

Source: Orange PCS Ltd
Title: Requirements for open interfaces in LCS
Document for: Discussion
Agenda Item:

Introduction

The GSM/GERAN Release 99 specifications for Location Services include the definition of a standalone SMLC. This is supported through standardised interfaces between the SMLC and the MSC, and the SMLC and the BSC. In contrast, the current UTRAN Release 4 architecture for Location Services does not include a standalone SMLC; instead, the SMLC functionality is integrated into the RNC.

This difference in architectures and the lack of open interfaces supporting a standalone SMLC is a cause for concern for a number of operators, and is the reason for this workshop. This paper articulates the requirements for a standalone SMLC.

Requirements

Orange has the following requirements for the Location Services architecture:

- Decomposition and separation of network functions, as described in 3G TR 23.821 V1.0.1, Services and System Aspects; Architecture Principles for Release 2000. The TR 23.821 also includes a list of "Separate functions that are likely to evolve independently" (23.821 chapter 5.1), which includes location-based service functionality. This separation allows LCS functionality to evolve independently from core RNC services;
- The ability to select an SMLC vendor independently of the RNC/BSC vendor, allowing 'best of breed' vendor selection;
- The ability to deploy SMLCs which support both GERAN and UTRAN, thus reducing deployment costs and management overheads;
- A smooth migration path from 2G to 3G LCS, allowing re-use of the SMLCs currently under development;
- The ability to deploy one SMLC serving many BSCs and/or RNCs to allow deployment of SMLCs according to service requirements and growth;
- Not limiting an operator's deployment options, for example, we do not want to be forced to buy an SMLC function with every RNC.

Conclusion

The requirements identified above can be met by introducing the stand-alone SMLC and associated interfaces which already exist in the GSM/GERAN LCS architecture into the UMTS/UTRAN LCS architecture. Therefore the stand-alone SMLC is a required part of the 3GPP specifications.