3GPP TSG CN Plenary Meeting #21 **NP-030395**
17th – 19th September 2003 Frankfurt, GERMANY.

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
29.228	041	2	N4-030991	Rel-6	Introduction of Presence Stage 3 (Px) to the Cx interface	B	5.4.0

3GPP TSG CN WG4 Meeting #20 **N4-030991**
Sophia Antipolis, FRANCE, 25th – 29th August 2003

CR-Form-v7

CHANGE REQUEST

⌘ **29.228** **CR** **041** ⌘ **rev** **2** ⌘ Current version: **5.4.0** ⌘

*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 (Px) to the Cx interface
Source:	⌘	CN4
Work item code:	⌘	PRESNC
Date:	⌘	29/08/2003
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 Px reference point between the Presentity Presence Proxy and the HSS. This Presentity Presence Proxy is made up of the I-CSCF and the S-CSCF of the Presence Server's Home Network. The Px interface re-uses the mechanisms defined for the Cx interface and so they are functionally equivalent.This CR introduces the linkage of the Presence capability (Px) into the Stage 3 Cx 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, 24.229 and 24.228 which are currently already referenced by TS 29.228.
Summary of change:	⌘	The scope section is updated to widen the scope to include the Px interface. A reference to TS 23.141 is included. The General Architecture section is updated to provide the assumptions regarding the Px 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:

1. The interactions between the HSS (Home Subscriber Server) and the CSCF (Call Session Control Functions), referred to as the Cx interface.

2. The interactions between the CSCF and the SLF (Server Locator Function), referred to as the Dx interface.

The IP Multimedia (IM) 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].

This document addresses the signalling flows for Cx and Dx interfaces.

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

The Presence Service Stage 2 description (architecture and functional solution) is specified in 3GPP TS 23.141 [10].

2 References

[1] 3GPP TS 23.228: “IP Multimedia (IM) Subsystem – Stage 2 (Release 5)”.

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

[3] 3GPP TS 33.203: “Access security for IP-based services”.

[4] 3GPP TS 23.002 “Network architecture”.

[5] 3GPP TS 29.229: “Cx Interface based on Diameter – Protocol details”

[6] 3GPP TS 23.218: “IP Multimedia (IM) Session Handling; IP Multimedia (IM) call model”

[7] Freed, N. and N. Borestein, “Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies”, RFC 2045, November 1996.

[8] 3GPP TS 24.229: “IP Multimedia Call Control Protocol based on SIP and SDP” – stage 3

[9] draft-ietf-aaa-diameter-17, “Diameter Base Protocol”, work in progress

[10] 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 Cx reference point, building on 3GPP TS 23.228 [1] and also the Px reference point building upon 3GPP TS 23.141 [10].

5.1 Functional requirements of network entities

5.1.1 Functional requirements of P-CSCF

There is no requirement for the interaction between the P-CSCF and the HSS.

5.1.2 Functional requirements of I-CSCF

The I-CSCF communicates with the HSS over the Cx interface.

For functionality of the I-CSCF refer to 3GPP TS 23.002 [4].

5.1.3 Functional requirements of S-CSCF

The S-CSCF communicates with the HSS over the Cx interface.

For functionality of the S-CSCF refer to 3GPP TS 23.002 [4].

5.1.4 Functional requirements of HSS

The HSS communicates with the I-CSCF and the S-CSCF over the Cx interface.

For functionality of the HSS refer to 3GPP TS 23.002 [4].

5.1.5 Functional classification of Cx interface procedures

Operations on the Cx interface are classified in functional groups:

1. Location management procedures
   - The operations regarding registration and de-registration.
   - Location retrieval operation.
2. User data handling procedures
   - The download of user information during registration and to support recovery mechanisms.
   - Operations to support the updating of user data and recovery mechanisms.

Editor's Note: Recovery mechanisms have not been specified in SA2 yet.

3. User authentication procedures

5.1.6 Functional Requirements of the Presentity Presence Proxy

The interaction between the Presentity Presence Proxy and the HSS, referred to as the Px interface, is handled using the mechanisms defined for the Cx interface.