

New Contract to Take EGNOS to Next Level



ESA has signed a contract with Thales Alenia Space for an upgrade of Europe's EGNOS satellite navigation augmentation system, which underpins the safety-critical use of satnav across the continent. Designed by ESA and being exploited by Europe's GNSS Agency, GSA, the European Geostationary Navigation Overlay Service (EGNOS) improves the precision of US GPS signals over most European territory, while also providing continuous and reliable updates on the 'integrity' of these GPS signals.

A network of ground monitoring stations throughout Europe performs an independent measurement of GPS signals, so that corrections can be calculated and then passed to users immediately via a trio of geostationary satellites. The result is that the EGNOS-augmented signals are guaranteed to

meet the extremely high performance standards set out by the International Civil Aviation Organisation standard, adapted for Europe by Eurocontrol, the European Organisation for the Safety of Air Navigation.

Paul Verhoef, ESA's director of the Galileo Programme and Navigation-related Activities, signed the contract at ESA Headquarters in Paris with Philippe Blatt, vice president of Thales Alenia Space France.

ESA is performing the procurement of 'EGNOS Version 2.4.2' under the overall programme authority of the GSA, which oversees both EGNOS and Europe's Galileo satellite navigation system. Two upgraded EGNOS releases will be provided over the course of the development: EGNOS V2.4.2I and EGNOS V2.4.2A.

These releases will resolve various obsolescence issues related to EGNOS's Central Processing Facility, based in Toulouse – which generates the corrections and integrity information to be broadcast across the European continent – to ensure continuity of EGNOS services into the future, including safety-of-life services, to an ever-expanding community of users.

The new contract includes a refreshment and enhancement of the Central Processing Facility design without algorithm modification; an optimised qualification process; a guarantee of full compliance to safety-critical software development requirements; the performance of end-to-end verification activities extending to the three geostationary satellites used by the system; and finally ensuring compliance to a new set of technical requirements and international standards.

Source: ESA.