

**Work Item Description**

**Title: LCS Enhancements Related to Location-Based Services**

**1 3GPP Work Area**

X	Radio Access
	Core Network
	Services

**2 Linked work items**

- SP-040682 Location Services Enhancements Rel-7 (LCS-R7)

**3 Justification**

Proposed LCS offerings are migrating beyond the initially targeted Emergency Services toward offerings that provide Location-Based Services (LBS). These LBS will require information to be communicated that is not accounted for in current specifications. Additionally, Emergency Services are characterized by a single request for position resulting in a single position report. In contrast, many LBS will require multiple reports of an UE's position with varying update rates. Some of these requests may be call independent location requests i.e. requests for a mobile's position when the mobile is not on an active call. Changes to the current specifications could alleviate the consequences of increased messaging traffic and provide the capabilities required for a feature rich LBS offering.

Specifically, LBS such as mobile tracking, turn-by-turn directions and point-of-interest finding require knowledge of the speed and direction of travel of the UE. As an example, this requirement could be achieved by providing the ability to report the velocity (speed and bearing) of a UE. As potential solutions to mitigate the increased messaging and the resultant increased bandwidth required for frequent location updates, modifications such as implementation of periodic position reporting could be considered.

Complementary work items that provide for LCS enhancements expected for release 7 have been approved in SA1 (SP-040682), SA2 (S2-050406), and GERAN (GP-050265).

**4 Objective**

This work item will encompass specification changes that will augment the ability to offer LBS by, for example:

- Enhancing the range and accuracy of information required by LBS, or
- Mitigating the network impacts encountered by the increased usage of LBS.

**5 Service Aspects**

The current work item proposes to improve the feature sets available to location services.

**6 MMI-Aspects**

None/Text

**7 Charging Aspects**

None/Text

**8 Security Aspects**

None/Text

**9 Impacts**

<b>Affects :</b>	<b>UICC apps</b>	<b>ME</b>	<b>AN</b>	<b>CN</b>	<b>Others</b>
<b>Yes</b>		X	X	X	
<b>No</b>	X				
<b>Don't know</b>					X

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

<b>New specifications</b>						
Spec No.	Title	Prime resp. WG	2ndary resp. WG(s)	Presented for information at plenary#	Approved at plenary#	Comments
<b>Affected existing specifications</b>						
Spec No.	CR	Subject		Approved at plenary#	Comments	
TS 25.305		Stage 2 functional specification of User Equipment (UE) positioning in UTRAN		TSG RAN # 30	R2	
TS 25.331		Radio Resource Control (RRC) protocol specification		TSG RAN # 30	R2	
TS 25.410		UTRAN Iu Interface: General Aspects and Principles		TSG RAN # 30	R3	
TS 25.413		UTRAN Iu interface RANAP signalling		TSG RAN # 30	R3	
TS 25.453		UTRAN Iupc interface Positioning Calculation Application Part (PCAP) signalling		TSG RAN # 30	R3	

**11 Work item rapporteur(s)**

Ben Rodilitz, SiRF Technologies  
[BRodilitz@SiRF.com](mailto:BRodilitz@SiRF.com)

**12 Work item leadership**  
3GPP TSG RAN (WG2)

**13 Supporting Companies**

SiRF, QUALCOMM, TruePosition, Andrew

**14 Classification of the WI (if known)**

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

14a The WI is a Feature: List of building blocks under this feature  
(list of Work Items identified as building blocks)

14b The WI is a Building Block: parent Feature

**Location Services Enhancements Rel-7 (LCS-R7)**

14c The WI is a Work Task: parent Building Block  
(one Work Item identified as a building block)