Next Generation Air Transportation System
Joint Planning and Development Office

JPDO News

May 2008 A newsletter from the Joint Planning and Development Office

From 1500 K Street, NW

Events:

On May 5 - 7, the 2008 Integrated Communications Navigation and Surveillance (ICNS) Conference, jointly sponsored by government and industry, took place at the Bethesda North Marriott Hotel & Conference Center. JPDO Deputy Director Bob Pearce chaired the plenary session: The Future of Airspace. JPDO Chief Architect Jay Merkle and Kris Burnham, JPDO Portfolio Management Division Director, both participated on the panel. Bob Pearce's speech is located in the JPDO Web site Library.

The 3rd International Conference on Research in Air Transportation (ICRAT) 2008 will be held on June 1 - 4 in Fairfax, VA. JPDO Deputy Director Bob Pearce will present on NextGen.

Reminder: The next JPDO "All Hands" meeting is scheduled for the morning of Wednesday, June 18, at 9:00 a.m. in the James Webb Auditorium at NASA Headquarters. This meeting is open to everyone in the broader JPDO community. Please visit the JPDO Web site for further details. *Please note that no travel compensation or per diem will be provided.*

Other Announcements:

The JPDO's Weather Working Group released Version 0.1 of the "Four-Dimensional (4-D) Weather Functional Requirements for NextGen Air Traffic Management" for review and comment. For your copy, please go to the JPDO Web site.

We welcome your input. Please send your comments to 9-AWA-ATO-JPDO-Partnership@faa.gov.

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Cross-Agency Gap Analysis Workshop

"This year's gap analysis was the first attempt to implement a database, analytic approach," said the Joint Planning and Development Office (JPDO) Chief Architect Jay Merkle before representatives from the FAA, NASA, DOC, DoD, and DHS at the Gap Analysis Cross-Agency Workshop on April 22. The gap analysis included agency-based discussions on FY10 to FY14 budgets "to identify big items not connected to Operational Improvements in the Integrated Work Plan."

After presenting individual agency gaps, Mr. Merkle identified cross-cutting gaps involving multiple agencies. From the more than 10 proposed cross-cutting gaps, participants discussed whether they were solvable by mechanisms such as study teams, cross-agency meetings, and NASA-FAA Research Transition Teams, or would need to be elevated to the Senior Policy Committee.

The majority of cross-cutting gaps identified, said Mark Andrews, JPDO Weather Working Group Government Co-Chair, needed an integrated concept, a statement of operational and functional requirements, and distributable roles and responsibilities, all of which could be determined by a collaborative effort on the part of the partner departments and agencies involved.

Along with being presented in a JPDO paper, the results of the gap analysis workshops will seed the JPDO Valuation Workshops. Led by the Portfolio Management Division over the May/June time frame Valuation workshops will be designed to further assess the gaps, considering such factors as performance, cost, benefits, risk, policy, and institutional feasibility. These activities support the development of the FY10 NextGen Business Case and budget submission.

Future of Aviation Industry Discussed at Aviation Summit

"Aviation's New Flight Plan: Innovation, Adaptation, and Consolidation" focused on the technological, economic, political, and environmental issues facing the aviation industry. On April 3, more than 175 representatives from government and industry attended the event co-hosted by the U.S. Chamber of Commerce and National Chamber Foundation. The summit was held as one of the Chamber's efforts to bring to the forefront important challenges facing America.

Government officials and industry executives from commercial, environmental, and financial aviation sectors discussed a broad range of issues including fuel prices, environmental responsibility, and adapting technology innovation system-wide. JPDO Director Charles Leader, serving on the "Investing in Technology Innovations" panel, emphasized the need for industry and public support to sustain the transformation to a more scalable infrastructure--the Next Generation Air Transportation System.

U.S. airline consolidation was a highlight of discussion. Glenn F. Tilton, Chairman, President, and Chief Executive Officer (CEO) of UAL Corporation and United Airlines, and Dave Barger, CEO of JetBlue Airways Corporation, presented opposing views about consolidating U.S. airlines in the face of industry's pertinent and pressing issues. Mr. Tilton said "consolidation makes sense" as foreign carriers continue to merge on the playing field. Mr. Barger, on the other hand, said JetBlue would actively pursue foreign partnerships. In December 2007, German carrier Deutsche Lufthansa AG paid $300 million for 19 percent of JetBlue shares.

Environment Working Group Aiming to Achieve 'Greener' Growth

By providing transportation of people and goods worldwide, aviation is critical to the U.S. and global economies. According to "Aviation and the Environment," a 2004 report to Congress, the past 35 years have seen a sixfold increase in the mobility provided by the U.S. air transportation system while there has been a 60 percent improvement in aircraft fuel efficiency and a 95 percent decrease in the number of people impacted by aircraft noise.

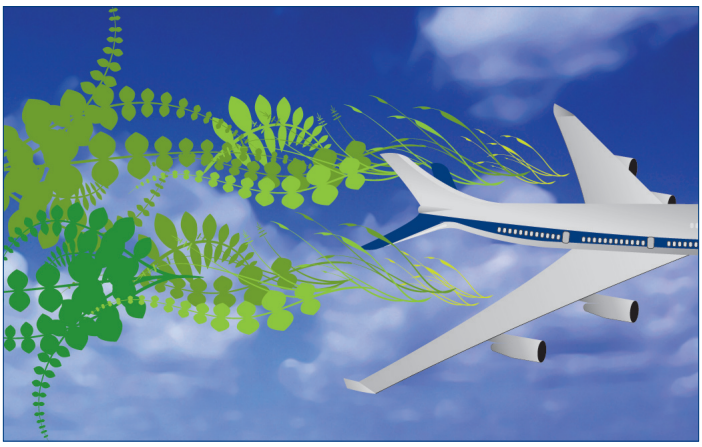
Despite such progress, there remains compelling need to address the environmental impacts of air transportation. As demand for capacity continually increases, aviation-derived pollutants also increase despite emissions reductions from other sources. Similarly, in recent years noise-reduction progress has slowed and plans for airport expansions have been delayed or mothballed due to concerns, primarily about local air and water quality or community noise impacts. Now added to these are increasing concern about aviation emissions' contribution to climate change. Left unaddressed, environmental impacts could collectively loom as the fundamental constraint on air transportation growth in the 21st century.

The Joint Planning and Development Office (JPDO) Environment Working Group (EWG), co-chaired by Carl Burleson of the FAA and Howard Aylesworth of the Aerospace Industries Association, is charged with addressing environmental issues throughout the development of the Next Generation Air Transportation System (NextGen). The JPDO and its government and industry partners are working on developing environmental protection strategies compatible with sustained aviation growth.

In support of NextGen, the EWG's key objectives include:
1) reducing in absolute terms community noise and local air quality emissions from aviation that significantly impact human health and welfare; 2) limiting or reducing the impact of aviation greenhouse gas emissions on climate change; 3) promoting airports as communities' gateways to the national and international transportation network; and 4) achieving leadership in developing and implementing technological, operational and policy initiatives to address environmental issues. Without such results, the EWG considers it unlikely that NextGen will be able to provide the additional capacity and services anticipated for the next 20 years.

Environmental Strategies

To achieve "greener" growth, the EWG is working to develop and implement new models, metrics, policy approaches, operational improvements, and technological innovations. It endorses a systematic, comprehensive approach to mitigating the environmental impacts of aviation through better scientific understanding, modernization of air traffic management procedures, development of lower-emissions and energy-efficient technologies for aircraft and engines, and exploration of the potential for alternative fuels.



2008 Earth Day, celebrated on April 22, brings into focus aviation industry environment initiatives.

Key Approaches and Initiatives

The EWG has already identified several procedures for NextGen. Operationally, Continuous Descent Arrival (CDA) has been proven to mitigate environmental impacts from noise, fuel burn, and emissions that occur during current, less-efficient "step-down" procedures (which require planes to level off in stages during their descent). The integration of Required Navigation Performance (RNP) also helps reduce rates of fuel burn. Globally, the JPDO is working with Europe on the Atlantic Interoperability Initiative to Reduce Emissions (AIRE) to hasten development of operational procedures to reduce aviation's environmental footprint on a "gate-to-gate" basis.

The Continuous Low Energy Emissions and Noise (CLEEN) cross-agency and industry initiative will ensure that technologies are developed, matured, and applied to in-service aircraft.

In the area of alternative fuels, the Commercial Aviation Alternative Fuels Initiative (CAAFI) – which draws from the collective efforts of JPDO, its partner agencies, departments, universities, and industry stakeholders both domestic and international -- strives to enhance energy security and environmental sustainability for aviation through the use of alternative fuels. By providing a forum for the U.S. commercial aviation community and emerging alternative-fuels industry to cooperatively promote the development of alternative fuel options, CAAFI aims to attain equivalent levels of safety and provide cost savings when compared to petroleum-based jet fuel.

Through these and other efforts, the EWG is helping to provide for environmental protection that will allow for both sustained aviation growth and increasingly blue (and "green") skies ahead for air transportation worldwide.