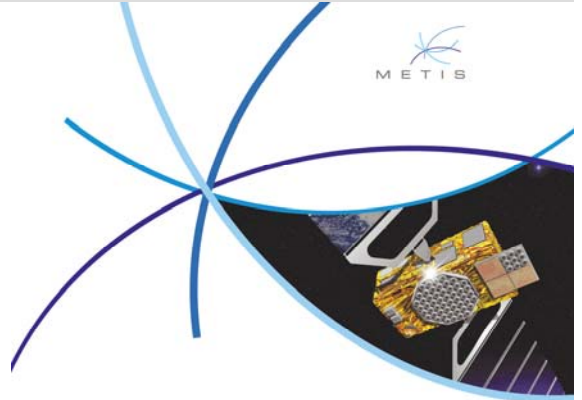




European GNSS Supervisory Authority



A Regional Plan for exploiting EGNOS services in the MEDA area

METIS (MEdiTerranean Introduction of GNSS Services) is a project, funded by EC DG AIDCO in the framework of the Euro-MED GNSS I Programme, managed by the European GNSS Supervisory Authority (GSA) and run by a consortium of private/public organizations from European and Mediterranean countries.

METIS performs activities in support of the implementation of GNSS (Global Navigation Satellite Systems) services in the MEDA countries: **Algeria, Egypt, Israel, Jordan, Lebanon, Morocco, Palestinian Authority, Syria, Tunisia and Turkey.**

The project defines a **GNSS Regional Plan** that proposes a Euro-Mediterranean policy to facilitate the introduction of EGNOS (European Geostationary Navigation Overlay Service), and in the future Galileo, in the region, for the next 5-10 years.

The **GNSS Regional Plan** takes into account the particular needs of the region in various user/application domains, and the social and economical benefits that the use of EGNOS and Galileo will generate.

Since 2007, the **METIS** project has been scoping out the navigation infrastructure needs of the MEDA countries and the possibility to introduce this innovative technology, with cooperation of local players.

The **transport sector** has been identified as the most promising in the Mediterranean area for the use of EGNOS today, to prepare the market for Galileo in the future.

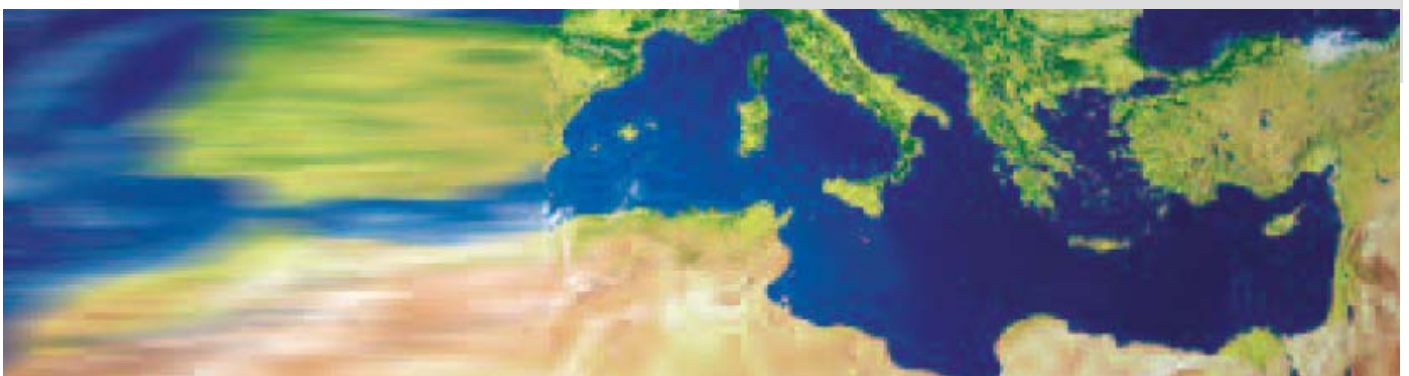
All the ten countries have clearly shown interests towards the exploitation of EGNOS services in the Civil Aviation, Maritime and freight markets. Particularly **EGNOS services for regulated use** have been considered the common priorities in the short-term.

EGNOS (and later Galileo) are satellite navigation systems run by civilian European entities entrusted by the European Union, which makes them suitable to provide services (with Service Level Agreements - SLAs) to third parties for both regulated and un-regulated applications (differently from the existing USA/Russian military systems which provide neither guarantee of service, nor commitment to performance).

Conceived as a Euro-Mediterranean shared implementation of GNSS services in the MEDA region, its preparation requires the close interaction with MEDA actors for reviewing, discussing and commenting the proposed action plan, before its final issue.

As part of this interaction process, **METIS** organised two workshops involving the National Coordinators of the 10 countries. The first workshop was held in Casablanca (Morocco) in July 2007. The final workshop was held in Cairo (Egypt) in October 2008.

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A workshop for sharing the GNSS Regional Plan

Cairo, 22 October 2008: METIS final GNSS Regional Plan workshop was organized by GEMCO (Galileo Euro Med Cooperation Office), with the support of the European Commission and the GSA.

The workshop was intended to share results of the **Cost & Benefit Analysis (CBA)** proposed for the MEDA States involved. The CBA covers the decade starting from year 2009, when the EGNOS system will be operational over Europe, while the MEDA extension of the EGNOS service is planned to be fully completed by 2011.

Under the chairing of the European Commission, the National Coordinators of eight MEDA countries (Egypt, Jordan, Lebanon, Morocco, Palestinian Authority, Syria, Tunisia and Turkey) had the opportunity to share with the METIS team the main outcomes of the GNSS Regional Plan. Market opportunities, priorities, direct economical and indirect social benefits that EGNOS can generate in the considered decade were discussed.

The METIS workshop showed the increasing attention and interest of MEDA countries towards EGNOS in both Civil Aviation and non Civil Aviation (freight maritime, road and rail) domains. MEDA National Coordinators expressed their need to have information on stages of development regarding adoption and service provision models for EGNOS in Europe, and for other Satellite Based Augmentation Systems in other regions out of Europe.

Based on the sensitive analysis results, in terms of microeconomic and macroeconomic parameters, the METIS team presented the recommendations for EGNOS services successful exploitation in the area.

- Establishment of appropriate regulatory framework (e.g. remove legal barriers)
- Supporting of regional and sub-regional policies for transport
- Creation of favourable market conditions

were identified as common key enablers (e.g. create competitive markets on the supply side of EGNOS-enabled mobile terminals).

Country specific aspects were also analysed and discussed with the relevant National Coordinator.

All Euro-Mediterranean attendees acknowledged that the **availability of EGNOS service over the MEDA region**, with the specified performances, is the primary requirement.

During the workshop, the METIS team gathered the feedbacks from the National Coordinators, with the purpose of refining the GNSS regional Plan.

The final version of the GNSS Regional Plan will be presented in occasion of the **next project promotion event, in January 2009 in Istanbul (Turkey)**.

The METIS workshop also hosted the contract signing ceremony for the installation of a Ranging and Integrity Monitoring Station (RIMS) in Alexandria in Egypt, that will be integrated in the EGNOS network to enhance the service coverage and relevant performances. The EGNOS system is shown in the figure (www.essp.be).



European Geostationary Navigation Overlay Service

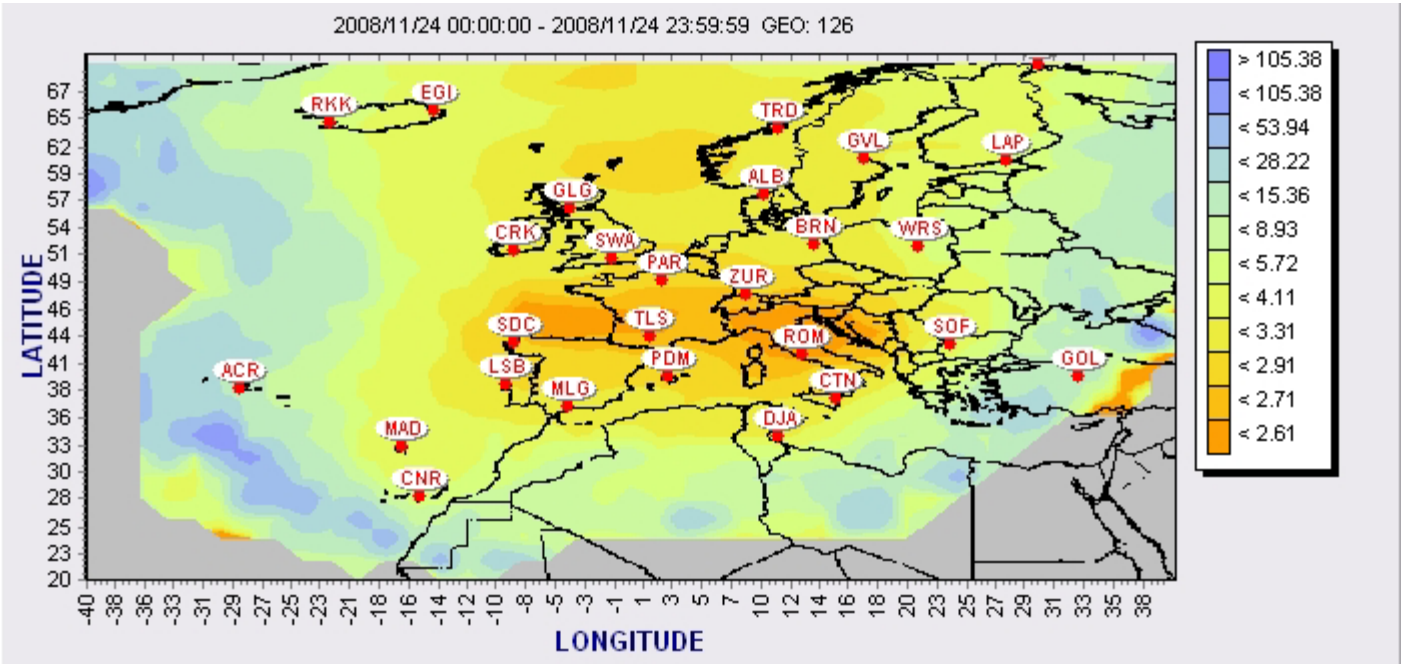


Demonstrating EGNOS capability over MEDA

In support to the elaboration of the GNSS Regional Plan, **METIS** runs demonstrations aimed at experimenting EGNOS commercial utilisation in various application domains and making use of the EGNOS service over the MEDA area.

METIS demonstrations run in different countries and target applications in the priority markets identified during the GNSS Regional Plan elaboration.

EGNOS service performances are shown in the figure (www.asqf-gnss.com).



EGNOS Commercial Service

Opportunities of EGNOS for the transport sector in the Euro-Mediterranean area rely not only on the signal coming from the satellite, but also on the distribution of EGNOS products via **EDAS (EGNOS Data Access Server)**.

EGNOS Commercial Service (CS) is the service based on the use of EGNOS products disseminated by EDAS.

The EDAS system is shown in the figure of next page (www.egnos-edas.com).

EDAS is a server that gets the raw data directly from the EGNOS system and distributes to Service Providers in real-time, within guaranteed delay, security and performance.

EDAS provides two types of data:

- The raw observations collected by the entire network of Ranging and Integrity Monitoring Stations (RIMS)
- The EGNOS augmentation messages, as normally received by users via the EGNOS Geostationary satellites.

Service Providers can implement solutions to create different types of **value added services**, built on the processing and distribution of the EGNOS data, via different telecommunication means.

The service architecture is based on a connection between the Service Providers and EDAS to get the EGNOS data.

Service Providers can exploit EGNOS CS into a value for the final users, in various domains and applications.

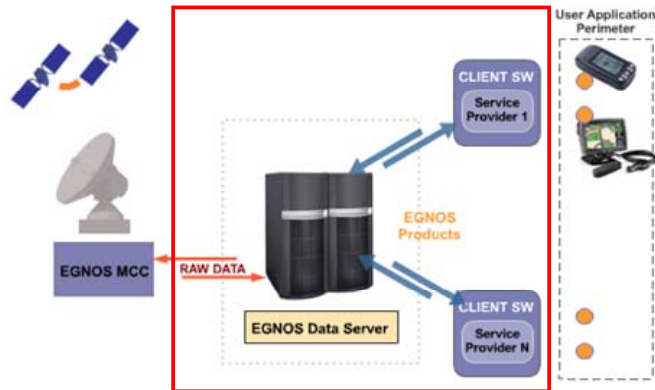
Such a value relies on

- **High precision real-time positioning and availability of historical data**
- A **“guaranteed positioning”** and **augmentation of availability**.

Value added services can be implemented for professional uses: in the first case to high precision positioning uses, in the second case to uses in the transport and mobility domains.

METIS has identified opportunities for EGNOS CS in the Mediterranean area in the next decade for services in the transport market. Real life demonstrations proved technical feasibility and quantified benefits for applications requiring guaranteed tracking and tracing: rail, road, maritime and freight management.

Cost & benefits for its commercial exploitation has been evaluated. Results are included in the GNSS Regional Plan.



Promoting EGNOS Commercial Service

Istanbul, 29 January 2009: in its role of main participant of the **METIS** demonstrations in Turkey, Turksat will organise the next promotion event.

Following the Cairo workshop and the conclusion of the three demonstrations in Turkey implementing the use of EGNOS for maritime and rail applications, the event will draw the attention on exploitation of EGNOS CS services in the MEDA transport markets.

An audience composed by European and Mediterranean stakeholders will attend the event.

The European Commission and the GSA will present the final GNSS Regional Plan, taking into account the feedbacks coming from the final workshop in Cairo.

The event will be also the occasion of promoting results of other demonstrations, EGNOS for eTourism and MEDaCoN.

The announcement and program of the event are published on the **METIS** web site.



Links

METIS	www.metis-project.eu
GSA	www.gsa.europa.eu
DGAIDCO	ec.europa.eu/europeaid/index_en.htm
DGTREN	ec.europa.eu/dgs/energy_transport
ESA	www.esa.int
Euro-Med Transport Project	www.euromedtransport.org
EDAS	www.egnos-edas.com

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