th-15th February

Tdoc S1-020619

CR-Form-v5

CHANGE REQUEST

⌘ **22.141** **CR** **013** ⌘ **rev** **-** ⌘ Current version: **5.1.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☒ Radio Access Network ☐ Core Network ☒

Title:	⌘	Multiple terminal support in presence service
Source:	⌘	SA1
Work item code:	⌘	PRESNC
Date:	⌘	14.2.2002
Category:	⌘	**C**
Release:	⌘	REL-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	A requirement has been added that enables access to presence information simultaneoulsy from multiple terminals e.g. presentity or watcher would be able to access the presence service via mobile phone or PC.
Summary of change:	⌘	A requirement to enable multiple terminal use simultaneously to access presence service has been added.
Consequences if not approved:	⌘	Presence service usage from multiple terminals is not possible.

Clauses affected:	⌘	5.3
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

5 High level requirements

5.3 General requirements

The following general requirements for the presence service shall be supported:-

a) Presence information

i) presence information for presentities shall be made available in a standardised presence information format to enable interoperability within 3GPP networks.

ii) presence information for presentities shall be made available in a standardised presence information format to enable interoperability with IETF specified presence information formats (e.g. RFC 2778 [3], RFC 2779 [4] and CPIM [5])

iii) presence information for presentities shall be extensible to represent additional information, without undermining the standardised format (e.g. device capabilities)

iv) presence information for presentities shall include a means to uniquely identify the presentity

v) presence information for presentities shall define a particular type of presentity, representing a 3GPP subscriber, with a minimum set of attributes as described below for interoperability within 3GPP networks. The values for these attributes are to be determined in the Stage 2/3 specifications.

In addition to the generic requirements described above, the presence information representing a 3GPP subscriber:

a) may include a subscriber's status attribute describing the subscriber's willingness to communicate (e.g. available, unavailable). It does not identify the status of the device (e.g. registration or attachment to the network) or of any application.

This attribute is controlled by the subscriber. It shall be possible for this subscriber's status to be provided by the subscriber, or by the network on behalf of the subscriber (subject to the subscriber's agreement). For example the subscriber could define that he's unavailable each day between 10 p.m. and 7 a.m., and the network would then be responsible for the subscriber's status update.

The format and values of this attribute shall be standardised.

Note: It is to be determined in the Stage 2/3 specifications how the Status field (in RFC2778 [3]) in notifications is completed, and whether or not the values in the subscriber status attribute, network status attribute or other information are used.

b) may include a network status attribute describing the connectivity of the device used by the 3GPP subscriber. This attribute could for example be defined using the information of the subscriber's connectivity to the network (e.g. CS attached, IMS registered, PDP context information…).

This attribute is controlled by the network.

The format and values of this attribute shall be standardised.

Note: It is to be determined in the Stage 2/3 specifications how the Status field (in RFC2778 [3]) in notifications is completed, and whether or not the values in the subscriber status attribute, network status attribute or other information are used.

c) may include one or more communication means (e.g. SMS, telephone, e-mail, multimedia session…) and their contact addresses (e.g. MSISDN, e-mail address, NULL…) by which the subscriber may be contacted.

This attribute is controlled by the subscriber. It shall be possible for this information to be provided by the subscriber, or by the network on behalf of the subscriber (subject to the subscriber's agreement).

The format and values of the communication means shall be standardised, and the format of the contact address shall be standardised.

d) may include two types of location information, one provided by the network (e.g. geographical co-ordinates) and/or one provided by the subscriber (e.g. “at home”).

The network provided location is controlled by the network, and the subscriber provided location information is controlled by the subscriber. It shall be possible for the subscriber provided location information to be furnished by the subscriber, or by the network on behalf of the subscriber (subject to the subscriber’s agreement).

The format of the network provided location shall be standardised, and the format of the subscriber provided location shall be standardised.

e) may include a priority attribute giving a relative priority for each of the defined communication means and contact address pairs. It is via this priority attribute that the subscriber can indicate his preference for the order in which the communication means and contact address pairs should be used.

This attribute is controlled by the subscriber. It shall be possible for the priority information to be provided by the subscriber, or by the network on behalf of the subscriber (subject to the subscriber’s agreement).

The format and values of this attribute shall be standardised.

f) may include a text attribute (e.g. “In a meeting until 4 p.m.”)

This attribute is controlled by the subscriber. It shall be possible for the text information to be provided by the subscriber, or by the network on behalf of the subscriber (subject to the subscriber’s agreement).

The format of this attribute shall be standardised.

b) A means to uniquely identify the watcher

c) Forward compatible presence service

Presence service shall leverage current and evolving presence technology by re-using existing standards as far as possible and proposing extensions (as necessary) to existing standards.

d) Interoperability with external presence services

External networks (e.g. those in other PLMN’s, the Internet, LANs etc.) currently support several different forms of presence service. The presence service shall enable the wireless network to present a consistent and interoperable support of presence, such that the wireless presence capability users can interwork with one or more other external presence services.

e) Consistent and interoperable presence service

Regardless of the service using presence information, the presence service shall be supported in a consistent and interoperable manner between the UE and the network

f) Transport independence

It shall be possible to use the presence service independent of the bearer or transport mechanism. Restrictions may apply due to the nature of the underlying transport mechanism (e.g. a CS terminal may not be capable to supply the same presence information as a terminal attached to the IM CN Subsystem)

g) Presence service quality of service

i) the Presence Service shall enable a watcher, if required, to request a time after which delivery of the requested information shall not take place.

ii) the Presence Service shall enable a presentity to indicate an expiry time for the presence information, if required.

iii) the Presence Service shall enable presence information delivered to a watcher to be marked with an expiry time, if required.

h) Presence and other user services

The operation of Presence Service may be offered both in parallel and independent of other services, e.g. supplementary services, teleservices, bearer services or any other services.

i) Simultaneous access to presence information from multiple terminals

It shall be possible to access presence information simultaneously from multiple terminals (e.g. presentity or watcher would be able to access the presence service via mobile phone and PC).

TSG-SA WG 1 (Services) meeting #15 **S1-020602**
Saalfelden, Austria, 11-15th February 2002 **Agenda Item:**

CR-Form-v4

CHANGE REQUEST

⌘ **22.141** **CR** **012** ⌘ ev **-** ⌘ Current version: **5.1.0** ⌘

Spec Title: Presence Service ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network ☐ Core Network **X**

Title:	⌘	Clarifications on identifier's hiding
Source:	⌘	SA1
Work item code:	⌘	PRESNC
Date:	⌘	13/02/02
Category:	⌘	**F**
Release:	⌘	REL-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	The requirement granting the ability for a watcher and a presentity to withhold their identifiers comes from an earlier confusion in the vocabulary and is unclear as it currently stands.
Summary of change:	⌘	The confusing requirement is removed. Anonymous watcher-subscriptions, which were briefly mentioned in the TS, are detailed.
Consequences if not approved:	⌘	Confusion remains in the specification

Clauses affected:	⌘	5.4		
Other specs affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications	⌘	
Other comments:	⌘			

How to create CRs using this form:

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

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be

downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Changes in Section 5.4

5.4 Management requirements

The following management requirements shall be supported for the presence service:

a) Access to the presence service

The presentity shall have the ability to accept or reject a request for presence information on a per watcher basis, with the option:-

i) once only per watcher (e.g. set up access rules for known watcher, groups of watchers, anonymous watcher-subscriptions, etc.),

ii) for each presence information request (e.g. for watchers that are unknown or not set up in the current access rules).

iii) it shall be possible for the presence service to make access control decisions on behalf of the presentity (e.g. when the presentity is out of contact) subject to the principal's privacy

b) Watcher-subscription to a presentity's presence information

i) an entity shall be able to watcher-subscribe to the presence service at any time, i.e. to request notification from the presence service of (future) changes in a presentity's presence information, subject to the principal's privacy. Note, that by this watcher-subscription the entity becomes a subscribed-watcher.

ii) subscriptions are soft-stated. The subscribed-watcher shall be able to refresh a watcher-subscription to the presentity's presence information at any time. A watcher-subscription refreshes overwrite an existing watcher-subscription for the same presentity, subject to the presentity's access rules – the duration of a watcher-subscription starts from the time it is accepted.

iii) the subscribed-watcher shall be able to cancel his watcher-subscription to a presentity's presence information at any time. Whenever a subscribed-watcher withdraws its watcher-subscription from a presentity's presence information, the subscribed-watcher shall no longer be receiving notifications regarding the presentity's presence information.

iv) an unauthorised third party shall not be able to cancel a subscribed-watcher's watcher-subscription to a presentity's presence information

c) Supplying data to, and requesting data from, the presence information

When supplying data it shall be possible to update only part of the presence information. It shall be possible to request the current value of presence information data on demand at any time (i.e. a fetcher) or on a periodic basis (i.e. a poller) subject to principal's privacy, or to be notified of subsequent changes in presence information data (except when such notification is prevented by access rules), and:-

i) ~~i)~~it shall be possible to inform the presentity of watcher-subscription requests

ii) it shall be possible for the watcher to request an anonymous watcher-subscription (i.e. the watcher's identifier will not be revealed to the presentity or to other watchers). This request can be accepted or rejected, depending on the principal's privacy.

ii) it shall be possible to report existing watcher-subscriptions to the presentity (on request or periodically)

iii) the subscribed-watcher shall be able to determine the status of his watcher-subscription to that presentity's presence information, at any time.

iv) it shall be possible for the presentity to request the watcher information

~~v) it shall be possible for the watcher and/or presentity to withhold their identifier~~

vi) if the subscribed-watcher so chooses, the subscribed-watcher's watcher-subscription to a presentity's presence information shall not be revealed to other watchers.

vii) It shall be possible for a watcher to define which parts of a presentity's presence information it receives, subject to the principal's privacy requirements.

Note: this may be a new requirement which should perhaps be added to the CPIM recommendation

d) User availability and mobility

The presence service shall continue to be supported if the environment into which the user has moved supports presence service. The presence service shall take into account changes in the availability of users (e.g. the user is out of contact or not reachable, despite having activated his presence) or his mobility (e.g. wherever he may be in his home environment or in a visited network).

e) Not used

f) Access to presence service

i) it shall be possible for the presence service to accept presence information from a presentity at any time

ii) it shall be possible for the presence service to accept requests from, and provide presence information to, an authorised watcher at any time

h) Principals, which are 3GPP Subscribers

If a 3GPP subscriber is a principal to one or more Presentities and/or Watchers her preferences, settings and personalisation data (e.g. access rules) which are not part of the presence information shall be part of her VHE User Profiles [2].

End of Document

CR-Form-v4

CHANGE REQUEST

⌘ **22.141** **CR** **011** ⌘ ev **-** ⌘ Current version: **5.1.0** ⌘

Spec Title: Presence Service ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE ☒ Radio Access Network ☐ Core Network ☒

Title:	⌘	Selective notification
Source:	⌘	SA1
Work item code:	⌘	PRESNC
Date:	⌘	05/02/02
Category:	⌘	**C**
Release:	⌘	REL-5

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	In order to reduce the load of notifications in the network, notifications should only be issued if an attribute changes, and if a watcher has asked to be notified whenever this specific attribute changes.
Summary of change:	⌘	In the management section, a requirement is modified in order to allow a watcher to define during the watcher-subscription which attributes shall trigger notifications when their values change.
Consequences if not approved:	⌘	

Clauses affected:	⌘	5.4
Other specs affected:	⌘	☐ Other core specifications ⌘ ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

Modified Clause 5.4

5.4 Management requirements

The following management requirements shall be supported for the presence service:

a) Access to the presence service

The presentity shall have the ability to accept or reject a request for presence information on a per watcher basis, with the option:-

i) once only per watcher (e.g. set up access rules for known watcher, groups of watchers, anonymous watcher-subscriptions, etc.),

ii) for each presence information request (e.g. for watchers that are unknown or not set up in the current access rules).

iii) it shall be possible for the presence service to make access control decisions on behalf of the presentity (e.g. when the presentity is out of contact) subject to the principal's privacy

b) Watcher-subscription to a presentity's presence information

i) an entity shall be able to watcher-subscribe to a presentity's presence information~~the presence service~~ at any time, i.e. to request notification from the presence service of (future) changes in ~~a presentity's presence information~~any of the attributes or only in the attributes specified by the watcher (~~,~~subject to the principal's privacy). Note, that by this watcher-subscription the entity becomes a subscribed-watcher.

ii) subscriptions are soft-stated. The subscribed-watcher shall be able to refresh a watcher-subscription to the presentity's presence information at any time. A watcher-subscription refreshes overwrite an existing watcher-subscription for the same presentity, subject to the presentity's access rules – the duration of a watcher-subscription starts from the time it is accepted.

iii) the subscribed-watcher shall be able to cancel his watcher-subscription to a presentity's presence information at any time. Whenever a subscribed-watcher withdraws its watcher-subscription from a presentity's presence nformation, the subscribed-watcher shall no longer be receiving notifications regarding the presentity's presence information.

iv) an unauthorised third party shall not be able to cancel a subscribed-watcher's watcher-subscription to a presentity's presence information

c) Supplying data to, and requesting data from, the presence information

When supplying data it shall be possible to update only part of the presence information.

It shall be possible to request the current value of presence information data on demand at any time (i.e. a fetcher) or on a periodic basis (i.e. a poller) subject to principal's privacy, or to be notified of subsequent changes in presence information data (except when such notification is prevented by access rules), and:-

i) it shall be possible to inform the presentity of watcher-subscription requests

ii) it shall be possible to report existing watcher-subscriptions to the presentity (on request or periodically)

iii) the subscribed-watcher shall be able to determine the status of his watcher-subscription to that presentity's presence information, at any time.

iv) it shall be possible for the presentity to request the watcher information

v) it shall be possible for the watcher and/or presentity to withhold their identifier

vi) if the subscribed-watcher so chooses, the subscribed-watcher's watcher-subscription to a presentity's presence information shall not be revealed to other watchers.

vii) It shall be possible for a watcher to define which parts of a presentity's presence information it receives, subject to the principal's privacy requirements.

Note: the last two requirements may be new requirements which should perhaps be added to the CPIM recommendation

d) User availability and mobility

The presence service shall continue to be supported if the environment into which the user has moved supports presence service. The presence service shall take into account changes in the availability of users (e.g. the user is out of contact or not reachable, despite having activated his presence) or his mobility (e.g. wherever he may be in his home environment or in a visited network).

e) Not used

f) Access to presence service

i) it shall be possible for the presence service to accept presence information from a presentity at any time

ii) it shall be possible for the presence service to accept requests from, and provide presence information to, an authorised watcher at any time

h) Principals, which are 3GPP Subscribers

If a 3GPP subscriber is a principal to one or more Presentities and/or Watchers her preferences, settings and personalisation data (e.g. access rules) which are not part of the presence information shall be part of her VHE User Profiles [2].

End of Document

TSG-SA WG 1 (Services) meeting #15 **S1-020307**
Saalfelden, Austria, 11-15th February 2002 **Agenda Item:**

CR-Form-v3

CHANGE REQUEST

⌘ **22.141** **CR** **010** ⌘ rev **-** ⌘ Current version: **5.1.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: ⌘ (U)SIM ☐ ME/UE **X** Radio Access Network ☐ Core Network **X**

Title:	⌘	Correction to the number of roles in the Presence Service
Source:	⌘	SA1
Work item code:	⌘	PRESNC
Date:	⌘	24/01/2002
Category:	⌘	**D**
Release:	⌘	*REL-5*

Use one of the following categories:
F *(essential correction)*
A *(corresponds to a correction in an earlier release)*
B *(Addition of feature),*
C *(Functional modification of feature)*
D *(Editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
REL-4	*(Release 4)*
REL-5	*(Release 5)*

Reason for change:	⌘	Clause 4 refers to the 3 roles of, when only 2 are subsequently identified.
Summary of change:	⌘	The reference to the 3 roles is changed to 2 roles. Note that originally 3 roles had been defined, and one of the roles was removed during the development of the specification, however the introductory sentence was not modified accordingly.
Consequences if not approved:	⌘	4.2

Clauses affected:	⌘	
Other specs Affected:	⌘	☐ Other core specifications ☐ Test specifications ☐ O&M Specifications
Other comments:	⌘	

How to create CRs using this form:
Comprehensive information and tips about how to create CRs can be found at: http://www.3gpp.org/3G_Specs/CRs.htm. Below is a brief summary:

1) Fill out the above form. The symbols above marked ⌘ contain pop-up help information about the field that they are closest to.

2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://www.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2000-09 contains the specifications resulting from the September 2000 TSG meetings.

3) With "track changes" disabled, paste the entire CR form (use CTRL-A to select it) into the specification just in front of the clause containing the first piece of changed text. Delete those parts of the specification which are not relevant to the change request.

4 Presence models

4.1 Informative models

The below models of the presence service and presence information are not definitive, and no implementation model or architecture is implied or required by them, and are solely provided to describe the functions and roles that shall be provided by the presence service.

4.2 Roles in the presence service

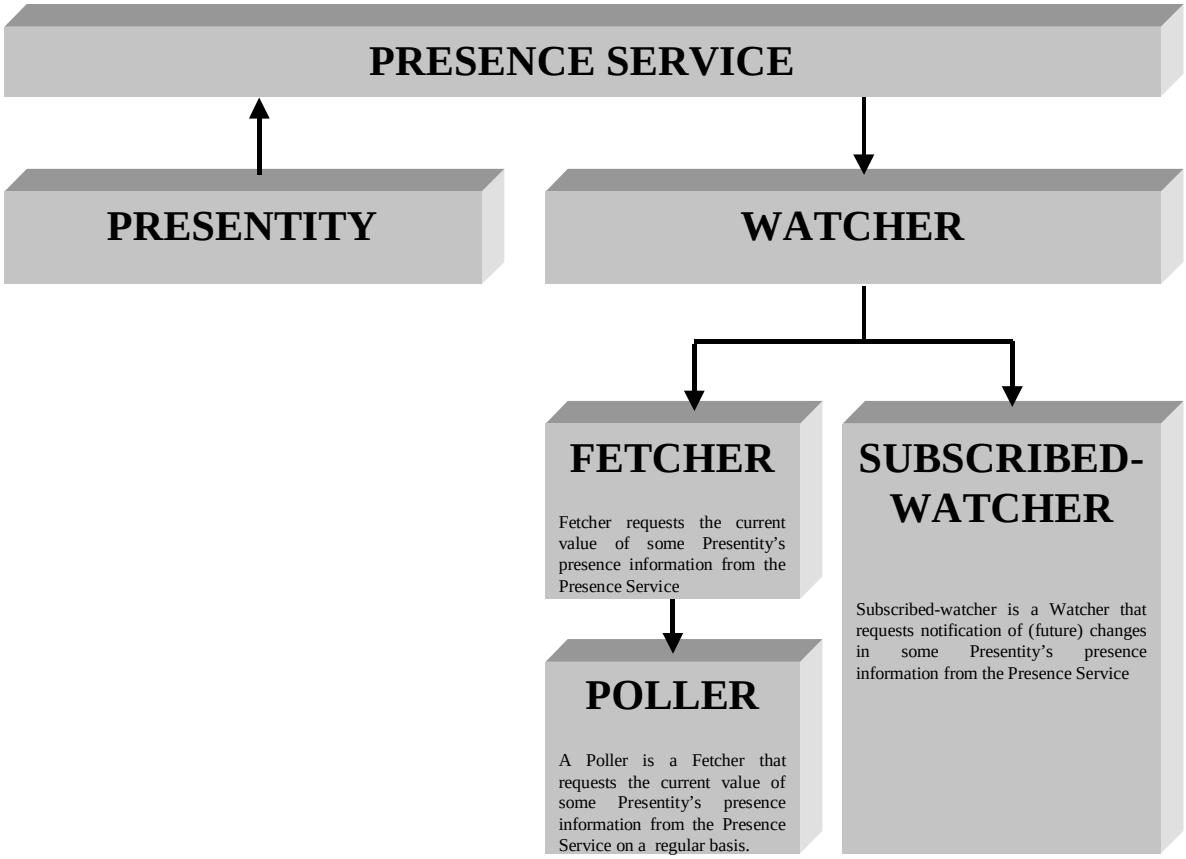

Figure 2: Presence service model

The presence service may be considered to support ~~three~~ two main roles, as depicted in figure 2"Presence service model".

For the purposes of this TS, the following roles are identified to support the presence service:-

Suppliers of presence information

This role represents those entities that supply presence information.

Requesters of presence information

This role represents those entities which request (and subsequently receive) presence information of a presentity. The presence information may also maintain data on requesters of presence information, which may also be potentially distributed (on request) to requesters of presence information. The term watchers is used to identify the requesters of presence information.

The requesters of presence information may be associated with 2 modes of operation:-

Information Mode

This mode corresponds to a request-response mode and represents those entities (i.e. watchers) which simply request the current presence information of a presentity . The term "fetchers" is used to identify the receivers of this type of presence information of a presentity. Presence information of a presentity may also be requested on a regular or periodic basis, and are referred to as pollers.

Notification Mode

This mode corresponds to a 'push-type' mode and represents those entities (i.e. watchers) which request notifications on (future) changes in presence information of a presentity. The term subscribed-watchers is used to identify the receivers of these notifications. Watcher-subscriptions for subscribed-watchers are soft-stated i.e. they are time-bound, notifications of presence information cease on expiry of the negotiated interval. The subscribed-watcher is allowed to 'refresh' a watcher-subscription at any time. Watcher-subscription refreshes overwrite an existing watcher-subscription for the same presentity, subject to the presentity's access rules.

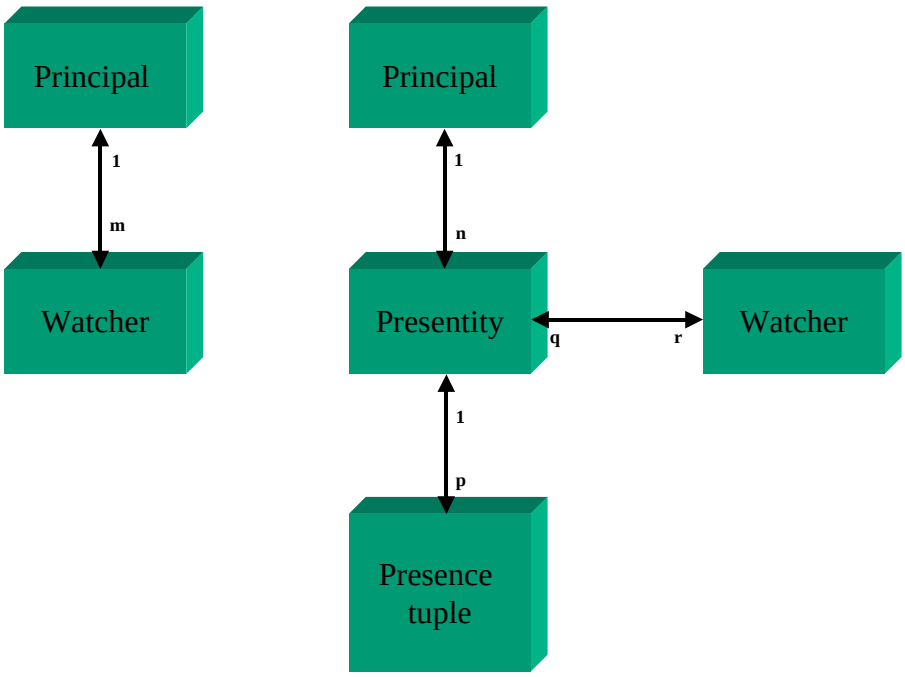

Figure 3: Presence Service Entity Relationships

The key concepts captured in figure 3 are as follows :-

- a principal may be associated with one or more watchers
- a watcher is associated with one principal
- a presentity is associated with one principal
- a principal may be associated with one or more presentities.
- a presentity may be associated with one or more presence-tuples
- a watcher can have a watcher-subscription to one or more presentities
- a presentity may be watched by one or more watchers