

Technical Specification Group Services and System Aspects **TSGS#15(02)0141**
Meeting #15, Jeju-do, Korea, 5-14 March 2002

Title: Proposed revision of the Location Services WID
(Related to Release 5)

Source: SA2

Agenda item: 7.2.3

For: Approval

This contribution contains a proposed update of the WID 'Support of Location Services in Release 5, System and Core Network aspects'.

The present WID on LCS enhancements is split in two, Release 5 related (this document) and Release 6 related (in SP-020142).

Work Item Description

Title: Support of Location Services, System and Core Network aspects in Rel-5

This Work Item describes the enhancements of location services in 3GPP from the system and core network viewpoints.

1 3GPP Work Area

	Radio Access
x	Core Network
x	Services

2 Linked work items

Location Services for GERAN in A/Gb Mode (UID 2436)
LCS for GERAN in Iu Mode (UID 2442)
Specification for the Le Interface (SP-010180)
Support of the Presence Service Architecture (S2-012405)

3 Justification

LoCation Services (LCS) provide the mechanisms to support mobile location based services for operators, subscribers and third party service providers.

This Work Item is needed in order to fulfil the requirements on supporting LCS in the GERAN packet switched domain and to enhance LCS with new service features.

4 Objective

The service description stage 1 specification 22.071 shall be common for all Access Networks. The new LCS service features to be developed or studied are:

- Location services in GERAN packet switched domain

The task is to include the system and core network aspects of LCS support in GERAN packet switched domain in TS 23.271.

- Change of area event driven deferred location reporting

It shall be possible for the network to initiate location reporting at the event when the target mobile moves to a new area.

- Standardization of the Le interface

There is a separate Work Item on a standardized Le interface between the LCS Client and GMLC. There are established specifications that have been found to be applicable for this interface and the Le work item has been completed by adding references to the established specification for the Le interface in TS 23.271. In case there is need for alignment or improvement between the related LCS specifications, this will be communicated with the corresponding forum.

- Enhanced support for user privacy and subscriber data handling

It should be studied how the privacy mechanisms provided for Location Services could be enhanced to support the increasing number of LCS clients and the varying privacy requirements for location services. It should also be possible for the user to set or change the location related privacy parameters in the home network. The UE

shall be protected against unwelcome LCS access from third parties. There are two possible ways to enhance the current functionality in order to fulfil this requirement.

- 1) The UE may be protected against monitoring his location from a third party by having a 'Codeword' function to limit the accesses. The 'Codeword' is an access code, which enables LCS access to the target UE.
- 2) The UE may be protected against monitoring his location from a third party by screening accesses based on 'Requestor'. The 'Requestor' is the originating entity of the LCS accesses.

A Technical Report shall be generated on this issue and privacy enhancements found to be useful are moved to the corresponding specifications.

-Relationship between Location Services and Presence service

This issue should be studied.

The detailed LCS time plan is documented in the 3GPP Work Plan.

5 Service Aspects

Yes

6 MMI-Aspects

7 Charging Aspects

8 Security Aspects

9 Impacts

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

10 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
TR23.871	Enhanced support for user privacy in location services	SA2	SA1	SA#14	SA#15	The TR shall be completed in SA#16 to show the selected network architecture
Affected existing specifications						
Specification No.	CR	Subject		Approved at plenary#		Comments
22.071		Location Services (LCS); Service description, Stage 1		SA#15		
23.002		Network Architecture		SA#15		
23.271		Functional stage 2 description of LCS		SA#15		
29.002		Mobile Application Part (MAP)		CN#15		
43.059		Functional Stage 2 Description of Location Services in GERAN		GERAN 12/01		

24.008		Mobile radio interface Layer 3 specification; Core network protocols; Stage 3	CN#16	
24.030		Location Services (LCS); Supplementary service operations; Stage 3	CN#16	
24.080		Mobile radio Layer 3 supplementary service specification; Formats and coding	CN#16	

11 Work item rapporteurs

Jan Kall, Nokia

12 Work item leadership

TSG SA WG 2.

13 Supporting Companies

Nokia, Elisa Communications, Siemens, Ericsson, Vodafone, NTT DoCoMo, NEC, Lucent, Signalsoft

14 Classification of the WI (if known)

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

14b The WI is a Building Block: parent Feature

Building block	Work task	WG
LCS support in GERAN PS domain	Specify the system and core network aspects of LCS in the GERAN PS domain	SA2
	Stage 3 specifications to support LCS in GERAN PS domain	CN
Location reporting at event 'change of area'	Identify and set service requirements for location reporting at event 'change of area'	SA1
	Functional description of event 'change of area'	SA2
	Stage 3 of event 'change of area'	CN
Standardization of the Le interface	Investigate whether an established Le specification would be applicable for 3GPP LCS, as specified in LCS stage 2 (23.271).	SA2
	Investigate whether an established Le specification would be applicable for 3GPP LCS, as specified in LCS stage 1 (22.071)	SA1
	Add references to the established standard for the Le interface in TS 22.071, TS 23.002 and TS 23.271.	SA2
	Communicate possible needs for alignment or improvement with the corresponding standardization forum.	SA1 & SA2
Enhanced privacy support in location services	Decision of the architecture for enhanced network support for user <u>privacy</u>	SA2
	Stage 2 work on support for enhanced user <u>privacy</u>	SA2
	Generate Technical Report on Enhanced privacy support in location services	SA2

	Stage 3 of Service type, Codeword and Requestor concepts and enhanced privacy check, MAP and Uu changes and	CN, SA2 liaison with other forums
Relationship between Location Services and the Presence Service	Study the relationship between Location Services and the Presence Service	SA2 & SA1