Strategic Industry Conversation III

Doubling Down on the Unity of Effort

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Homeland Security

Aviation Security

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Transportation Security Administration

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Key Topics

Agenda:

- Program Goals
- Capability Areas
- Checkpoint Programs
  - Advanced Imaging Technology (AIT)
  - Automated Screening Lanes (ASL)
  - Advanced Technology X-Ray (AT)
  - Computed Tomography (CT)
  - Explosive Trace Detection (ETD)
  - Credential Authentication Technology (CAT)|
  - Security Technology Integrated Program (STIP)

Program Goals

The following goals, defined by the Office of Acquisition and Program Management (OAPM), help drive the division's current and future initiatives.

Aggressively field enhanced capabilities

Build an experienced and engaged workforce

Promote organizational alignment and collaboration

Mature portfolios

Capability Areas

The Checkpoint Solutions and Integration Division (CSID) aligns its initiatives to the following capability areas to most effectively achieve the aforementioned four goals and support the overall mission of the division and office.

Primary People Screening	Technologies to detect concealed or carried threats on the person
Accessible Property Screening	Technologies to detect threats on or concealed in the passenger's carry-on baggage
Alarm Resolution	Enhanced detection capability for explosives on passengers and accessible property
Identity Verification	Next-Gen credential verification capabilities

CHECKPOINT PROGRAMS

Advanced Imaging Technology (AIT)

AITs safely screen passengers for a wide range of metallic and nonmetallic threats.

Current initiatives to discover and develop capability enhancements:

Algorithm Development
Exploring new algorithm techniques to increase detection performance against current and emerging threats

Grand Challenge Wideband Competition
Conducting a grand wideband competition to seek innovative algorithm solutions

Automated Screening Lane (ASL)

ASLs are a modified version of existing carry-on baggage screening lanes automating screening elements to improve effectiveness and efficiency (e.g., automated bin return, tracking, and diverting).

Current initiatives to discover and develop capability enhancements:

Urgent Operational Need (UON)
Currently deploying UON units at select airports to improve the operational landscape

Engagement with Industry
Developing Public-Private Partnerships to improve checkpoint experience and security effectiveness

Advanced Technology X-Ray (AT)

ATs screen accessible carry-on property to detect a wide range of threats.

Current initiatives to discover and develop capability enhancements:

Algorithm Development
Exploring new algorithm techniques to increase detection performance against current and emerging threats

Improved Threat Detection
Improving the overall system through Tier II detection software, which requires detection of a reduced threat mass and additional threat materials

Computed Tomography (CT)

CTs utilize 3D-imaging and detection software to automatically identify threats. Ideally, CT systems may eliminate the need for divestiture of electronics.

Current initiatives to discover and develop capability enhancements:

CT and ASL Integration
Planning demonstrations to manage ingress/egress and assess minimal automation components

CT as an AT Replacement
Working towards detection of threats at a lower threat mass with electronic clutter and expanding detection of additional explosives and precursors

Explosive Trace Detection (ETD)

ETDs screen for explosive compounds on airline passengers, their accessible property, and checked baggage.

Current initiatives to discover and develop capability enhancements:

Algorithm Development
Exploring new algorithm techniques to increase detection performance against current and emerging threats

Life Cycle Cost
Exploring methods to increase system reliability and reduce operating costs

Credential Authentication Technology (CAT)

CAT validates passenger self-reported biographic information and vetting status via a connection back to Secure Flight (SF) through the Security Technology Integrated Program (STIP).

Current initiatives to discover and develop capability enhancements:

Developmental Testing (DT)
Conducting DT to assess system functionality and standard operating procedures in an operational environment

Document Library
Updating the document library to include all recently changed state ID templates and prepare for Real ID

Security Technology Integrated Program (STIP)

STIP provides a dynamic and adaptable communications infrastructure that facilitates the transfer of data to and from Transportation Security Equipment (TSE) on the TSA Network.

Current initiatives to discover and develop capability enhancements:

Data Storage and Reporting
Stores Threat Image Projection data, TSE User Access data, TSE performance data reports, and property data

End-to-End Connectivity
Planning to conduct a pilot to connect AIT and WTMD to STIP in order to automate collection of data and experiment with enhanced reporting

Questions?

A Path Forward for Enhancing Test and Evaluation

Where We Are Today

Inconsistent levels of system maturity and the inability of Transportation Security Equipment (TSE) to meet defined requirements have led to a cyclical "test-fix-retest" loop, resulting in acquisition delays and increased costs.

Opportunities to Enhance Testing

1. External Testing

Expedite/supplement Transportation Security Administration (TSA) testing by accepting vendor and/or Third Party Agent test data.

+ Can add additional confidence to formal TSA test data and/or reduce the TSA Qualification Test (QT) data required once a system is accepted into the Acquisition process.

- 1a. Vendor In-House
- 1b. Third Party Agent

2. Data Sharing

Avoid duplication by leveraging existing test data through the creation of data sharing agreements with international government entities.

+ May minimize the amount of new testing required for TSE deployed globally, reducing the overall time needed for testing

- 2. Data Sharing

3. Modeling & Simulation

Use accredited Modeling & Simulation (M&S) to augment live testing and support evaluations that cannot be assessed in a live environment.

+ May minimize certain live test requirements, reducing the resource costs associated with live testing and the overall time needed for testing

- 3. Modeling and Simulation

4. Iterative Testing

Flexible, iterative, testing that allows for a better understanding of system capabilities prior to entering formal Operational Testing (OT).

+ Allows for ad-hoc changes in test plans to align with the overarching mission. Enables in-progress milestones to provide visibility prior to completion.

- 4. Iterative Testing

The Potential Impacts

Minimized Delays
Creates standardized processes for engaging vendors throughout the acquisition lifecycle to address potential issues early on

Increased Capacity
Expands testing capacity by further integrating agency efforts with industry and government partners

Expedited Testing
Uses existing data to augment test events and potentially reduce the total amount of test runs required