Location Interoperability Forum (LIF)

Mobile Location Services (MLS) is being recognized as an enabler of new revenue, personalization, safety and convenience services for consumers, network operators, and service providers worldwide.

MLS is a collection of enabling technologies and applications that:

1. Estimate the location of a mobile device
2. Derive, customize, and personalize information (contents) based on the device's location and user preferences
3. Deliver the information to the interested parties, devices, or network equipments.
4. Collect and deliver charging data

The success of MLS relies on making location information available and easily and securely accessed by mobile applications. ***Interoperability,*** availability of useful applications and contents, and protection of end user ***privacy*** are the backbone of this evolution. Main interoperability aspects include:

1. ***The interface between the wireless network and applications:*** Applications should use one interface obtain location information from any wireless network irrespective of whether the network is GSM, CDMA, TDMA, etc., and the positioning technology used.
2. ***The interface between the application and content engines and databases:*** Applications should also be able to use one interface to access contents.
3. ***Roaming***: Users should have the same experience, performance and quality whether they access the service in the home network or when visiting other networks
4. ***Billing and revenue sharing***: Network operators, application providers, and contents provider, should be able to bill for their services and share revenue amongst themselves.

Given the concerns surrounding privacy and security, it is extremely important to develop trust models between the service provider and the end user. This can be achieved by:

1. Data Security: developing secure and effective methods for interfacing to subscriber profiles, location information, billing, etc.
2. Access Security: secure the APIs between the application and the network.
3. Satisfy regulatory guidelines

End users may have the desire for using location services but fear for unwanted misuse of their location information. Security and Privacy requirements have to be clearly specified for "home" and "roaming" environments.

Recognizing this crucial need, Motorola, Ericsson, and Nokia have established the Location Interoperability Forum (LIF) in September 2000, over 100 companies have joined LIF since then representing a mix of network operators, equipment and handset manufacturers, application developers and providers, and contents providers.

LIF's purpose is to define and promote an interoperable location services solution that allows user appliances and internet-based applications to obtain location information from the wireless networks independent of their air interfaces and positioning methods. Current LIF focus include:

1. Define a simple and secure access method that allows user appliances and Internet applications to access location information from the wireless networks irrespective of their underlying air interface technologies and positioning methods.

2. Promote a family of standards-based location determination methods and their supporting architectures, that are based on CellSector-ID, Cell-ID and Timing Advance, E-OTD (GSM), AFLT (IS-95), and Assisted-GPS.

3. Work with industry experts and organizations to define/adopt common solutions that facilitate billing and revenue sharing of location services and applications in multi-network, multi-vendor and multi-service environments.

4. Work with industry experts and organizations to define/adopt common solutions that facilitate provisioning of location services and applications in a multi-network, multi-vendor and multi-service environments.

5. Establish a framework for contributing to the global standard bodies and specification organizations to define common methods and procedures for the testing and verification of the LIF-recommended access method and positioning technologies.

LIF is not a standards setting organization, rather it is a standards influencing organization. LIF will work with standards setting organizations to ensure solutions Interoperability.

LIF's structure consists of the following:

Management Board: Consists of Founding Members. Its main functions include Approving budget and membership fees, approving working procedures and PR policy, responding to network operators needs, controls "essential" and "sensitive" liaisons to external organizations.

Network Operator Advisory Group (NAG): Membership in this group is limited to Network Operators who signed LIF membership agreement. NAG guides LIF work to ensure that products and services made by LIF members will satisfy market needs and will be widely adopted

Standards Influencing Group (SIG): Creates LIF contributions to Global Standards and Technical Specifications setting organizations according to directions from the LIF Working Groups and the LIF Management Board. SIG produces LIF deliverables in the form of proposals or recommendations to external organizations such as e.g. IETF, 3GPP, W3C, WAP Forum, TR45, …

Interoperability and Testing Group (ITG): Defines recommendations for compliance test specifications that need to be created by Global Standards and Technical Specifications setting bodies. It also defines appropriate interoperability and accuracy test settings and procedures based on compliance test specifications

Public Relation Group (PRG): Tracks LIF related IPR in order to ensure, that IPR incorporated in LIF endorsed standards and technical specifications can be made available under 'fair and reasonable' conditions to LIF members.

Intellectual Property Tracking Office (IPG): A standing committee that will define LIF PR policy and is responsible for LIF communication to the outside world, e.g. LIF joint press releases, conference presentations, etc.

For more information, please visit www.locationforum.org

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