

TSG GERAN #6
Naantali, Finland
27-31 August 2001

Source: TSG GERAN
Title: Work Item Description for Building block: Location Services (LCS) for GERAN in Iu Mode
Document for: Approval

Work Item Description

Title

Location Services (LCS) for GERAN in Iu Mode

1 3GPP Work Area

X	Radio Access
X	Core Network
X	Services

2 Linked work items

*LCS work items for R2000 in TSG-SA, TSG-CN, TSG-RAN
GERAN work item radio interface evolution.*

3 Justification

LoCation Services provide the mechanisms to support mobile location services for operators, subscribers and third party service providers. Currently, GSM LoCation Services (LCS) Release 98 and 99 supports only circuit switched case. In order to provide same services for packet switched case support for Packet Switched (PS) LCS domain should be included in the 3GPP GERAN LCS Release 5. Other enhancements will be considered in later 3GPP GERAN Releases. The alignment of GERAN LCS Release 5 with UMTS LCS in Release 4 is required, e.g. due to the common Core Network.

4 Objective

The purpose of this work item is to enhance GERAN LCS, i.e. to implement GERAN LCS Release 5. This includes introduction of LCS in packet switched GERAN including similar services that are available in circuit switched GSM, with reasonably small amount of changes to the existing GPRS specifications. Backward compatibility with GSM LCS R'98 & '99 BSS architecture is required. LCS support for GERAN also includes the support for circuit switched and packet switched modes (i.e. GPRS), which are not covered in GSM LCS R'98 & R'99. The LCS Stage 1 description TS 22.071 already include this requirement but should be further elaborated regarding LCS support in the packet switched domain. The three positioning mechanisms supported by GERAN LCS are Timing Advance (TA), Enhanced Observed Time Difference (E-OTD), and Global Positioning System (GPS). There are two main efforts that can be identified for LCS in 3GPP TSG GERAN.

1. Support LCS in A/Gb mode: LCS support on packet-data channels and over the A/Gb interface.
2. Support LCS in Iu mode: LCS support over the Iu-ps, Iu-cs, Iur-g interfaces.

This building block describes support for LCS in GERAN for Iu mode.

The following work tasks items are listed below:

- GERAN LCS stage 2
- Iu-ps interface support for LCS
- Iu-cs interface support for LCS
- Iur-g interface support for LCS
- RRC protocol support for LCS
- Additional impacts on Broadcast of LCS data on packet channels
- Miscellaneous impacts from the new LCS Stage Two (23.271)

5 Service Aspects

- Provision of Velocity
- Privacy Control

6 MMI-Aspects

None

7 Charging Aspects

None

8 Security Aspects

None

9 Impacts

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

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

New specifications

Specification No.	Title	Prime rsp. WG	2ndary rsp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
43.059	Functional Stage 2 Description of Location Services in GERAN	GERAN				This specification describes the LCS support in GERAN for both Circuit Switched and Packet Switched services.
23.271	Functional stage 2 description of LCS [based on 23.171 and System and core network aspects from 03.71 +new features]					This specification describes the system and core network aspects of LCS and is common to GSM and UMTS

Affected existing specifications

Specification No.	CR	Subject	Approved at plenary#	Comments
44.018		Mobile radio interface layer 3 specification, Radio Resource Control Protocol		
44.031		Mobile Station (MS) Serving Mobile Location Centre (SMLC) Radio Resource LCS Protocol (RRLP)		LCS R98/99 specifications
44.035		Broadcast Network Assistance for Enhanced Observed Time Difference (E-OTD) and Global Positioning System (GPS) Positioning Methods		LCS R98/99 specifications
44.071		Mobile radio interface layer 3 Location Services (LCS) specification;		
49.031		Base Station System Application Part LCS Extension (BSSAP-LE)		
25.413		UTRAN Iu interface RANAP signalling		
25.412		UTRAN Iu interface signalling transport		

11 Work item rapporteurs

Nokia – Margaret Livingston

12 Work item leadership

GERAN

13 Supporting Companies

Nokia, Motorola, Ericsson, Siemens, Qualcomm, T-Mobil

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

14b The WI is a Building Block: parent Feature

Location Service (UMTS)

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

(one Work Item identified as a building block)