

Surveillance and Broadcast Services

India SBAS / GBAS ADS-B Seminar

By: Dan Hanlon

Date: January 29, 2010



Federal Aviation
Administration



Agenda

- **Overview**
- **Strategy**
- **Program Status**
- **Rulemaking Status**
- **Agreements**
- **Routes**
- **Next Steps**



International Harmonization



- **International Civil Aviation Organization (ICAO)**
 - Aeronautical Surveillance Panel (ASP)
 - Caribbean and South American Regional Planning and Implementation Group (GREPECAS)
 - Asia Pacific Air Navigation Planning and Implementation Regional Group (APANPIRG)
- **Eurocontrol**
 - CASCADE: ADS-B is main focus of CASCADE, standardization, trials, and implementation activities. It is the largest Eurocontrol partner in terms of budget and staff.
 - Action Plan 23: exchange information and ideas for the future
- **Airborne Separation Assistance Systems (ASAS)**
 - Joint FAA and Eurocontrol forum
- **Requirements Focus Group (RFG)**
 - Joint RTCA / EUROCAE Working Group
- **Recurring Coordination Meetings**
 - Service Providers: AirServices Australia, Eurocontrol, FAA, and NAV CANADA
 - Regulators: EASA, Civil Aviation Safety Authority, FAA, and Transport Canada



Critical Services: Automatic Dependent Surveillance - Broadcast (ADS-B)

- **Automatic**
 - Periodically transmits information with no pilot or operator input required
- **Dependent**
 - Position and velocity vector are derived from the Global Positioning System (GPS)
- **Surveillance -**
 - A method of determining position of aircraft, vehicles, or other asset
- **Broadcast**
 - Transmitted information available to anyone with the appropriate receiving equipment

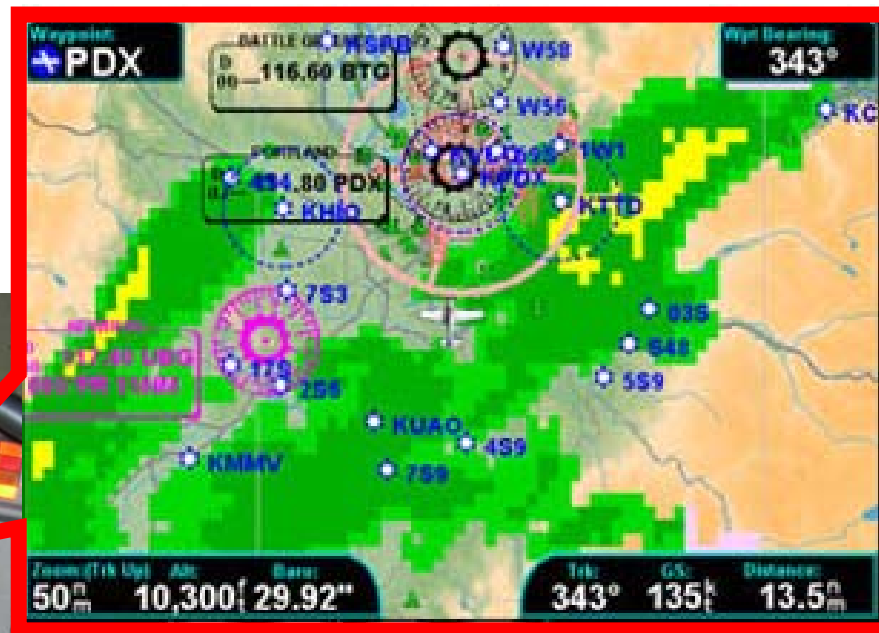


Essential Services: Traffic Information Service - Broadcast

TIS-B is a service which provides ADS-B equipped aircraft with position reports from secondary surveillance radar on non-ADS-B equipped aircraft.



Essential Services: Flight Information Service - Broadcast



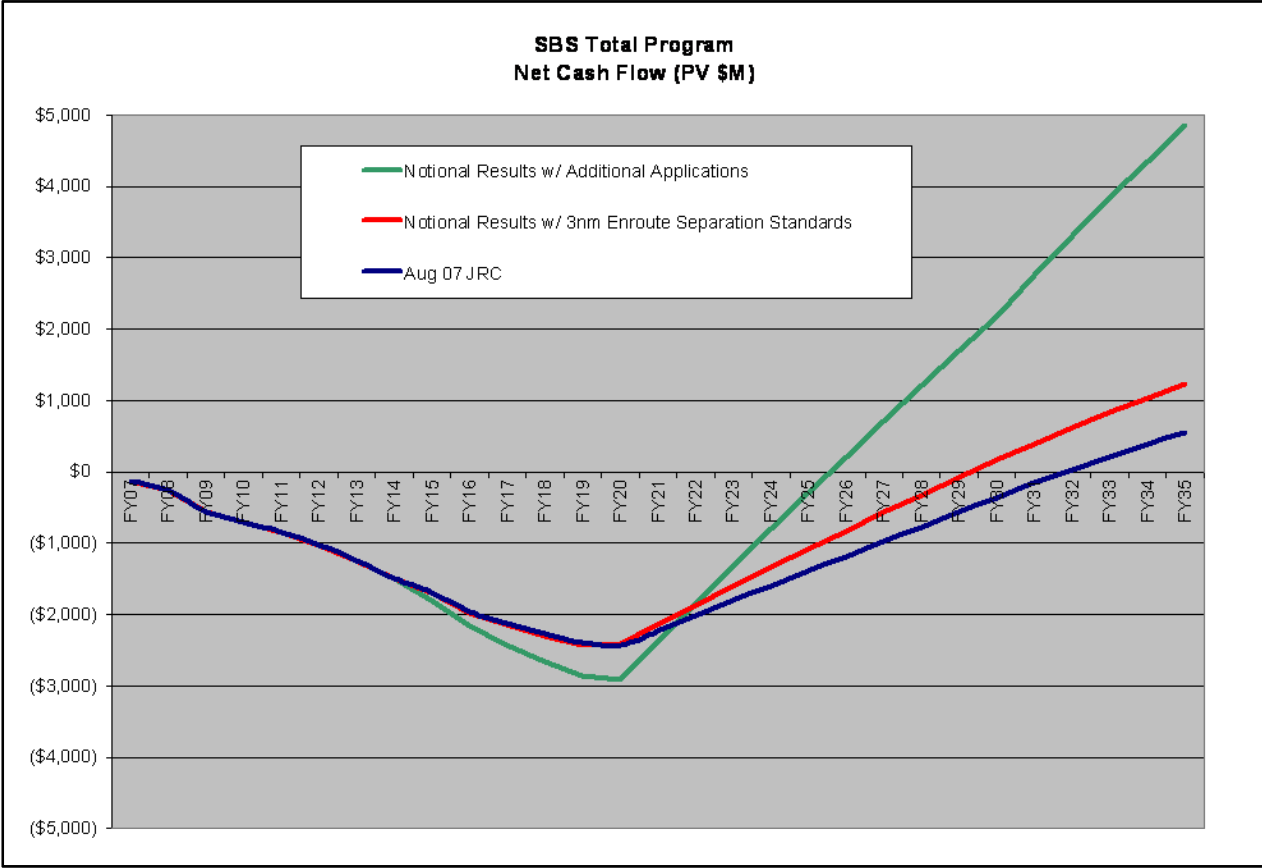
FIS-B transmits graphical National Weather Service products, pilot reports, and special use airspace.

Business Case Summary

- Total Cost / Benefit Summary (Risk Adjusted, Present Value) Through 2035**

	Total
Costs	
FAA	1882.0
Aviation System User	2631.1
Total FAA, User and Other Costs	4513.1
Benefits	
FAA	451.7
Aviation System User	4591.5
Total FAA, User and Other Benefits	5043.2

- FAA Baseline Cost Summary**

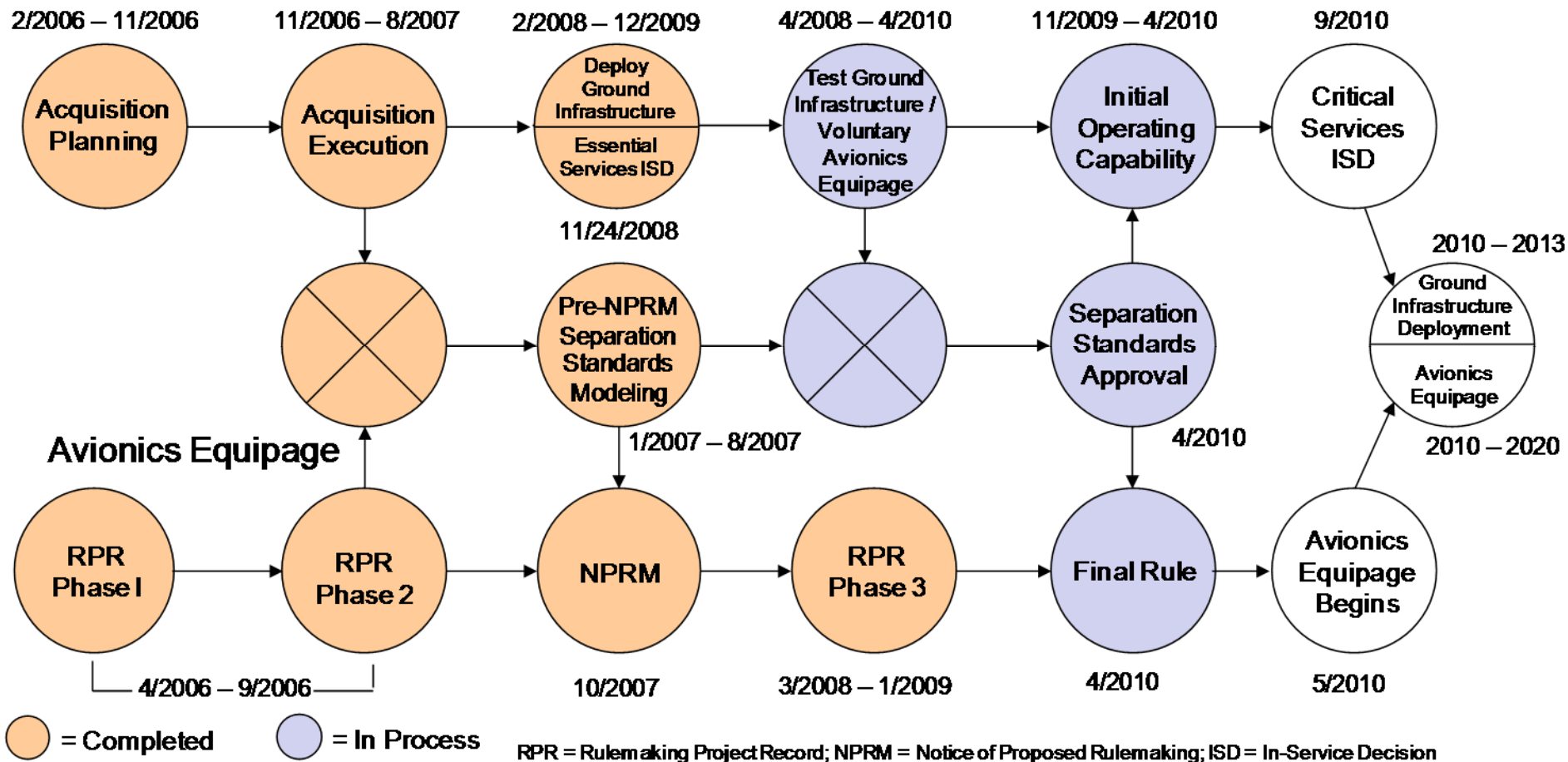


Estimated Cost	Baselined								Total Baselined (FY07 - FY14)
	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	
Segment 1 and 2 F&E Program Plan	\$90.0	\$100.0	\$308.4	\$198.2	\$175.2	\$284.2	\$270.7	\$254.7	\$1,681.5

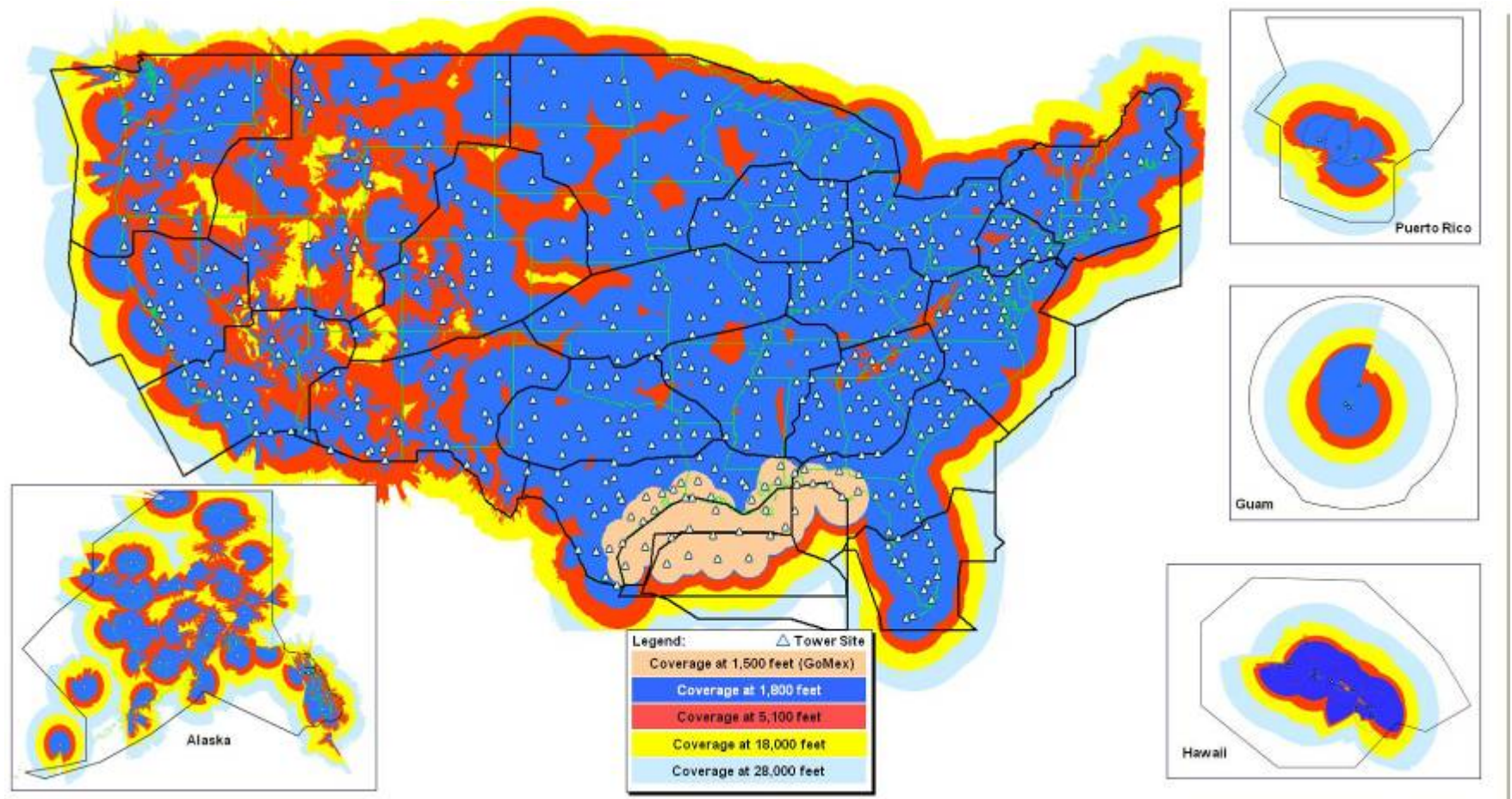


Strategy

Ground Infrastructure



Ground Infrastructure: 794 Ground Station Solution Provides National Coverage



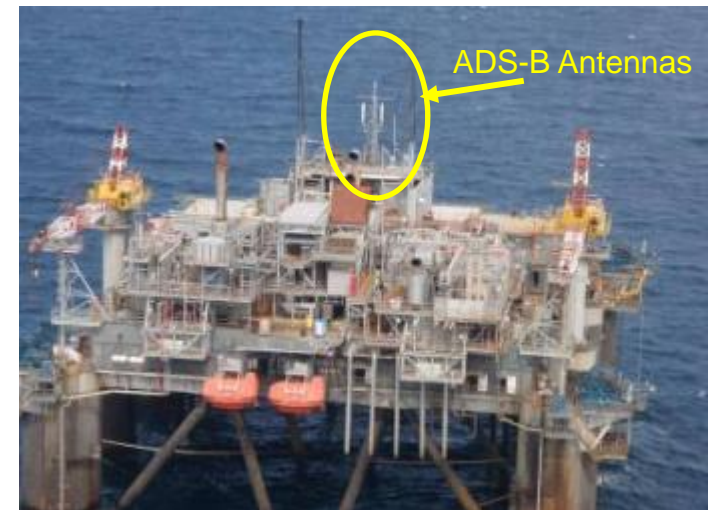
Key Site Status

- **Essential Services**

- Miami Area In Service Decision – November 2008 ✓

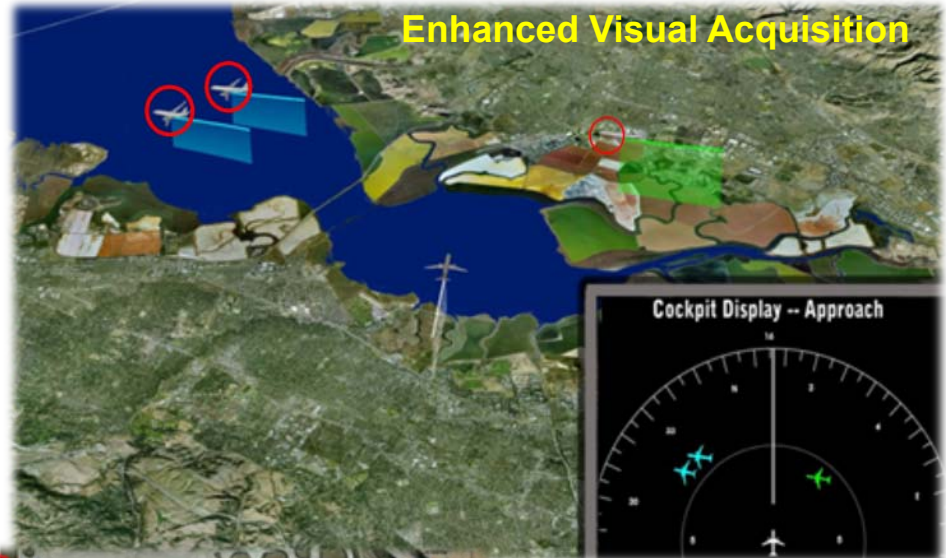
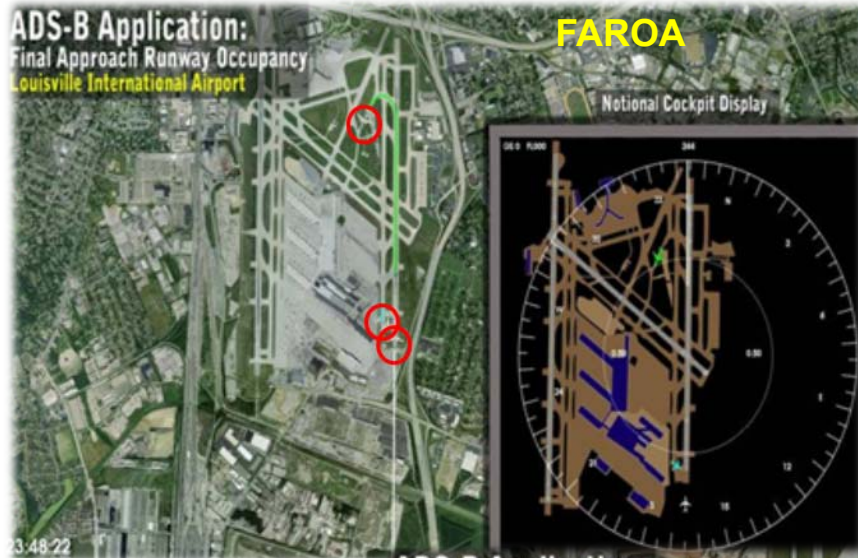
- **Critical Services**

- Louisville Initial Operating Capability (IOC) – November 2009 ✓
- Gulf of Mexico IOC – December 2009 ✓
- Philadelphia IOC – Planned February 2010
- Juneau IOC Planned – April 2010
- In Service Decision – Planned September 2010





ADS-B Applications





U.S Rulemaking: Notice of Proposed Rulemaking (NPRM) Summary

- **All aircraft operating in the following airspace would have to meet the proposed performance requirements for ADS-B Out:**
 - Class A, B and C airspace
 - All airspace at and above 10,000 feet MSL over the 48 contiguous United States and the District of Columbia
 - Within 30 nautical miles of airports listed in 41 CFR Part 91, Appendix D, from the surface up to 10,000 feet MSL
 - Class E airspace over the Gulf of Mexico from the coastline of the United States out to 12 nautical miles, at and above 3,000 feet MSL

Final Rule for ADS-B Out will be issued in 2010 with a compliance date of 2020



Rulemaking Next Steps: Schedule to Final Rule

Milestone	Planned Date of Completion	Status / Comments
FAA Rulemaking Team finalizes RPR Phase 3	January 14, 2009	Complete
RPR Phase 3 Submitted to Office of Rulemaking	January 21, 2009	Complete
Rulemaking Council Approval of RPR	January 27, 2009	Complete
Rulemaking Team Drafts Final Rule	May 2009	Complete
Final Rule Economic Assessment	August 2009	Complete
Final Rule Concurrence through Directors	October 2009	Complete
Final Rule Concurrence through Associates	November 2009	Complete
Final Rule Concurrence through Administrator	December 2009	Complete
Final Rule Approved through OST	January 2010	Ongoing
Final Rule Approved through OMB	April 2010	
Final Rule Published in Federal Register	April 2010	

•RPR = Rulemaking Project Record

SBS External Agreements



Continental MOA
Underway



Delta MOA
Underway



AOPA MOA
October 2009



Auburn University MOA
September 2009



United MOA
April 2009



U.S. Airways/ACSS MOA
January 2009



NetJets MOU
December 2008



Honeywell
October 2008



Aviation Communication
and Surveillance Systems
October 2008



Alaskan Aviation Community
& State Representative MOA
February 2007

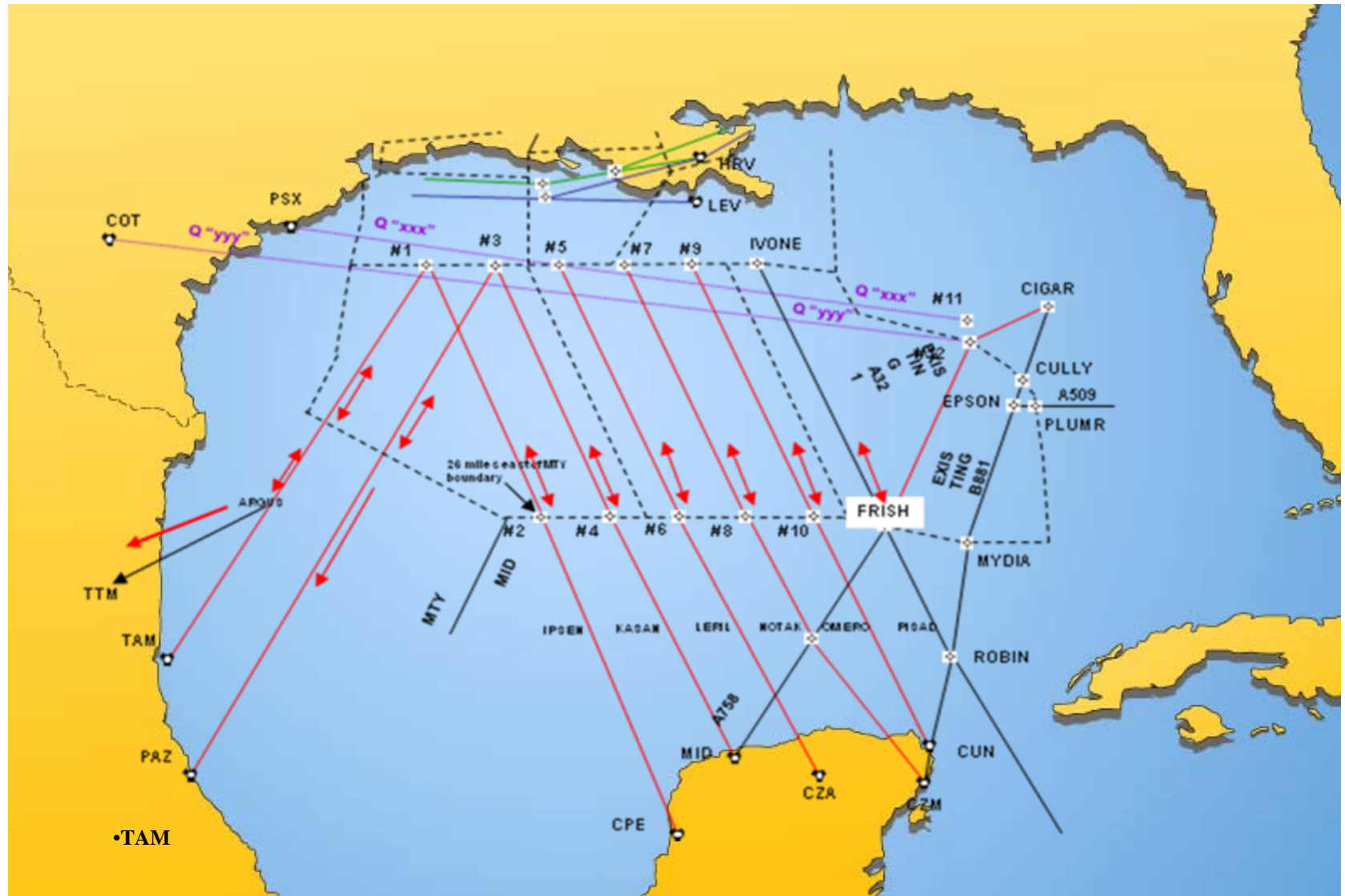


UPS MOA
November 2006



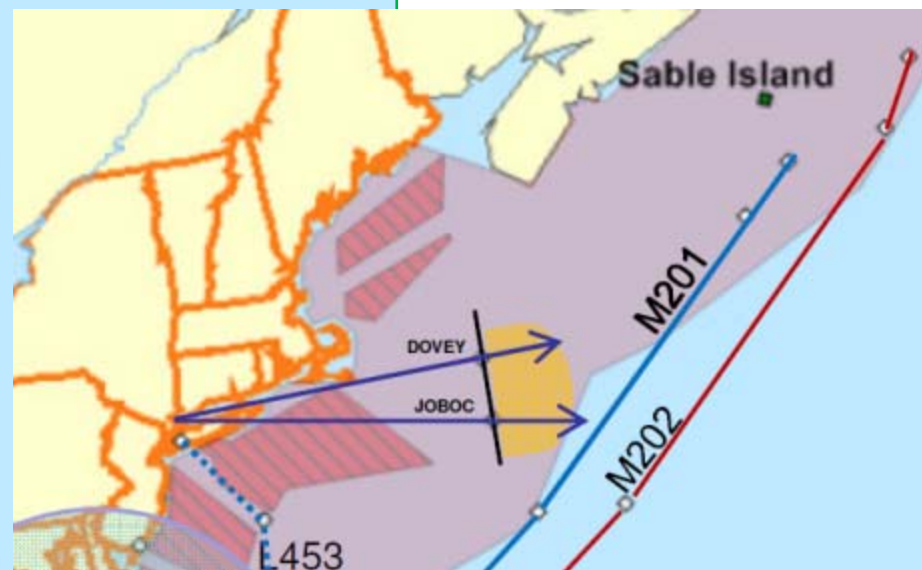
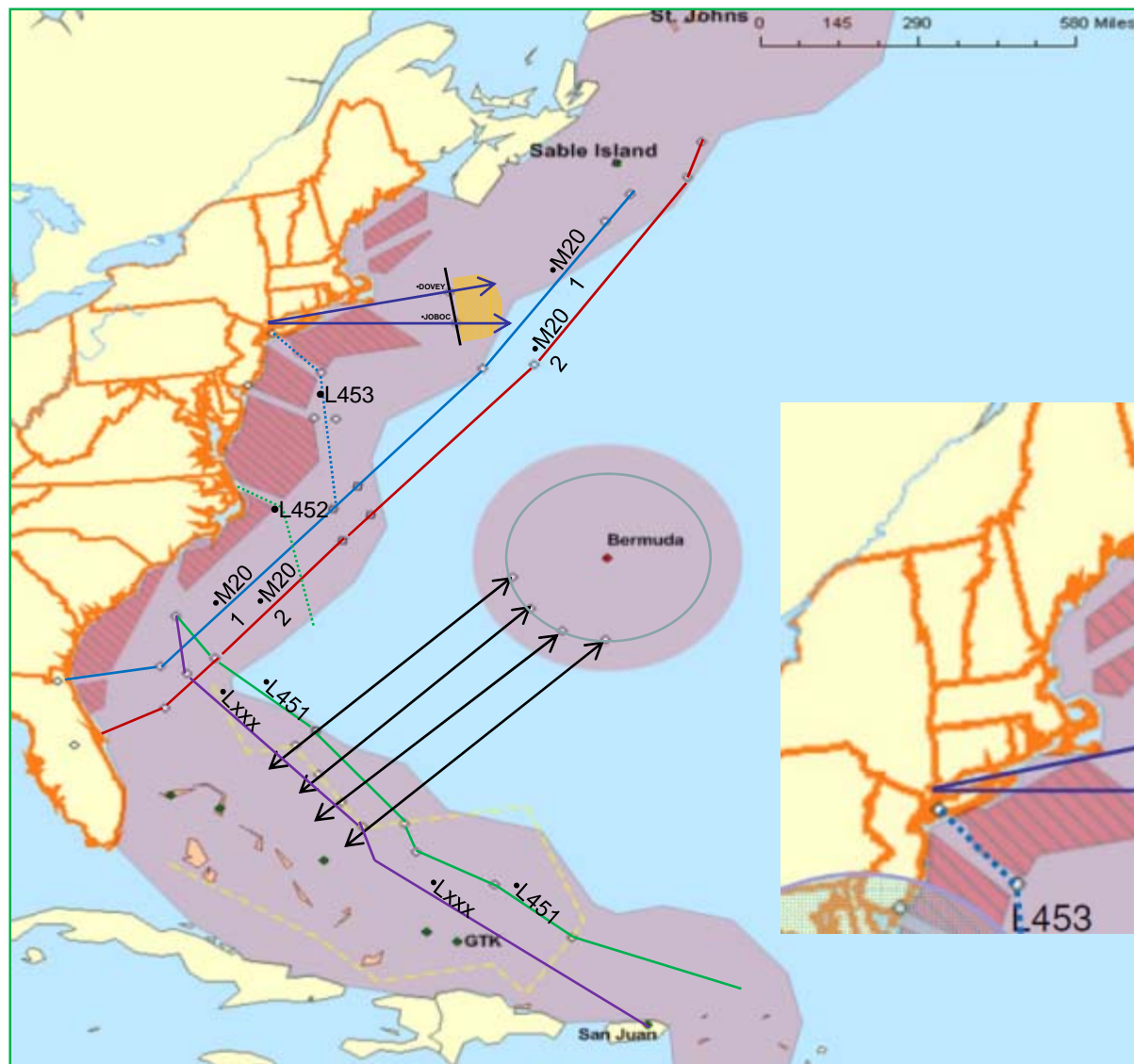
HAI & Gulf of Mexico
Helicopter/Platform Owners MOA
May 2006

Proposed GOMEX Route Structure





East Coast and North Atlantic Tracks



Next Steps: FY2010 Schedule

Milestone	Planned Date of Completion / Status
FY2010	
Juneau Service Acceptance Test (SAT)	October 2009 / Complete
Louisville IOC of Surveillance Services	October 2009 / Complete
Gulf of Mexico IOC of Surveillance Services	December 2009 / Complete
Philadelphia IOC of Surveillance Services	February 2010
Juneau IOC of Surveillance Services	April 2010
Final Rule Published	April 2010
Critical Surveillance Services ISD for ADS-B	September 2010





SBS Next Steps

- **Continue to Work Collaboratively with Aviation Community**
 - ICAO
 - RTCA
 - Air Traffic Management Advisory Committee (ATMAC)
 - Special Committee 186 (SC186)
 - Requirements Focus Group (RFG)
 - Aviation Rulemaking Committee (ARC)
 - Customer MOU's
 - Outreach at Association Forums
- **Continue to Meet Major Program Milestones**
 - Integrity / Discipline
 - Transparency
 - Measured Risk Taking
- **Monitor Quality of Service and Adjust Investments**

