

agile

Application of Galileo in the LBS environment

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www.galileo-in-lbs.com

AGILE is a project supported by the Galileo Joint Undertaking with funds from the EC's Sixth Framework Programme



Content

- ◆ AGILE
- ◆ Assessment of LBS Applications
- ◆ Market Aspects
- ◆ Technical Achievements
- ◆ Regulation and Standardization
- ◆ Conclusion



AGILE

- ◆ AGILE - Application of Galileo In the LBS Environment - is a two-years project co-financed by the Galileo Joint Undertaking within the EC 6th Framework Programme
- ◆ The main objective of AGILE is the definition of a detailed roadmap for the identification and development of GNSS based applications
- ◆ AGILE puts special emphasis on the integration of EGNOS and Galileo to increase the benefits for users and service providers
- ◆ By analysing the current environment, AGILE points out open issues and offers strategies to overcome obstacles in the technical and non-technical field

AGILE

- ◆ AGILE consists of an industrial consortium of 18 companies and organisations from ten European countries covering all links in the LBS value chain

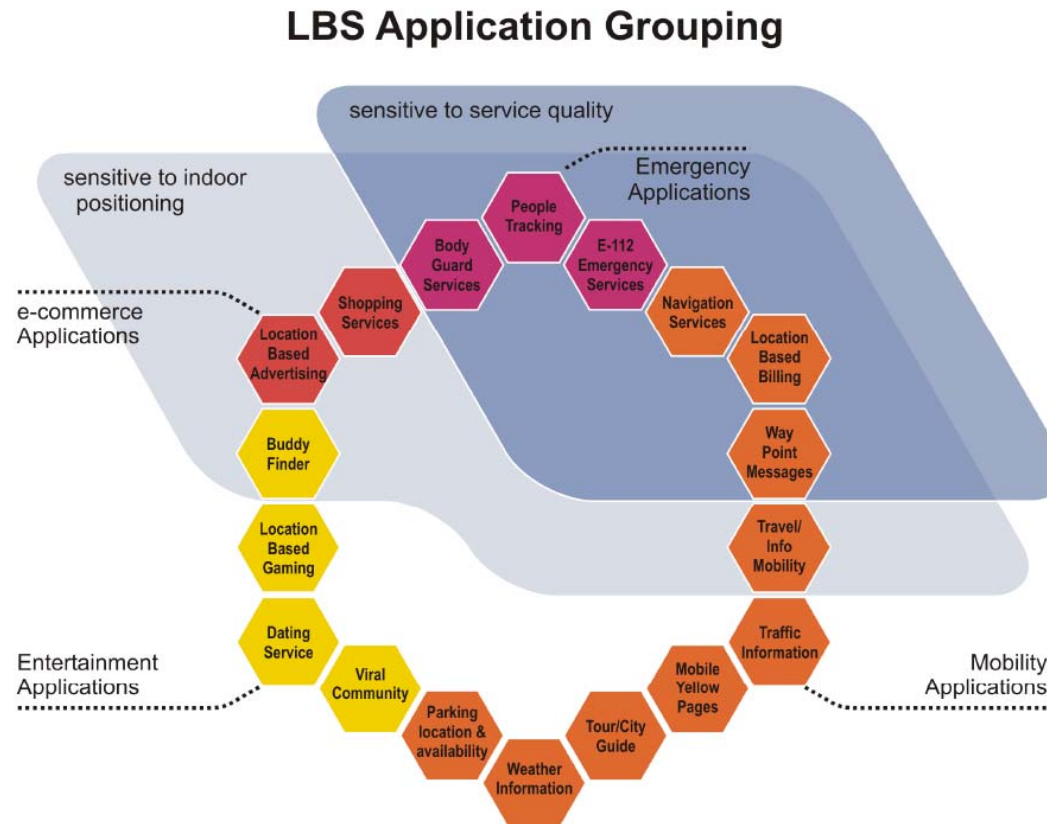


Assessment of LBS Applications

- ◆ LBS applications cover nearly every aspect related to human mobility
- ◆ There are two broad categories of LBS :
 - Existing services augmented by Location
 - Information, entertainment, location based billing
 - Services which depend wholly on Location
 - Navigation, mapping...
- ◆ The assessment of LBS application allows AGILE to accomplish accurate market analyses and to detect the benefits of Galileo for the given applications
- ◆ Thus AGILE strengthens the cooperation between European and International LBS Actors and decision makers

Assessment of LBS Applications

- ◆ AGILE identified 18 applications that cover the spectrum of LBS and defined application groups for further analyses



From the operator view, the market is very diverse, with multiple business models !



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Market Aspects

The 2000-2003 Hype and disappointment phase

From the hype...

- High expectations towards LBS
- High revenue forecasts
- Killer applications

... to the resiliation

- Low customer acceptance
- Too large value chain
- Too difficult and expensive integration
- Lack of easy to use LBS applications
- Lack of accuracy
- Slow and confusing standardization process

LBS first mass success stories in 2005

- **First success stories**
 - Nextel in the US
 - SK Telecom : 68MUSD revenues in 2005
- **Consumer services are enriched with the location**
 - Increased usage on some services : POI
 - Navigation is a growing worldwide success
- **Tracking services give tangible business benefit**
- **High accuracy technologies are now mature**

Now many opportunities for mobile operators !

Market Aspects

Business Drivers

Developing existing revenue streams:

- Enhancing existing service utility through greater location accuracy
- Provide greater customer satisfaction of existing LBS
- Raising of the customer awareness towards the benefits of LBS

Creating new revenue streams

- Offering new services, dependant on high accuracy localization

Complying with local regulation

- Ensuring compliance with mandates for personal emergency localization

Technical Drivers

Accelerated implementation of high accuracy systems

- cell-id remains the most widespread positioning technology but Assisted GPS looks like the clear high accuracy positioning leader

Availability of cheaper, more powerful and more friendly LBS handsets

- Motorola A1000, E1000, Siemens SXG75, HP, HTC devices

Improvement of easy to use applications

- Quality and usability

Availability of standards enabling easy interoperability between products

All the conditions (positioning technology, handsets, content) are now in place for a service take up !



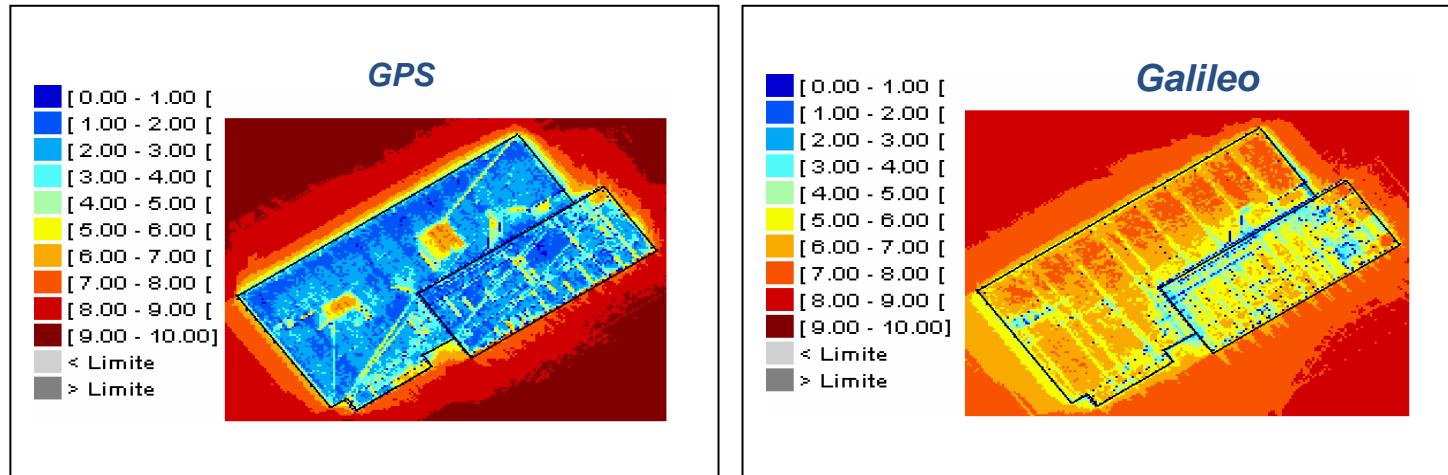
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Technical Achievements

- ◆ The main achievements also include :
 - Assessment of advanced location techniques (pseudolites, WiFi) to expand the indoor service coverage
 - Demonstration of Galileo-improved outdoor and indoor coverage through 3D mapping simulation

Average number of Sat visible





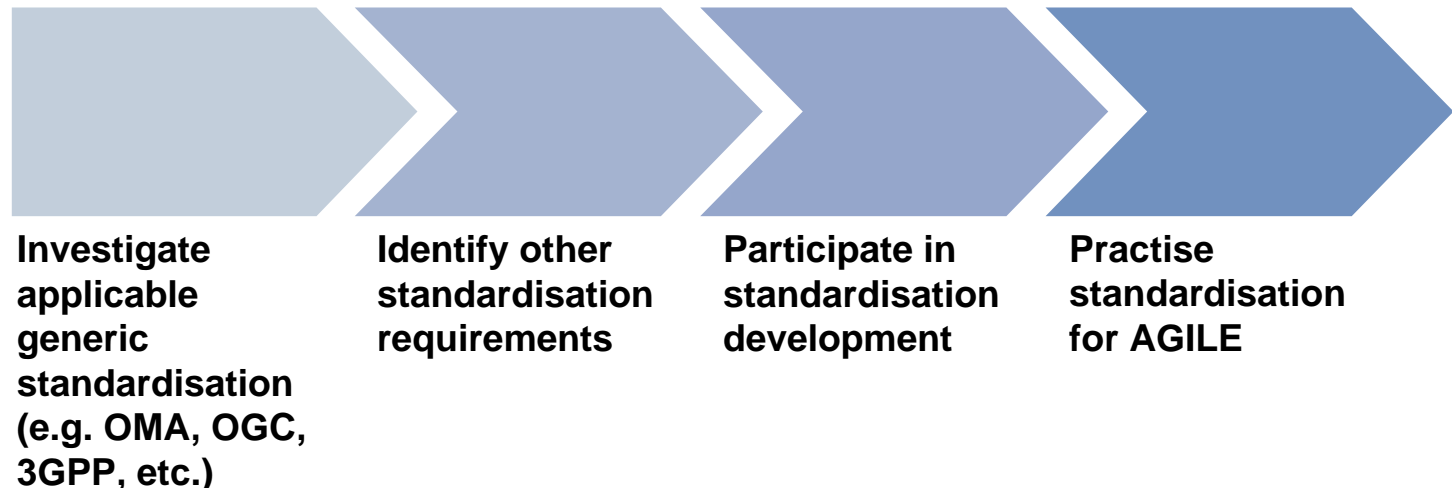
Regulation and Standardization

- ◆ A major enabler for successfully bringing Galileo to the LBS market is a standardised legal and regulatory framework
- ◆ Such a framework enhances the trust of governments and financiers involved with political and economic aspects of Galileo
- ◆ Since the standardisation procedures are very long, it is of prime interest that technical specifications for Galileo-related location techniques and applications are pushed, so that mobile phones can support the feature as soon as Galileo is operational

**Standardization and interoperability are major drivers
for the adoption of Galileo !**

Regulation and Standardization

- ◆ The AGILE partners are familiar with application development in navigation, telecommunications, and GIS environments. Therefore, the standardisation strategy for AGILE is to continue on existing standardisation themes and is based on previous experiences and current knowledge
- ◆ AGILE standardisation Process :



AGILE contributed actively at OMA to achieve that SUPL 2.0 shall support Galileo!

Conclusion

- ◆ The AGILE project paves the way for the introduction of LBS applications for the mass market
- ◆ The project partners welcome further discussion, information exchange, and cooperation that will facilitate driving forward the success of Galileo and EGNOS in the LBS domain and maximise the benefit to the user





AGILE Events 2006

- ◆ Demonstration at 3GSM 2006, February 2006, Barcelona, Spain
- ◆ Paper presentation at ITS2006, London, UK
- ◆ AGILE workshop and technical demonstration during MovilForum, 22/23 November 2006, Madrid, Spain
Info: <http://www.galileo-in-lbs.com>
- ◆ Paper presentation at ESA NAVITEC, 11-13 December 2006, Estec, Noordwijk, The Netherlands
Info: <http://www.congrex.nl/06c17>

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