Air Cargo Security Technology Program

Presented by: Robert Pryor
General Manager, Intermodal Program

July 12, 2011
Agenda

- Air Cargo Security Technology Program (ACSTP) Overview
- ACSTP Key Initiatives
- ACSQT Submission and Test Processes
- Air Cargo Screening Technology List
- ACSTL Status (as of Version 6.6)
- Upcoming Qualification Activities
ACSTP Mission & Vision

**Mission:**
ACSTP evaluates and qualifies air cargo screening technologies to prevent explosive devices and other dangerous goods from being transported in air cargo on passenger aircraft. Additionally, ACSTP aims to evaluate and qualify human detection technologies to prevent human intruders from invading cargo aircraft and using them as weapons of mass destruction.

**Vision:**
ACSTP strives to assess and test cargo screening technologies that are critical to the success of the Certified Cargo Screening Program (CCSP), the 100% Screening Mandate, and air cargo security at large. These technologies include cargo screening equipment, chain of custody technologies, and the management of a pipeline for future, more efficient and effective cargo security screening technologies.

**Strategic Objectives:**

<table>
<thead>
<tr>
<th>Term</th>
<th>Objective</th>
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<tbody>
<tr>
<td>Near Term</td>
<td>Qualify viable air cargo screening technology that is currently in the marketplace and/or can be quickly modified to meet the requirements of the 100% cargo screening mandate.</td>
</tr>
<tr>
<td>Medium Term</td>
<td>Evaluate emerging air cargo screening technologies and provide feedback to vendors to enhance products for qualification and the development of refined technology standards.</td>
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<tr>
<td>Long Term</td>
<td>Collaborate through the DHS Capstone IPT with S&amp;T to identify current technology gaps/opportunities and support R&amp;D efforts for future sophisticated air cargo screening technology requirements.</td>
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## ACSTP Key Initiatives Summary

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Description</th>
<th>FY11 Activities</th>
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</table>
| **Air Cargo Screening Qualification Test (ACSQT)** | The ACSQT process involves the demonstration, verification, and validation that a candidate cargo screening technology meets established TSA requirements and standards.  | • Completed laboratory testing for QG3 (EMD) Submission Window 1  
• Published approved configuration updates for all technology devices on the TSA Air Cargo Screening Technology List (ACSTL)  
• Published ACSQT Broad Agency Announcement (BAA) Version 2.0 on fbo.gov to open new submission windows |
| **Innovative Technology Review Process (ITRP)** | ITRP is a process for ACSTP to assess and evaluate innovative and emerging technologies that are still developing but not yet commercially available.  | • Coordinated with DHS S&T for R&D of acoustic technology and palletized cargo screening systems |
| **Supply Chain Integrity Program (SCIT)** | ACSTP evaluates and develops standards for supply chain integrity technologies for certified cargo screening facilities to use when securing screened cargo from point of screening until loading aboard aircraft. Examples include tapes, ties, mechanical locks, and secure cartons.  | • Continued evaluation of tamper evident tape products for possible qualification and application to cargo supply chain operations |
| **Data Analysis Reduction Team (DART)** | DART processes and analyzes operational and technical data from regulated industry to streamline and integrate air cargo policy, procedures and regulations.  | • Completed air cargo operational and business landscape study |
ACSQT Submission and Test Processes

Submission Process

- **ACSTP Releases Broad Agency Announcement (BAA)**
  Vendors submit white papers with basic system and compliance information.

- **ACSTP Convenes Technical Review Panel (TRP)**
  Vendors that pass the white paper review are required to submit a Qualification Data Packet (QDP) to substantiate conformance to the Performance Specification (PS).

- **Vendors Submit QDPs**
  The TRP reviews the QDP for compliance. Vendors whose QDPs are evaluated favorably may enter the qualification test process.

Test Process

- **Laboratory Testing (Conformance Verification Testing)**
  Equipment is first tested in a laboratory setting or other controlled environment.
  - Commodity Testing
    Equipment is tested in parallel on the various commodity classes

- **Operational Testing**
  Equipment is then evaluated in a field environment

  - Initial Release
  - Revised Release
  - Approved Section
  - Qualified Section
Air Cargo Screening Technology List

The ACSTL indicates the equipment that can be used by air carriers, indirect air carriers, independent cargo screening facilities, and shippers to screen for domestic and outbound air cargo.

- The ACSTL includes three sections:
  - **Qualified**
    - Equipment that has passed formal TSA sponsored laboratory, commodity and operational testing, and is deemed qualified for screening operations. When procuring equipment, regulated parties should select equipment from the Qualified technology section.
  - **Approved**
    - Equipment that has passed laboratory and commodity testing and has been conditionally approved for screening operations. This equipment is currently undergoing or scheduled for operational field test activities.
  - **Grandfathered**
    - Equipment that is currently approved to screen cargo but has a stated expiration date. This allows regulated parties who are using the grandfathered technology an opportunity to gradually phase out the equipment and transition to devices listed in the qualified or approved sections. Regulated parties should reference the qualified or approved sections for their procurement needs.

- TSA publishes new versions of the ACSTL as new technologies become qualified through the ACSQT.

- A Non-SSI version of the ACSTL is available on tsa.gov, under Air Cargo’s Standards and Regulations.
**ACSTL Status (as of Version 6.6)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Status</th>
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<tbody>
<tr>
<td><strong>X-Ray</strong></td>
<td>- <strong>Qualified:</strong> 60 X-Ray devices from 7 OEMS</td>
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<tr>
<td></td>
<td>- 20 Capacity A systems</td>
</tr>
<tr>
<td></td>
<td>- 27 Capacity B systems</td>
</tr>
<tr>
<td></td>
<td>- 13 Capacity C systems</td>
</tr>
<tr>
<td><strong>Explosives Trace Detection</strong></td>
<td>- <strong>Qualified:</strong> 2 ETD devices from 2 OEMs</td>
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<tr>
<td></td>
<td>- <strong>Waived:</strong> 6 ETD devices from 2 OEMs</td>
</tr>
<tr>
<td><strong>Electronic Metal Detection</strong></td>
<td>- <strong>Approved:</strong> 3 EMD devices from 2 OEMs</td>
</tr>
<tr>
<td></td>
<td>- <strong>Under Evaluation:</strong> 8 EMD devices from 4 OEMs</td>
</tr>
<tr>
<td><strong>Explosives Detection Systems</strong></td>
<td>- <strong>Qualified:</strong> 8 EDS devices from 3 OEMs</td>
</tr>
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Upcoming Qualification Activities

The ACSQT BAA Version 2.0 includes details for upcoming submission windows for QG1 (X-Ray), QG2 (ETD), and QG3 (EMD), available through fbo.gov.

<table>
<thead>
<tr>
<th>Qualification Group</th>
<th>Submission Window</th>
<th>White Paper Submission Deadline</th>
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<tbody>
<tr>
<td>QG1</td>
<td>SW3</td>
<td>07/01/2011</td>
</tr>
<tr>
<td></td>
<td>SW4</td>
<td>08/28/2012</td>
</tr>
<tr>
<td>QG2</td>
<td>SW2</td>
<td>05/27/2011</td>
</tr>
<tr>
<td></td>
<td>SW3</td>
<td>08/21/2012</td>
</tr>
<tr>
<td>QG3</td>
<td>SW2</td>
<td>08/01/2011</td>
</tr>
<tr>
<td></td>
<td>SW3</td>
<td>09/19/2012</td>
</tr>
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Intermodal Transportation Protection Program

Presented by: Robert Pryor
General Manager, Intermodal Program

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Agenda

- Intermodal Background
- Intermodal Technology Pilot History
- Mission and Goals
- Input to Research and Development
- Analysis of Technology Integration
- Product Lists and Databases
- Path Forward
Intermodal Background

• Particularly since fiscal year 2003/2004, in response to the Madrid attacks and increasing threats to passenger ferries, TSA has collaborated in field experiments and pilot test projects assessing innovative uses of existing technologies in mass transit venues and other surface transportation modes.

• Results of these efforts showed that airport checkpoint-style technologies had only limited applicability to such environments, and that different security technologies and operational approaches were needed in mass transit and rail and surface venues.

• There is ample evidence of multiple threat vectors in mass transit environments and the continuing desire by terrorists to attack mass transit targets.
Intermodal Technology Pilot History

The following examples reflect 8 of the 21 major pilots from 2004-2010

- **Presidential Inauguration**
  - Mass Transit
  - Smiths 400B Table Top Trace
  - GE Itemizer 3 Table Top ETD

- **SAIL I**
  - Maritime
  - Explosives Trace Detection

- **TRIP I**
  - Mass Transit
  - Smiths 400B Table Top Trace
  - L3 MVT Checked Bag Automated Explosives Detection System
  - GE Explosives Trace Portal

- **Standoff Detection of Mass Transit PBIED**
  - Mass Transit
  - QinetiQ SPO 20 and SPO 07 remote threat imaging systems

- **Vehicle Command and Control Phase I**
  - Mass Transit
  - Qualcomm Vehicle Location and remote Engine Control Systems (Satellite)
  - MAGTEX Remote Engine Control Systems (Cellular Network)

- **SAIL III**
  - Maritime
  - QinetiQ SPO 20 and SPO 07 Remote MMQ Threat Imaging Systems
  - AS&E GEMINI Combined Transmission X Ray and Backscatter Screening System

- **Pre-Boarding Vehicle Inspection Phase II**
  - Maritime
  - CarSCAN Portal
  - Under Vehicle Screening System

- **Pre-Operation Inspection of Mass Transit Rail Cars**
  - Mass Transit/Rail
  - Under Vehicle Screening System

Legend:
- Pilot
- Modality
- Technology
Mission and Goals

Mission:
Enhance intermodal transportation security by developing requirements for, and evaluating, security technologies that: protect employees and travelers, eliminate vulnerabilities, mitigate damages, identify potential threats, provide decision support, and facilitate recovery from intentional assault on commercial intermodal transportation modes and related infrastructure.

Goals:

**Near Term**
- Align Intermodal Transportation Protection Program with the TSA Transportation Sector Network Management (TSNM) organization
- Provide technology and technical services to prevent and deter acts of terrorism using, or against, mass transit and rail systems
- Create an integrated test bed for technologies to support pilots and field experiments in mass transit environments

**Medium Term**
- Enhance resilience of intermodal transportation systems

**Long Term**
- Improve the cost effective use of resources for intermodal transportation security
Input to Research and Development

Intermodal:

- Coordinates requirements for research and development investment in emerging technologies
- Leverages private industry developments in suitable technologies
- Recommends and evaluates modifications to existing or emerging technologies to meet client needs

Requirements Timeline

Requirements for inclusion in the Intermodal Transportation Protection Program are solicited annually in 2nd Quarter, in concert with other requirements calls such as S&T’s Capability Gap submission window.
Analysis of Technology Integration

Intermodal:

- Collaborates with appropriate agencies and stakeholders to determine best practices, most useful technological employment, and concepts of operation (CONOPS)

- Incorporates lessons learned from field experiments and pilots

- Plans, coordinates, and supports technology-related experiments and exercises

- Supports assessments of safety, security, and reliability of technology implementations, including technology and analytic support for development of technology-related Corporate Security Reviews design
Product Lists and Databases

After baseline capabilities analysis, market surveys, technical evaluations, field experiments, and pilots, Intermodal then:

- Determines viability of production base
- Evaluates vendors’ economic and business viability
- Provides final acceptance of effectiveness and suitability

Establishes product lists and databases, including recommendations for grants guidance and lists

Product List Examples

- Authorized Equipment List - maintained by FEMA
- The TSA Qualified Technology List - maintained by TSA OST
Path Forward

Current Standards Approach:

- To meet requirements of Executive Order 13146, and many requests from intermodal transportation agencies, TSA has established an ongoing program to develop, coordinate, and publish performance based specifications for explosives detection equipment.

**Specifications are:**

- Developed by TSA and other federal agencies desiring to participate, in collaboration with interested parties and stakeholders

- Under Federal government content and configuration management control throughout their life

- Available free of charge to any transportation authority, regardless of membership or affiliation or lack thereof

- Available to vendors, consistent with limitations of restricted content such as SSI or classified information

- Useful in defining products eligible for grant funding
Path Forward (cont.)

Qualification Strategy:

- Strong movement in Executive Branch and Congress to require product qualification testing to become fee for service.
- TSA proposes to collaborate with DHS in establishing a list of qualified laboratories for assessment of products against standards, at vendor expense.

Benefits:

- Places product maturity risk on vendor vice the government
- Avoids anti-competitive provisions of Federal Acquisition Regulation
- Equal opportunity for all vendors
- Allows assessment of products against SSI or classified requirements, without vendor necessarily being in the National Industrial Security Program
- May facilitate Safety Act reviews
- Transportation authorities could require proof of qualification before procurement; will weed out ineffective or unsuitable products
QUESTIONS