FACT SHEET

GNSS Evolution

Europe has its own Global Navigation Satellite System (GNSS), composed of the Galileo satellite constellation, currently under deployment, and the regional augmentation system EGNOS, which has been operational since October 2009 all over Europe.

ESA initiated the European GNSS Evolution Programme (EGEP) in 2007 with the following objectives:

- prepare for upgrades and evolution of EGNOS and Galileo caused by mission evolution, improvement of performances and services, operability improvements and/or technology obsolescence;
- promote and support scientific exploitation of Galileo;
- maintain European technical know-how, competences and infrastructures at international level;
- sustain competitiveness and innovation capabilities.

On EGNOS, the major improvements concern the evolution towards a multi-constellation (GPS plus Galileo), multi-frequency service fully interoperable with other similar systems (i.e. WAAS in the US, MSAS in Japan) and the extension of its coverage.

On Galileo, the replacement of the satellites after a lifetime of 10–12 years gives the opportunity in the 2020s to embark new technologies in a wide range of domains, such as space clocks, advanced navigation payloads and inter-satellite links allowing improved performance. New services and optimisation of the exploitation will maintain the competitiveness of the European navigation infrastructure with the three other worldwide GNSS (the US GPS, Russia’s GLONASS and China’s BEIDOU).

General information about the European Global Navigation Satellite System

www.esa.int/Our_Activities/Navigatio

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