3GPP TSG CN Plenary **Tdoc NP-010080**
Meeting #11, Palm Springs, U.S.A
14th - 16th March 2001

Source: **TSG CN WG4**

Title: **Work Item Description for Bearer Independent Circuit-Switched Core Network**

Agenda item: **8.3**

Document for: **APPROVAL**

This contribution presents the updates performed in the Work Item Description of Bearer Independent Circuit-Switched Core Network (N4-000692, approved in the TSG CN WG4 #4 Seattle, USA) in order to reflect the new specifications produced as well as the time frame modifications.

These updates were asked to the rapporteur during the join TSG CN WG4-WG3 #6 meeting in Beijing, China.

This document was presented at the CN4 Ad Hoc meeting (N4-010238) in Madrid, and TSG CN WG4-WG3 joint meeting (NJ-010137) in Sophia Antipolis. The joint meeting decided: WID will be submitted to the CN#11 for approval.

Work Item Description

Bearer Independent Circuit-Switched Core Network

The work item introduces the separation of call control and bearer control in the circuit switched core network.

1 3GPP Work Area

	Radio Access
X	Core Network
	Services

2 Linked work items

Related work items are:
1. *Out-of-Band Transcoder Control*
2. *Circuit Switched Multimedia Swap & Fallback*
3. *Service Modification without Pre-notification*
4. *Lawful Intercept*

3 Justification

This work item follows up the S2 work item "Enable bearer independent circuit-switched network architecture".

4 Objective

The objective of the work item is to evolve the R99 circuit switched domain (CS domain) in a transport network independent manner to allow the use of different transport resources (ATM, IP, STM, …). The main new characteristic of the R00 CS domain compared with the R99 CS domain consists in the flexibility for PLMN internal transport means that allow transport based on IP. Transport and control of the CS domain network are separated to enable service provision by different means of transport resources (ATM, IP, STM, ...) for better transport resource efficiency and convergence with the PS domain transport.
The bearer independent circuit-switched network architecture comprises all core network functionality for provision of bearer- and teleservices in a circuit oriented manner. It includes the functions for the call control, related supplementary services, application services and mobility support.
Maintaining calls while terminals change locations is handover functionality of the CS domain UMTS specific call control.
Note:
The protocols used for access signalling and signalling within the network (e.g. CC in 3G TS 24.008 or MAP in 3G TS 29.002) are not affected by the introduction of new signalling transport bearers in the core network.

5 Service Aspects

None identified.

6 MMI-Aspects

None identified.

7 Charging Aspects

None identified.

8 Security Aspects

Possible impacts from Lawful Intercept

9 Impacts

Affects:	USIM	ME	AN	CN	Others
Yes				X	
No	X	X	X		X
Don't know					

10 Expected Output and Time scale (to be updated at each plenary)

New specifications						
Spec No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
23.~~xxx~~205	Bearer Independent CS core network; Service description; Stage 2	CN4		CN#10	CN#11	Stage 2 describing the information flow on the Nc, Mc, Nb reference points in relation to UMTS specific traffic cases e.g. interworking between access signalling and evolved call control protocols, and between handover and evolved call control protocols.
29.~~xxx~~232	Media Gateway Controller (MGC) – Media Gateway (MGW) Interface; Stage 3 ~~<stage 3 for the circuit switched bearer independent core network>~~	CN4	CN3	CN#10	CN#11	Stage 3 describing the UMTS specific protocol impacts e.g. new packages for H.248. CN4 shall work on general protocol matters whereas CN3 shall determine the parameter values applicable to standardization activities within CN3.
29.205	Application of Q.1900 Series to Bearer Independent CS Core Network Architecture~~Application of Q.1902 as Call Control Protocol; Stage 3~~	CN4		CN#11	CN#11	Stage 3 to act as an umbrella specification for the BICC architecture with Q.1902 as call control protocol.
29.414	Core Network Nb Data Transport and Transport Signalling	CN3		CN#11	CN#11	Stage 3 describing Nb bearer transport and transport signalling.
29.415	Core Network Nb Interface User Plane Protocols	CN3		CN#11	CN#11	Stage 3 describing the applicability of the UP defined in [25.415] for the Nb interface only.

Affected existing specifications				
Spec No.	CR	Subject	Approved at plenary#	Comments
29.007		General requirements on Interworking between the PLMN and the ISDN or PSTN	CN#11~~0~~	Add the interworking with other networks using evolved call control protocols.
23.910		Circuit Switched Data Bearer Services	CN#11	Introduction of Nb UP.

11 Work item raporteurs

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12 Work item leadership

CN4

13 Supporting Companies

Ericsson L.M., NEC, Vodafone, Nortel Networks, Nokia, Motorola, Cisco, Lucent Technologies, Siemens, Telecom Italia

14 Classification of the WI (if known)

	Feature (go to 14a)
X	Building Block (go to 14b)
	Work Task (go to 14c)

14a The WI is a Feature: List of building blocks under this feature

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14b The WI is a Building Block: parent Feature

WI: Enable bearer independent circuit-switched network architecture

14c The WI is a Work Task: parent Building Block

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