U. S. Coast Guard

“Acquisition Capability” Technology Demos (ACTD)

CG-926 | CAPT John Macaluso, USCG
Innovation Expo JCTD Panel | November 2008
Topics

Modern Coast Guard

➢ Modern Acquisitions
  ➢ RDT&E Modernization
  ➢ Acquisition Capability Tech Demos (ACTD)
  ➢ Recent Examples
RDT&E Modernization

A modern RDT&E Program
- Principal RDT&E Advisor to the Chief Acquisition Officer (CG-9)
- R&D Center – modern organization & location
- Experts in CG multiple missions & environments

New strategic relationships
- Increased capacity, experience, and expertise
- Trusted-advisor services & SETA support

A modern RDT&E Appropriation
- Early exploration of real-world modern technology & concepts
- Knowledge & experience informs early decisions of PM’s
Acquisition Capability Tech Demos

Modern technology demonstrated in multiple environments
- Maritime, arctic environments – harsh & austere

Adapted to Coast Guard multiple missions
- Match acquisition concepts with modern technology

Reduce Risk & Raise Value
Examples

Comprehensive Maritime Awareness (CMA) JCTD

Global Observer JCTD

Gulf Coast Maritime Predator Demonstration

Unmanned Aircraft System (UAS) ACTD’s
Summary

A modern RDT&E Program, with new strategic relationships, funded by a modern RDT&E Appropriation is using early exploration & ACTD’s to reduce the risk & raise the value of adapting modern technologies to acquisition, operational, and regulatory programs in the modern Coast Guard.
Discussion

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Backups
CMA JCTD

RDT&E Liaison to ONR
NRL Project “USCG Vessel Tracking Project”
MDA PIO & RDT&E Program involvement
CMA JCTD
CG-2 (Intelligence) & RDT&E Program involvement
Coalition data fusion & sharing
“Need to Share” – sensitive info for coalition & port partners
CMA won JCTD Management Team of the Year Award
Global Observer JCTD

High-altitude UAS – endurance of several days, hydrogen ICE*

Multi-mission – configurable payload
- Persistence: “Unblinking eye”
- Communications & Data Relay

CG-6 championed DHS S&T sponsorship

CONOPS includes Homeland Security vignettes
- CBP / CG law enforcement operations

* Internal Combustion Engine
Gulf Coast Maritime Predator Demo

USCG/CBP Joint Operations
Predator B

- Vessel detection, tracking and classification
- 36 hrs hour fuel endurance

55,000 feet

Global Hawk / Broad Area Maritime Surveillance (BAMS)

National Strategic Asset
55K feet and above

Source of Strategic Data

Operational Altitudes depicted:
Aircraft can fly higher, however current sensors are not effective at higher altitudes.

20,000 feet

Predator B

Agency Operational Asset
20K feet and below

Fire Scout

Cutter-Based Tactical Asset
8K feet and below

- Vessel detection, tracking, classification and identification
- 24 hour endurance

- Vessel detection, tracking, classification and identification
- 5 hour endurance
UAS4NSC – Project Timeline

**R&D Center**
NSC-UAS Project Team

- **Validation**
  - Constraints Analysis Interim Report
  - 10/08

- **Market Research & Analysis**
  - Market Survey Interim Report
  - Test Plan
  - 12/08

- **Field Testing & Evaluation (up to 4 ATDs)**
  - Test Interim Report
  - 4/09

- **Results & Reports**
  - UAS Technical Feasibility Report & Briefings to USCG, DHS, OMB, & Hill
  - 7/09
  - 1/10
  - 3/10

**Project ID**

- **MS #0**
  - Project Initiation
  - Mission Needs Statement, CONOPs, Updated Funding

**Concept & Technology Development**

- PORD & ORD
- Alternatives Analysis
- Validate MNS
- PMP
- APB
- ILS Plan
- TEMP
- Update funding
- Acquisition Plan
- CM Plan

Note: Acquisition MS’s are shown for context of deliverables only. Actual dates are pending resolution of FY09 and FY10 AC&I budgets.
Strategic Relationships

Sandia National Labs
- Experts in technology, analysis, T&E, M&S (8,500 employees, 1,500 PhD)
- Trusted-advisor strategic relationship with USCG
- Dept of Energy Lab working for DHS (by Homeland Security Act)

Johns Hopkins Applied Physics Lab
- Experts in naval systems (4,200 employees, 790 PhD)
- Trusted-advisor strategic relationship with USCG
- Navy University Affiliated Research Lab

SETA Contract: ABSG Consulting, Inc. plus 19 subs
- Experts in acquisition-support functions
- Private-sector entity
- Works for R&D Center under IDIQ contract

SAIC Contract
- Experts in systems development and integration
- Private-sector entity
- Works for R&D Center under IDIQ contract