Project information FACT SHEET 19132

19132 Geographic information – Location based services – Reference model

The ‘Location based services reference model’ project is a follow up on the possible standards project, which was tasked with investigating the need for standards to facilitate the development and promotion of the emerging class of applications regarded as location based services (LBS). This standard takes the result of this earlier project and builds a framework for the support of the integration of LBS and GIS systems and services.

By their nature, LBS and GIS services are aimed at different users, but share a large portion of their basic understanding of how location works and how users want to work with it.

The term ‘location based service’ (LBS) has been used to define a wide range of applications and often describes situations where mobile users are connected to the Internet via a human-computer interface device, which has access to multiple positioning devices or services. In the broadest sense, a location based service can be regarded as any service, query or process whose return is dependent on the location of the client requesting the service and/or of some other things, objects or persons (often collectively referred to as the targets).

On the other hand, geographic information system (GIS) based services, data and processing do not usually deal with direct interactions with individuals in the field, except possibly in the gathering and proofing of data, and information and the execution of decisions. GIS tends to be interested in the analysis of spatial data for large scale planning and decision support, as opposed to the personal, individual small scale arena inherent in LBS. While demonstrating a disparate nature tied to their different use paradigms, GIS and LBS do have a lot in common, the processing of location as a fundamental issue.

With the mobile services sector of the telecommunications industry has whole-heartedly adopted the concept of location-based services, reliance on geographic data and positioning (integral parts of GIS)are also recognized as integral components of the business models of LBS services.

The danger is that the current vision and the current realities of the wireless networks will lead to standards relevant for today, but that are too distant from each other to be easily converged when a wider vision is recognized and new communication technologies are deployed. There are several technologies involved in location-based services and the potential exists for others to be added. Presently these technologies come from two industry sectors that are seen as competitive, and this is only acceptable to users provided that open standards allow them to integrate these technologies as their particular applications dictate. The necessity to establish a framework for Location Based Services is an urgent requirement to prevent future "stove piping" in Location Based Services' standardization.

The intent for the reference model for location based services is to build an abstract model independent of implementation and communication paradigms that can allow us to build integrated services for today while preparing for the changes in processing and communication realities in the future.

The standard is of particular relevance to the following sectors:

Sector	Of particular interest
Developers of LBS products	Yes
Developers of GIS products	Indirectly through support services and data products
Developers of LBS application systems	Yes
Developers of GIS application systems	Indirectly through the support and publication of GIS specific services
Producers/ suppliers of location data	Yes
Users of geographic data and GIS	Indirectly through services and data products
Developers of standards	Yes

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For further information on this standard and its implementation, please contact ISO/TC 211 secretariat via www.isotc211.org. or the project leader or editor:

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