

European GNSS Evolution Programme

**4th Meeting of the International Committee on Global Navigation Satellite
Systems (ICG)**

Saint Petersburg, Russian Federation
14-18 September

Background

- ESA Optional Programme fully funded by ESA Member States.
- Objectives:
 - Maintaining technical European know how, competences and infrastructures at par internationally.
 - Sustaining competitiveness and innovation capabilities.
 - Enabling technical readiness for upgrades and evolution caused by mission evolution and technology obsolescence.
- The activities cover system development activities and the related technology R&D.
- Implementation of the programme results in the operational systems (EGNOS, Galileo) is outside the scope of the Programme, since this is a task of the EC.

Programme Status

- Activities were already initiated in 2007 with a set of architecture studies, test-bed and technology development preparatory activities.
- Participating states:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Canada, Czech Republic, United Kingdom

Activities

- Preparation and demonstration of the technology for EGNOS V3 and future GNSS augmentation services:
 - L1/L5
 - Support to Multi-Constellation
 - High Precision Services,
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- Advancement of the technology for future Galileo payloads:
 - Clocks
 - C-band
 - On-board integrity
 - Inter satellite links
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- Fostering scientific utilization of Galileo and GNSS in general.

Ionospheric Monitoring

- The ionosphere is one of the major sources of GNSS errors and malfunctions.
- Solar activity is expected to increase from 2010 onwards.
- ESA plans to undertake a ionospheric measurement campaign during this period. Other organizations will be planning similar campaigns.
- A task of the ICG could be to act as focal point to gather information on the different initiatives and support coordination of efforts.