TSG GERAN #1
Seattle, WA, U.S.A
28-1, August/September 2000

TSG GERAN #1 (00)0430

Source: SBC

Title: Work Item Description for support of Iu-cs interface in GERAN

Work Item:

Support of UMTS CS services on GERAN and GSM-UMTS CN using the Iu-cs interface

1 SMG Work Area

	UMTS Radio Access
X	GSM Radio Access
X	GSM-UMTS Core Network
X	UMTS Services

2 Linked work items

None

3 Justification

Since the transition to IP multimedia services will not happen immediately, operators may need to support both traditional mobile circuit switched services and IP multimedia services simultaneously. IP multimedia services can only be delivered via the IM Subsystem of the PS domain within the GSM-UMTS Core Network (CN). The ability to offer both CS and PS services via a common GSM-UMTS CN allows low-risk evolution from current networks, while enabling an operator to have full service offering. The ability to map GSM/EDGE radio bearers to the CS domain for optimized voice services and to the PS domain for generic IP multimedia services is greatly desired by some operators for Release 2000.

The soft switch architecture (i.e. MGW/MSC Server) specified within the CS domain of the GSM-UMTS CN provides additional flexibility. Since GSM-UMTS MSC servers are not restricted to a given geographical area, they can be deployed at remote/centralized sites, reducing operations costs and complexity.

4 High level requirements

A GSM-UMTS CN shall allow:

- Access to CS domain services independently of access to any PS domain service
- Optimized functional reuse between PS and CS domains (e.g. HR 8PSK channel coding)
- The MS to be attached to both PS and CS domains, and the MS to support multiple simultaneous sessions (e.g. GSM DTM Release 99 feature)
- The support of CS and PS services for both UTRAN and GERAN on the same CN

Two possible interface options between GERAN and the UMTS CN may be considered to support the required functionality: 1) an A interface (evolved if necessary) and/or 2) the Iu-cs interface (not yet specified for connection to GERAN). This work item supports the Iu-cs interface connectivity to GERAN.

5 Proposed Building Blocks and Work Tasks:

This item is part of the "GERAN/UTRAN Interface Evolution" feature.

6 Service Aspects

The ability to support tandem-free operation and/or transcoder free operation is desired.

7 MMI-Aspects

None

8 Charging Aspects

None

9 Security Aspects

TBD

10 Impacts

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

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

New specifications						
Spec No.	Title	Prime rsp. STC	2ndary rsp. STC(s)	Presented for information at SMG#	Approved at SMG#	Comments

Affected existing specifications				
Spec No.	CR	Subject	Approved at SMG#	Comments
8.08		Digital cellular telecommunications system (Phase 2+); Mobile-services Switching Centre - Base Station System (MSC - BSS) interface; Layer 3 specification		
8.58		Digital cellular telecommunications system (Phase 2+); Base Station Controller - Base Transceiver Station(BSC - BTS) interface; Layer 3 specification		
4.18		Mobile radio interface layer 3 specification		
5.05		Radio Receiver Performance		
5.02		Multiplexing and multiple access on the radio path		
5.03		Channel coding		

NOTE: This list does not include BSS or MS conformance testing CRs.

12 Work item rapporteur

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13 Work item leadership

TSG-GERAN lead with TSG-SA2 support as required

14 Supporting Companies

SBC Communications
Nortel Networks
Motorola
Ericsson
Nokia

References