

S&T Stakeholders Conference

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Maritime Security IPT

Breakout Session#12

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From Science and Technology... Security and Trust



Homeland Security



Capstone IPT Overview

Participants

- Capstone Lead:
 - RADM Ron Hewitt, USCG, Assistant Commandant for C4IT (CG-6)
- USCG, CBP, ICE
- ***Today's representative: Joe Milligan, USCG, Deputy Assistant Commandant for Acquisition***

Process

- Four rounds of meetings (representation from relevant agencies)
- Identification of capability gaps
- Prioritization of capability gaps
- Review of relevant, ongoing S&T programs

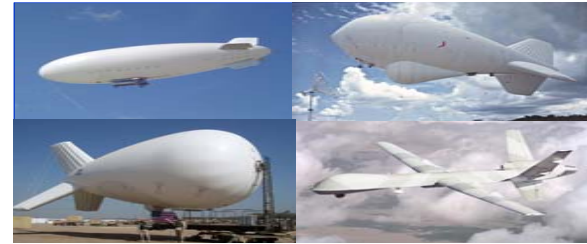
Outcome

- Resource-constrained, prioritized list of proposed programs (FY09-FY13)



Representative Technology Needs

- Wide-area surveillance from the coast to beyond the horizon; port and inland waterways region – detect, ID, and track
- Data fusion and automated tools for command center operations
- Vessel compliance through non-lethal compliance methods
- Enhanced capability to continuously track contraband on ships or containers
- Improved ballistic personal protective equipment for officer safety
- Improved WMD detection equipment for officer safety; improved screening capability for WMD for maritime security checkpoints



Wide-Area Surveillance

“Wide” area

- From the coast to beyond the horizon
- Port region
- Inland waterways

Technology shortfall

- Three capability areas:
 - Detection
 - Identification
 - Tracking



Operator issues/concerns

- Legacy surveillance tools designed for supporting pre-9/11 mission set (response-oriented)
- Need for *persistent* surveillance capability
- Classification of small, stealthy vessels
- Ability to access and fuse intelligence data into actionable information



Wide-Area Surveillance (continued)

Cross-functional values of the technology

- Primary customers – USCG, CBP (AMO)
- Planned partnership with other relevant agencies to prototype and evaluate long-term solutions to WAS sensor and platform requirements



Future anticipated deployments

- Demonstrate a persistent WAS COTS/GOTS capability to explore CONOPS and data integration issues
- Deliverable systems will be driven by the results of the demonstration and in conjunction with customer input throughout the program development process



Data Fusion and Automated Tools for Command Center Operations

Example – Response to the terrorist attacks of 9/11

- Internal agency challenges
- Inter-agency coordination challenges

Technology shortfall

- Situational awareness tools
- Decision support technologies
- Interoperability when not co-located
- Intelligence asset processing technologies
- *Success depends upon interoperability of multiple systems at differing levels of technological sophistication*



Operator issues/concerns

Note – S&T is seeking to support the mandate in the Safe Port Act of 2006, Section 108, to establish interagency operational centers for port security at all high-risk priority ports

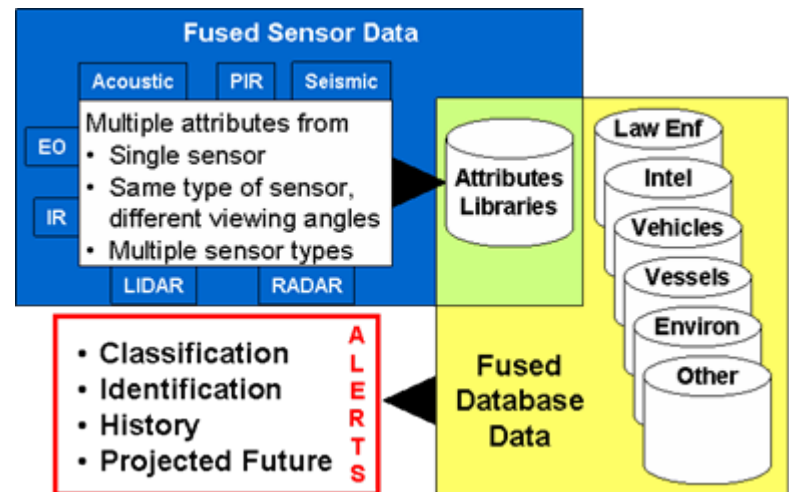
- Multiple sources of data → *timely, actionable* information
- Balancing agency-specific capability requirements with those of response partners



Data Fusion and Automated Tools for Command Center Operations (continued)

Cross-functional values of the technology

- Primary customer – USCG
- “Port partners”: CBP, TSA, Port Authorities, local metropolitan police and fire departments
- Technical challenges inherent in this effort will impact all agencies with operational responsibilities in response to national emergencies, including terrorist events and natural disasters



Future anticipated deployments

- Pilot program to assess, develop advanced situational awareness and collaboration tools
- Advanced fusion technologies

Vessel Compliance

Border enforcement personnel have limited tools to compel the compliance of suspect vehicles/vessels

* Border Security IPT crosswalk

Technology shortfall

- Non-lethal
- Platform compatibility limitations
- Ability to stop multiple boat types
- Limiting collateral damage
- Leveraging technologies used to stop terrestrial vehicles

Operator issues/concerns

- Compatibility with current CONOPS
- Training and maintenance requirements
- Maximum safety during follow-on interdiction by law enforcement personnel



Vessel Compliance (continued)

Cross-functional values of the technology

- Primary customers – USCG, CBP, and ICE
- Seeking technologies deployable from multiple platforms: vehicles, vessels, and aircraft
- Ideal solutions will be deployable against both terrestrial and maritime threats



Future anticipated deployments

- Investigate EMP approaches for vehicles and vessels
- Investigate and test feasibility of alternative technologies



Border Officer Tools & Safety

Provides technologies that will enable border security law enforcement agents to perform their tasks in a border security operation with a higher level of safety

Technology shortfall

- Personal protective equipment (PPE)
 - Effectiveness against increasingly lethal ballistics
 - Weight restrictions
- Detection equipment
 - Handheld
 - “Through-the wall”
 - Humans and contraband



Operator issues/concerns

- Suitable for use across with full spectrum of operational scenarios (PPE)
- Compatibility with DoD, DoJ, and state-of-the art industry equipment (PPE)
- Ease of use, minimal maintenance requirements (Detection equipment)



Border Officer Tools & Safety (continued)

Cross-functional values of the technology

- Primary customers – USCG, CBP, and ICE
- Seeking solutions that will meet the requirements of all three agencies
- Success will result in the cross-cutting desire to:
 - reduce officer fatalities
 - reduce illegal entry of people and contraband



Future anticipated deployments

- Improved ballistic protection meeting the needs of multiple DHS enforcement agencies
- Handheld inspection devices suitable for hidden compartments on ships or in vehicles





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