

NextGen Implementation General Aviation

Review of FY11 FAA Business Plan Item

Presented to: AEA ADS-B Conference

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Federal Aviation
Administration



Objectives

- What problem do we hope to address with our effort?
 - Understanding of Industry concerns for ADS-B & NextGen Implementation
 - Gather data/concerns from equipment manufacturers, installers, and owners
- What do we hope to achieve?
 - Identify potential paths for maximizing use of existing technology
 - Proper balance of cost & utility for GA

Background

- **Late 2010**

- It became increasingly evident that NextGen planning efforts and the related equipment requirements were not accounting for equipage of the lower end of GA, including LSA, amateur built, sailplanes, and some rotorcraft

- **November 2010**

- FAA management agreed to survey fixed wing and rotorcraft GA industries and identify paths for implementation towards the 2020 goals for ADS-B.

The Business Plan Target

“Complete a strategy and plan that defines the necessary steps and enabling technologies for each segment of GA to transition from the current infrastructure to our NextGen goals.”



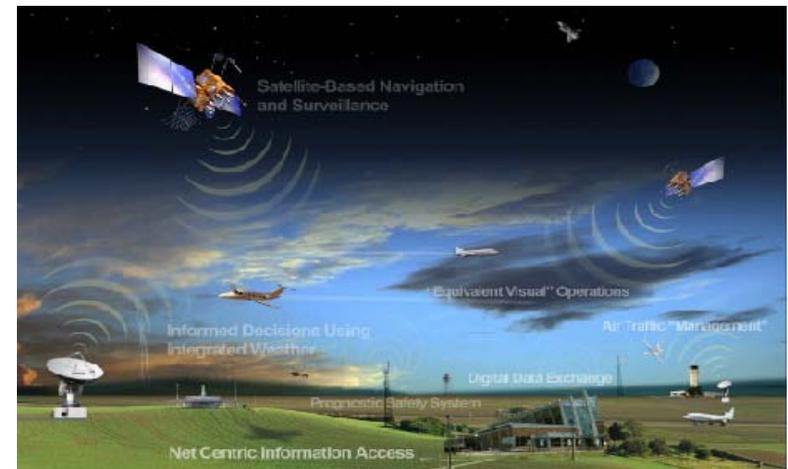
The Concern

- We have completed 10+ years of upgrades in GA - GPS, Displays etc.
- Most of the equipment was certified to standards that won't meet the standards designed by RTCA
- Must provide a means to get from current capability to future equipage
- Goals based on true safety case and realistic performance expectations



The Complexity

- ADS-B Out, and Operation Rule (Part 91), requires all aircraft be equipped by 2020.
- Current requirements may not accommodate needs & cost impact to various aviation segments
 - Air carriers (Part 121)
 - Business Aviation (GA)
 - Recreational (GA)
 - Various Rotorcraft
 - Sailplanes, LSA, etc.



The Target

- Meet with industry, survey current equipage levels, and determine whether upgrades are possible, ie using TSO-C129 GPS in future ADS-B
- Consider options for lower end of GA, including impact of limiting operations if they cannot equip
- NOT seeking to duplicate efforts of the larger NextGen effort.
- Findings will be fed into Appendix A of NextGen Implementation Plan & potential guidance

Specific Technical Concerns

- **GNSS and ADS-B Integration**

- Position Source Accuracy, Position Integrity, Velocity Accuracy, Geometric Altitude Output, Latency, Track Angle, etc.
- Interaction between the ADS-B and GNSS manufacturer
 - Position source manufacturer may not share data with ADS-B out installer – competition, intellectual property, etc.
- Can older equipment be upgraded to meet AC 20-165? If not, what ops restrictions result?

The Team

- Wes Ryan, ACE-114, Team Lead
- Bruce DeCleene, AIR-130, NextGen Focal
- Don Walker, AIR-130, ADS-B Focal
- Jorge Castillo, ASW Focal
- Ruth Hirt, ACE-114 ASE
- Rick Peri – AEA Industry Liason
- Industry Participants – TBD



Milestones

- Kickoff & Identification of Industry Team Members for Each Segment of GA
- Review NextGen Implementation Plan and Avionics Roadmap and Identify Key GA Related Capabilities/Gaps
- FAA & Industry Meeting to Identify Specific Needs & Goals for Each Segment – Discuss Steps to Implementation Goals for Each Group
- Gain Team Concurrence on Key GA Related NextGen Capabilities & Interim Steps to Implementation
- Brief ACE/AIR management on the findings - 7-31-11
- Document Findings/Suggestions/Industry Feedback - 8/31/11

Progress Update: This Industry coordination is first step.