Seaborne Target Overview

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Unclassified
Outline

• Who we are
• What we do
• Remote Platforms
  — small high speed
  — mid-size, mid-speed
  — ship size
  — launch platforms
• Tow Targets
Seaborne Target Overview

Surface Targets Team

• Mission:
  - To provide seaborne target services to the Fleet, DoD, and Foreign Military Customers in support of weapon system T&E and Fleet Training
  - Cognizant Field Activity to NAVSEA for Seaborne Targets and augmentation systems
    - Development
    - T&E
    - In Service Engineering/depot
    - Integrated Logistics Support
    - Support To Other Operating Activities
  - Tri-Service Lead for Seaborne Targets
Seaborne Target Overview
Surface Targets Team

• Customer Base
  — SEABORNE TARGETS (PMS325/OPNAV)
    - RDT&E
    - LOGISTICS MANAGEMENT
    - IN-SERVICE ENGINEERING
    - ACQUISITION
    - MAINTENANCE SUPPORT
  — OPERATIONS
    - THIRD FLEET
    - HARPOON
    - SLAM
    - HARM
    - Other Field Activities/Services
  — OSD SUPPORT
    - MOBILE SHIP TARGET (MST)
    - AERIAL TARGET LAUNCH SHIP (ATLS)
    - COMMON DIGITAL ARCHITECTURE
  — SELF-DEFENSE TEST SHIP
  — FMS (VARIOUS)
Seaborne Target Overview
Surface Targets Team

ASSETS

- QST-35 SEPTAR (56 FT POWERED TARGET)
- HSMST (7m, 35+kt. Target)
- Mobile Ship Target (MST)
- Aerial Target Launch Ship (ATLS)
- Target Augmentation Systems
  - RADAR SIGNATURE ENHANCEMENT
  - IR SIGNATURE ENHANCEMENT
  - RADAR SIMULATORS
  - ECM SIMULATORS
- Tow Targets
- HARM platform
- SDST (PWC)
- Support Vessels
Seaborne Target Overview

Midsize, midspeed vessels

- **QST-35A SEPTAR**
  - 17m x 4.5m x 14 LT Disp.
  - 15-20 kts
  - 10 ton payload
  - fully remote controlled
  - Varied augmentation
    - radar simulators
    - RF/IR
    - ECM/Chaff
    - scoring
  - Represents threats to 40m+
  - Demonstrated OTH capable
  - Mine countermeasure potential
QST-35 Evolution
Fast Attack Craft Target

QST-35 Deficiencies

- Slightly undersized
  - 56 ft vice 65 ft
  - Marginal IR and RF signature representation

- Inadequate speed in developed seaway
  - 15 knot capability
  - 50 knots required

- Survivability
  - Amortized cost/impact is $550K

Proposed Solution

- Open-ocean performance craft
  - 50+ feet
  - 50+ Knots

- Survivability
  - $500K estimated production cost (vs. $900K)

- Also enables hi-speed towing
Seaborne Target Overview

Small, high speed vessels

- High speed maneuvering surface target (HSMST)
  - 7m LOA, 3m Beam
  - 2 LT Displacement
  - Aluminum hull w/foam sponson
  - 45+ kts speed capability (35 kt. SS3)
  - LOS to 25 km., OTH capable
  - operates from fixed Range or mobile via PCCU
  - COTS platform w/ Govt. owned onboard C²
- Realistic littoral target for GUNEX and target acquisition
- SWARMEX
- Can be used in Minehunting/clearing
Seaborne Target Overview
Ship Deployable Surface Target

- Remotely Controlled Personal Water Craft
- Potential to be deployed from aboard ship
- Utilizes Portable Command and Control Unit (PCCU) for deployed ops
Seaborne Target Overview

Ship-sized Platforms

- Use of ex-combatants now limited
  - extremely costly
  - environmentally unfriendly
- Lack of threat realism
  - no mobility
  - fixed configuration
- Poor survivability
  - age
  - lack of watertight integrity
  - limited maintenance

The Old Days
Seaborne Target Overview

Mobile Ship Target

• Fully mobile to 15 kts
• Unmanned operation
  • OTH capable
• highly survivable
• hardened ship systems
• very low life-cycle cost
• low repair cost
• built to commercial standards
Seaborne Target Overview

Mobile Ship Target

- Configurable superstructure
- > 50 ton deck payload

Mobile Ship Target 80m Version

Unclassified
Mobile Ship Target (MST)
Seaborne Target Overview

Aerial Target Launch Ship (ATLS)

- Unmanned Operation
- Built to commercial standards
- Verified low life cycle cost
- Suitable for multiple systems
  - VANDAL (MQM 8EER)
  - BQM-34/74
  - others
- Operation within hazard patterns
- TBM testing
- Manned ops/HVBSS

Aerial Target Launch Ship
80m
Seaborne Target Overview
Vandal Target Launch from ATLS

- First launch 18 Sept 03
- Vandal blast-test vehicle
- Ship unmanned and under remote control
- Ship speed 10 knots
- Successful launch
- No damage to ship
- GQM-163A next
Seaborne Target Overview

Command and Control

- Common on-board Command & Control System - SeaCAN
  - Utilizes a Common Digital Architecture
  - Can interface with all Navy range control systems
  - TM of ship motions
  - Designed and fabricated at NAWCWD Pt. Mugu
  - OTH capable
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Tow Targets

- Used to simulate threats
- May be more cost effective
- Can be mobile or freely floating
- Survivable HARM/IR target
- Utilizes wide range of augmentation
- Can simulate multiple targets
- Continued development
Seaborne Target Overview

NAWCWD Point Mugu Environment

- 36000 sq. mi. (92000 Km²) adjacent sea range
- Offshore islands
- Adjacent onshore peaks to 500m
- Fully instrumented for surface and aerial TM
- Minimum civilian/commercial interference
Seaborne Target Overview

Operating Sites and Resources

• Point Mugu, CA
  – QST-35, HSMST, ISTT, Trimaran, Williams Sled, Mobile Ship Target, HARM Barge, SDST Aerial Target Launch Ship

• Kauai, HI
  – QST-35, HSMST, ISTT, Trimaran,

• Norfolk, VA
  – QST-35, HSMST, ISTT, Trimaran,

• Patuxent River, MD
  – QST-35, HSMST, SDST, ISTT, Williams Sled

• MCAS Cherry Point, NC
  – HSMST, Trimaran

• Okinawa
  – HSMST, ISTT, Trimaran, HARM Barge

• SCORE (Dec ’03)
  – HSMST, Trimaran

Unclassified
Questions?