3GPP TSG CN Plenary Meeting #17 **NP-020455**
4th – 6th September 2002 Biarritz, FRANCE.

Source: TSG CN WG4

Title: Shared Networks

Agenda item: 8.9

Document for: APPROVAL

The CR independent of transport method for SNA access information.

Spec	CR	Rev	Doc-2nd-Level	Phase	Subject	Cat	Ver_C
23.003	050	1	N4-021101	Rel5	Support for Shared Network in connected mode: definition of SNA	B	5.3.0

3GPP TSG CN WG4 Meeting #15 ***N4-021101***
Helsinki, Finland, 29th July – 2nd August 2002

CR-Form-v7

CHANGE REQUEST

⌘ **23.003** **CR** **050** ⌘ **rev** **1** ⌘ Current version: **5.3.0** ⌘

*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:	⌘	Support for Shared Network in connected mode: definition of SNA
Source:	⌘	CN4
Work item code:	⌘	TEI5
Date:	⌘	09/07/2002
Category:	⌘	**B**
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)*
Rel-6	*(Release 6)*

Reason for change:	⌘	RAN#3 has agreed on a solution for the support of Shared Networks in connected mode in Release 5. See TR R3:012 available in LS N4-020865 (R3-021816). The agreed solution is based on the concept of SNA, which is basically a collection of Location Areas. A set of allowed SNA's is associated to each IMSI serie. The set of allowed SNA's, the SNA Access Information, is signalled to the Radio Network when a call is setup, so that the Radio Network can decide whether a subscriber can be handed over when moving to a new Location Area, i.e. if he has authorization to get service in that Location Area. During the Handover procedure the anchor MSC has to inform the non-anchor MSC about the SNA Access Information of the subscriber so that non-anchor MSC shall be able to forward this information to the Radio Network when performing subsequent intra-MSC handovers.
Summary of change:	⌘	The concept and format of Shared Network Area is defined
Consequences if not approved:	⌘	The concept of SNA would be used in other TS's without a proper defintion

Clauses affected:	⌘	12, 12.6

Y N

Other specs	⌘	**X**	Other core specifications	⌘	29.002 CR 466 29.010 CR 058 23.009 CR 080
affected:		**X**	Test specifications		
		X	O&M Specifications		
Other comments:	⌘	The notation for the concatenation operator has been changed throughout section 12 from “+” to “||”			

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.

****** FIRST MODIFIED SECTION ******

12 Identification of PLMN, RNC, Service Area, CN domain, Shared Network Area

The following clauses describe identifiers that are used by both CN and UTRAN across the Iu interface. For identifiers that are solely used within UTRAN, see 3GPP TS 25.401.

NOTE: in the following, the double vertical bar notation || indicates the concatenation operator.

12.1 PLMN Identifier

A Public Land Mobile Network is uniquely identified by its PLMN identifier. PLMN-Id is made of Mobile Country Code (MCC) and Mobile Network Code (MNC).

- **PLMN-Id = MCC || MNC**

The MCC and MNC are predefined within a UTRAN, and set in the RNC via O&M.

12.2 CN Domain Identifier

A CN Domain Edge Node is identified within UTRAN by its CN Domain Identifier. The CN Domain identifier is used over UTRAN interfaces to identify a particular CN Domain Edge Node for relocation purposes. The CN Domain identifier for Circuit Switching (CS) is made of the PLMN-Id and the LAC, whereas for Packet Switching (PS) it is made of the PLMN-Id, the LAC, and the RAC of the first accessed cell in the target RNS.

The two following CN Domains Identifiers are defined:

- **CN CS Domain-Id = PLMN-Id || LAC**
- **CN PS Domain-Id = PLMN-Id || LAC || RAC**

The LAC and RAC are defined by the operator, and set in the RNC via O&M.

For syntax description and the usage of this identifier in RANAP signalling, see 3GPP TS 25.413.

12.3 CN Identifier

A CN node is uniquely identified within a PLMN by its CN Identifier (CN-Id). CN-Id together with the PLMN identifier is used to globally identify the CN node. CN-Id together with the PLMN-Id is used as CN node identifier in RANAP signalling over the Iu interface.

Global CN-Id = PLMN-Id || CN-Id

The CN-Id is defined by the operator, and set in the nodes via O&M.

For syntax description and the usage of this identifier in RANAP signalling, see 3GPP TS 25.413.

12.4 RNC Identifier

An RNC node is uniquely identified within UTRAN by its RNC Identifier (RNC-Id). RNC-Id together with the PLMN identifier is used to globally identify the RNC. RNC-Id or the RNC-Id together with the PLMN-Id is used as RNC

identifier in UTRAN Iub, Iur and Iu interfaces. SRNC-Id is the RNC-Id of the SRNC. C-RNC-Id is the RNC-Id of the controlling RNC. D-RNC-Id is the RNC Id of the drift RNC.

- **Global RNC-Id = PLMN-Id ~~|~~|+ RNC-Id**

The RNC-Id is defined by the operator, and set in the RNC via O&M

For syntax description and the usage of this identifier in RANAP signalling, see 3GPP TS 25.413.

12.5 Service Area Identifier

The Service Area Identifier (SAI) is used to identify an area consisting of one or more cells belonging to the same Location Area. Such an area is called a Service Area and can be used for indicating the location of a UE to the CN.

The Service Area Code (SAC) together with the PLMN-Id and the LAC will constitute the Service Area Identifier.

- **SAI = PLMN-Id ~~|~~|+ LAC ~~|~~|+ SAC**

The SAC is defined by the operator, and set in the RNC via O&M.

For syntax description and the usage of this identifier in RANAP signalling, see 3GPP TS 25.413. 3GPP TS 25.423 and 3GPP TS 25.419 define the usage of this identifier in RNSAP and SABP signalling.

A cell may belong to one or two Service Areas. In the case that it belongs to two Service Areas, one is applicable in the BC domain and the other is applicable in both the CS and PS domains.

The broadcast (BC) domain requires that Service Area consist of one cell. This does not limit the usage of Service Area for other domains. Refer to 3GPP TS 25.410 for a definition of the BC domain.

12.6 Shared Network Area Identifier

The Shared Network Area Identifier (SNA-Id) is used to identify an area consisting of one or more Location Areas. Such an area is called a Shared Network Area and can be used to grant access rights to parts of a Shared Network to a UE in connected mode (see 3GPP TS 25.401).

The Shared Network Area Identifier consists of the PLMN-Id followed by the Shared Network Area Code (SNAC).

- **SNA-Id = PLMN-Id ~~|~~|+ SNAC**

The SNAC is defined by the operator.

For syntax description and the usage of this identifier in RANAP signalling, see 3GPP TS 25.413.

****** END OF MODIFICATIONS ******