



JPDO “Snap Shot” Series: Securing America’s Air Transportation System

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NextGen and Aviation Security

The Next Generation Air Transportation System’s (NextGen) Concept of Operations, prepared by the Joint Planning and Development Office (JPDO), outlines a future for aviation security which emphasizes a multi-layered, system-wide approach. It addresses security from the perspective of the passenger, the airport, the aircraft, and the airspace.

The goal is to secure our nation’s air transportation system at all levels, from reservation to destination.

The JPDO Role

The JPDO was created by Congress in 2003 to act as a facilitator and an “honest broker” in the multi-agency development of NextGen. This role includes the planning and integration, on a government-wide scale of all the research, budgeting, and systems development needed to make NextGen a reality. This coordination is an unprecedented undertaking.

JPDO’s government partners include the Departments of Commerce, Defense, Transportation, Homeland Security, the Federal Aviation Administration, National Aeronautics and Space Administration, and the White House Office of Science and Technology Policy.

Securing the airspace is a critical mission for several of the JPDO’s government partners. Next-

Gen technologies and capabilities are essential to meeting this objective.

Developing a New Security Paradigm

NextGen based technologies will substantially improve our nation’s ability to manage, monitor, and secure the nation’s air traffic system.

NextGen will give those charged with this essential mission the tools to work in real time while relying on the same operational picture. This will create an entirely new paradigm for the way America manages the security of its airspace. The benefits will be substantial.

For example, with NextGen tool, it will be possible to immediately view data on the current operation and intent of any aircraft in the system. In the event an aircraft deviates from its flight plan or begins to operate in a suspicious manner, this information will be instantly available. It will also allow for the rapid exchange of data and information regarding suspicious passengers or cargo.

Interagency demonstrations are now underway that are laying the groundwork for this kind of operational capability.

Key NextGen technologies critical to making this new paradigm a reality include satellite-based air

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navigation and location systems and the ability to rapidly share information throughout the aviation environment through cutting edge net-centric data exchange.

These new capabilities will not only improve the operational performance of the air traffic system, a critical NextGen objective, but will also provide those charged with the security of the system with a range of new and highly effective tools.

Security Benefits of a More Flexible and Efficient Air Traffic System

One of the challenges in the event of a national security threat or a national disaster is the ability of the nation’s air traffic system to rapidly adapt. With NextGen, this kind of flexibility is substantially enhanced. Through substantially improved data sharing, and trajectory-based flight management, the air transportation system will be able to adjust to demands caused by possible threats, disasters, or special security and military needs.

With NextGen, it will be possible to rapidly establish, and disestablish, special use airspace for military and security purposes, and in the event of a threat, to move air traffic away from a danger area.

Unmanned Aircraft Systems

DHS, DoD, as well as federal, state, and local law enforcement organizations are progressively relying on Unmanned Aircraft Systems (UAS) for a wide range of new missions.

However, this important security and defense capability is limited by the inability of these platforms to operate in controlled airspace. This is a serious challenge



and the goal for the JPDO is to facilitate the development of systems and capabilities that will allow UAS platforms the maximum flexibility of operations while at the same time assuring critical safety targets.

Outlining the Future of Aviation Security – The Integrated Work Plan

Modernizing aviation security is a long-term undertaking. Whether this involves new systems and new technologies to screen passengers, or the application of sophisticated data and communications capabilities to monitor the airspace, it is a complex process. There has to be extensive and continuing collaboration between departments and agencies. This includes multi-agency research, planning, budgeting, and systems development.

That is why the JPDO’s role in developing the long term plan is so important. To guide the NextGen process into the next decade and beyond, the JPDO has crafted the Integrated Work Plan (IWP).

The IWP integrates research efforts, program development needs, and long-term requirements into a detailed point-by-point plan that outlines how NextGen will develop in the years to come.

