



# SURVEILLANCE and BROADCAST SERVICES OVERVIEW

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11/13/2018

Harris Proprietary Information  
Non-Export Controlled

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**HARRIS**<sup>®</sup> TECHNOLOGY TO CONNECT,  
INFORM AND PROTECT<sup>™</sup>

## **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

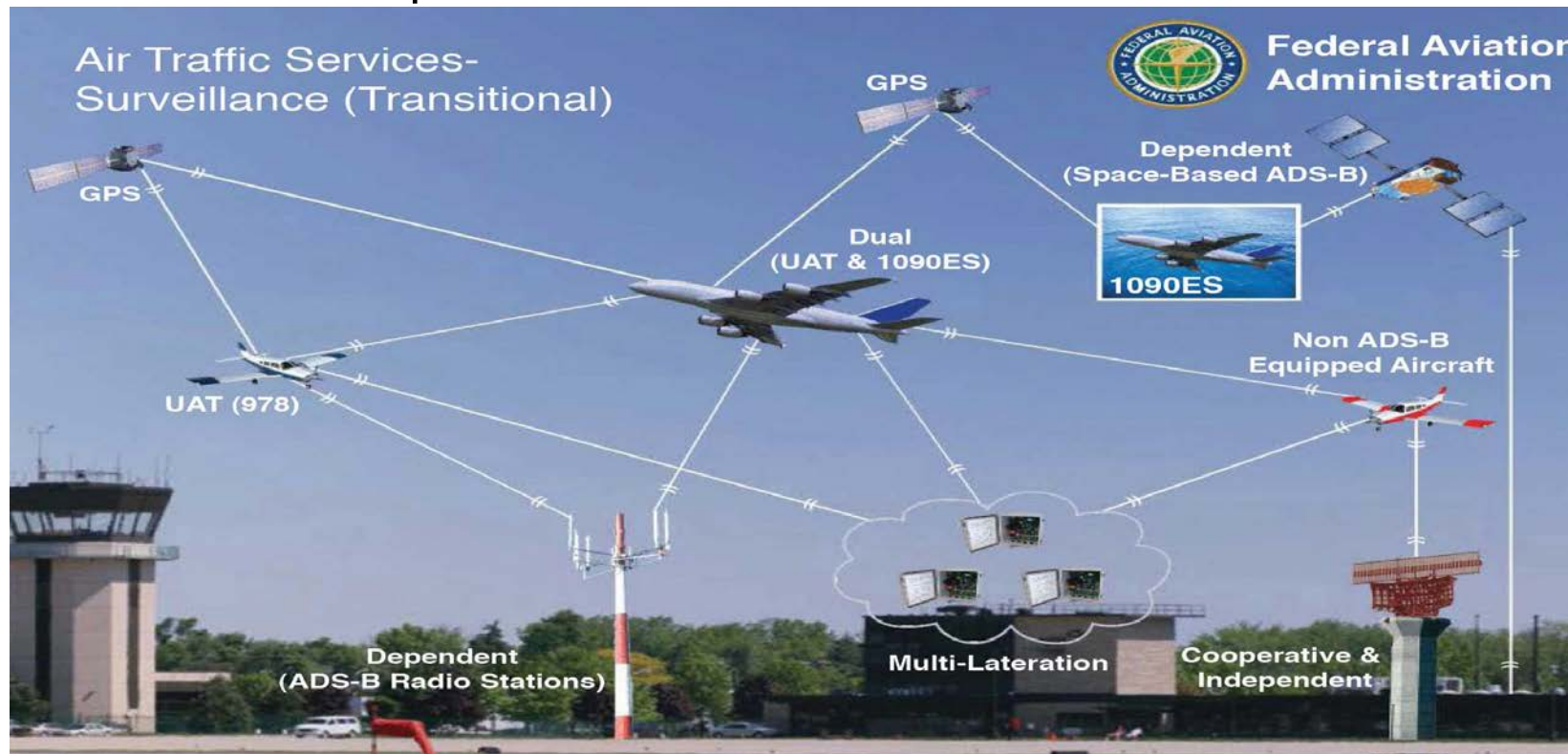
## **ADS-B Benefits**

- 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

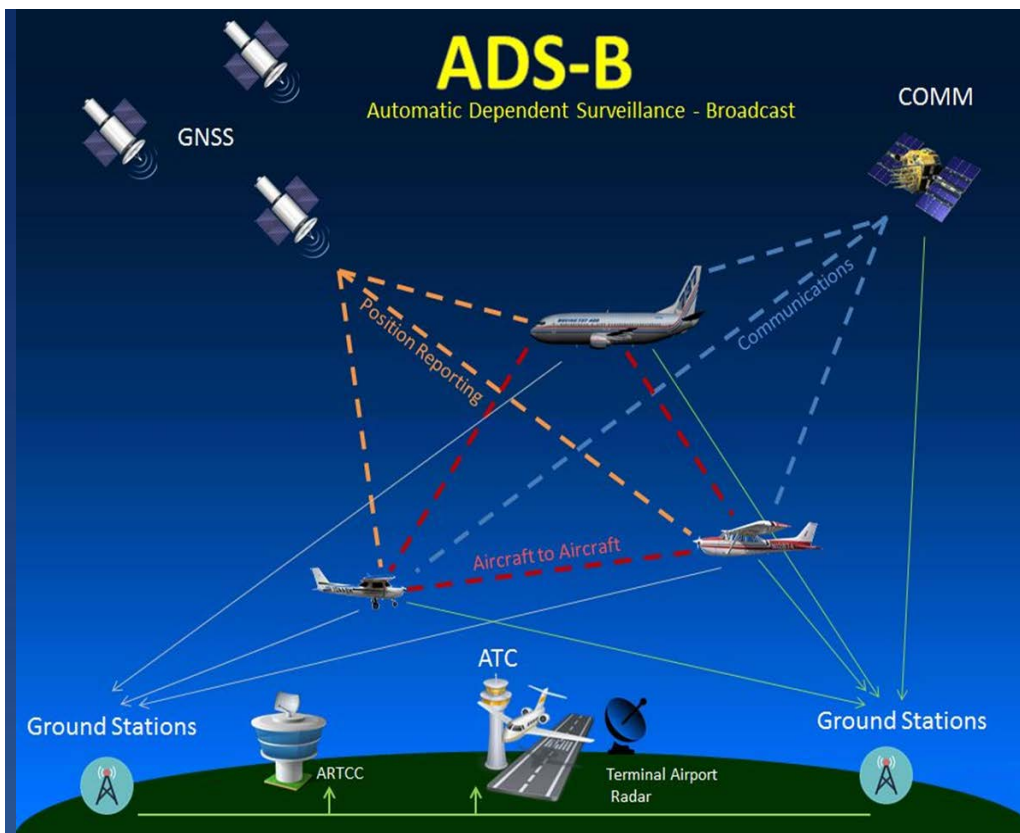
Automatic Dependent Surveillance - Broadcast:

*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



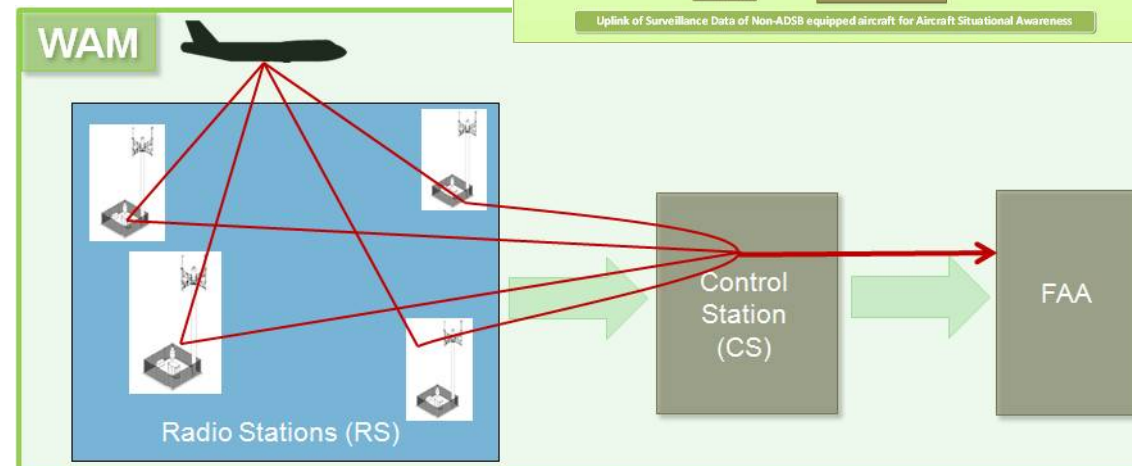
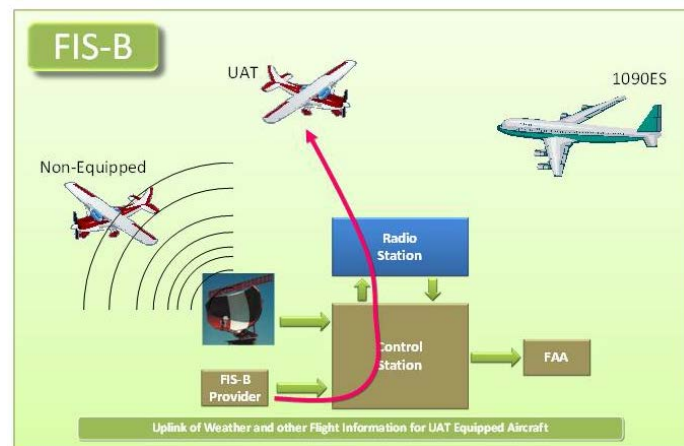
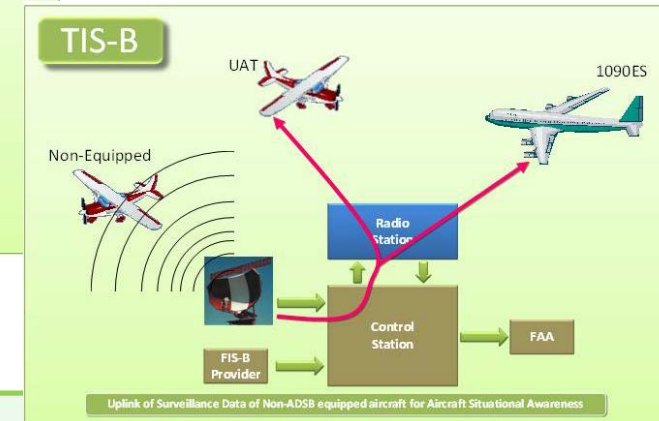
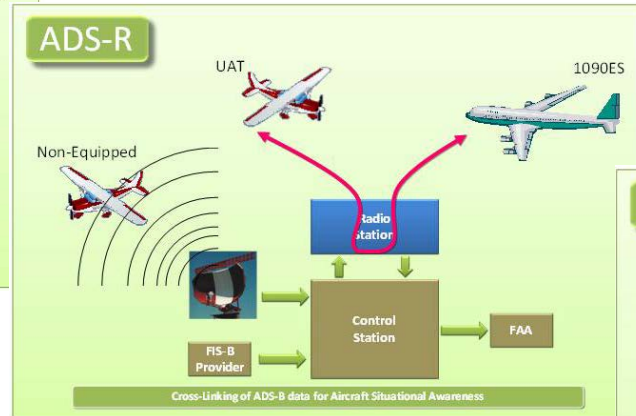
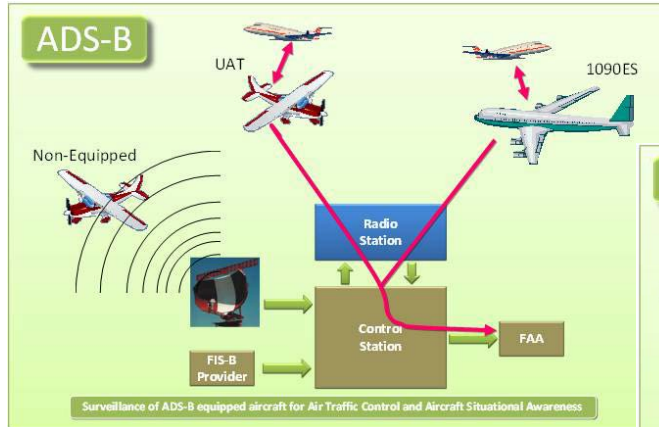
## ADS-B offers:

- 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



# SBS Radio Station & Radar Network

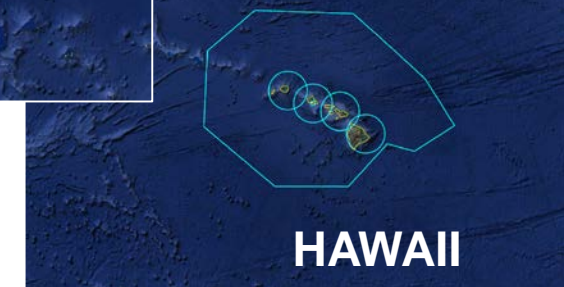
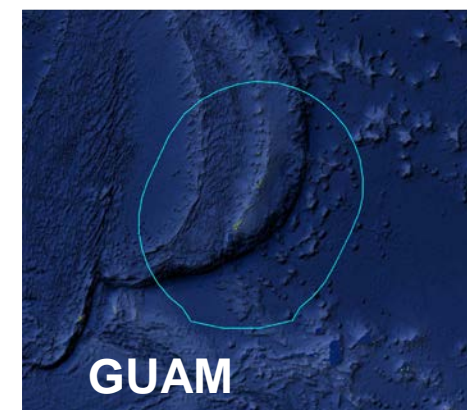
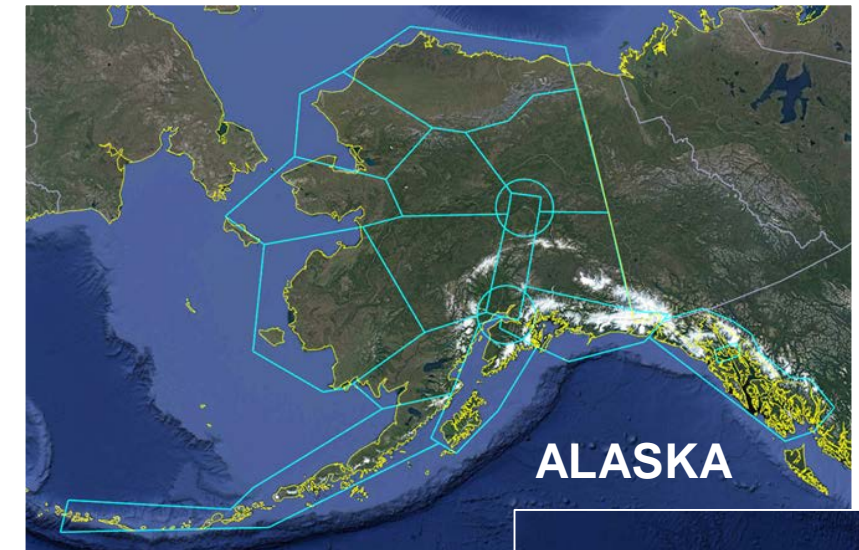
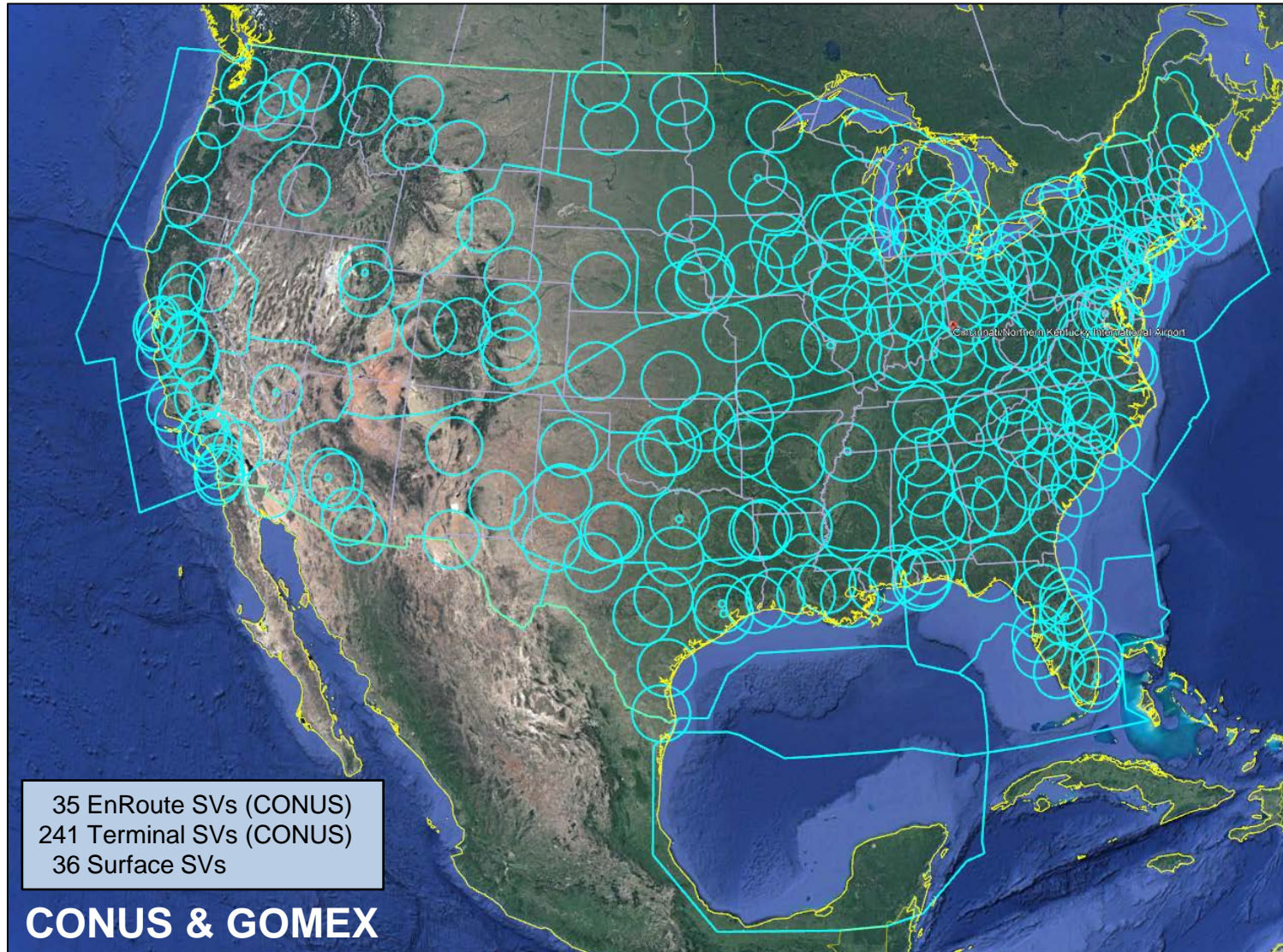


**Harris Operates the Largest Air Traffic Control Surveillance Network in the World**

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

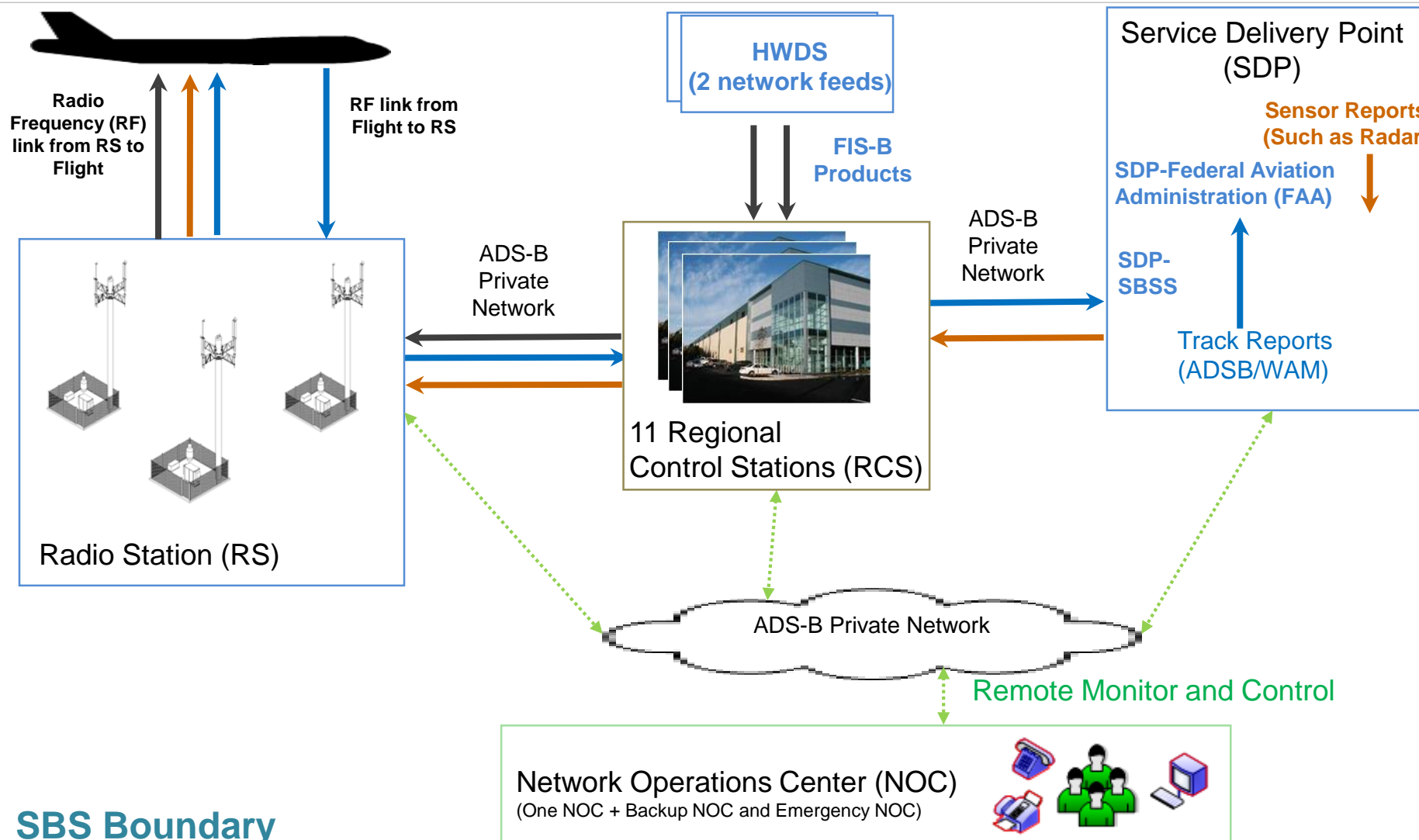


# ADS-B Service Volumes: EnRoute, Terminal, and Surface



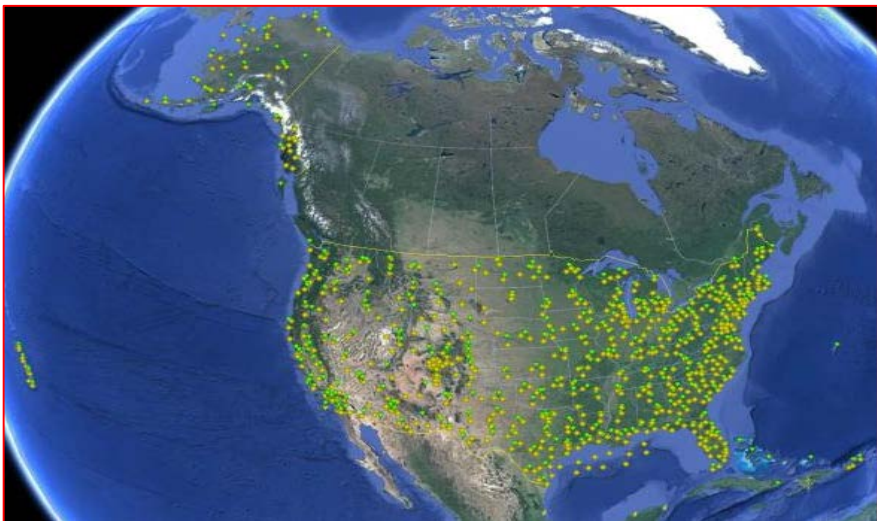


# SBS Architectural Overview





# ADS-B System Infrastructure



**650+** Radio Stations spanning 9,443 miles



**Harris Radio Station  
Greenfield Site**



**29** Automated Weather  
Observation Stations



**Radio Station  
Leased Tower Site**



**200+** Service  
Delivery Points



**11** Regional Control Stations









Antenna Array – 1090, UAT, GPS



Radio Station Equipment Cabinet & Generator



**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

