USCG - DEPLOYABLE OPERATIONS

Presentation to 18th Annual NDIA SO/LIC Conference
26 February 2007

Providing the Coast Guard with technology expertise and support for operational analysis and development.
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Conference Theme

• Warfare in the Seams: Defense and Industry Partnering to Win the Long War

• Transforming General Purpose Forces for Warfare in the Seams
  – e.g., Training and Technology required to Conduct Military Operations in Cities, Mountainous Regions, Desert Terrain, and to Secure Long Borders from Hostile Incursions
CG Mission

- Safeguard lives, property and the environment from intentional and accidental maritime threats.
- Protect maritime mobility by eliminating interruptions and impediments to the economical movement of goods and people while maximizing the recreational use of the Nation's waterways.
- Secure maritime routes by halting the flow of illegal drugs, aliens and other harmful/toxic contraband while preventing illegal incursions of our Economic Exclusion Zone thereby enforcing federal law.
- Defend the nation as one of the five US Armed Services and enhance regional stability in support of the National Security Strategy.
Threats & Challenges

Homeland Security

- Mass Migration
- Crime & Violence
- Environmental Degradation
- Maritime Food Supply
- Maritime Transportation
- Disaster Relief
- Smuggling Aliens/Drugs
- Arms Trafficking
- Sanctions Violations
- Trade Access
- Mobilization & Key Asset Protection
- Multinationals/Multiflags
- Weapons of Mass Destruction
Threats & Challenges (cont.)

- Vessels carrying contraband
  - *WMDs, Explosives, Weapons, Drugs*
- Vessels as weapons
  - *Threat to other vessels and infrastructure*
- Vessels used to smuggle illegal aliens
  - *Go-fast boats, “put-puts” and containers*
- Vessel crews and passengers contain terrorists
  - *Ship jumpers*
- Underwater threats
  - *Swimmers, mines, explosives*
Traffic Density

Thousands of vessel “trips” in the AOR per week
System of systems approach to sensors, processing, correlation, analysis, decision and reaction systems

- Open architecture
- Interoperable
Technology Opportunities

Pre-Acquisition
- Project Identification
- Project Initiation

Acquisition
- Alternative Selection
- Capability Development & Demonstration
- Project Decision

Sustainment
- Post Implementation Review

Operations & Support

Mission
- Mission Analysis
- Operational Effectiveness

Technology Assessment
- Technology Demo
- Cost Assessment
- Human Systems Study
- ORD Development
- MNS Development

DT&E
- OT&E
- Technical Advisor

Market Research
- Alternative Analysis
- Proof-of-Concept Tests
- Modeling & Simulation
- Human Sys Integration
- Technical Advisor
Boarding Officer Bill/Betty

Hi,
Prepare to be boarded

Attain accurate accounts of material, personnel, etc. for vessel control issues and concerns
Deployable Specialized Forces

- Port Security Units (PSU)
- National Strike Force/Strike Teams
- Tactical Law Enforcement Teams (TACLET)
- Maritime Safety & Security Teams (MSST)
- Maritime Security Response Team (MSRT)
Areas of Interest & Need

- Protective Equipment/Components
- Detection of Agents & Compounds of Interest
- Audio/Visual Tactical Sensing
- Lethal & Non Lethal Technologies
- Tactical Intelligence
- Biometrics
- Enhanced Strategic/Tactical Platform & Sensor Performance
Deployable Specialized Forces

Related Needs

- Weapons Proficiency
- Weapon Retention
- Close Quarters Battle
- Crowd Control
- Fire and Movement
- Site Security
- Moving Targets
- Assistance to other Emergency Responders
- Weapons Transition
- CBRNE Sampling, Monitoring
- CBRNE Evidence Collection
- Night / Low Light Engagement
- Self-Defense
- Vessel Operations
- Suspect Control
- Decontamination
- Communications
- Rescue
- CB Perimeter Characterization
- Unassisted Equipment Donning
Deployable Specialized Forces

Task/Skill

- Weapons Proficiency
- Weapon Retention
- Operating Equipment
- Close Quarters Battle
- Ground Fighting
- Fire & Movement
- Moving Targets
- Weapons Transition
- Night / Low-Light Engagement
- Self-Defense
- Suspect Detaining
- Site Security

Integration Issue

- Dexterity / Tactility
- Weapon Aiming / Sighting
- Weapon Access
- Weapon Clearing / Reloading
- Durability
- Sustainability
- Ability to Communicate
- Visual Acuity
- Hearing Acuity
- Unassisted Equipment Donning
- Sustainability
- Monitoring of Individuals
Deployable Specialized Forces

Task/Skill

- Evacuation of Victims
- Decontamination of Self
- Decontamination of Equipment

Integration Issue

- Limited Capability
Prioritization of Integration Issues

- Sustainability of Wearer
- Communications & Interoperability
- Dexterity Issues
- Donning & Doffing of Equipment & Clothing
- Respirator interoperability/interchangeability
- Integration of equipment in CB ensembles
- Inability to characterize threats - real time
- “Frequency of Use” Analysis for load carriage
- Overall load carrying expectations
- Weapon sights/facemask compatibility
## Mission Profile Duration

<table>
<thead>
<tr>
<th>Mission Profile</th>
<th>Duration for CB Protection</th>
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</thead>
<tbody>
<tr>
<td>First Responder</td>
<td>8 - 12 hours (min)</td>
</tr>
<tr>
<td>Perimeter Control</td>
<td></td>
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<tr>
<td>Tactical Operations</td>
<td>4 - 6 hours</td>
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<tr>
<td>HAZMAT</td>
<td>TBD</td>
</tr>
<tr>
<td>Emergent SAR</td>
<td>1 – 2 hours</td>
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Technology Insertion Goals

• Invest in products that address priority needs
• Develop “best” products as quickly as possible (triage/spiral approach)
• Help CG implement products
Program Evolution

• Spiral Development
  – Build - Test - Build evolution over multiple years
  – Incorporate new sensors, technology and improvements
  – Conduct operationally assessments (Test beds)

• First Spiral
  – Sensors at three ports
  – Sector Command Center
  – Web-Based Information Client

• Second Spiral
  – Additional Long Range Radars
  – Scene awareness
  – Common operating picture integration

• Follow-On Spirals
  – Wideband local communications
  – OTH coastal area surveillance sensors
  – Underwater object awareness
  – Swimmer and vessel defense
Technology Community of Interest - Government

National Counterterrorism Center
Office of Science and Technology Policy
Department of Justice
National Security Agency
Defense Intelligence Agency
Department of State
National Institute of Standards
USCG R&D
IC CIO
FBI
Special Operations Command
National Geospatial-Intelligence Agency
Department of Homeland Security
Department of Defense
National Reconnaissance Office
Department of Energy
Defense Advanced Research Projects Agency
Technology Community of Interest - Academia & Industry

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