EGNOS FACT SHEET

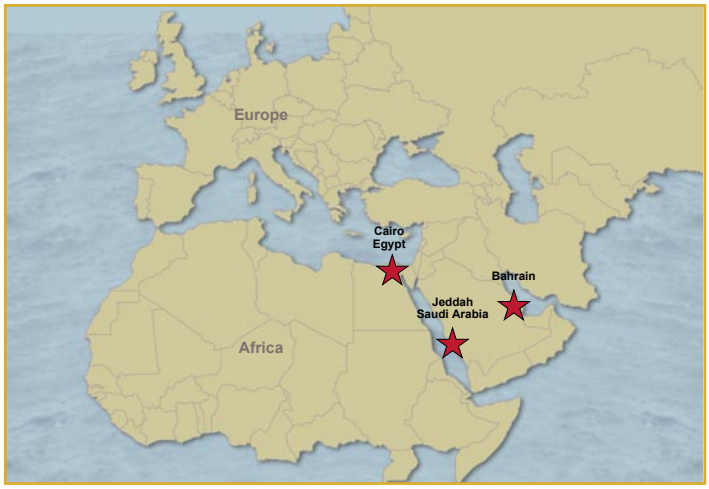
16: CAIRO FLIGHT TRIALS

In September 2002, three reference and integrity monitoring stations (RIMS) were added to the ESTB to provide eastern Mediterranean coverage for EGNOS flight trials at Cairo, Egypt. These tests were conducted by the Italian ATS Provider, ENAV, in cooperation with Telespazio and the EGNOS Project Office.

These Cairo flight trials were first discussed in March 2000 at an ICAO Middle East Air Navigation Planning and Implementation Regional Group (MIDANPIRG) GNSS task force meeting. The objectives included demonstrating EGNOS compliance with International Civil Aviation Organisation (ICAO) requirements for APV-I and APV-II over the eastern Mediterranean, and validating methods for extending EGNOS services beyond the European Civil Aviation Conference (ECAC) region.

As part of the preparation for these trials, the ESTB was combined with the Mediterranean Test Bed (MTB), and three additional transportable RIMS were deployed in Cairo, Jeddah in Saudi Arabia, and Bahrain. A pre-operational EGNOS signal was broadcast from Inmarsat's Indian Ocean Region satellite, and a Cessna Citation SII aircraft was equipped with advanced flight inspection instruments, EGNOS receivers and special flight data recorders for use during these trials.

Between October 7 and 11, the Cessna performed around thirty ILS look-alike precision approach procedures at Cairo on Runway 05R and Runway 23L. These were performed at different times of day to assess the impact of the ionosphere. The ESTB was also trialed in an en route environment using straight and circular tracks within 50NM of Cairo airport.



MIDAN RIMS

So, how well did the ESTB perform? Anecdotal evidence from the pilots indicated they were confident that the ESTB was complying with APV-II precision approach requirements. We were also pleased to hear that the IOR satellite was always visible, even during non-standard turns with 60° banking.

These early results look promising, and we expect to see them confirmed by the ongoing post-mission data analysis. A positive outcome will confirm that it is technically feasible to extend the EGNOS service beyond the core ECAC region. It will also mean that EGNOS can potentially deliver a precision approach capability (APV-II) to the entire Mediterranean region and parts of Africa.

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