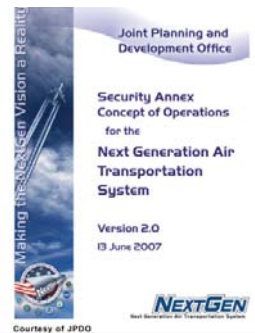


# Aviation Security

Since the terrorist attacks of September 11, 2001, the efforts to manage and secure the air transportation system in the United States has become progressively complex. Threats can take many forms and occur on the aircraft, in cargo areas, airports, airspace, and areas adjacent to aviation facilities as well.

Providing aviation security requires a multi-layered, adaptive approach that starts with an integrated understanding of the total threat vector, followed by security of airports, people, baggage, cargo/mail, airspace, and aircraft.



The MITRE Corporation, Center for Advanced Aviation System Development (MITRE/CAASD) has become a close and valuable partner to the aviation security community. Working with the Joint Planning and Development Office (JPDO), MITRE/CAASD played a key role in developing a vision of aviation security for the 2025 timeframe. The JPDO's Concept of Operations version



2.0 captures this vision. Working with the Federal Aviation Administration's (FAA's) System Operations Security organization, MITRE/CAASD has helped to develop a concept

of operations for future system capabilities to detect and respond to potential airspace security threats. MITRE/CAASD used this concept of operations as a starting point to provide the FAA's Airspace Security Automation Program Office with systems engineering and research to help this Office begin initial acquisition of the FAA's Next Generation Air Transportation System (NextGen) airspace security capability—the Security Integrated Tool Suite (SITS).

MITRE/CAASD designed and developed the FAA's first Airspace Security Metrics Portal, an operational prototype, which generates daily security metrics information for operational assessment by FAA




leadership. MITRE/CAASD has also partnered with the Transportation Security Administration (TSA) to provide important technical and programmatic analyses to such

programs as Registered Traveler, Transportation Worker Identification Credential.

A strong Research and Development (R&D) program is essential to meeting aviation security's future challenges. MITRE/CAASD has invested in several R&D efforts. An example of MITRE/CAASD's efforts is its research into airport movements modeling. This research explores the impact of threat prevention on airport operations. Integrating this model with MITRE/CAASD's Aviation Integration





Demonstration and Experimentation for Aeronautics Laboratory (IDEA Lab) provides MITRE/CAASD the ability to quickly analyze the impact of aviation security incidents on almost all aspects of the National Airspace System (NAS).

In addition, a robust, yet agile, experimental environment is critical for quickly exploring and validating future security concepts, needs, and capabilities. MITRE/CAASD, through sponsorship from the FAA, has developed the Airspace Security Environment (ASE) to address this need. ASE integrates with the aforementioned IDEA Lab

and MITRE's Collaborative Experimentation Environment (CEE) to provide a robust research environment in which partnering agencies can come together to prototype and investigate existing, future, and prospective airspace security tools, operations, partnerships, policies, and scenarios. The FAA, the Department of Homeland Security (DHS), the Department of Defense (DoD), and MITRE/CAASD have used this environment, for example, to explore how new tools and procedures can be used across agencies to more effectively mitigate the threat of a non-cooperative airliner penetrating United States airspace.