



**INTERNATIONAL BORDER
MANAGEMENT SYSTEMS**

Overview of Technologies & Techniques

Detection Goals

Human Challenges

	Routine	Non-routine
Non-threatening	<ul style="list-style-type: none"> • Cross-border nomads/ tribal movement • Traders • Travelers and tourists 	<ul style="list-style-type: none"> • Refugees • Illegal immigrants
Threatening	<ul style="list-style-type: none"> • Criminal • Smugglers • Illicit traffickers 	<ul style="list-style-type: none"> • Non-state national security threats • Terrorists • Insurgents

Commodity Challenges

- Fraudulent Documents
- Tariff/License Avoidance Products
- Contraband
- Currency
- Human Beings
- Conventional Weapons
- Weapons of Mass Destruction

Define what we are trying to detect and in what domain to apply appropriate sensor technologies.

Techniques & Technologies

Surveillance, Monitoring, Screening

- Visual/Cognitive
- Chokepoint Management
- Sensors
 - Remote Wide Area
 - Hand-held
 - Screening Portals
- Cameras
- Random Inspections
- Manifests
- Watch Lists



Infrastructure/Facilities

- Fences / vehicle barriers
- Floodlighting, spotlights
- Observation posts
- Conveyances/vehicles
- Electrical power sources



Wide Area Sensors



**Portable Ground
Radars**



Cameras



Magnetic Sensors



Conveyance



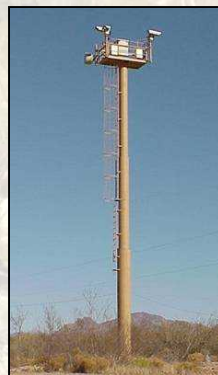
**Buried Fiber
Optic Sensors**



**Seismic
Sensors**



**Mobile Sensor
Platforms**



Sensor Towers



CBP Hermes 450 UAV

**Aerial/Satellite
Remote Sensing**

Land Point of Entry



**Detection
Portals**



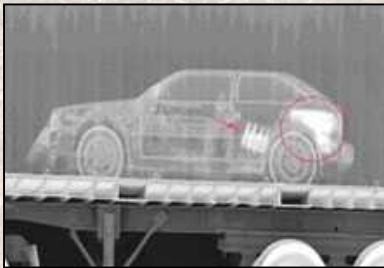
**Package
Scanners**



**Metal
Detectors**



**Vehicle Inspection
Technologies**



**X-Ray
Scanners**



**Radiation
Detectors**



**Fiber Optic
Inspection Tools**



**Handheld
Contraband
Detection Equipment**

Techniques & Technologies

Detection, Inspection, Assessment

- Sensor Alarm Assessment
- Secondary Inspections
- Watch Lists
- Reachback



Techniques & Technologies

Engagement, Arrest, Confiscation

- Training
- Weapons
- Conveyances



Techniques & Technologies

Prosecution, Disposition, Deportation

- Chain of custody protocols
- Supporting legal system
- Reachback
- International Agreements
- Containment Chambers



Techniques & Technologies

Communications

- Data display and review
 - Text-Based
 - Graphical
 - Real-Time or Delayed Retrieval
- Data analysis and decision support
- Archiving of data
- Initiation of response to event
- Reporting
- Musters



Keys to Success

- **Legal Authorizations**
- **Training – People & Equipment**
- **Technology Test & Evaluation Capability**
- **Technology Maintenance Programs**
- **Contingency Planning**



Discussion

- What is the nature of the normal flow of goods and people through your points of entry?
- What do you see coming through areas between points of entry?
- What differences are in your land, water, and air systems?
- In your opinion, what technologies and techniques have proven most useful to you?

