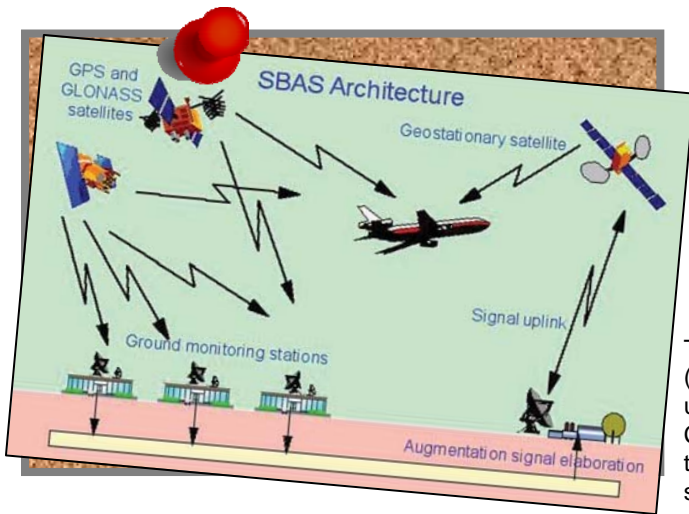


What's new?

May 2009



EGNOS / WAAS

The **European Geostationary Navigation Overlay Service (EGNOS)** is a satellite based augmentation system (**SBAS**) under development by the European Space Agency, the European Commission and EUROCONTROL. It is intended to supplement the GPS, GLONASS and Galileo (when it becomes operational) systems by reporting on the reliability and accuracy of the signals.

The SBAS is intended to enable aircraft to rely on GPS for all phases of flight, including precision approaches to any airport within its coverage area.

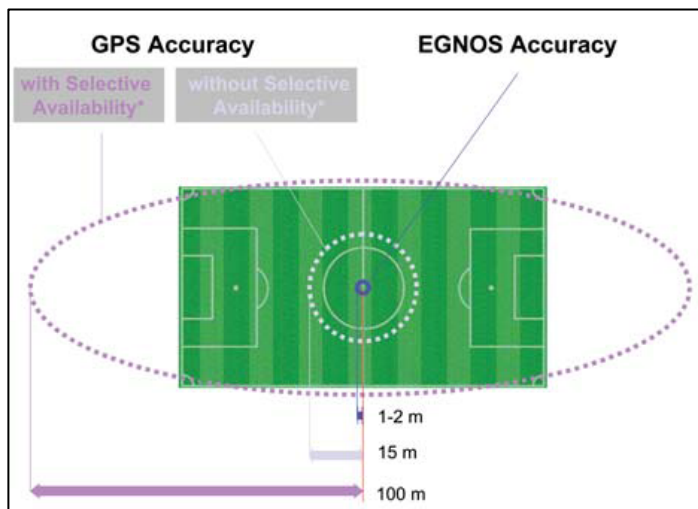
Similar services are provided in North America by the Wide Area Augmentation System (WAAS) and in Japan by the Multi-functional satellite augmentation system (MSAS).

Specifications of SBAS:

Accuracy:

Standard GPS systems provide a measured position accuracy of 2.5 m lateral and 4,7 m vertical.

An activated **SBAS** provides a measured position accuracy of 0,9 m lateral and 1,3 m vertical.



Advantages

- Fewer flights aborted due to bad visibility at less well-equipped airports
- Lower risk of flight-into-terrain accidents at less well-equipped airports
- New flight routes into smaller and less equipped airports
- Increased helicopter and general aviation capacity
- More efficient Europe-wide air traffic management
- More efficient ground operations at airports
- Reduced need for installation and maintenance of aircraft avionics

What's new?

May 2009



EGNOS / WAAS

Interested in
certification and installation?

e-mail us at
customer.support@gateV.at

or call our
Engineering Team
at
+43 1 7007 32025
mo – fr / 0800H – 1700H

Availability is the probability that a navigation system meets the accuracy and integrity requirements. Before the implementation of WAAS, the GPS Signal reception failure rate was approx. 4 days per year. The WAAS specification mandates availability as 99.999% throughout the service area, equivalent to a downtime of just over 5 minutes per year.

EGNOS will deliver the following services:

- ✓ Open service (OS) – a free signal that can be used by all receivers now available on the market
- ✓ Safety-of-life (SoL) service – featuring a level of reliability not matched by current stand-alone GPS signals
- ✓ Commercial service (CS) – access to the system's raw data, for specific sectors requiring higher accuracy, like surveying or oil drilling

Implementation date (Recommended)

Until 2010

Certification / Technical Validation

- Validation of the existing GPS-Equipment. (GPS- Receiver , FMS)
- Upgrade to a EGNOS / WAAS capable Flight Management System (for example: Universal UNS-1Lw, Garmin GNS 530W)
- AFM Supplement amendment
- System Safety Analysis
- EASA certification to gain airworthiness approval.