

Pre-seminar, MLS Amsterdam, 2002

LIF Interoperability; standards and test procedures

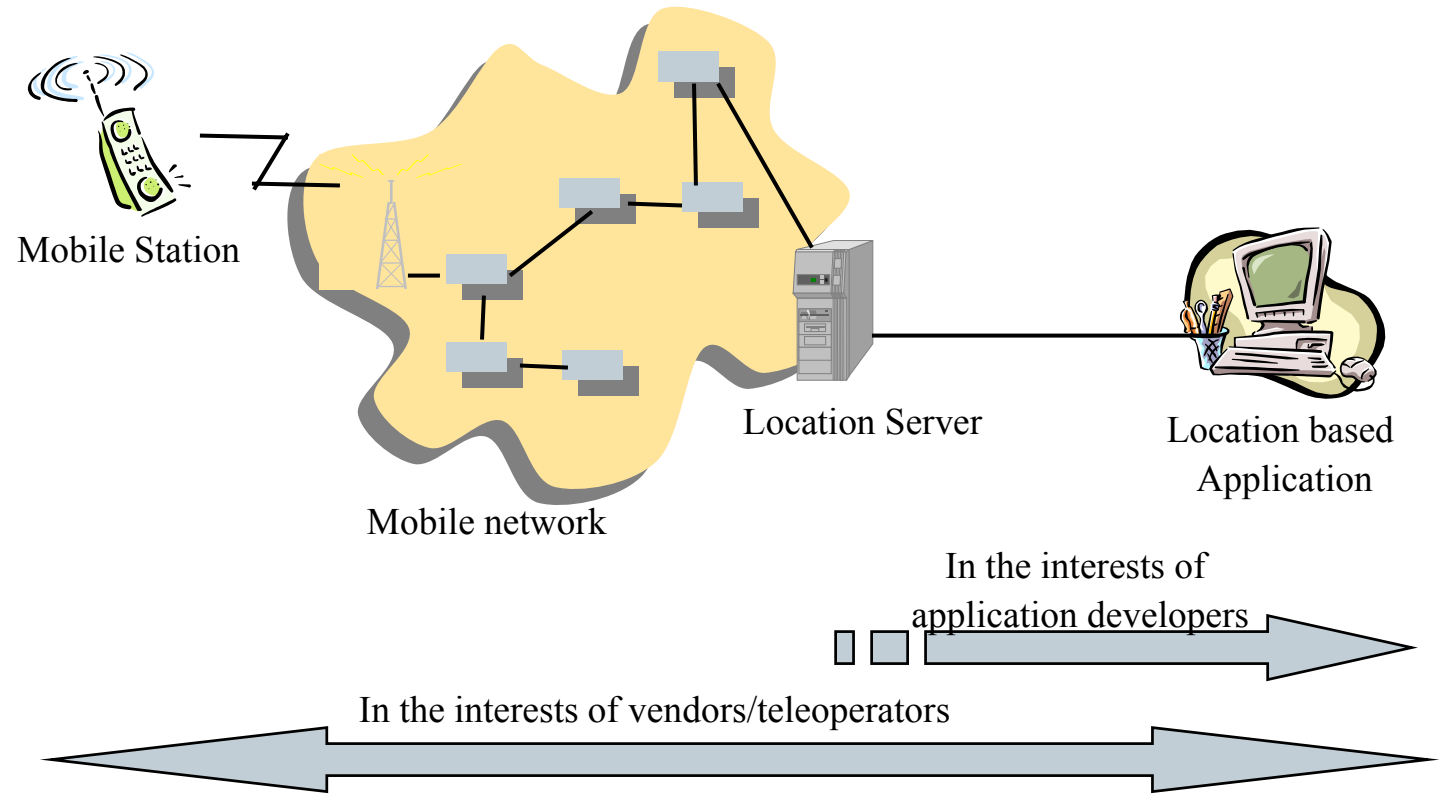
May, 7th 2002

Veijo Vanttinen

veijo.vanttinen@locusportal.com



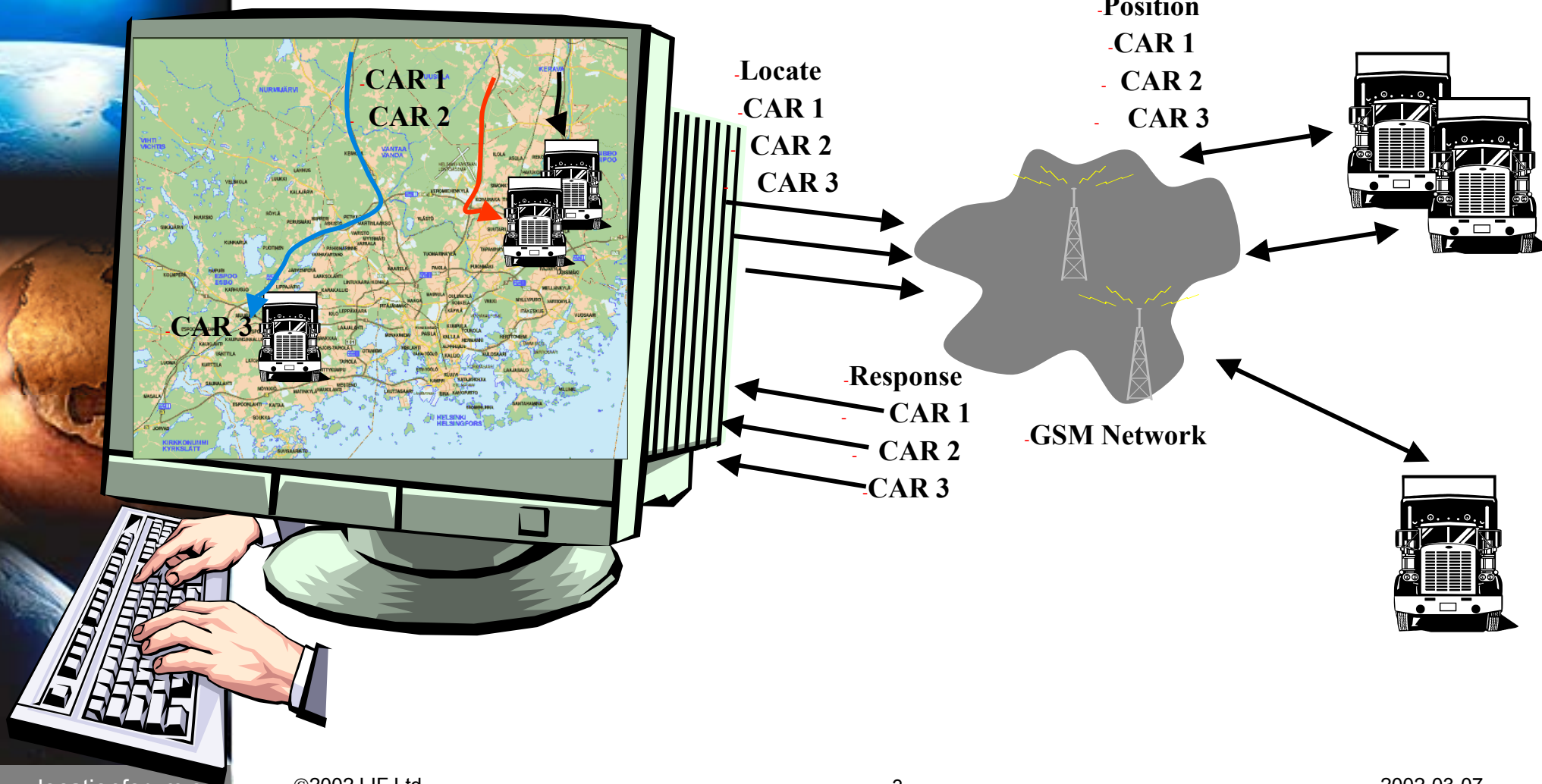
Interoperability Testing Group (ITG)



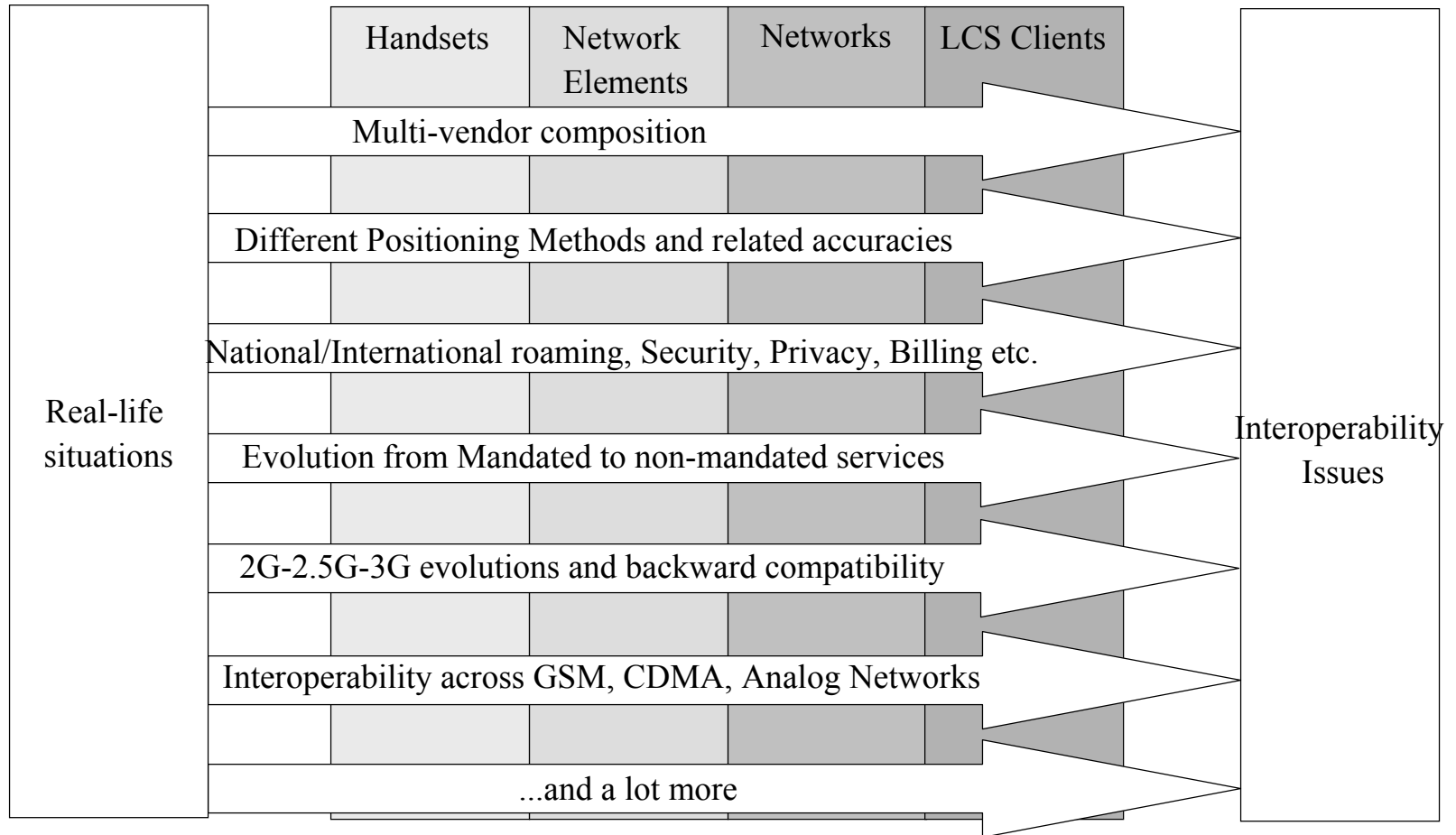
- Public LIF ITG documents available at:
<http://www.locationforum.org/publicdownload>

Why is interoperability testing important?

- Example scenario; multiple MT-LR



LCS Interoperability Issues

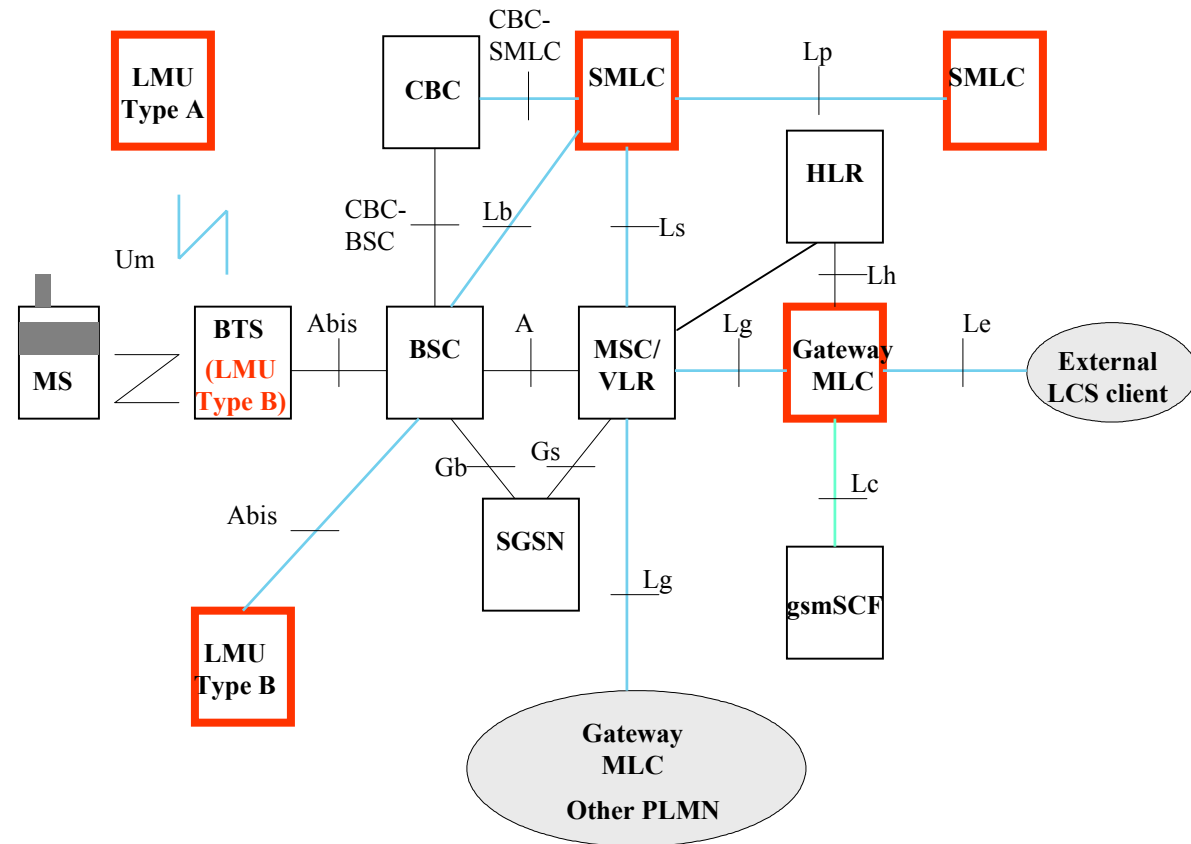


The scope of LIF ITG Work

- WI#2
 - LCS Interoperability test specification in GSM
- WI#3
 - MLP test specification
 - test environment to test MLP procedures for application developers
- Other work areas
 - CDMA test specifications
 - accuracy verification (FCC phase II)

The scope of WI#2 work

- Test suites against GSM Release 98/99, now
- 3GPP Release 4 work, autumn 2002

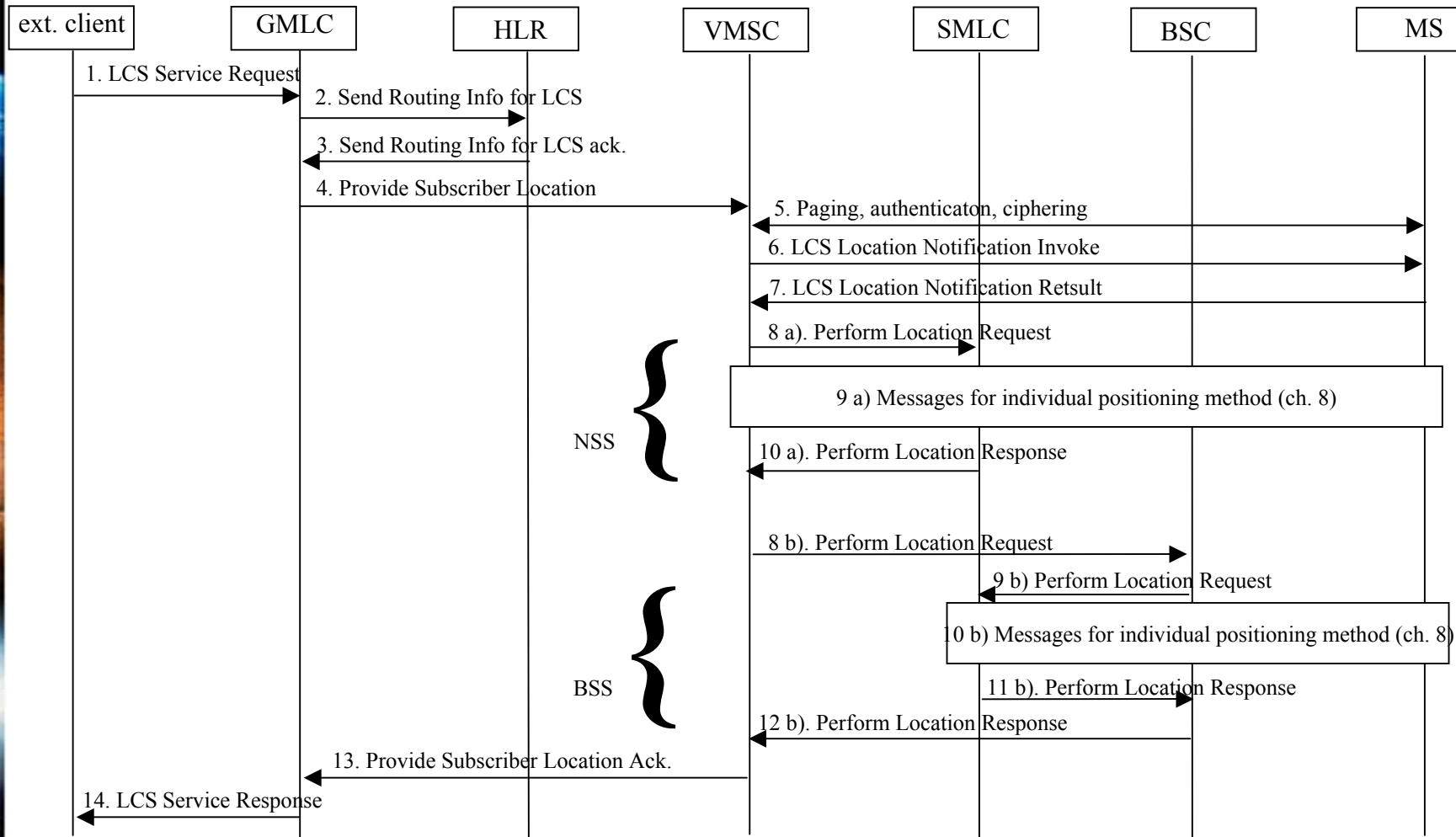


WI#2; LCS IOT specification

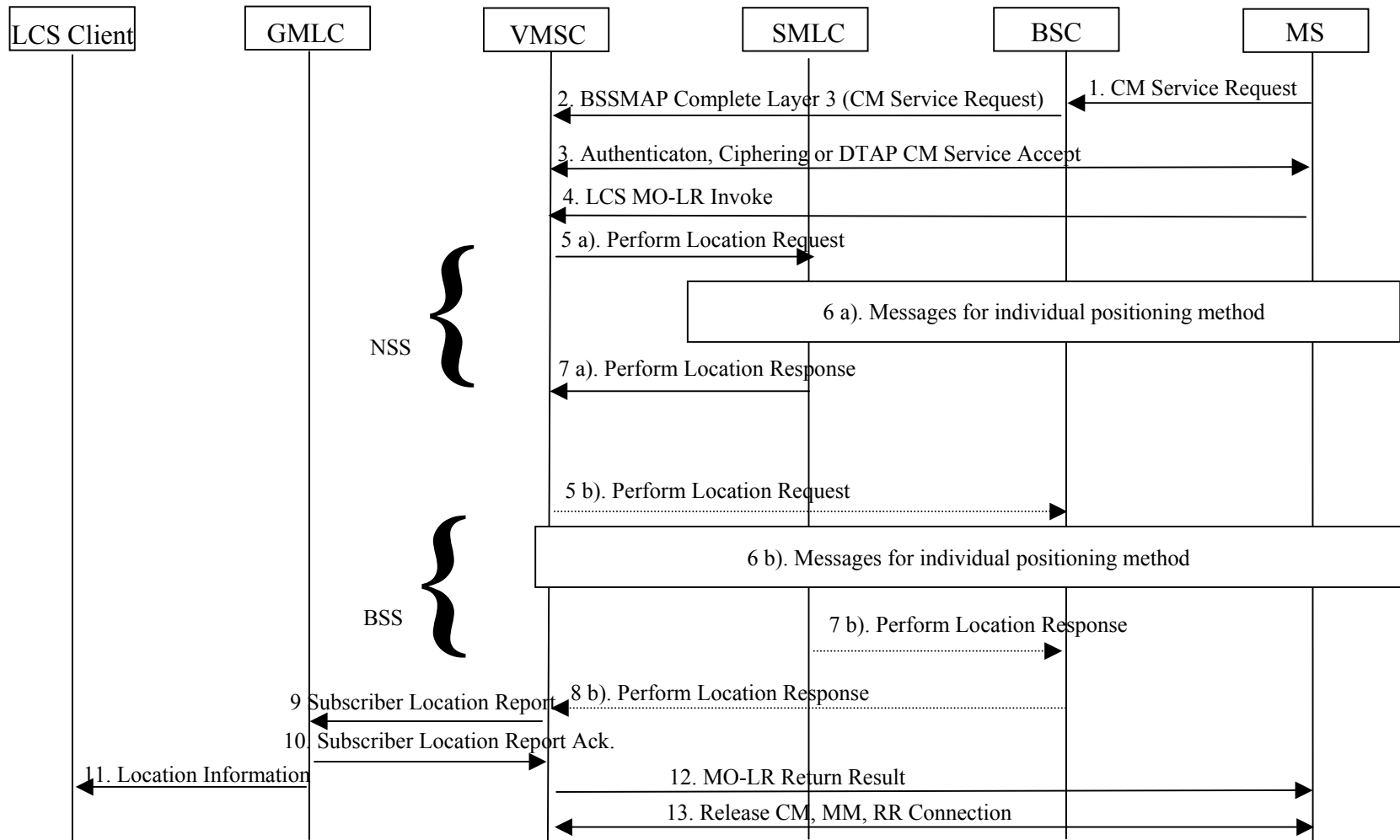
- Test cases cover
 - Mobile Terminated Location Request (MT-LR)
 - Mobile Originated Location Request (MO-LR)
 - Network Induced Location Request (NI-LR)

 - Tests for positioning methods (TA, E-OTD, A-GPS)
 - Lp interface tests (RIT, Deciphering Keys)

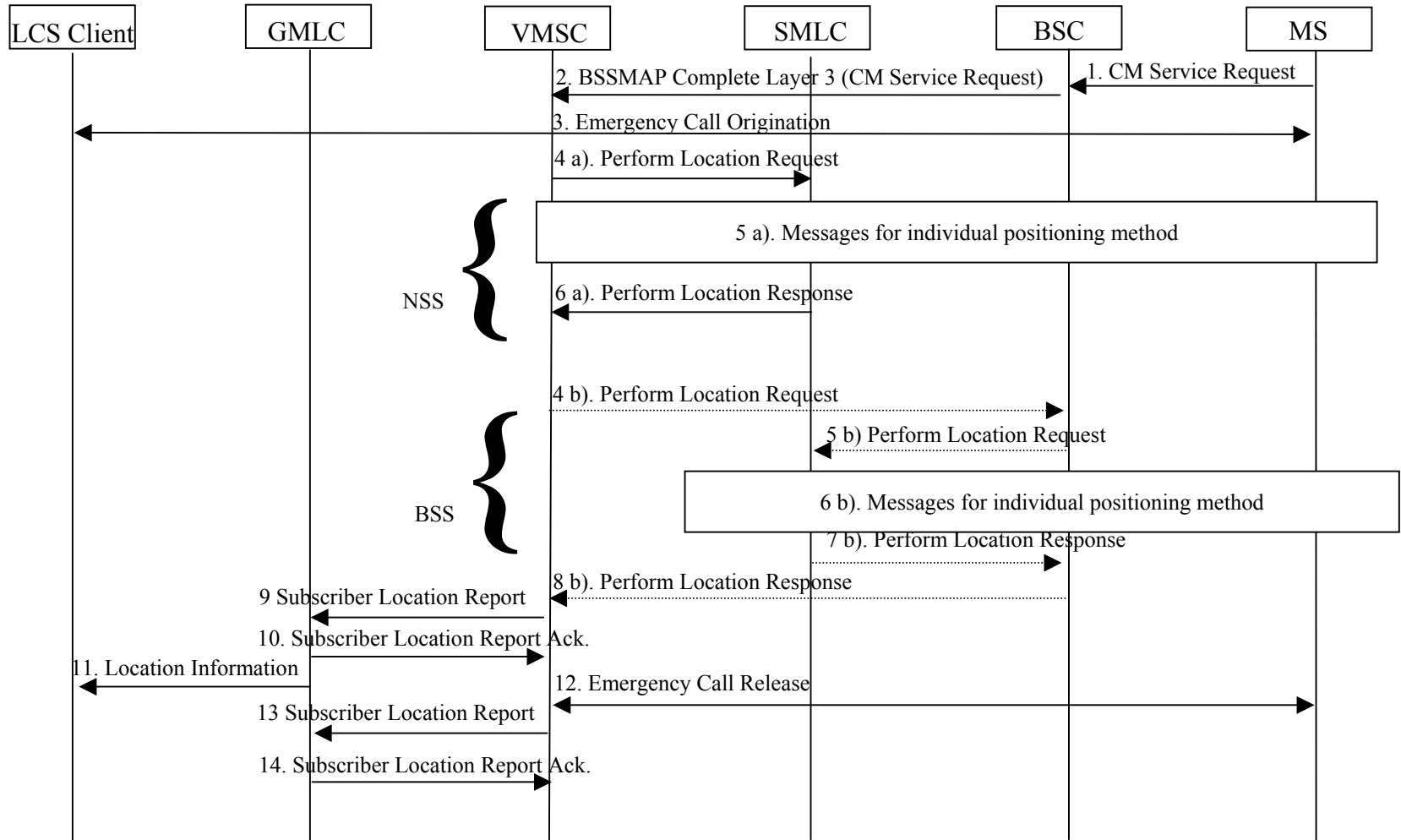
Example 1: Mobile Terminated Location Request (MT-LR)



Example 2: Mobile Originated Location Request (MO-LR)



Example 3: Network Induced Location Request (NI-LR)

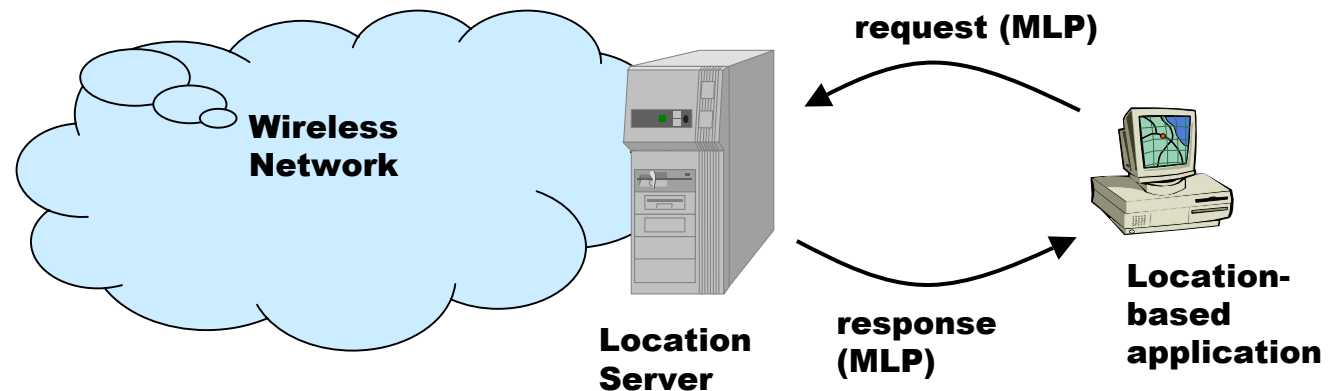


The scope of WI#3 work

- Test suites against MLP 3.0.0
- Test environment for application developers (downloadable from LIF website)
- A process whereby LIF can store completed tests

Test suites against MLP 3.0.0

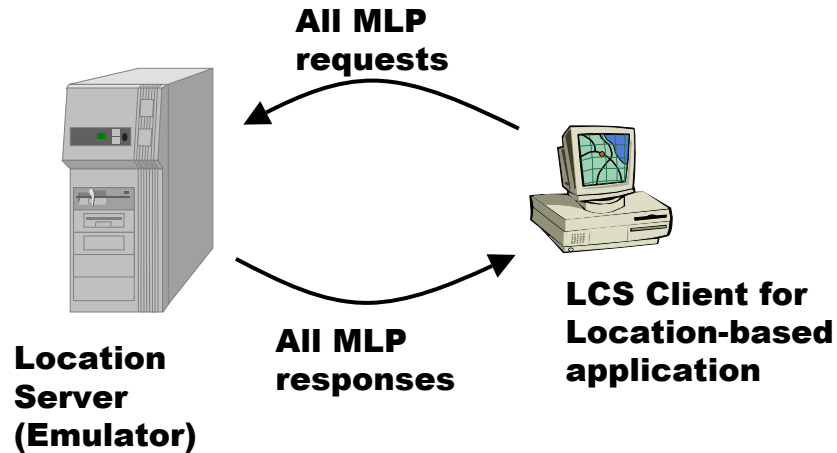
- LIF MLP 2.X.X, work has been started



WI#3; MLP Compliance Test Specification

- Test suites for
 - Standard Location Immediate Service, using the following messages:
 - Standard Location Immediate Request
 - Standard Location Immediate Answer
 - Standard Location Immediate Report
 - Emergency Location Immediate Service, using the following messages:
 - Emergency Location Immediate Request
 - Emergency Location Immediate Answer
 - Standard Location Reporting Service, using the following messages:
 - Standard Location Report
 - Emergency Location Reporting Service, using the following messages:
 - Emergency Location Report
 - Triggered Location Reporting Service, using the following messages:
 - Triggered Location Reporting Request
 - Triggered Location Reporting Answer
 - Triggered Location Report
 - Triggered Location Reporting Stop
 - Triggered Location Reporting Stop Answer

Test Environment for MLP interface testing



Future ITG work

- CDMA test specification
 - similar test specification as in GSM (LIF TS 202) to be created
- E-911 Phase II Compliance Verification Procedures For Mobile Phones
 - These verification procedures may be used by all the handset manufacturers and carriers to show compliance of handset-based location technologies with the FCC E-911 Phase 2 requirements.
- LCS IOT specifications based on 3GPP release 4, 5, 6,..
- New Privacy, Roaming, Charging aspects to be covered

Challenges with Privacy handling

- LIF Privacy Guidelines
- 3GPP, several privacy issues such as
 - enhanced privacy handling
 - GMLC – GMLC communication etc.
- EU directive still to come (end 2002?)

Challenges with Roaming

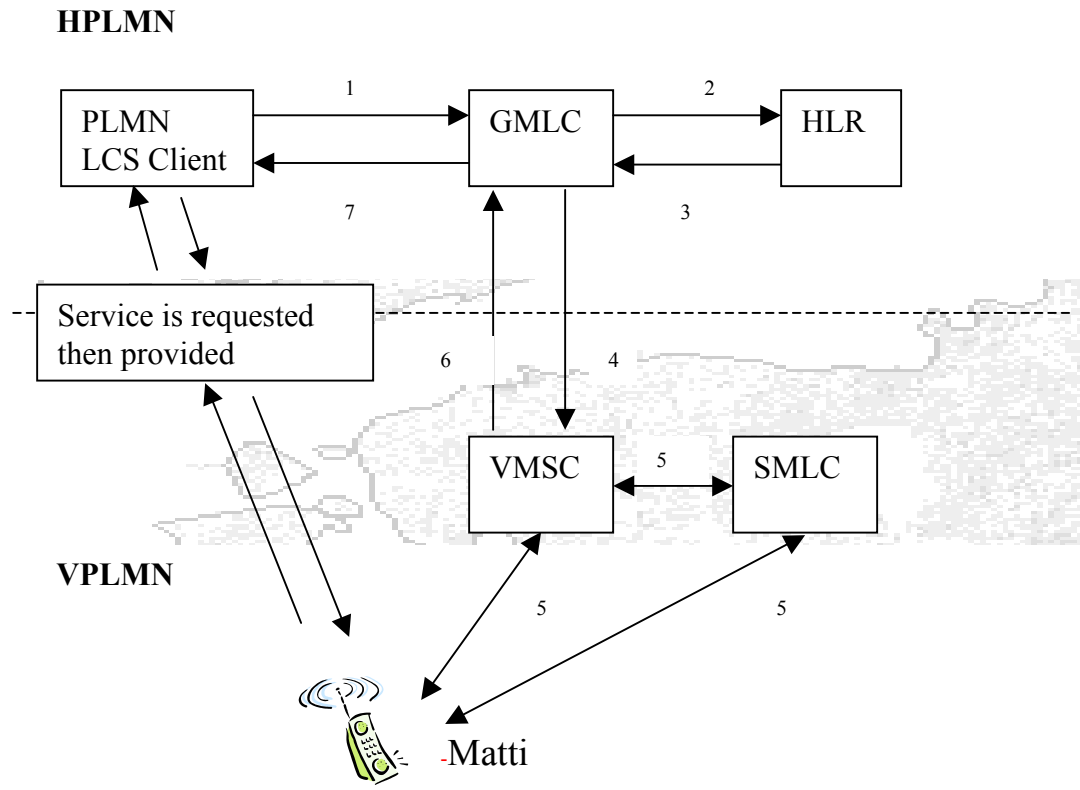
- ▶ Location Based Services to be supported
 - Point of Interest,
 - Community Services,
 - Fleet Management,
 - Emergency Services

▶ A few examples



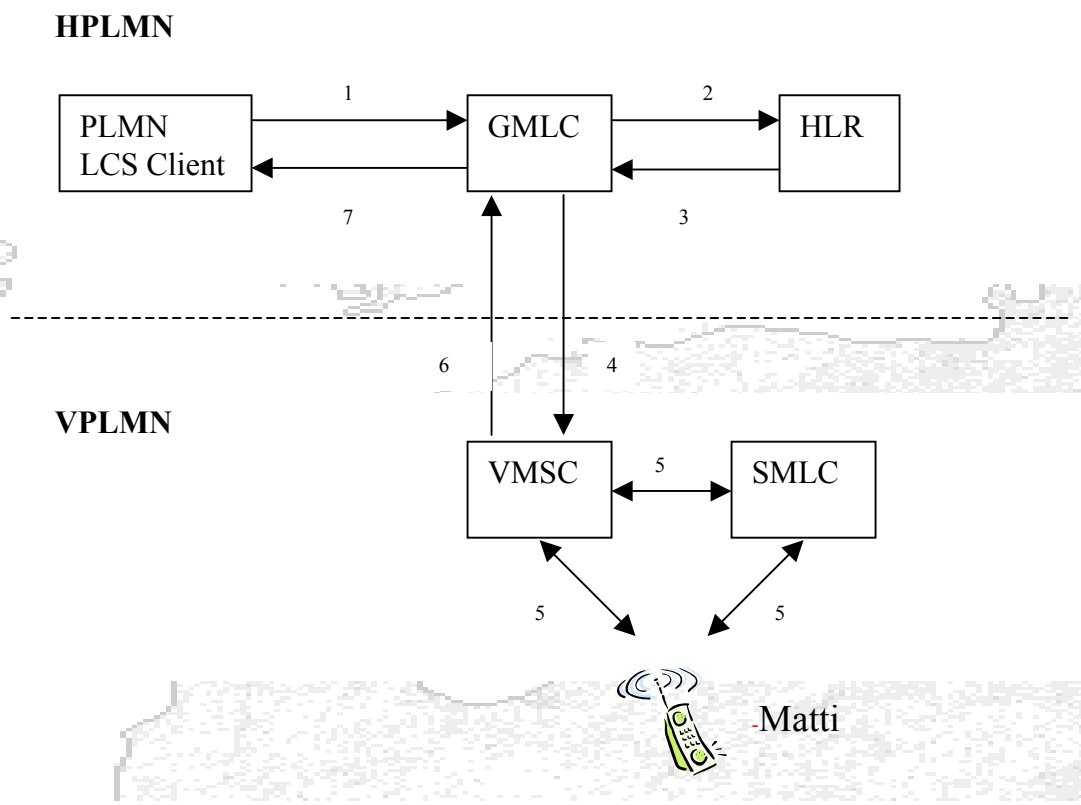
Point Of Interest

A roaming subscriber wants to access a service provided by its **HPLMN**



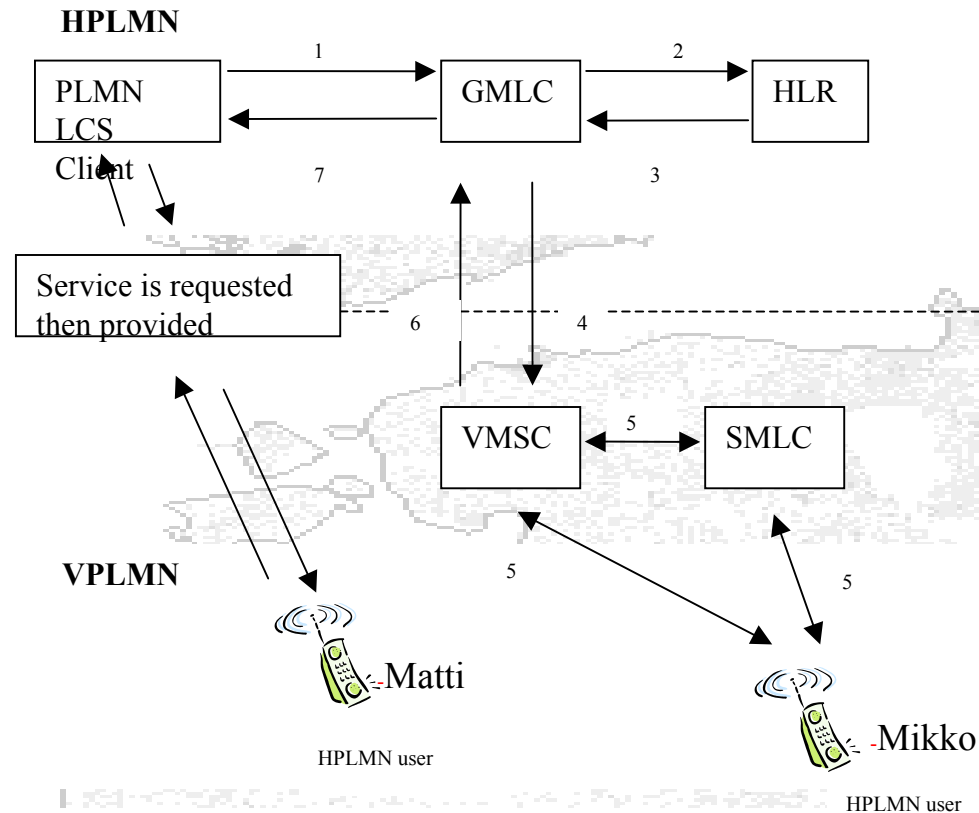
Fleet Management

An LCS Client from the HPLMN wants to locate a roaming subscriber in the VPLMN



Community Services

A roaming subscriber wants to locate another roaming subscriber from the same network in the VPLMN.



Challenges with Charging

- Many players, complicated value chains

