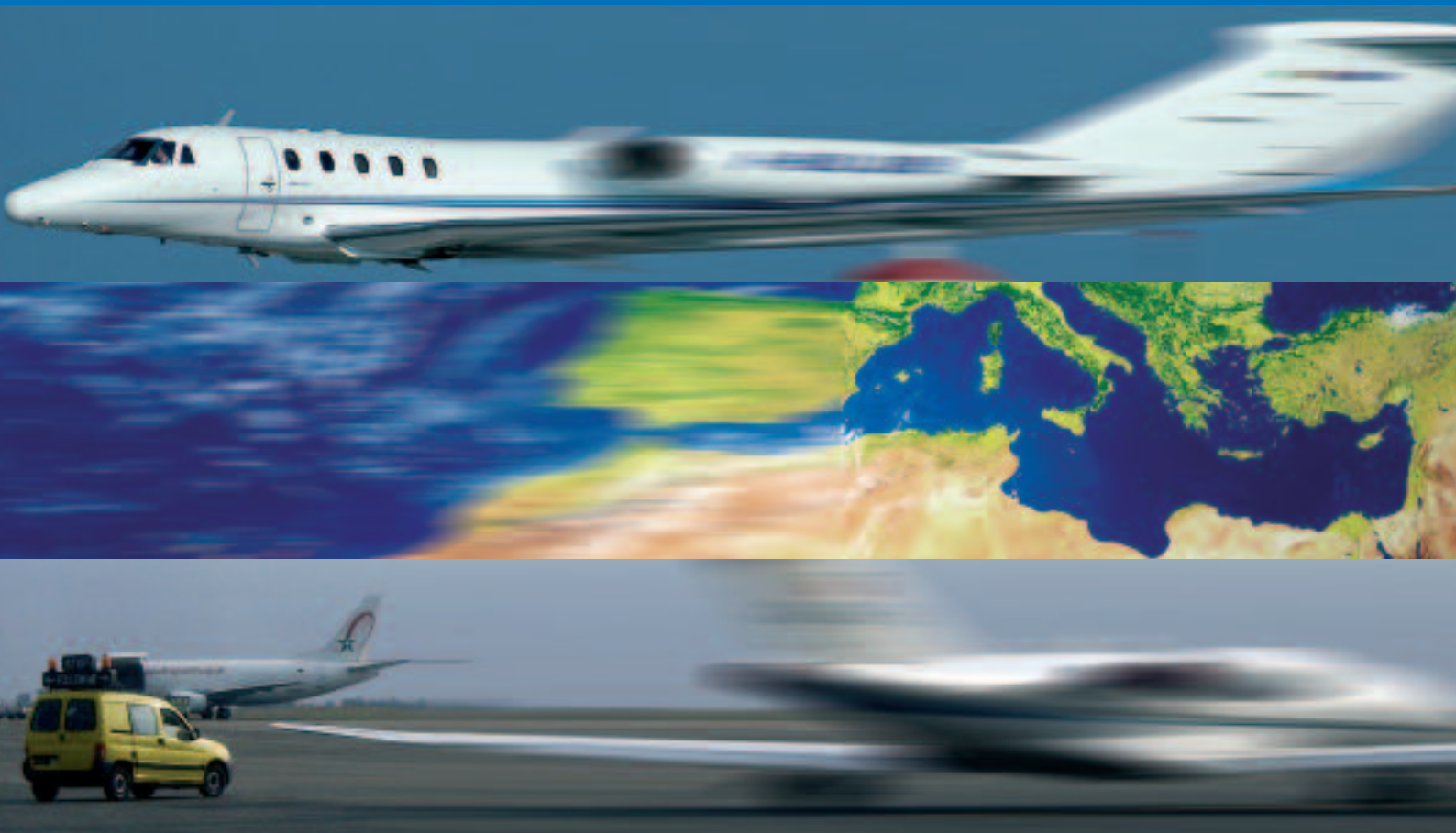




# M E T I S

## EGNOS demonstrations in the Mediterranean Area



### Improving civil aviation operations with EGNOS

**METIS (MEdiTerranean Introduction of GNSS Services)** implements EGNOS use in transport domains over the Euro-Mediterranean area, to prepare the market for Galileo. METIS proposes a **GNSS MEDA Regional Plan** to exploit EGNOS technologies and services in international freight cargo, civil aviation, rail and maritime.

METIS demonstrated the use of EGNOS for Civil Aviation applications in two operative cases:

**Approach with Vertical Guidance (APV)**

**Airport mobiles on-ground surveillance and control.**

EGNOS benefits in Civil Aviation are in improving safety, efficiency, capacity of flights across a regional and uniform scale, while reducing the ground navigation aid infrastructures.

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# METIS is part of the EuroMed Transport cooperation

## Çanakkale (Turkey) and Perugia (Italy), November 2009

A Cessna Citation VI aircraft was equipped with a GPS/SBAS navigation unit (Garmin GNS 480) used by aircrafts of the general aviation. The flight demonstrations consisted of a number of approaches, following the SBAS APV experimental procedures designed for the two airports.

Flight guidance was provided to the pilots through a conventional CDI/VDI (Course Deviation Indicator/Vertical Deviation Indicator) connected to the navigation unit, where the database of the APV procedures was loaded.



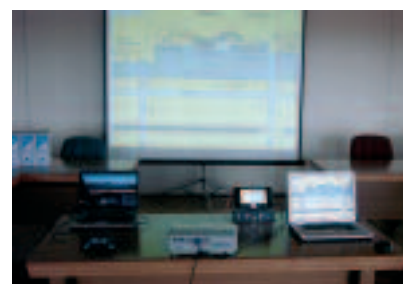
**METIS demonstrated that EGNOS will enable APV operations in the Mediterranean countries, once its service coverage will be extended and certified by the Civil Aviation Authorities.**

**The benefits rely on the possibility to carry out “nearly ILS CAT I approaches” (APV) also at airports not equipped with conventional navigation aid infrastructures.**

## Casablanca (Morocco), October 2009

A live demonstration of EGNOS at Casablanca's airport showed how precision and reliable navigation could be used to improve safety at airports. A follow-me vehicle was outfitted with an EGNOS-enabled navigator and sent its position via a wireless network to a monitor & supervision centre located in the control tower.

**METIS demonstrated that EGNOS could play a part in the safe guidance and control of ground traffic at airports.**



EGNOS (European Geostationary Navigation Overlay Service) is a Satellite-Based Augmentation System (SBAS) that improves the accuracy of satellite navigation signals over Europe and the Mediterranean area. EGNOS improves the accuracy of current GPS signal up to one metre and provides integrity information, making it suitable for applications requiring very accurate and guaranteed positioning.

EGNOS is designed to offer three services:

- The Open Service (OS), available since October 2009, suitable for most common applications;
- The Safety of Life (SoL) Service, to be available after certification in 2010, suitable for safety critical applications such as flying aircrafts or navigating ships through narrow channels;

- The Commercial Service (CS), currently under test until mid-2010, enabling specific applications for professional markets.

**EGNOS**