

# JPDO NEWS

December 2008 - January 2009

A newsletter from the Joint Planning and Development Office

## From 1500 K Street, NW

**Reminder:** The JPDO will host an interactive demonstration of the Joint Planning Environment (JPE) on December 12 at 9:00 a.m. in the James Webb Auditorium at NASA Headquarters, 300 E Street, SW, Washington, DC. This demo is open to the public. *No travel compensation or per diem will be provided.* Read this month's "From the Director" section for more details on the JPE.

### Events:

On December 2, JPDO Director Charlie Leader will speak at the Interagency Surveillance Summit at Andrews Air Force Base, MD.

On January 29, 2009, JPDO Net-Centric Operations Division Director Colonel Douglas Wreath will speak at the Defense Net-Centric Operations 2009 Conference in Washington, DC.

The next JPDO "All Hands" meeting is scheduled for 9:00 a.m. on Thursday, February 5, 2009, in the James Webb Auditorium at NASA Headquarters, 300 E Street, SW, Washington, DC. This event is open to the JPDO community and the interested public. Please mark your calendar and join us. This is not a mandatory meeting and no travel compensation or per diem will be provided.

### Recent Releases:

New documents posted to the JPDO Web site (at [www.jpdo.gov](http://www.jpdo.gov)):

- Phase 2 Aviation Safety Information Analysis and Sharing Concept of Operations
- NextGen Avionics Roadmap Version 1.0
- Integrated Surveillance for the Next Generation Air Transportation System: Final Report of the Integrated Surveillance Study Team

### Added to the JPE

NextGen Enterprise Architecture FY11 aligns current state operational and business plans and strategies to the NextGen future state vision described in the Concept of Operations (ConOps).

We welcome your input. Please send your comments to [9-AWA-ATO-JPDO-Partnership@faa.gov](mailto:9-AWA-ATO-JPDO-Partnership@faa.gov).

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## From the Director

First of all, seasons greetings, and thank you for contributing to a very successful year for the JPDO and NextGen! It's hard to believe that 2009 is just around the corner.

Before we head into the new year, I'd like to briefly recap some of our accomplishments in 2008. From a new Web application and safety management documents, to a revised work plan and a new avionics roadmap, the JPDO government and industry partners have worked on a variety of exciting projects designed to accelerate the NextGen initiative.

In May, we launched the NextGen Joint Planning Environment (JPE). A publicly available Web application, the JPE communicates NextGen planning information more concisely so users can better understand the roles of the JPDO government partners in the development of NextGen. I invite you to attend a demonstration on Friday, December 12, at NASA Headquarters in Washington, DC. For details, visit [www.jpdo.gov](http://www.jpdo.gov).

Millions of people travel by airplane everyday, which is why safety remains the highest priority. In July, the JPDO Safety Working Group released the Safety Management System (SMS) Standard Version 1.4 and the Safety Culture Improvement Resource Guide. The SMS helps manage safety risk throughout the air transportation system, while the improvement resource guide offers aviation organizations practical tools for improving safety. Our Senior Policy Committee (SPC) endorsed the SMS Standard and agreed to implement it in their departments and agencies.

September marked an important month for us with the release of the Integrated Work Plan (IWP) Version 1.0. The IWP details the proposed milestones, time lines, and responsibilities needed to transform the current air transportation system into the NextGen vision. Thanks to everyone who provided feedback on previous versions of the IWP.

Also, in November, the Safety Working Group released the Phase 2 Aviation Safety Information Analysis and Sharing (ASIAS) Concept of Operations. This document describes an integrated, operational capability to support aviation safety management systems. The SPC endorsed the ASIAS Concept of Operations, designated FAA as the lead agency, and supported coordination among JPDO partner agencies on relevant research, such as automated knowledge-based aids, statistical analyses, and information sciences.

Finally, in an effort to communicate specific improvements needed in the aviation community, the JPDO published the NextGen Avionics Roadmap Version 1.0. This document carefully outlines how NextGen improvements correlate to aircraft-related capabilities and functions. It will continue to develop over the next couple of months, so stay tuned for important updates.

As you can see, 2008 was a busy and productive year. We expect 2009 to also be filled with growth, opportunity, and success.

*Best wishes to you and yours for a wonderful holiday season!*



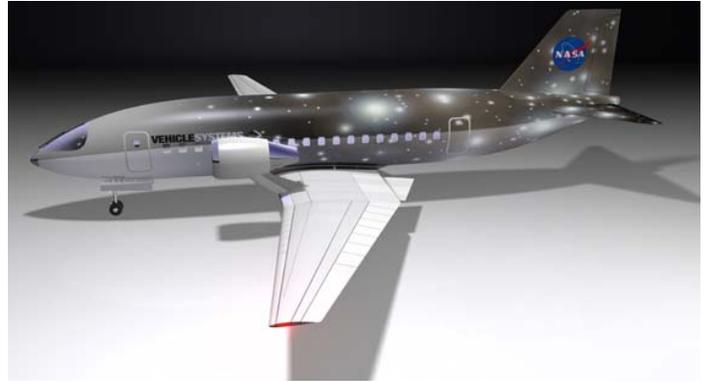
*Charles Leader*

## NASA Fundamental Aeronautics: Forward Thinking

As a critical part of its Aeronautics Research Mission, NASA remains actively involved in the development of many NextGen capabilities and technologies that will help build the future national air transportation system. This work includes studying new aircraft designs and creating new concepts for the architecture of airports. This kind of forward thinking, which remains essential to the planning and implementation of NextGen, was the focus of the NASA Fundamental Aeronautics 2008 Annual Meeting in October.

The meeting featured numerous breakout sessions, which addressed new, aeronautical innovations. Specifically, the sessions included dynamic discussions of research and testing of subsonic fixed wing aircraft and subsonic rotary wing aircraft, as well as future applications of supersonic and hypersonic aircraft. These new technologies have the potential to significantly impact the future development of NextGen, and were highlighted in a separate workshop at the meeting called “Integration of Advanced Vehicles into NextGen.” Here, speakers emphasized the important role that NextGen capabilities will play in the development and fielding of new classes of aircraft, such as high-performance aircraft, very light jets, and large-scale, heavy-lift aircraft.

To help direct future NextGen requirements and structure design characteristics for new aircraft, NASA is conducting modeling and projection studies to run simulations of anticipated NextGen operations as



Graphic from NASA's Subsonic Fixed Wing Project.

far out as the year 2040; these studies leverage JPDO baseline data, and factor in relevant environmental and greenhouse gas impacts.

Ultimately, the studies will provide insight about the trade-offs involved for both vehicles and air traffic management, so that industry experts can make recommendations for NASA's Airspace Systems Program, NASA's Fundamental Aeronautics Program, and NASA's Aviation Safety Program with the FAA, the Department of Defense, and the aviation industry. ✈️

## ISST Delivers Recommendations for NextGen Integrated Surveillance

Collaboration, planning, and vision are three important qualities of the Integrated Surveillance Study Team (ISST). Led by the JPDO's ISST Lead Doug Arbuckle, the team recently leveraged its unique synergy to develop and publish a Final Report titled “Integrated Surveillance for the Next Generation Air Transportation System.”

In the report, the ISST outlined key findings and recommendations for integrated surveillance needed to support NextGen. Ultimately, the ISST recommended establishing a formal, institutionalized interagency mechanism for the responsibility, management, funding, and ownership of integrated surveillance elements.

As part of its duties, the interagency mechanism would perform the following tasks: develop a concept of operations for NextGen Integrated Surveillance; create an interagency Integrated Surveillance architecture to support operational, system, technical, and investment decisions; develop and implement an Aviation Surveillance Information Network strategy; develop and execute an interagency Integrated Surveillance implementation plan; and use demonstrations and experiments to mature and field early versions of Integrated Surveillance capabilities.

This report represents a significant achievement for the JPDO – one that will help propel NextGen and enhance the Federal Government's involvement in aviation transportation system surveillance.

You can read the complete ISST Final Report on [www.jpdo.gov](http://www.jpdo.gov). ✈️

## JPDO Publishes NextGen Avionics Roadmap

A top priority for the JPDO Aircraft Working Group in 2008 was the development of a NextGen Avionics Roadmap. This work is now complete and Version 1.0 of the Roadmap is available on [www.jpdo.gov](http://www.jpdo.gov).

Designed for the aviation community, the Roadmap communicates how the proposed NextGen improvements correlate to aircraft capabilities and functions, and how these aspects evolve over time. This initial Roadmap is a starting point that will help focus the discussion and debate needed to build consensus in the aviation community.

Material for the Roadmap draws from existing NextGen planning documents (i.e., the JPDO's IWP and ConOps, the FAA's NextGen Implementation Plan and Performance-Based Navigation Roadmap), which capture how aircraft operations are expected to change through utilization of improved avionics. The Roadmap brings these proposed changes together – into a single aircraft perspective – so the aviation community can better understand the key avionics system changes for NextGen. The Roadmap is not a separate, long-term NextGen planning document, but rather is intended to clarify and more fully characterize the avionics functionality needed for NextGen.

Prepared by the JPDO Aircraft Working Group. ✈️