

EGNOS enhances ITS accuracy and security

High accuracy and reliability of GNSS location data is available using the EGNOS services to be ready for Galileo's expanding satellite constellation.



Global navigation satellite systems (GNSS) are increasingly a building block for ITS applications from road user charging and E-call to tracking & tracing of freight.

Even while the European Space Agency is still assembling the Galileo constellation, EGNOS (the European Geostationary Navigation Overlay Service) is already providing the

basis of a range of services across Europe and the regions around the Mediterranean Sea. EGNOS improves the accuracy of the current GPS signal and provides integrity information, making it suitable for applications requiring accurate and reliable positioning. EGNOS provides an Open Service which is free to users of the satellites' open signal, and the EGNOS Data Access Service (EDAS) delivered through a server via terrestrial networks to enable a further increase in GPS performance.

EGNOS is able to enhance existing GPS-based ITS solutions and Galileo will allow further improvements on a global scale when it will become fully operational.

Technologies and software solutions which use EGNOS to deliver added value services for transport and mobility applications have been developed by various European research projects co-funded by industry. The European Commission has also introduced other initiatives to promote EGNOS outside Europe particularly in neighbouring areas (see *ITS International* May/June 2014).

An example is LCS (LoCation Server) which has been developed by Telespazio, a Finmeccanica-Thales company. LCS makes use of EGNOS Open Service and EDAS, and it is a multi-constellation compatible solution suitable for ITS, tracking and tracing services for freight transport, and logistics applications. The system's ability to enhance the accuracy and the reliability of positional information has been validated in life demonstrations and real business cases in Europe and beyond.

So even before the Galileo constellation is operational, LCS enables users in Europe and in the North African and Middle East regions around the Mediterranean Sea to exploit EGNOS. LCS is a 'plug-in' solution to utilise EDAS and is easily retrofitted to existing GPS tracking and tracing systems, both in tracking devices and at servers. It receives data from the tracking devices installed on tracked assets such as vehicles, containers and tankers, and provides positioning and security information in accordance with CEN Workshop Agreement CWA 16390.

The use of LCS enhances the accuracy of the position measured with GPS by approximately four metres (users of the EGNOS Open Service get an enhancement of approximately three metres) and it provides information (called 'protection level') qualifying/guaranteeing the measured position and thus ensuring the robustness of the received signals.

LCS has been extensively integrated in operational GPS-based platforms to utilise EGNOS. In various European projects it has been proved in many applications and in various modes of transport and

environments.

In the SCUTUM project, the system has been utilised to track and trace the transport of dangerous goods in Europe including more than 300 vehicles belonging to a leading oil company which are used for transporting dangerous goods by road.

In the CONTAIN project LCS has been validated by demonstrations at Interporto Bologna for monitoring the shipment of intermodal containers along road and rail corridors.

The EGNOS2road project demonstrated applications including road charging, monitoring the transit of vehicles in limited traffic areas and controlling the traffic of heavy goods vehicles and urban regulated fleets (such as city logistics and local public transport).

Outside of Europe, LCS has been validated in MEDUSA (MEDiterranean follow-Up for EGNOS Adoption) to track and trace the shipment of containers across the Mediterranean Sea and the movement of commercial vehicles in Jordan in cooperation with the Ministry of Transport of Jordan and the Jordanian Customs.

The results of these trials and applications demonstrate an increase in efficiency, safety and security, improved traffic management, risk management and prevention. Moreover, the 'protection level' delivered is a guarantee of the position information reliability, allowing the establishment of liability schemes among the various stakeholders, thus supporting the implementation of a smart mobility and the European policies for logistics such as 'e-freight' and 'green lanes'.

Capitalising on these use cases, the recently started CORE project is developing a real business case for the intermodal transport of dangerous material across Europe with the participation of chemicals, minerals and gas logistics company Hoyer. ■

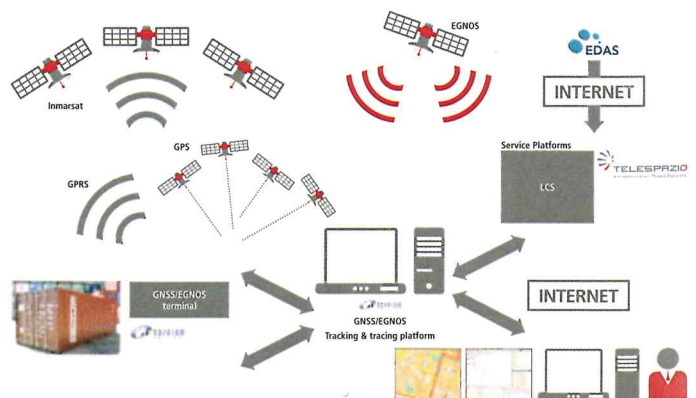
www.containproject.com

www.coreproject.eu

www.euromedtransport.eu

www.scutumgnss.eu

www.telespazio.com



GPS+EGNOS based architecture for tracking and tracing of freight

2015 MARCH

31-2 April: Intertraffic China 2015, China, Intex Shanghai
Contact: Amsterdam RAI exhibitions and TTEC.
Tel: +31 (0)20 549 12 12
Fax: +31 (0)20 549 18 89
<http://www.intertraffic.com/>



APRIL

21-23: TRAFFEX 2015
Hall 5, NEC, Birmingham, UK
Contact: Brintex Events
Tel: +44 (0) 20 7973 6401
Email: b.butler@hgluk.com
<http://traffex.com>



27-29: EXPOTRAFFIC 2015

Moscow, Russia
Mack Brooks Exhibitions
Tel: +44 (0) 1727 814 400
Fax: +44 (0) 1727 814 401
Email: expotraffic@mackbrooks.com
<http://expotraffic.com/>



MAY

27-29: Intertraffic ISTANBUL 2015
Contact: Amsterdam RAI
Tel: +31 (0)20 549 12 12
Fax: +31 (0)20 549 18 89
<http://www.intertraffic.com/>



27-29: ASECAP Study & Information Days, Lisbon, Portugal

Tel: + 32 (0)2 289 26 20
Email: asecapdays@asecap.com
<http://www.asecapdays.com>



JUNE

1-3: ITS America annual meeting and exposition, Pittsburgh, Pennsylvania // David L. Lawrence Convention Center
Contact: ITS America
Tel: +1 (202) 721-4214
scollier@itsa.org



AUGUST

2-5: ITE Annual Meeting, Florida
Contact: ite_staff@ite.org
Tel: +1 202-785-0060
www.ite.org



OCTOBER

5-9: 22nd ITS World Congress 2015, Bordeaux, France
Tel: +32 (0) 2 789 23 29
<http://itsworldcongress.com/>



NOVEMBER

10-12: TranspoQuip 2015 Red Pavilion of Expo Center Norte in São Paulo, Brazil
Contact: Real Alliance
Tel: +55 11 5095 0096
Email: info@real-alliance.com
<http://www.transpoquip.com.br/>

DECEMBER

7-9: Gulf Traffic 2015, Dubai International Exhibition Centre
Contact: Informa
Tel: +971 4 4072606
Fax: +971 4 3353526
Email: richard.pavitt@informa.com
www.gulftraffic.com/



2016

APRIL
5-8: Intertraffic Amsterdam, AMSTERDAM
Contact: Amsterdam RAI Exhibitions
Tel: +31 (0)20 549 13 33
Fax: +31 (0)20 549 18 89
<http://www.intertraffic.com/>



NOVEMBER

Seeing is Believing 2016 - Leicestershire
Tel: +44 (0)1732 459683
<http://www.sib.uk.net/>



INTERTRAFFIC EVENTS

2015 MARCH
31-2 April: Intertraffic China, China



MAY
27-29: Intertraffic Istanbul, Turkey



CONTACT:
Tel: +31 (0)20 549 12 12
Fax: +31 (0)20 549 18 89
www.intertraffic.com

IBTTA MEETINGS

2015 MARCH
29-31: IBTTA WASHINGTON BRIEFING
Washington DC, Marriott



AUGUST
30-2 September: IBTTA 83rd Annual Meeting & Exhibition
Dublin, Ireland

CONTACT:
International Bridge, Tunnel & Turnpike Association
Tel: 202-659-4620
Fax: 202-659-0500
Email: kbromberg@ibtta.org
www.ibtta.org

Tracking & tracing empowered by EGNOS!

LCS enhances tracking & tracing solutions with EGNOS, and enables highly accurate positioning services with proof of reliability.

LCS uses EGNOS and is compatible with Galileo.

LCS is compliant with CEN CWA 16390.

Telespazio
A Finmeccanica/Thales Company
telespazio.com