

Skyguide

Swiss Air Navigation Services complies with new flight procedures thanks to NavX-NCS Professional GNSS Simulator



Skyguide Swiss Air Navigation Services provides safe and reliable air navigation and related services for military and civil applications. As a high reliability organisation, skyguide is totally committed to safety. Together with civil and military partners, skyguide continuously improves air navigation and related services. Within the European Aviation Network, skyguide is focused on being an innovator and acting as a reliable partner. In this role, the company's goal is to create value-adding solutions in its core-competency areas as well as their implementation and continuous improvement.

Challenges

Recently, new satellite-based flight procedures were introduced in Switzerland under the CHIPS implementation program for SESAR oriented objectives. To comply with the new procedures, skyguide needed equipment for simulating GNSS that would provide a highly increased level of flexibility.

The Solution

Skyguide has been collaborating with IFEN, a leading provider of GNSS testing products, since 2010. Having seen the reliability, flexibility, and affordability of IFEN's equipment firsthand, skyguide chose the company's NavX-NCS Professional GNSS Simulator to support this project.

Using the NavX-NCS, skyguide can simulate satellite-based flight procedures in challenging time-frames and locations, with reduced satellite visibility. Due to the specific topography of Switzerland, the flight tracks are often designed in narrow valleys surrounded by mountain tops up to 10000 ft. Simulations make sure that safety requirements of the newly introduced flight procedures are met.

IFEN has been producing GNSS satellite navigation systems for more than 15 years. Aside from IFEN's in-depth expertise and track record for delivering reliable GNSS equipment, one of the reasons skyguide chose the

NavX-NCS was its cost-effective and compact design. With the NavX-NCS system, skyguide is enabled to generate various GNSS signals (e.g., GPS, Galileo, GLONASS, QZSS, and SBAS) by combining the different modulations with the up to 9 L-band frequencies. Currently, NavX-NCS is one of the best solutions on the market that supports all of these signals simultaneously from a single chassis.

The NavX-NCS system also provides skyguide with flexibility for the future. Using the GNSS system, skyguide can easily simulate additional satellite navigation system constellations. NavX-NCS only requires a simple software license upgrade to support other GNSS systems, such as GLONASS, Galileo, BeiDou, and QZSS.

With safety being the top priority at skyguide, the company is usually conservative with regards to innovation. In this instance, IFEN helped skyguide assume the role of a "smart follower" by enabling it to simulate Switzerland's new satellite-based flight procedures.

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