3GPP TSG CN Plenary Meeting #22 **NP-030510**
10th – 12th December 2003 Maui, USA.

Source: TSG CN WG4

Title: Corrections on Support of Presence Capability

Agenda item: 9.2.

Document for: APPROVAL

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
29.328	026	3	N4-031336	Rel-6	Introduction of Presence Stage 3 (Ph) to the Sh interface	B	5.5.0

3GPP TSG CN WG4 Meeting #21 ***N4-031336***
Bangkok, THAILAND, 27th – 31st October 2003

(Revision of N4-031103)

CR-Form-v7

CHANGE REQUEST

⌘ **29.328** **CR** **026** ⌘ **rev** **3** ⌘ Current version: **5.5.0** ⌘

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

Proposed change affects: UICC apps⌘ ☐ ME ☐ Radio Access Network ☐ Core Network ☒

Title:	⌘	Introduction of Presence Stage 3 (Ph) to the Sh interface
Source:	⌘	CN4
Work item code:	⌘	PRESNC
Date:	⌘	30/10/2003
Category:	⌘	**B**
Release:	⌘	Rel-6

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)
Rel-6 (Release 6)

Reason for change:	⌘	The Presence architecture document (Stage 2) in TS 23.141 defines a Ph reference point between the Presence Network Agent and the HSS. This Presence Network Agent queries the HSS about the state of the user (associated with a presentity). The Ph interface re-uses the mechanisms defined for the Sh interface and so they are functionally equivalent.This CR introduces the linkage of the Presence capability (Ph) into the Stage 3 Sh Interface. As background, TR 24.841 defines the Presence calls flows and protocol details based on SIP. These will ultimately be introduced into TS23.218 and 24.228 which are currently already referenced by TS 29.328.
Summary of change:	⌘	The scope section is updated to widen the scope to include the Ph interface. A reference to TS 23.141 is included. The General Architecture section is updated to provide the assumptions regarding the Ph reference point.
Consequences if not approved:	⌘	There is no link in the Stage 3 between the Presence Stage 2 architecture and the Stage 3 interface that is required to be assigned.

Clauses affected:	⌘	1, 2 and 5.			
Other specs affected:	⌘	**Y**	**N**		⌘
			X	Other core specifications	
			X	Test specifications	
			X	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/specs/CR.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.

1 Scope

This 3GPP Technical Specification (TS) specifies the interactions between the HSS (Home Subscriber Server) and the SIP AS (Application Server) and between the HSS and the OSA SCS (Service Capability Server). This interface is referred to as the Sh reference point.

The IP Multimedia (IM) Core Network Subsystem stage 2 is specified in 3GPP TS 23.228 [1] and the signalling flows for the IP multimedia call control based on SIP and SDP are specified in 3GPP TS 24.228 [2].

The IP Multimedia (IM) Session Handling with the IP Multimedia (IM) call model is specified in 3GPP TS 23.218 [4].

This document addresses the signalling flows and message contents for the protocol at the Sh interface.

This document also addresses how the functionality of Ph interface is accomplished.

The Presence Service Stage 2 description (architecture and functional solution) is specified in 3GPP TS 23.141 [18].

2 References

[1] 3GPP TS 23.228: "IP Multimedia (IM) Subsystem – Stage 2".

[2] 3GPP TS 24.228: "Signalling flows for the IP multimedia call control based on SIP and SDP".

[3] 3GPP TS 23.002 "Network architecture".

[4] 3GPP TS 23.218: "IP Multimedia (IM) Session Handling; IP Multimedia (IM) call model"

[5] 3GPP TS 29.329: "Sh Interface based on Diameter – Protocol details"

[6] 3GPP TS 29.228: "IP multimedia (IM) Subsystem Cx Interface; Signalling flows and Message Elements".

[7] 3GPP TS 29.229: "Cx and Dx Interfaces based on the Diameter protocol ; Protocol details"

[8] draft-ietf-aaa-diameter-17, "Diameter Base Protocol", work in progress

[9] ITU-T recommendation Q.763: "Signalling System No. 7 - ISDN User Part formats and codes"

[10] 3GPP TS 23.018: "Basic Call Handling; Technical realization"

[11] 3GPP TS 23.003: "Numbering, Addressing and Identification"

[12] 3GPP TS 23.032: "Universal Geographical Area Description (GAD)"

[13] 3GPP TS 29.002: "Mobile Application Part (MAP) specification"

[14] 3GPP TS 23.078: "Customised Applications for Mobile network Enhanced Logic (CAMEL) Phase 3 - Stage 2"

[15] RFC 2045: "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies"

[16] RFC 3261: "SIP: Session Initiation Protocol"

[17] RFC 2806: "URLs for Telephone Calls"

[18] 3GPP TS 23.141: "Presence Service; Architecture and Functional Description"

***** Next Modified Section *****

5 General Architecture

This clause further specifies the architectural assumptions associated with the Sh reference point, building on 3GPP TS 23.228 [1], ~~and~~ 3GPP TS 23.218 [4] and also the Ph reference point building upon 3GPP TS 23.141 [18].

5.1 Functional requirements of network entities

5.1.1 Functional Requirements of the Application Server

The Application Server may communicate with the HSS over the Sh interface.

For functionality of the Application Server refer to 3GPP TS 23.002 [3], 3GPP TS 23.228 [1] and 3GPP TS 23.218 [4].

5.1.2 Functional requirements of HSS

The HSS may communicate with the Application Server over the Sh interface and with the Presence Network Agent over the Ph interface. The functionality of the Ph interface shall be the same as the functionality of the Sh interface.

For functionality of the HSS refer to 3GPP TS 23.002 [3], 3GPP TS 23.228 [1] and 3GPP TS 23.218 [4].

5.1.3 Functional Requirements of the Presence Network Agent

~~The interaction between the Presence Network Agent and the HSS, referred to as the Ph interface, is accomplished using the mechanisms defined for the Sh interface.~~ The Presence Network Agent may communicate with the HSS over the Ph interface. In this case, ~~A~~all references to an Application Server in this specification apply also to a Presence Network Agent ~~as such~~.

5.2 Functional classification of Sh interface procedures

Operations on the Sh interface are classified in functional groups:

1. Data handling procedures
   - The download of data from the HSS to an AS.

- The update of data in the HSS.

2. Subscription/notification procedures
   - An AS or Presence Network Agent can subscribe to receive notifications from the HSS of changes in data.
   - The HSS can notify an AS of changes in data for which the AS previously had subscribed.