

GERAN LCS Standardization



LCS Workshop

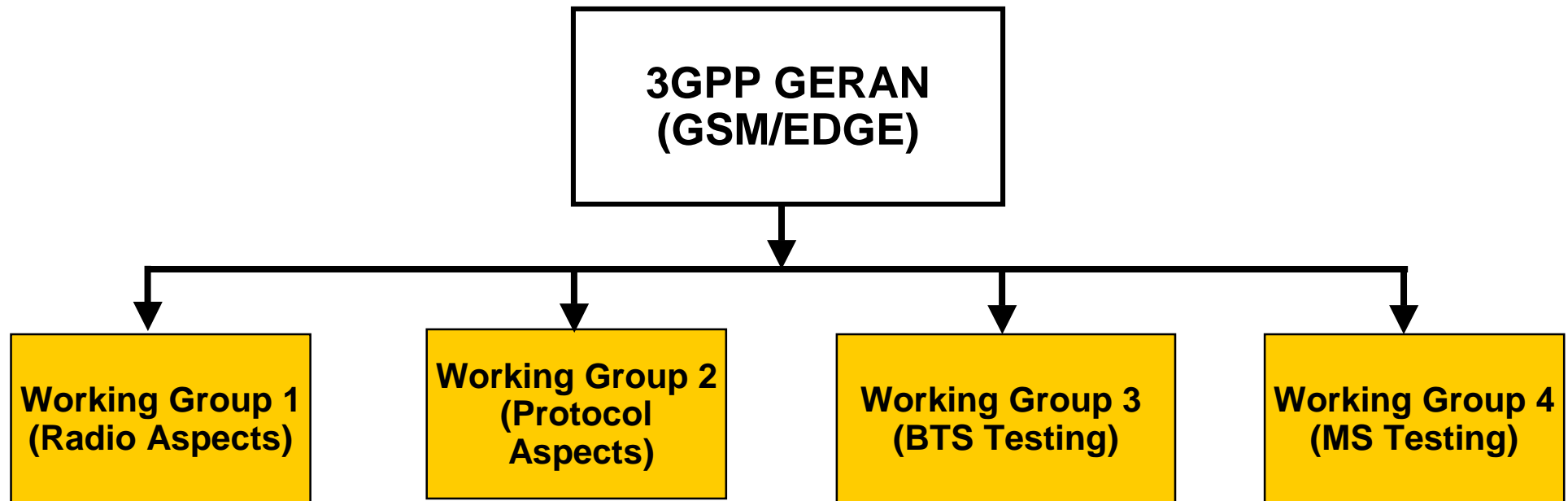
January 11-12, 2001

Margaret Livingston

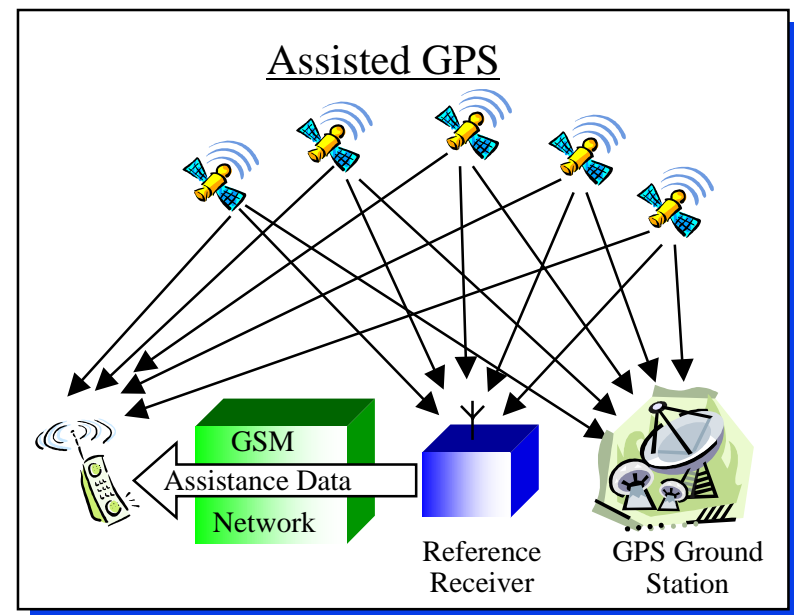
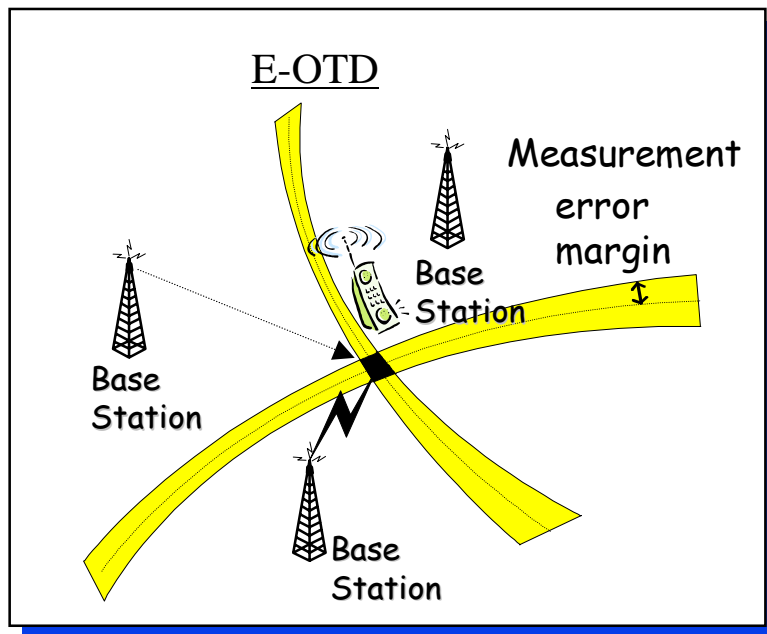
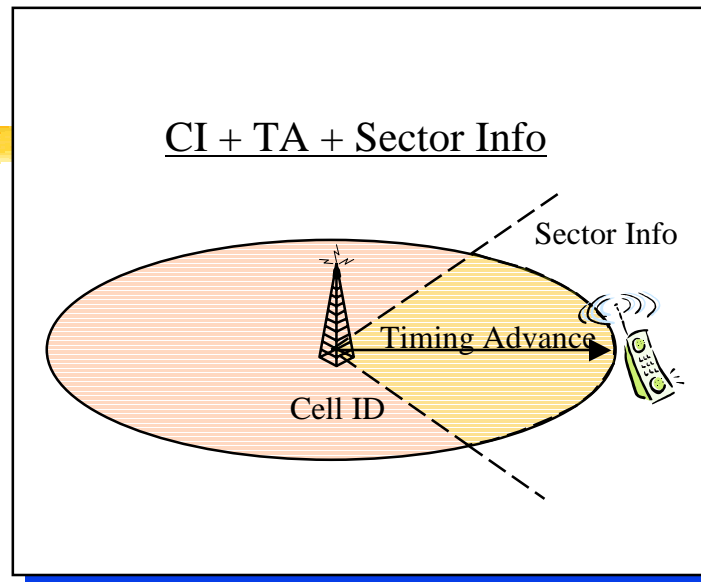
Nokia

GERAN

GSM/EDGE Radio Access Network



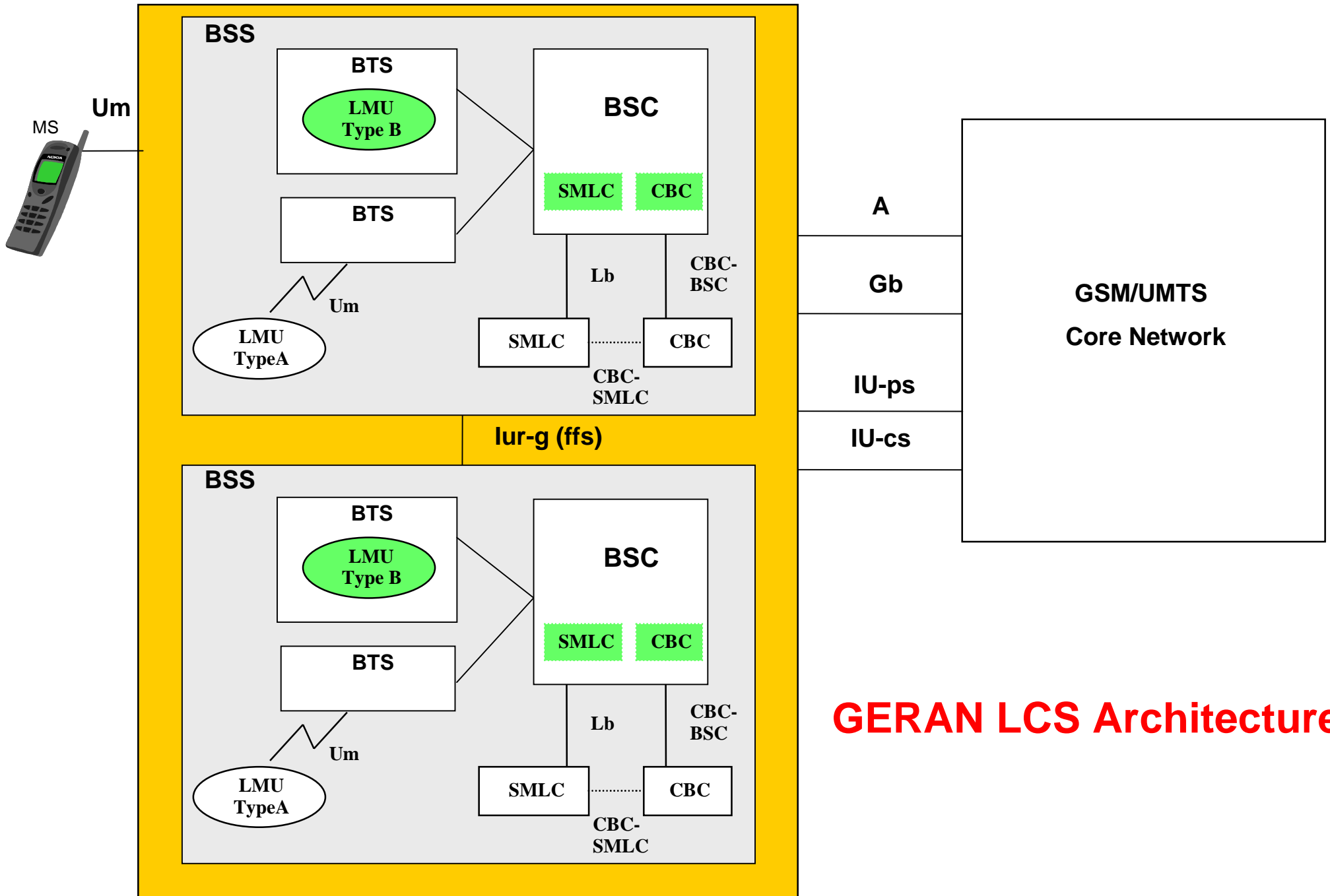
GERAN LCS Position Methods



GERAN LCS Ad-Hoc



- GERAN LCS Stage 2 : TS 43.059 Description of location Services in GERAN (R00)
 - Defines the GERAN LCS architecture, functional entities and operations to support location methods.
 - Describes aspects of LCS within the GERAN only. (Not in Core Network)
 - Specification covers the GERAN LCS functional model and entities, the location methods, state descriptions, and message flows



GERAN LCS Architecture

GERAN LCS Ad-Hoc



■ Work Items:

- GP-000918: Work Item Description for Building block: Location Services (LCS) for GERAN in A/Gb Mode (April 2001)
- GP-000919: Work Item Description for Building block: Location Services (LCS) for GERAN in Iu Mode (June 2001)
- GP-000456: Work Item Description for Building block: LCS interoperability aspects to GERAN
- GP-000458: Work Item Description for Building block: GERAN MS Conformance test for LCS
- GP-000459: Work Item Description for Building block: GERAN BTS Conformance test for LCS

■ Work Item Rapporteur: Margaret Livingston, Nokia

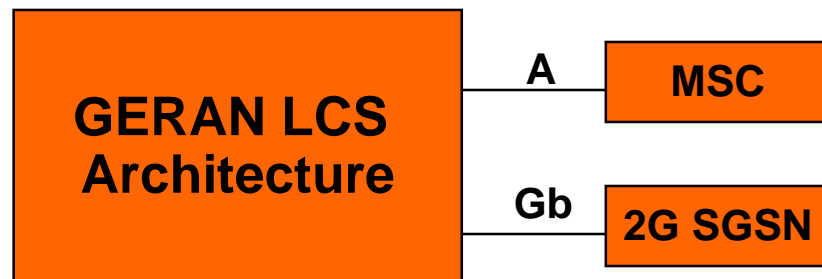
GERAN LCS Objectives



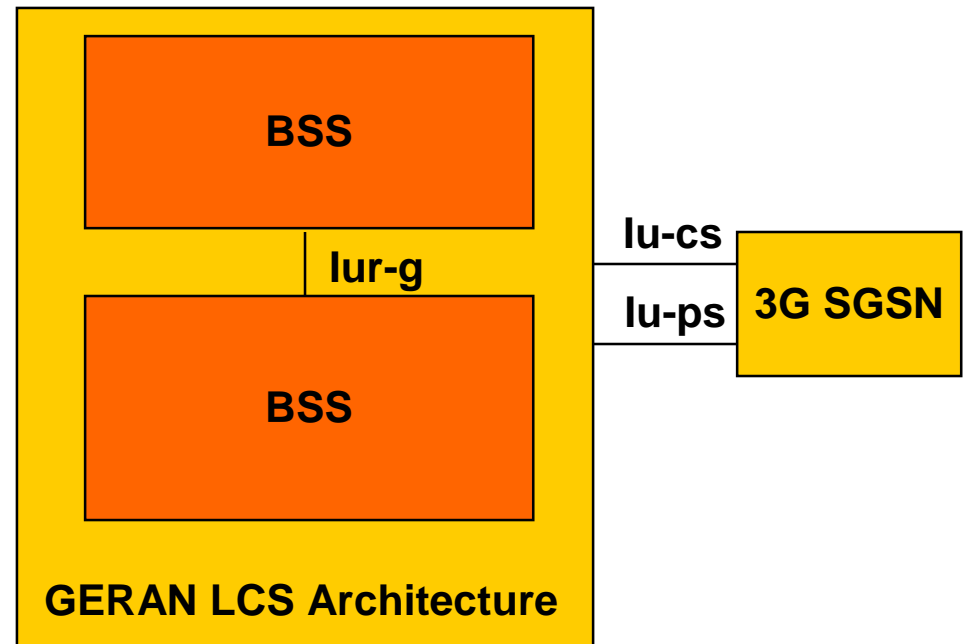
- Implement GERAN LCS Release 4
- LCS in packet switched GERAN
- Small amount of changes to the existing GPRS specifications
- Backward compatibility with GSM LCS
R'98 & '99 BSS architecture is required.
- Support for circuit switched and packet switched modes (i.e. GPRS)

GERAN LCS Objectives (cont.)

- There are two main efforts that can be identified for LCS in 3GPP TSG GERAN.



1. A/Gb mode: LCS support on packet-data channels and over the A/Gb interface.



2. Iu mode: LCS support over the Iu-ps, Iu-cs, Iur-g interfaces.

GERAN LCS Work Item

A/Gb mode



- **Major work tasks are identified as high priority items:**
 - GERAN LCS Stage Two (first release)
 - A/Gb interface support for LCS
 - Lb interface support for LCS in GPRS
 - Broadcast of LCS data on packet channels
 - Cipherring of LCS in GPRS
 - Miscellaneous impacts from the new LCS Stage Two (23.271)

GERAN Work Item - IU Mode



- GERAN LCS stage 2 (second release)
- Iu-ps interface support for LCS
- Iu-cs interface support for LCS
- Iur-g interface support for LCS
- Additional impacts on Broadcast of LCS data on packet channels
- Miscellaneous impacts from the new LCS Stage Two (23.271)

GERAN LCS Schedule



■ GERAN LCS: A/Gb Mode

- GERAN #2 GERAN LCS Stage 2, version 1.0.0 November 2000
- GERAN #4 GERAN LCS Stage 2, version 4.0.0 April 2001
- GERAN #5 GERAN LCS Stage 3, complete May/June2001

■ GERAN LCS: IU Mode

- GERAN #6 GERAN LCS Stage 2 August 2001
- GERAN #7 GERAN LCS Stage 3 November 2001

Concerns



- Proposed changes to the agreed overall LCS architecture will impact the current GERAN LCS work
 - Disturbing the distribution of LCS work, I.e. creating overlaps in the 3GPP fundamental where the work is clearly separated by Radio Access Network & Core Network.
 - Release 4 LCS schedule delays
 - Reduces GPRS enhancements for LCS in Rel. 4

Conclusion



- 2 main efforts that can be identified for LCS in 3GPP TSG GERAN
 1. A/Gb Mode (GERAN - MSC & 2G SGSN)
 2. IU Mode (GERAN - 3G SGSN)
- GERAN Stage 2- 3GPP TS 43.059: April 2001
- GERAN LCS is concerned with changes to the overall LCS architecture for Release 4.