Source:	Alcatel, Ericsson, Lucent, Motorola, Nokia, Nortel Networks, Siemens
Title:	Proposed Work Item on Location Services for UMTS
Agenda Item	5.2
Purpose	For approval in TSG S

Location Services has previously been seen as primarily an "emergency call" issue but is now considered as a one of the potential market drivers for UMTS. To make that happen in a multivendor environment, stable and complete standards will be needed.

To speed up the process, source companies see it utmost important to start the standardisation activities in this work item now. Especially air interface lower layers standarisation activity is about to be freezed soon, and necessary functions and capabilities have to be included there (L1 and L2) to later avoid possible incompatibility problems.

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Work Item Description

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1. TITLE

Location services in UMTS

2. INTENDED OUTPUT

Technical specification(s).

3. IMPACT ON OTHER TECHNICAL SPECIFICATIONS AND TECHNICAL REPORTS

Several existing core protocol specifications need to be modified based on output of this work item.

T1P1 has worked on location services in GSM already for a long time and quite stable specifications on location services are available as an outcome of that work, namely GSM 02.71, 03.71 and 04.71. These specifications for phase 1 location services in GSM are up for approval in June 1999. A related specification is also GSM 03.32, which specifies the Universal Geographical Area Description.

RAN WG2 has produced a "Report on Location Services (LCS)", 3G TR 25.923, version 1.0.0, which should be used as input in the further work on location services in UMTS.

The stage 1 service requirements for location based services in UMTS has to be elaborated based initially on input from GSM 02.71 and the LCS requirements of UMTS 22.105, 23.10 and 23.20. The first results of such work are documented in the report 3G TR 25.923. The current version of GSM 02.71 does not cover all the requirements expressed in the above apecifications - e.g. packet services are not yet incorporated - and need to be added for UMTS.

Stage 2 of LCS is being elaborated for GSM in GSM 03.71.

4. TECHNICAL SCOPE

The requirement is to have a similar architecture for GSM (GSM LCS phase 2) and UMTS and the general principle is to hide radio network aspects from the core network.

In 2G mobile system there are various location services being developed to identify the geographical position of a mobile terminal. UMTS is required to provide enhanced location services, both regarding accuracy and regarding service capabilities. To achieve this, it is important to consider the basic requirements for the support of location services already in Release '99.

The development of location based services in UMTS should be based on the existing GSM specifications and it should be identified what aspects needs further study and what modification are needed because of the new radio interface and the architectural differences between 2nd and 3rd generation systems.

5. IMPACT ON OTHER 3GPP WORK ITEMS AND WORK GROUPS

Location based services in UMTS is proposed to be established as a Work Item throughout 3GPP, under the coordination of TSG SA S2. The stage 1 Service Description Specification for location based services in UMTS shall be developed by TSG S1 and TSG S2 shall develop Stage 2. TSG S3 shall investigate the security implications and TSG S5 NMS issues. The TSG R and TSG T WGs (at least R1, R2 and R3 and T2) shall take the requirements on location services into account when developing the radio access and functional specifications.The most urgent issue is the required modifications to layer 1 to support the required measurements for terminal location calculation.

6. SCHEDULE OF TASKS TO BE PERFORMED.

The goal of the task is to have UTRAN part of the specificatoins to be completed in time for Rel99 and the complete set of the specifications for Rel00.

To achieve this the WI shall be approved June 99 and the work started immediatelly.

7. SUPPORTING INDIVIDUAL MEMBERS

Alcatel, Ericsson, Lucent, Motorola, Nokia, Nortel Networks, Siemens

8. RAPPORTEUR

Nokia's rapporteur candidate is Jan Kåll.