

Technical Specification Group Services and System Aspects **TSGS#14(01)0720**
Meeting #14, Kyoto, Japan, 17-20 December2001

Source: TSG SA WG2
Title: Proposed updates to the LCS REL5 WID
Agenda Item: 7.2.3

This contribution proposes to update the WID LCS REL5.

Two new functions are proposed to be added to the WID LCS REL5, namely the Password concept and the Requestor concept.

Work Item Description

Title

Support of Location Services in Release 5, System and Core Network aspects.

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)

The 3GPP Generic User Profile

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 services for operators, subscribers and third party service providers.

This Work Item is needed in order to fulfill the requirements on supporting LCS in the GERAN packet switched domain and to enhance LCS with new service features in Release 5.

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 in Release 5 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 Rel'5.

- Event driven deferred LCS request

Event driven LCS is included in Rel'4 to determine the position of a mobile when it becomes active in the network. Other types of events to initiate location reports should be investigated for Rel-5, first in SA1, if needed, to determine the service aspects of event driven LCS request, e.g. different types of events. Some events could be related to localised services, e.g. services limited to UEs in a defined area or location based charging where the tariff is changed according to terminal whereabouts.

- Periodic location reports

Periodic LCS could be seen as Event based LCS, where the event is that a defined period timer is running out and activates a location request/report. In Release 4 it has been decided that GMLC handles periodic LCS request, but in Rel-5 it should be investigated if also other network elements like MSC, SGSN, UE and RNC could handle periodic location reports autonomously. Depending upon how these possibilities are resolved, there may need to be a separate new RAN work item to cover RNC based periodic UE Positioning and a new T work item to cover UE based periodic UE Positioning aspects in Rel-5.

- Standardization of the Le interface

There is a separate Work Item on a standardized Le interface between the LCS Client and GMLC. There are specifications being established that are applicable for this interface and it will be investigated whether such a specification would be applicable for 3GPP LCS, as specified in LCS stage 1 (22.071) and stage 2 (23.271). If found appropriate, the Le work item could be completed by adding references to the established specification for the Le interface in TS 22.071 and TS 23.271. In case there is need for alignment or improvement, 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. A Technical Report will be generated on this issue in Rel-5.

- Relationship between Location Services and Presence service

This issue should be studied.

- Compliance with national regulatory guidelines on user privacy

According to the guideline on The Ministry of Public Management, Home Affairs, Posts and Telecommunications in Japan, There is a clear statement regarding to the privacy issue that,

- 1) The UE may be protected against monitoring his location from a third party by having 'Password' function to limit the accesses.
- 2) The UE may be protected against monitoring his location from a third party by screening accesses based on the access terminal.

The LCS REL-5 should be made compliant to this Japanese guideline by adding these optional functions.

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

Task	Planned Start	Planned Finish
Work Item Revision	5/2001	128/2001
Approval of Revised Work Item Approval		129/2001
Drafting and discussion, updates of specifications	8/2001	3/2002 12/2001
Submission to TSG CN and SA for approval		3/2002 12/2001
Possible remaining corrections and clarifications		6/2002

5 Service Aspects

Yes

6 MMI-Aspects

7 Charging Aspects

8 Security Aspects

It should be studied are there some implications on User Privacy in periodic or deferred location reporting.

9 Impacts

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

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

New specifications						
Specification No.	Title	Prime resp. WG	2ndary resp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
TRxx.yyz	Technical Report on enhanced privacy support in location services	SA2	SA1	SA#14	SA#14	
Affected existing specifications						
Specification No.	CR	Subject		Approved at plenary#		Comments
22.071		Location Services (LCS); Service description, Stage 1		SA#14		
23.271		Functional stage 2 description of LCS		SA#154		
29.002		Mobile Application Part (MAP)		CN#154		
43.059		Functional Stage 2 Description of Location Services in GERAN		GERAN 12/01		

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 and NEC

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 covers several Building Blocks: List of Work Tasks under these Building Blocks

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
Event driven deferred LCS request	Investigate and standardize other types of events to initiate location reports	SA2 (SA1)
Periodic Location reports	Investigate the implications of generating periodic location reports in MSC/SGSN, RNC or UE	SA2
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
	If seen feasible, the Le work item could be completed by adding references to the established standard for the Le interface in TS 22.071 and TS 23.271.	SA1 & SA2
	Communicate possible needs for alignment or improvement with the corresponding standardization forum.	SA1 & SA2
Enhanced privacy support in location services	Generate Technical Report on Enhanced privacy support in location services	SA2
Relationship between Location Services and the Presence Service	Study the relationship between Location Services and the Presence Service	SA2 & SA1
Password and Requestor handling in location services Compliant to the Japanese guideline	Introduce Password concept and Introduce Requestor Originator concepts according to national regulatory guidelines	SA1 & SA2 & SA3
	Stage 3 of Password concept, MAP and Uu changes	CN
	Stage 3 of Requestor concept, MAP and Uu changes	
