

Surveillance and Broadcast Services

Status on FAA Deployment of ADS-B

March 23-27, 2009

ISPACG/23, IP11ATT



Federal Aviation
Administration



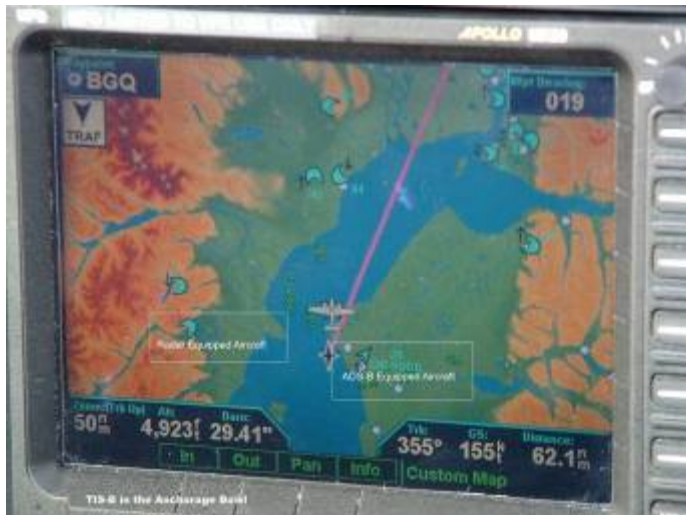
Agenda

- **Program Status**
 - Essential Services
 - Critical Services
 - Rulemaking
- **Strategy**
- **Architecture**
- **Accomplishments**
- **Schedule**



Essential Services: Traffic Information Service - Broadcast / Flight 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.



FIS-B transmits graphical National Weather Service products, temporary flight restrictions (TFRs), and special use airspace.



Overview: Initial ADS-B Services and Applications

Services:
Surveillance Broadcast Services (En Route, Terminal, Surface)
Traffic / Flight Information Broadcast Services
Applications:
Enhanced Visual Acquisition
Enhanced Visual Approaches
Final Approach and Runway Occupancy Awareness
Airport Surface Situational Awareness
Conflict Detection
Merging and Spacing
Cockpit Display of Traffic Information (CDTI) Assisted Visual Separation (CAVS)



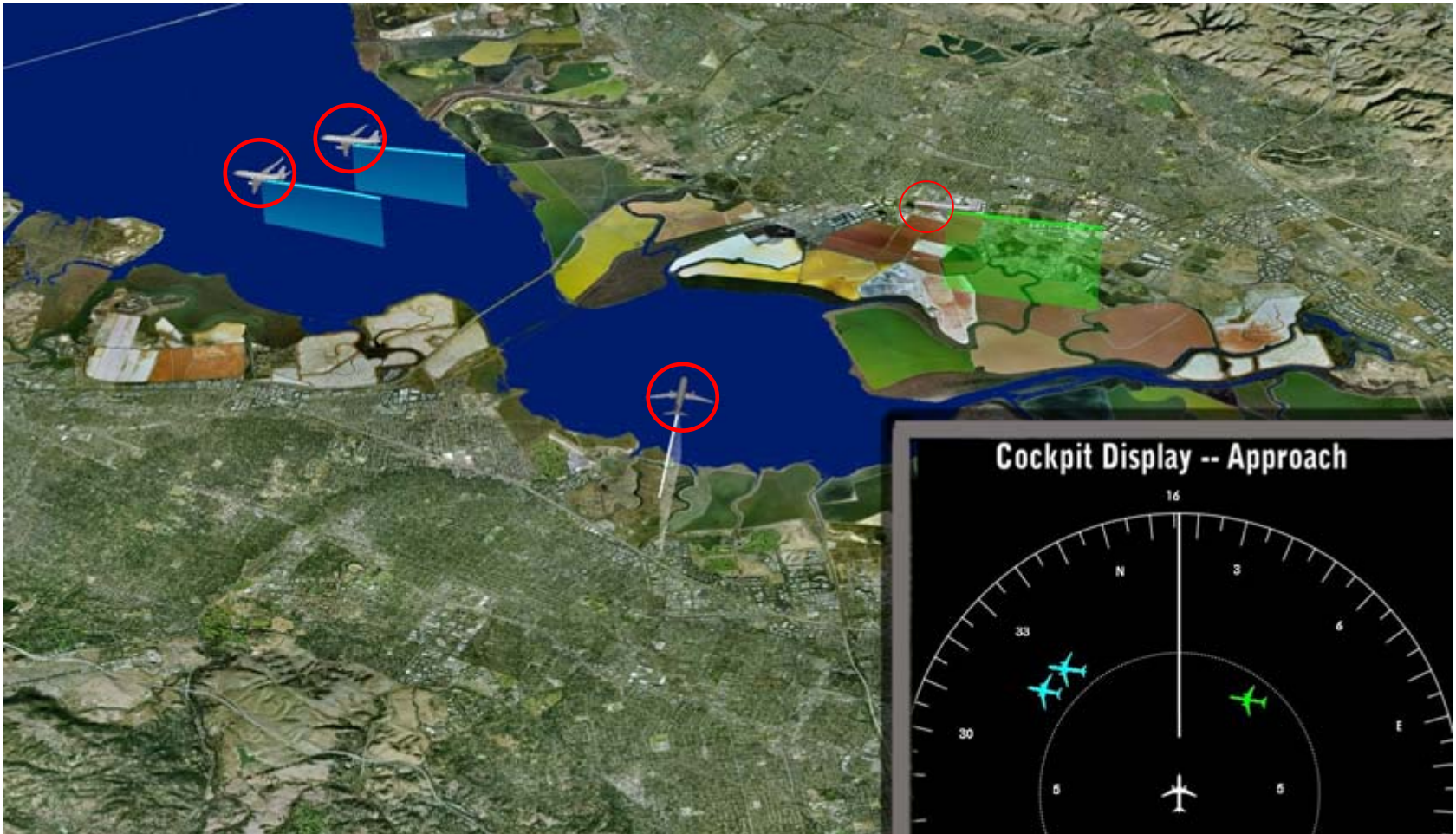
Gulf of Mexico: Current Conditions (High)



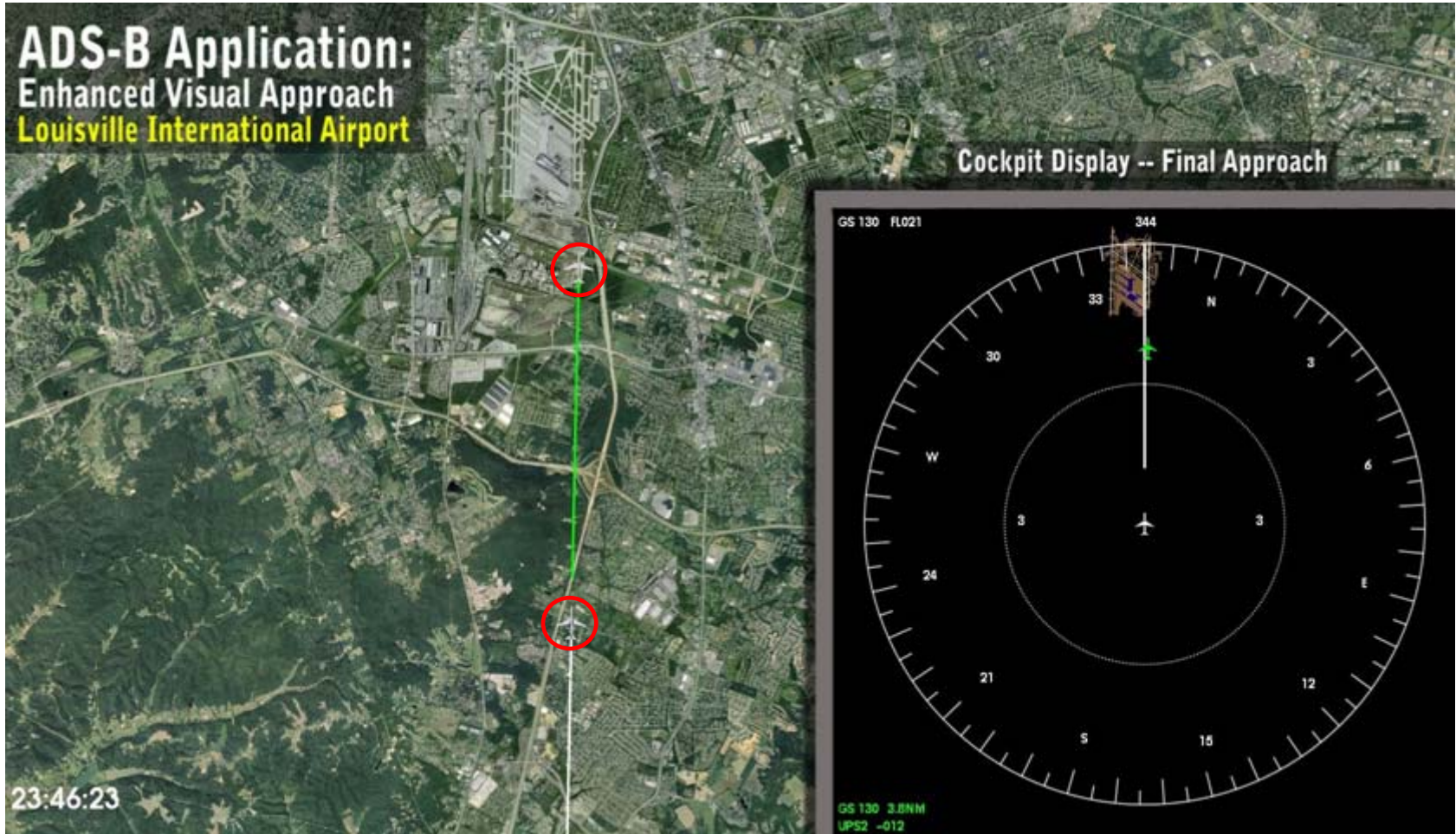
Gulf of Mexico: ADS-B Enabled (High)



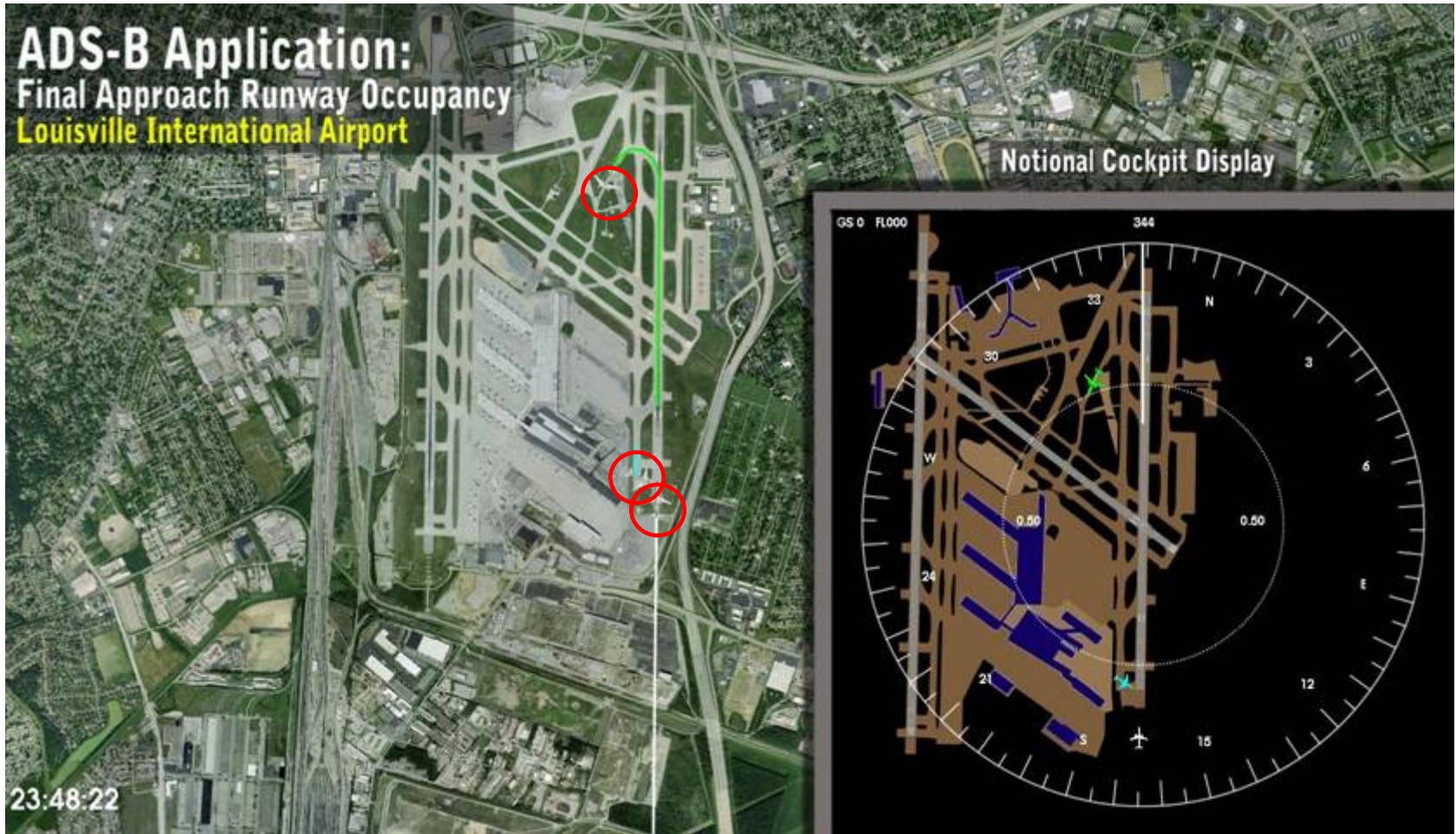
Airborne Applications: Enhanced Visual Acquisition



Airborne Applications: Enhanced Visual Approaches



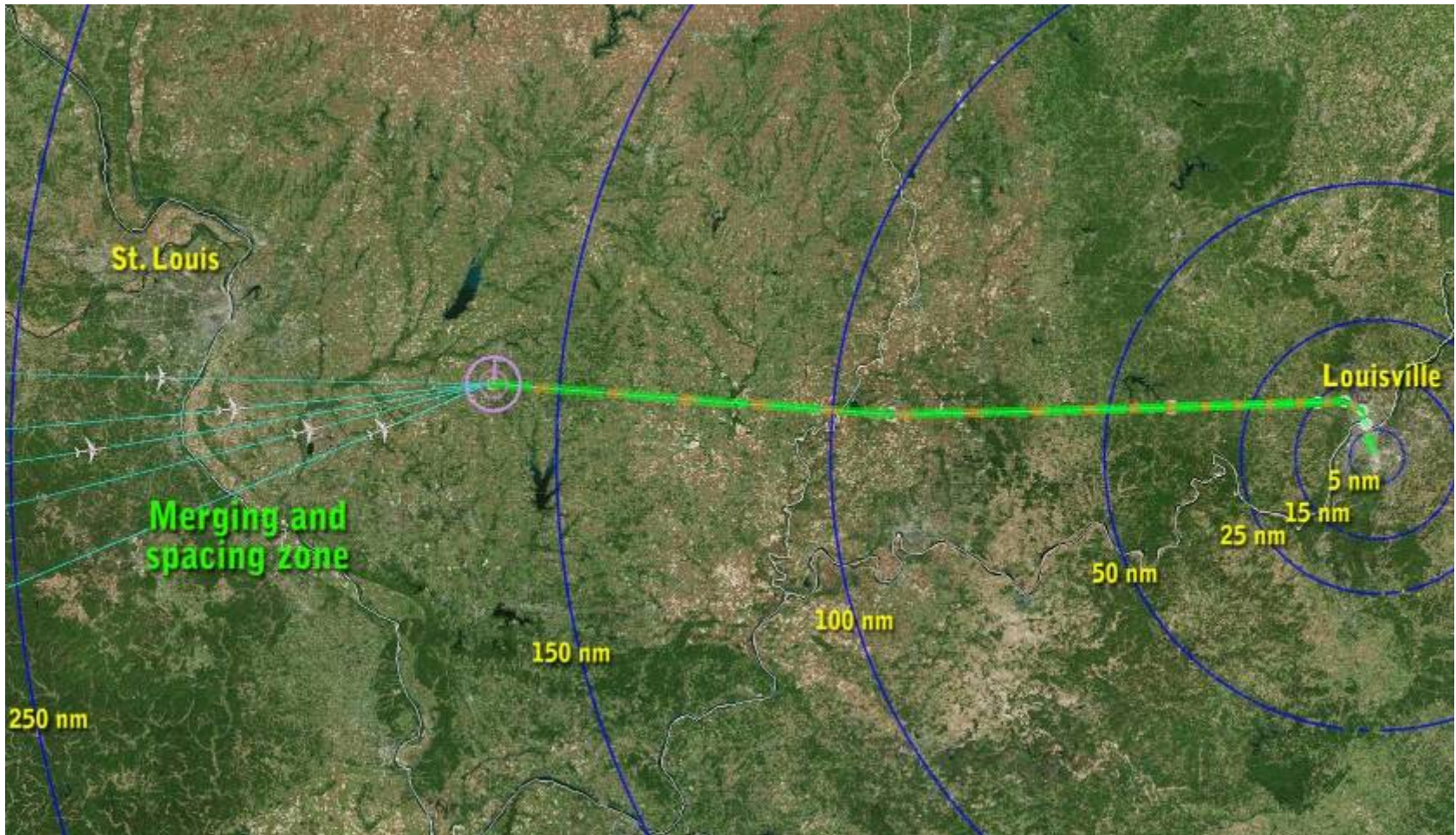
Airborne Applications: Final Approach and Runway Occupancy



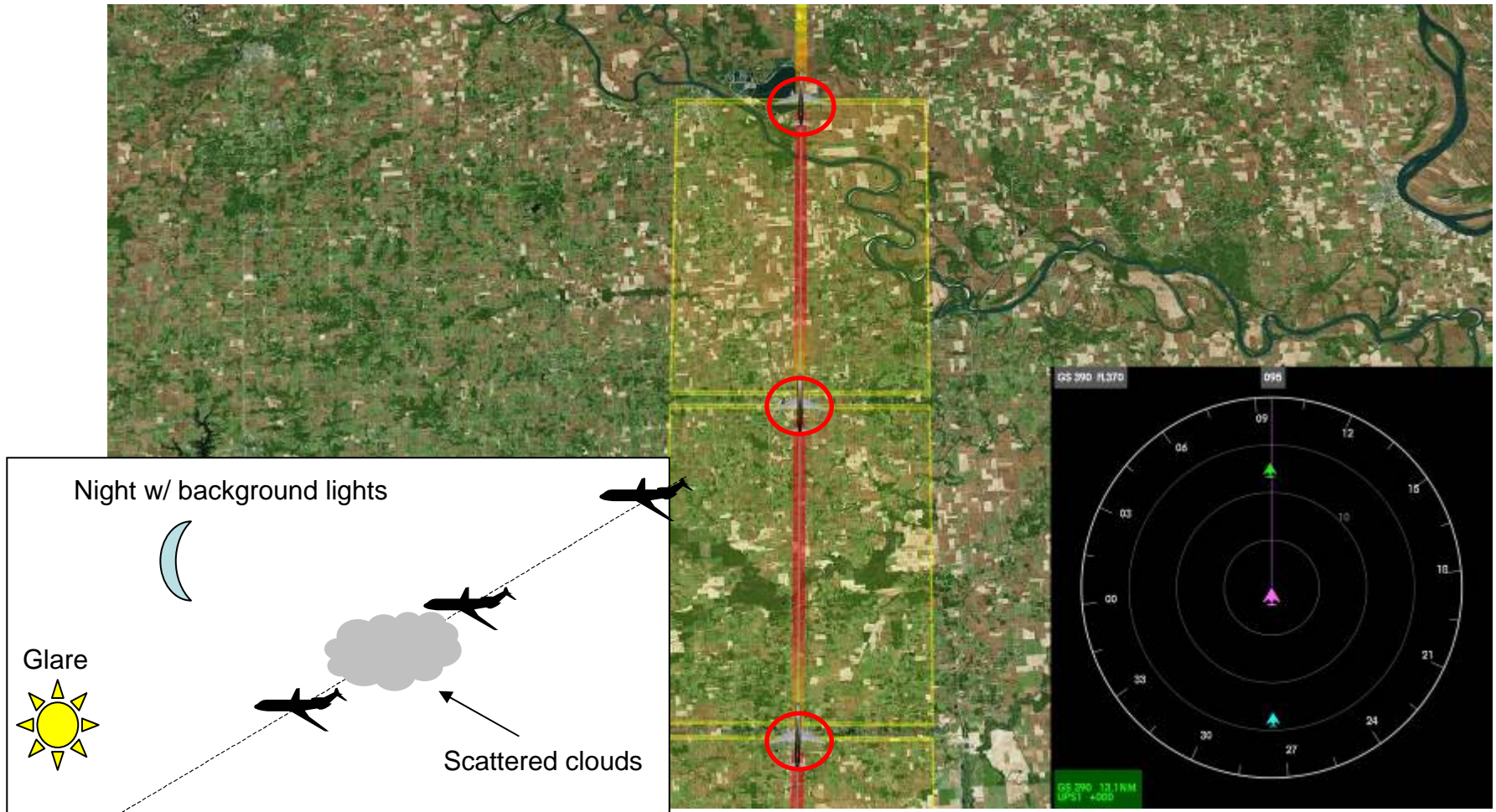
Airborne Applications: Airport Surface Situational Awareness



ADS-B In: Program Baseline - Merging and Spacing

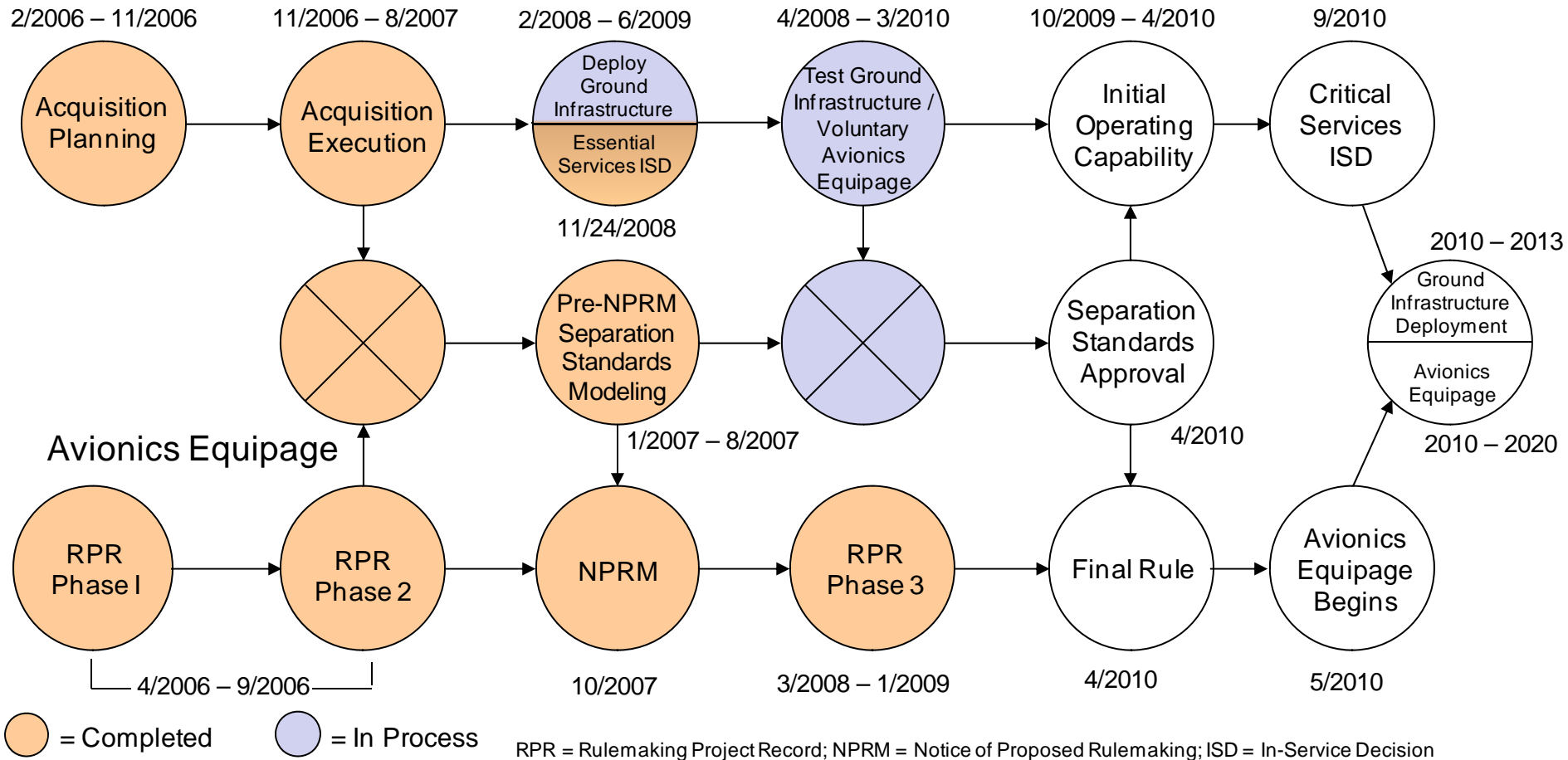


ADS-B In: Program Baseline - Cockpit Display of Traffic Information (CDTI) Assisted Visual Separation (CAVS)

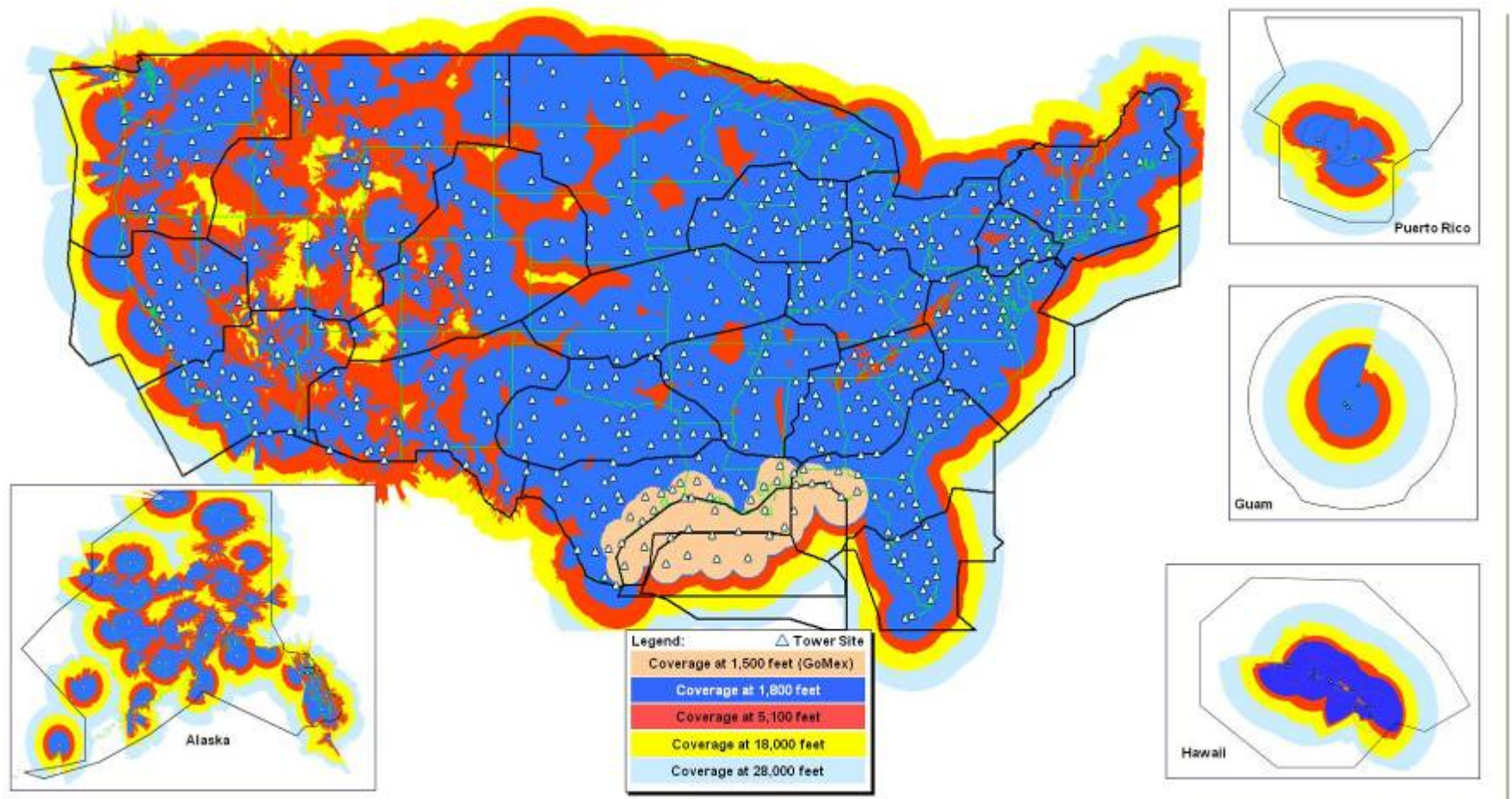


Strategy

Ground Infrastructure



Ground Infrastructure: 794 Ground Station Solution Provides National Coverage



Key Accomplishments

Milestone	Planned Date of Completion
Preliminary Design Review (PDR)	November 2007 ✓
Critical Design Review (CDR)	February 2008 ✓
Factory Acceptance Test for Essential Services	May 2008 ✓
Service Acceptance Test for Essential Services	June 2008 ✓
End to End System Test	August 2008 ✓
Operational Test	August 2008 ✓
Initial Operating Capability (IOC) for Essential Services	August 2008 ✓
Independent Assessment Data Collection	September 13 – September 30, 2008 ✓
Preliminary Report / Briefing	October 15, 2008 ✓
Independent Assessment Final Report	November 18, 2008 ✓
In-Service Decision	November 24, 2008 ✓

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



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 ARM	January 21, 2009	Complete
Rulemaking Council Approval of RPR	January 27, 2009	Complete
Rulemaking Team Drafts Final Rule	May 2009	
Final Rule Economic Assessment	August 2009	
Final Rule Concurrence through Directors	October 2009	
Final Rule Concurrence through Associates	November 2009	
Final Rule Concurrence through Administrator	December 2009	
Final Rule Approved through OST	January 2010	
Final Rule Approved through OMB	April 2010	
Final Rule Published in Federal Register	April 2010	

RPR = Rulemaking Project Record



Next Steps: FY2009 / FY2010 Schedule

Milestone	Planned Date of Completion / Status
FY2009	
Louisville Service Acceptance Test (SAT)	April 2009
Gulf of Mexico Weather Service Acceptance Test (SAT)	June 2009
Gulf of Mexico Service Acceptance Test (SAT)	June 2009
Philadelphia Service Acceptance Test (SAT)	August 2009
Gulf of Mexico Comm. and Weather Initial Operating Capability (IOC)	September 2009
FY2010	
Juneau Service Acceptance Test (SAT)	October 2009
Louisville IOC of Surveillance Services	October 2009
Gulf of Mexico IOC of Surveillance Services	December 2009
Philadelphia IOC of Surveillance Services	February 2010
Juneau IOC of Surveillance Services	April 2010
Final Rule Published	April 2010
Surveillance Services ISD for ADS-B	September 2010



Continued Opportunities for Collaboration

- **Cross Border Meetings**
- **Quarterly Coordination Meetings between AirServices Australia, FAA, Eurocontrol, and NavCanada (including Regulators)**

