EGNOS
FOR LOCATION BASED SERVICES

GALILEO

FASTER FIX, IMPROVED ACCURACY

European Global Navigation Satellite Systems Agency

Precise navigation, powered by Europe

Today, Location Based Services (LBS) are by far the largest user of satellite navigation services, and this is not likely to change as we continue to depend upon a growing number of mobile apps for navigation, personal tracking, emergency calling, gaming, advertising, social interaction and general well-being.

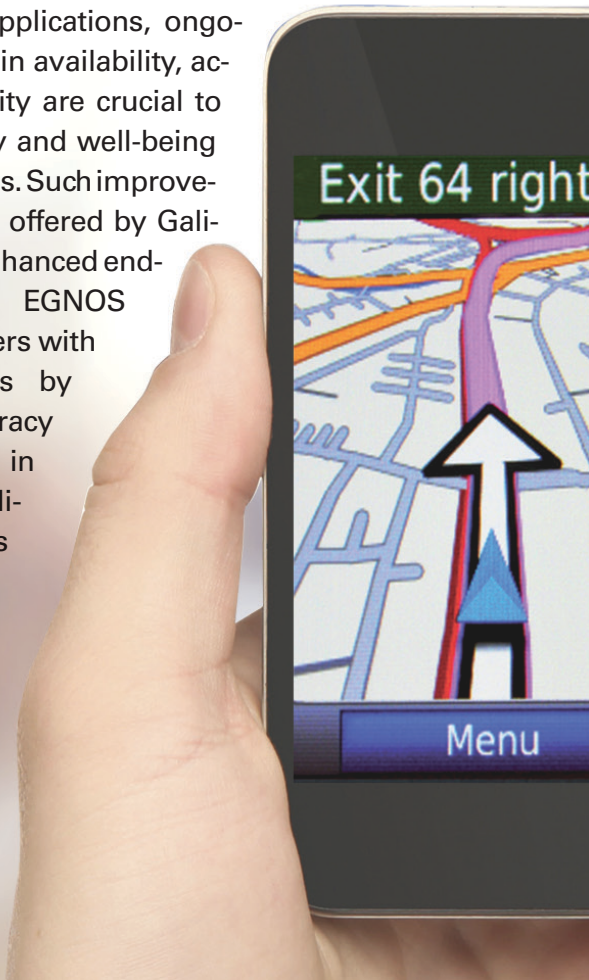
The number and variety of LBS devices is on the rise as more and more mobile devices have GNSS capabilities. In fact, more than half of all mobile phones in Europe and North America are GNSS capable. Global shipments of GNSS-enabled LBS devices have grown from 150 million to 800 million over the last five years. The reason behind this remarkable growth is that LBS are a perfect fit with our increasingly fast pace of life. For example, they not only help us get the information we need at the right time and place, they allow us to understand and use it properly. This, combined with the increased affordability of smartphones and other GNSS-enabled platforms, will drive the future growth of the LBS market.

MOBILE APPLICATIONS

Mobile Location Based Services use the geographic location of a personal device, such as a smartphone, to either enhance existing applications or to enable new ones. Such applications cover nearly every aspect related to human mobility, including consumer, enterprise and public safety.

The combined use of wireless communication, location determination, geo-information systems and mobile devices opens the door to the development of new or improved information, entertainment, social networking, personal navigation, mapping, geo-advertising, safety services – among others.

As mass-market applications, ongoing improvements in availability, accuracy and reliability are crucial to ensuring the safety and well-being of millions of citizens. Such improvements are globally offered by Galileo to provide an enhanced end-user experience. EGNOS also empowers users with additional features by improving accuracy and availability in rural areas. Application developers can rely on Galileo and EGNOS to create new and enhanced applications.



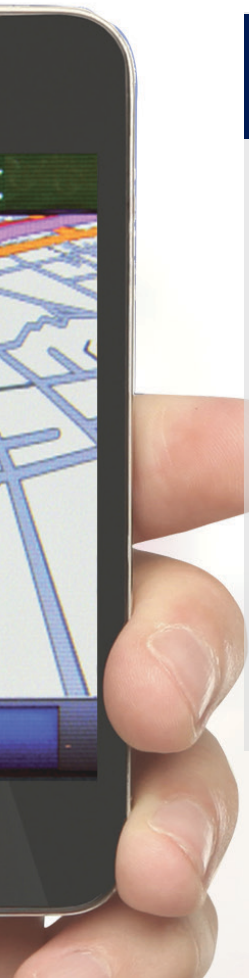
GALILEO: EMPOWERING USERS WITH IMPROVED PERFORMANCE FOR ENHANCED APPLICATIONS

Galileo, in combination with other GNSS, further improves the GNSS performance by offering:

- Improved accuracy and availability, thanks to additional satellites;
- A faster time-to-first-fix, especially if used in A-GNSS mode;
- Enhanced indoor penetration, to extend the use of LBS based on GNSS;
- Improved performances in challenging environments, such as urban canyons, allowing a reliable use of LBS;
- Signal in space authentication to protect against spoofing interferences.

The integration of Galileo-enabled chips within smartphones, cameras, tablets and innovative wearable devices means even more opportunities for application developers. With the enhanced level of performance provided by Galileo, there is a great need for the development of new and more powerful LBS applications.

Thanks to Galileo, innovation is on the rise, directly benefiting citizens, businesses and governments both in the EU and beyond.



Galileo for Emergency Services

The swiftness of emergency service response time is a critical factor to saving lives.

To intervene successfully, however, emergency services need to know exactly where an incident is. Here is where Galileo can make a difference: enhanced accuracy and availability offered by Galileo are at the service of authorities to localize distressed persons in the shortest time.

HOW IT WORKS

EGNOS, the European Geostationary Navigation Overlay Service, is Europe's first concrete venture into satellite navigation. EGNOS uses geostationary satellites and a network of ground stations to increase the accuracy of existing satellite positioning signals, while providing a crucial 'integrity message' that informs users in the event of signal problems.

The EGNOS network includes around 40 reference stations in more than 20 countries. These reference stations pick up GNSS signals, which are processed in Master Control Centres (MCC). The accuracy of the original signals is determined and confounding factors, such as electrical disturbances in the atmosphere, are corrected.

Galileo is the European Satellite-Based Navigation System providing a highly accurate, guaranteed global positioning service. Galileo, run by civil authorities, provides users with a new and reliable alternative to other Global Navigation Satellite Systems (GNSS).

While European independence has been a key goal behind the creation of the new system, Galileo is nevertheless 100% interoperable with other GNSS, making it a fully integrated new element in the worldwide global navigation satellite system – a powerful cornerstone that will allow more accurate and more reliable positioning, even in high-rise cities where buildings can obscure signals. Galileo is creating a range of new business opportunities for equipment manufacturers, application developers and providers of 'reliability-critical' services.

For more information, please visit:
www.egnos-portal.eu

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EGNOS
EGNOS, it's there. Use it.

GALILEO

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