Galileo and EGNOS Programmes

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European Commission

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In 2013 the long term programme structure for Galileo and EGNOS has been shaped and secured

★ New Regulations adopted for the European GNSS Programmes and for the GNSS Agency

★ Funding secured for EGNOS and Galileo for the new financial framework 2014-2020

★ Exploitation tasks conducted by the GNSS Agency under delegation

★ System design and development tasks conducted by the European Space Agency under delegation

★ **1. Galileo**

   ★ **Contracts for the procurement of the system are signed or launched**

   ★ **Worldwide availibility of number of Galileo services**

★ **2. EGNOS (European Geostationary navigation Overlay Service)**

   ★ **Contracts for the procurement of the system are signed or launched**

   ★ **Availibility of EGNOS services in EU and possibly in the European neighbourhood**

Open Service (OS)	Freely accessible service for positioning and timing	
Public Regulated Service (PRS)	Encrypted service designed for greater robustness and higher availability	
Search and Rescue Service (SAR)	Assists locating people in distress and confirms that help is on the way	
Commercial Service (CS)	Delivers authentication and high accuracy services for commercial applications	

Galileo implementation plan

Full Operational Capability
Full services, 30 satellites
2018

Initial Operational Capability
Early services for OS, SAR
PRS and CS
2014/2015

In-Orbit Validation
4 fully operational satellites
and ground segment
2013

GIOVE A/B
2 test satellites
2005/2008

Galileo System Testbed v1
Validation of critical algorithms
2003

GALILEO
GIOVE

GALILEO
GSTB-V1

Early Galileo services

2012	2013	2014	2015	2016

Stable good quality signals

Early Services

Open Service — Early service **Combined with GPS** — **Enhanced service**

Public Regulated Service — **Demonstrator** — Early service — **Enhanced service**

Search and Rescue — Early service — **Full service**

Commercial Service — **Demonstrator** — **Early service**

EGNOS System Architecture and Service Area

6 Navigation Land Earth Stations

34 Ranging & Integrity Monitoring Stations (RIMS)

GPS signals

2 Support Facilities

4 Mission Control Centres

EGNOS Service Area

3 GEO Satellites

EGNOS Satellite Footprints

3 Geostationary satellites
- INMARSAT 3F2 AOR-E (15.5°W)
- ARTEMIS (21.3°E)
- INMARSAT 4F2 (25°E)

Soon to be replaced by

- ASTRA SIRIUS 5
- ASTRA 5B

EGNOS is operational
New version of the Service Definition Documents (SDD) released between March and June 2013*

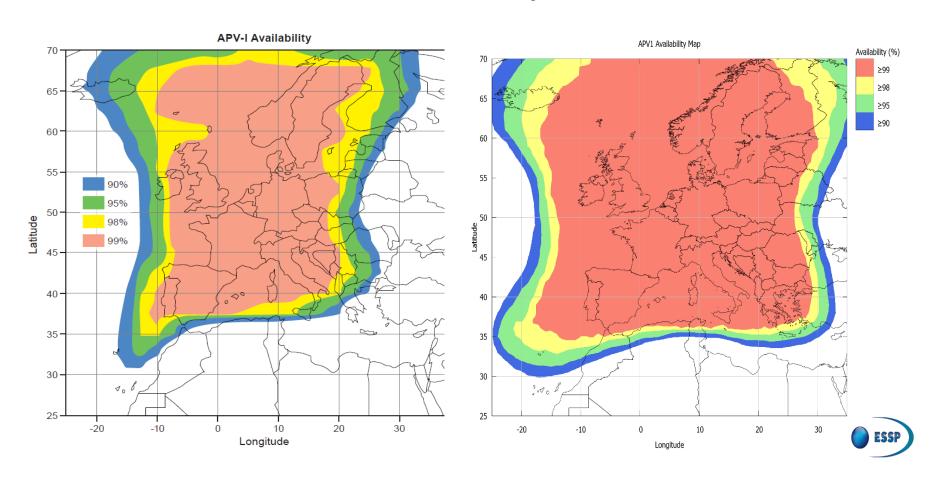| Service	Characteristics	Service Status	
Open Service	accuracy ~1m, free	available since October 2009	
Safety of Life Service	accuracy ~1m, compliant to aviation standards	Available since March 2011	
EDAS	accuracy <1m, corrections are provided by terrestrial networks	experimental service since 2008; official service made available in 2012	

EDAS: EGNOS Data Access Service
* http://www.essp-sas.eu/service_definition_documents

SoL SDD (March 2011) SoL SDD (June 2013)

6 month observed performance

Performance Status: Safety-of-Life Service

EGNOS services will further improve over time

Medium term

★ Full coverage of 28 EU Member States territory (geographically located in Europe)

Long term

★ EGNOS version with dual (L1/L5) frequencies, also to enable augmentation of Galileo and potentially other GNSS

★ Subject to available funding and conclusion of necessary contracts and agreements, extension of the EGNOS coverage to EU neighbouring countries and regions. No funding foreseen for EGNOS extension outside the EU under the GNSS Regulations. Funding for EGNOS extensions must come from other programmes.

LPV: Localizer Performance with Vertical guidance

Thank you!

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Navigation solutions powered by the European Union

http://ec.europa.eu/galileo