

EURO-MEDITERRANEAN SATELLITE NAVIGATION (GNSS) PROJECT

PROJECT SUMMARY

1. OBJECTIVES

The Vth Euro-Mediterranean Conference of Ministers for Foreign Affairs held in Valencia in April 2002, adopted an Action Plan for the development of the Euro-Mediterranean partnership in association with the regional strategy (2002-2006) for the Mediterranean region. Satellite radio-navigation is priority component of this action plan, which seeks to promote regional strategies of benefit to multimodal transport systems in these countries. The Mediterranean region, due to its geographic and economic proximity, can benefit, in terms of regional development and safety, from EGNOS and GALILEO services.

As part of the overall strategy in support to the EGNOS and GALILEO service provision scheme, the Commission recognises the need for infrastructure development, training and demonstration activities for different regions worldwide.

In this context, the European Commission shall launch a 3-year project (EUROMED SATELLITE NAVIGATION) which will allow running a programme of training and demonstration activities on satellite navigation services in the Mediterranean area along with the relevant infrastructure development. Moreover, the project shall raise awareness among decision-makers in the Mediterranean region regarding the possibilities afforded by the use of EGNOS and GALILEO and shall take concrete steps towards the introduction of such services for the benefit of the region.

Activities launched within the Euro-med Satellite Navigation project will be co-ordinated with the Galileo Euro-Med Cooperation Office which will be hosted by the Ministry of Civil Aviation of the Arab Republic of Egypt.

2. PROJECT DESCRIPTION

The principal aim of the Euro-Med Satellite Navigation project is to pave the way for the involvement of the Mediterranean Partners in EGNOS and GALILEO activities.

In practice, the project shall focus on the extension of EGNOS system and services in the region capitalising on existing neighbouring infrastructure and with a view to preparing the ground for the introduction of the full GALILEO services. Consequently, the project shall initially enable demonstration and training activities and shall prepare the ground for a more sound service development scheme for the benefit of the region.

More specifically, the project aims at:

- Raising the awareness of local decision makers, service providers and product manufacturers on the potential of EGNOS and GALILEO for the Mediterranean region;
- Establishing elements for a Mediterranean GNSS policy in order to encourage a common approach to radio navigation, positioning and timing means across all potential sectors of utilisation;
- Identifying the benefits of EGNOS and GALILEO vis-à-vis the specific needs of the region;
- Increasing safety of related operations in the Mediterranean region;
- Enhancing performance and promote integration of Euro-Mediterranean navigation systems in various modes;
- Promoting interoperability of navigation, positioning and timing systems in adjacent regions;
- Fostering the emergence of national MEDA projects regarding the development of GALILEO services, initially through EGNOS.

The project shall set priorities for regional added value service development based on EGNOS and GALILEO. To this end, it shall identify the most important target market segments; it shall perform demonstration projects and define an operational validation plan taking into consideration the existing sub-regional initiatives; it shall define the concept of service provision and associated programmatic institutional issues; it shall identify funding requirements; it shall perform specific research activities and legal assessments; it shall identify national partners for GALILEO among the Mediterranean Partners; and it shall implement the necessary infrastructure.

The work performed in the frame of the MEDA GNSS project shall be organised in four main activities as described in the following sections:

2.1. Activity A: GNSS Regional Plan

The GNSS Regional Plan shall identify further activities for the region assessing specific needs with respect to planned developments.

In order to have a clear and updated picture of the current status of GNSS in the region, an analysis shall be performed addressing at least the following items:

- GNSS user needs in the area
- GNSS infrastructure
- GNSS local actors and in particular services provided in the area
- GNSS services and infrastructure framework such as management, involved actors, legal and institutional structures, and sustainability of the proposed scheme.

- GNSS market analysis and size

This analysis shall be complemented by a set of recommendations regarding critical issues and priority applications. The MEDA GNSS Regional Plan shall be coordinated with other regional activities and priorities notably those of Sub-Saharan Africa.

The final regional plan shall be submitted to the MEDA partners for endorsement at an appropriate level.

2.2. Activity B: Training and Awareness

The objectives of this activity shall be to:

- Identify training needs and means
- Produce training and communication material
- Undertake logistics for dissemination and awareness activities
- Implement an education and awareness campaign in the region
- Facilitate communication and networking among GNSS actors in the region

Consequently, this activity shall implement a training and awareness review and relevant plan for the region. These shall be complemented by a number of awareness activities (e.g. communication material, events), which shall also be coordinated with the demonstrations activities.

The role of the Galileo Euro-Med Co-operation Office in training and awareness activities in the region shall be instrumental.

2.3. Activity C: GNSS Services Demonstration

This activity shall be devoted to the definition and implementation of demonstration projects for the development of GNSS services and applications in the Mediterranean area, encompassing various transport modes and non-transport applications, and focusing on specific applications selected on the basis of regional priority criteria.

During an initial definition phase the demonstration priorities and implementation plan shall be elaborated. Due consideration shall be attached to customising previous and on-going demonstration project results in order to exploit synergies and minimise costs and at the same time take into account the specific needs of the region.

The demonstration implementation phase shall exploit the GNSS signal that will become available in the area as a result of the signal provision activity.

Demonstrations shall be performed with the direct involvement of MEDA Partners actors and when relevant with the local service providers.

2.4. Activity D: GNSS Signal in Space Provision

This activity includes definition, design, development and validation of the additional infrastructure needed for an early provision of the GNSS signal in space in the defined service area, with the required level of performance. This shall be based on upgrades of the EGNOS infrastructure.

The extension of the EGNOS services in the Mediterranean region will be dealt with in accordance with the European GNSS Strategy and Euro-Med partnership regional objectives described above.

According to the defined targets regarding the EGNOS integration into GALILEO, such activities shall ease the introduction of the full GALILEO services.

The project shall be carried out in two phases.

The infrastructure development activity shall be the backbone of the initial phase of the project in order to assure the EGNOS signal in space provision for the development of projects and associated training activities. During the initial phase, preparatory activities shall be conducted for the regional plan activity and the demonstration and training tasks.

The second phase shall coincide with the EGNOS signal in space availability, which shall enable the implementation of demonstration projects and associated training activities. Feedback from the demonstrations and infrastructure development activities shall be used in order to finalise the regional plan.

The activities performed by the Euro-Med Satellite navigation project shall be coordinated with those of the GALILEO EURO-MED Co-operation Office which constitute a reference point for the promotion of GALILEO services and applications in the region.

3. EXPECTED RESULTS

The expected results of the Project shall include:

- The extension of the Trans-European navigation and positioning network to the region, by validating EGNOS service extension capabilities in the region
- Regional plan including the identification of regulatory measures to be proposed to national administrations
- Adequate involvement of MEDA Partners in the application, demonstration and validation activities
- Customised training plan for the benefit of the region
- Identification of potential service providers
- Identification of the priority markets in the region

- Assess the financial sustainability of service provision schemes