Transportation Security

Transportation Security Challenges:

General:

- Preventing unauthorized access to restricted areas
- Detection of all types of dangerous and threatening items
- Screening of passengers and employees
- Screening of cargo and baggage
- Critical infrastructure protection
- System integration
Transportation Security – Key Aviation Issues:

• Access control
• Cargo
• Screening
• Policing at airports

Transportation Security Issues - Marine:

• Containers
• Cruise ships (facilities, passengers, crew, etc)
• Coastal waters and maritime approaches
• Inland waterways - Seaway/Great Lakes
• Bridges
• Nuclear facilities near ports
• Natural resource (oil, gas) platforms
• Ports
**Transportation Security Issues - Surface:**

- Road and Rail:
- Containers
- Bridges and tunnels
- Trucking – universal transportation worker identification card (Can/US)
- Transportation of Dangerous Goods (e.g. chemical, biological and radiological threats)
- Canada - US border clearance
- Protection of rail passengers, employees, cargo and infrastructure

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**THE CONTAINER SYSTEM**

- Excellent delivery system for international and domestic cargo—including terrorists and WMDs
- Current security is essentially perimeter-based, 2% inspection
- Future needs to be collaborative among carriers, shippers, and security forces
THE AVIATION SYSTEM (1)

- High visibility even if not highest risk

- Steps to improve layering are underway
  - Access Controls
  - Better Screening and Sensors
  - Coordination/Systems Approach

THE AVIATION SYSTEM (2)

- Better information integration can improve performance
  - Trusted shippers/travelers
  - CAPPS for screening selection

- Hardening still required

- Human Factors such as smart screeners
PUBLIC TRANSIT SYSTEMS

- Open system-difficult access control for public spaces
- Key needs—situational awareness, sensor development, operational planning
- System cleanup capacity

OTHER TRANSPORTATION MODES

- Hazardous Materials Shipments-Rail and Truck
- Pipelines
Protecting U.S. Transportation

- Protecting U.S. Transportation Infrastructure is a Major Challenge due to its vastness
  - 4 Million Miles of Roads
  - 500,000 Bridges
  - 150,000 Rail Track Miles
  - 5,500 Public Use Airports
  - 25,000 Miles of Waterways
  - 1.6 Million Pipeline Miles
  - 5 Million Containers Through U.S. Ports/Yr

Source: Preparing For the Unknown: Geospatial Technologies for Improving Security in Intermodal Freight and Hazardous Materials Transport; Draft Report prepared for RSPA by NCRST

Selection criteria of targets for terrorists

- Terrorists select targets that are:
  - highly visible
  - have a high economic, symbolic, or sentimental value
  - have a highly disruptive destruction value
    - For example, the World Trade Center represented America’s economic might
- The method of attack is designed
  - to generate shock and widespread public fear,
  - leave a severe psychological impact, and
  - attract a great deal of attention to the terrorist group and its cause.
Potential Transportation Targets

- **Bridges**
  - Multitier overpasses and bridges that traverse heavily used navigable waters.
  - vertical supports,
  - suspension cables, and
  - mechanical components on drawbridges.

- **Tunnels**
  - These can act as containers for
    - fire,
    - hazardous fumes, or chemical/biological weapons and
    - can restrict emergency crew access.

- **Pipeline crossings**
  - Pipelines often carry flammable or explosive material that may be useful in destroying adjacent roads or bridges.

- **Rest areas**
  - unusual or out-of-place items.

Potential Transportation Targets-Continued

- **Isolated stretches of rural road**
  - heavily forested, isolated areas that can allow planning and attacks on key passing targets with reduced chances of detection.

- **Key routes**
  - heavy truck use routes,
  - high-volume bus routes,
  - VIP routes,
  - military routes, and so on.

- **Cargo in transport**
  - Particularly cargo that may be subject to hijacking or destruction, such as
    - explosives,
    - weapons,
    - hazardous materials, or
    - high-value cargo, such as
      - electronics,
      - jewelry,
      - name brand fashions, etc.
Federal Agencies Involved in Transportation Security

- Dept. of Homeland Security (DHS)
- U.S. Dept. of Transportation (DOT)
- Environmental Protection Agency (EPA)
- U.S. Army Corps of Engineers
- Government Accountability Office
- Others

Collectively these public servants are responsible for protecting our nation's transportation systems and supervising the entry of people and goods into the United States.

Department of Homeland Security
• Transportation Security Administration (TSA)

Mission
The Transportation Security Administration protects the Nation's transportation systems to ensure freedom of movement for people and commerce.

Source: Transportation Security Administration. www.tsa.gov

TRANSPORTATION SECURITY ADMINISTRATION

Created on November 19, 2001 by the Aviation and Transportation Security Act (ATSA) which made it responsible for (among other things that Transportation does):

(1) the deployment of air marshals
(2) improved airport perimeter security
(3) a 911 emergency call system for aircraft and trains
(4) screening of all passengers, baggage, mail, cargo, and carry-ons
(5) chemical and biological weapons detection.
TRANSPORTATION SECURITY ADMINISTRATION

Under the PATRIOT Act, the TSA also implements background checks on all Hazmat truck drivers and carries out other maritime and land security missions.

The jurisdiction of the Transportation Department is quite broad, and covers not only the five (5) main transportation modes of Airways, Highways, Railways, Waterways, Pipelines

And:

Urban mass transit, the transport of migrant workers, bus security, certain aspects of port security, security training for carriers, and flight training for non-US. citizens.

TRANSPORTATION SECURITY ADMINISTRATION

Developing CAPPS II-type technology which would automate the process of "detecting suspicious behavior within the aviation security domain that would sense patterns of travelers' or employees' physiological responses and/or overt behavior that are reliably associated with malicious intent"
CAPPS
Computer Assisted Passenger Prescreening System

- CAPPS is an FAA-approved automated system run by the airline companies which scores each airline passenger's profile to identify those who might pose a threat to civil aviation.

- The system also chooses some passengers at random, and these people, along with those who meet the "profile" are targeted to receive additional security scrutiny. 10 out of the 19 hijackers in the 9/11 attack were identified via the CAPPS system.

- In addition to CAPPS, airline ticket agents also mark as "selectees" those passengers who do not provide adequate answers to security questions, fail to have appropriate identification, or meet other criteria as determined by airline security.

CAPPS II

CAPPS II is a TSA-sponsored database system that combines the profiling capabilities of CAPPS with linkages to other governmental and commercial databases. CAPPS II has been vigorously opposed by privacy advocates, but it is essential to the mission of agencies like the TSA, which are supposed to develop a "safe" or trusted passenger system.

Passenger profiling and surveillance system that would require you to give your birth date, home phone number, and home address before you can board a U.S. flight.

Under CAPPS II, travel authorities would check these and other personal details against the information collected in government and commercial databases, then "tag" you with a color-coded score indicating the level of security risk that you appear to pose.

Based on your assigned color/score, you could be detained, interrogated or made subject to additional searches. If you are tagged with the wrong color/score, you could be prohibited from flying.
TSA

• **Passenger Screening** – In six airports, TSA is testing explosives detection trace portals, also known as “puffer” machines. The airports are in San Diego; Tampa, Fla.; Providence, R.I.; Rochester, N.Y.; Gulfport-Biloxi, Miss.; and John F. Kennedy in New York.

• At the security checkpoint, puffs of air are blown at a passenger walking through a portal which is similar to a walk-through metal detectors. The air is then analyzed for explosives.

TSA

• **Checked Baggage Screening** – TSA has partnered with private industry to develop next-generation explosives detection equipment for the screening of checked baggage.

• Currently, TSA uses two types of equipment to screen checked baggage – Explosives Detection Systems (EDS) and Explosives Trace Detection (ETD) equipment.

• EDS are the size of a mini-van and employ technology similar to a medical CAT scan whereas ETD equipment is much smaller – about the size of large suitcase.

• Screeners working with the portable ETD use a swab on a piece of luggage; the swab is then analyzed for traces of explosives.
TSA

- **Biometrics** – TSA is focusing on the use of biometric technology to further enhance security and customer service.

- This summer, TSA launched the Registered Traveler (RT) Pilot Program in five airports – Washington Reagan, Boston-Logan, Houston’s Intercontinental, Los Angeles and Minneapolis-St. Paul.

- Under the RT program, passengers volunteer to undergo a security assessment and are enrolled in the program if approved.
A Brief History

The **TSA** is charged with the responsibility for inspecting persons and property carried by aircraft operators and foreign air carriers.

These policies govern:

- the handling of cargo
- the security of aircraft and facilities
- reporting unlawful acts of interference
Security in Air Transportation

Security Regulations are constantly modified in accordance with the most current risk assessment to insure the protection of:

- People
- Property
- Aircraft

Security Checks & Balances

- Each entity in the transport chain is responsible to insure that all cargo is:
  - from a reliable source,
  - protected from outside tampering,
  - packaged properly to minimize hazard risks,
  - handled by trained personnel,
  - documented accurately.
Security Checks & Balances

All staff with access to cargo destined for air transport must:

- have passed a rigorous background check
- be successfully trained in security procedures
- report any signs of tampering
- have specialized DGR training if they will be involved in the packing or transport of this type of cargo

Hazardous material controls

- Diligent protection & oversight of Hazmat cargo is a critical element in the defense of Homeland Security.
Hazardous material controls

- **Packaging**: Specific requirements based on
  - Hazard Class
  - Quantity
  - Transport mode

- **Labeling**: Including
  - Hazards
  - Contents
  - Special Handling

- **Documentation**: All of the above +
  - Emergency Contact information

- **Loading**: Compatibility
  - Accessibility

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Hazardous material controls

Security Requirements have been added to the CFR ("Code of Federal Regulations")

- After March 25, 2003 all hazmat employees must receive *security awareness training with* their recurrent hazmat training.
- By September 24, 2003, every person or company who transports hazmat *must develop & adhere to a security plan*.
- By December 22, 2003 all *employees* of these companies *must be trained in this security plan*. 
Hazardous material controls

At a *minimum*, the security plan must include:

- **Personnel Security** - verified background checks of job applicants.

- **Unauthorized access** - preventing unauthorized persons from gaining access to these goods.

Hazardous material controls

The security plan must also include:

- **En route security** - measures to assess and address the security risks in transit from origin to destination, including storage areas.

- **Written copies of the plan**, available to all employees on a “need to know” basis.

- **Revisions and updates** as necessary to reflect changing circumstances.