THALES
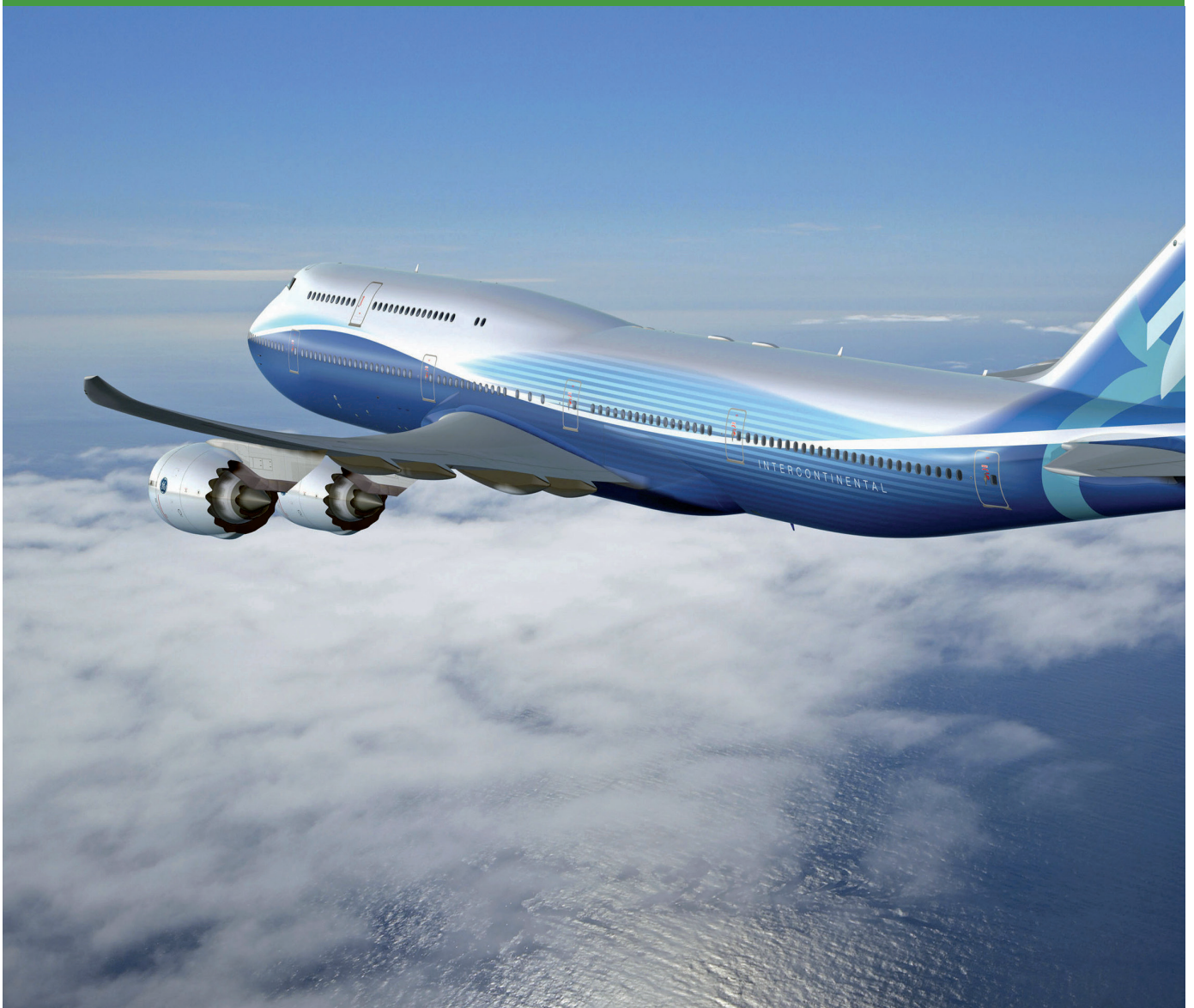
NextGEN

Implementing Solutions for NextGen
Key Technology Partner to FAA for NextGen

SHAPING THE FUTURE OF US SKIES

NextGen is transforming the US National Airspace System (NAS) to meet future needs and avoid gridlock in the sky and at airports. The FAA has embarked on a continuous roll-out of new capabilities and technologies that will reduce delays, make air traffic more efficient and minimize aviation's impact on the environment. Travel will become more predictable, quieter, cleaner and more fuel-efficient – and more importantly, safer.

- Thales is contributing to FAA test infrastructure and standards, and supplying trial automation systems to support the introduction of air-ground Data Comm.

- For over 70 years, Thales has provided the ground-based navigation infrastructure in the US, including 100% of the VOR network, more than 99% of ILS and 50% of DME procured by the FAA.

- As a long-term supplier to the FAA, Thales is a key contributor to NextGen.

- Thales has supplied Exelis with advanced ADS-B radios and Thales's Multi-Sensor Tracking System, TopSky - Tracking for the National ADS-B Program.

- As a key teaming partner on two SE2020 teams (Exelis and Metron), Thales brings worldwide experience in Automation, Navigation, Surveillance, Simulation and Avionics to NextGen.

- ACSS (an L3-Thales joint venture) is on the forefront of NextGen avionics and ADS-B applications development.

MAJOR CONTRIBUTOR TO NEXTGEN AND SESAR

Thales, as a ground, airborne and space systems supplier deeply involved in both SESAR and NextGen initiatives, is facilitating worldwide cooperation in building tomorrow's aviation system:

- Contributing to a greater integration and global harmonization of the Air Traffic Management systems.

- Assisting with the interoperability of the air and ground ATM/CNS systems that enable the operational improvements from key innovative concepts such as:
  ▷ Trajectory Based Operations
  ▷ Green navigation and control procedures
  ▷ New ways of assuring the aircraft separation
  ▷ ATM data and System Wide Information Management System
  ▷ Efficient and safe Surface Traffic Management

- Contributing expertise to standards bodies and working groups enabling the implementation of the NextGen and SESAR programs strategy, such as RTCA and EUROCAE.

ADS-B INNOVATIONS ACCOMPLISHING NEXTGEN OBJECTIVES

Thales has provided more than 1,200 ADS-B radios for nationwide coverage across the US, as well as the multi-sensor tracking function, TopSky - Tracking, as part of the Exelis team.

- Pilots will benefit from improved situational awareness.
- Controllers will be able to reduce aircraft separation and increase airspace capacity.
- Aircraft will fly more direct routes, reducing fuel burn.

ADS-B TECHNOLOGY ON THE GROUND AND ON-BOARD AIRCRAFT IS CREATING NEW PATHS OVER THE GULF OF MEXICO

JetBlue can now use ADS-B to reroute over the Gulf to avoid thunderstorms on its twice-daily flight from Los Angeles to Fort Lauderdale. Without ADS-B technology, flights re-route north of Florida adding 15 minutes to the journey and burning an extra 60 gallons of jet fuel.
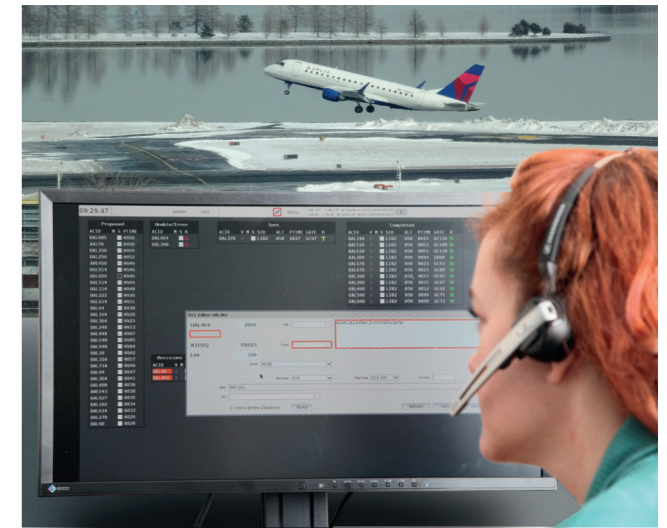
SE2020

Systems Engineering 2020 (SE2020) is a contract that enables close industry-FAA collaboration for advancing NextGen concepts. SE2020 allows the FAA to access industry's leading subject matter experts to facilitate research, analysis, systems engineering, concept development, and demonstrations activities.

Thales is a key contributor on both the Exelis team and the Metron team. Thales leverages its experience with global interoperability, system engineering and its leading position in SESAR for the SE2020 project.

INCREASING CAPACITY WITH DATA COMM

Data Comm allows digital information to be exchanged between air traffic control and pilots, enabling the auto-load of information directly into the aircraft flight management system. This alllows aircraft to receive departure clearances and airborne reroutes digitally.

Thales is working with the FAA to develop Data Comm Avionics and support its validation and verification efforts with simulation equipment.

Additionally Thales has delivered a tower automation platform to enable the FAA to conduct departure clearance trials at several major airports.

As one of the leading providers of Data Comm services through its automation deployments around the world, Thales is in a unique position to provide expertise to the FAA and industry stakeholders for the implementation of some of these advanced technology concepts.

Modernizing and maintaining infrastructure for navigation

As the FAA develops NextGen navigation capabilities such as WAAS, RNAV, RNP, and GBAS, the backbone of the NAS navigation system remains the VOR, DME and ILS systems that Thales has supported for decades. Maintaining these systems, developing innovative ways to reduce O&M costs, and providing new, low cost systems is a major focus for Thales.

PARTNERING WITH EXELIS AND THE FAA
TO PROVIDE THE FOUNDATION OF NEXTGEN THROUGH NATIONWIDE ADS-B COVERAGE

NextGEN

Generalized AGL Surveillance Coverage (AGL feet):
● 0 - 500   ● 500 - 1,000   ● 1,000 - 3,000

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