SURVEILLANCE and BROADCAST SERVICES OVERVIEW

11/13/2018
The SBS Program:

- FAA contract awarded to Harris on 8/30/07, extending over 18 years to 8/30/2025
- Leased Subscription Based Service contract providing SBS services in FAA-defined Service Volumes
- Harris designed, developed, installed and operates the network
- System has passed FAA safety case
- System has achieved security accreditation through independent audit from FAA security office

ADS-B Benefits

- Significantly more accurate surveillance
- At significantly lower cost
- Common situational awareness picture to Air Traffic Control, Pilots, Airlines/Airports, and other stakeholders for improved safety & efficiency
Automatic Dependent Surveillance - Broadcast:

_is most importantly a Safety of Life program_

ADS-B provides a Common situational awareness.
ADS-B is a Vital Element of the NextGen System

ADS-B offers:

- Lower cost, more accurate, and more frequent update of surveillance infrastructure
- Allows surveillance deployment where previously not possible - e.g. Gulf of Mexico
- Delivers safety services to the cockpit
- Unprecedented pilot situational awareness
- Enabler of air traffic control procedures that will provide increased airspace capacity and efficiency
Five Aviation Services provided by SBS
Harris Operates the Largest Air Traffic Control Surveillance Network in the World

Harris’ 663 ADS-B radio station network also receives and processes data from 425+ FAA radar systems and 35 ASDE-X Systems Totaling 1,110 air traffic NextGen Network surveillance sensors
ADS-B Service Volumes: EnRoute, Terminal, and Surface

CONUS & GOMEX

- 35 EnRoute SVs (CONUS)
- 241 Terminal SVs (CONUS)
- 36 Surface SVs

ALASKA

GUAM

PUERTO RICO

HAWAII
SBS Architectural Overview

- Radio Station (RS)
- Regional Control Stations (RCS)
- Service Delivery Point (SDP)
- Network Operations Center (NOC)
- Remote Monitor and Control

- Radio Frequency (RF) link from RS to Flight
- RF link from Flight to RS
- HWDS (2 network feeds)
- FIS-B Products

- ADS-B Private Network
- Track Reports (ADSB/WAM)
- SDP-Federal Aviation Administration (FAA)
- Sensor Reports (Such as Radar)

- 11 Regional Control Stations (RCS)
- ADS-B SBSS
- FIS-B Products

- Network Operations Center (NOC)
  (One NOC + Backup NOC and Emergency NOC)
ADS-B System Infrastructure

650+ Radio Stations spanning 9,443 miles

Harris Radio Station Greenfield Site

200+ Service Delivery Points

29 Automated Weather Observation Stations

Radio Station Leased Tower Site

11 Regional Control Stations
Typical Airport Site
Typical Co-Location

Antenna Array – 1090, UAT, GPS

Radio Station Equipment Cabinet & Generator
Airport Surface Radio

Radio Enclosure

1090 and UAT Antennas
SBS Network Operations Center (NOC)  
24 X 7 X 365

• NOC Functionality
  • Monitor: Automated monitoring systems to
    • Alert operators when equipment and service anomalies occur
    • Ticketing System tracks anomalies to resolution
  • Control: Authorized operators have remote access to SBS Equipment for maintenance and repair
  • Coordination: Authorized operators work with internal and external groups for SBSS maintenance and coordination

• Locations
  • Herndon Monroe St. Building
  • Backup Facility: Glen Drive Facility in Sterling, VA
  • Emergency Facility: Moorestown, NJ