U. S. NAVY SEABORNE TARGETS
Moving Forward
Responding to the Fast Attack Threat

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NAVAIR 5.3
Threat/Target Systems Department
Pt. Mugu, California

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Symposium and Exhibition

Unclassified
New Challenges = New Capabilities
Overview

- Organization / mission
- Current targets
- Fast Inshore Attack Craft – HSMST evolution
- Fast Attack Craft - FACT evolution
- Control Systems
- Enhanced realism
- Expanded role
Seaborne Targets Structure

OPNAV N433

PEO SHIPS PMS325i

NAVAIR 5.3 Pt Mugu CA Engineering Logistics CM/DM

Operating Activities

Major Claimants

CAPT William Jensen

Mr. Rick Wolff

Mr. Jeffrey Blume
Surface Targets Team

Mission

• Navy life-cycle lead for Seaborne Targets and augmentation systems
• Tri-Service Lead for Seaborne Targets
• Seaborne target services to the Fleet, DoD, and Foreign Military Customers in support of weapon system T&E and Fleet Training
Seaborne Target Resources

Powered Targets

**FACT**
- Fast-Attack Craft Target
- 50 feet, 50 Knots

**HSMST**
- High-speed threat
- 27 Feet, 46 Knots

**SDST**
- Ship deployable for at-sea training.
- 12 Feet, 20 Knots SS2

**QST-35**
- Generic threat. Also tow tractor
- 56 Feet, 20 Knots

**MST**
- NAWCWD T&E Asset
- Self-propelled ship simulator
- 260 Feet, 14 Knots
Seaborne Target Resources
Towed Targets

- Gunnery
- Low-Cost Modular Target
- Hellfire
- Harpoon
- HARM
- ISTT (with Hellfire Kit)
- LCTT
- Multi-purpose tow used with QST-35 or HSMST

Small low-cost tow for use with HSMST & SDST
Fast Inshore Attack Craft Evolution

• Requirement
  – 5” gun - High Speed Maneuvering Surface Target test requirements
  – Multiple maneuvering targets capable of 35 knots in Sea State 3
Fast Inshore Attack Craft Target
QST-33

- Characteristics
  - 18 feet long
  - 7’ 4” beam
  - 330 Hp
  - 3650 Lb
  - Deficient performance in established seas

- Requirement
  - 35 Kts SS3

- Capability
  - 20 Kts SS2
Fast Inshore Attack Craft Target
HSMST-1

• Characteristics
  – 7 meters long
  – 9.5 ft beam
  – 300 Hp
  – 5000 Lb
  – Substantial improvement over QST-33 attributed to size

• Requirement
  • 35 Kts SS3
  • Capability
  • 35 Kts SS3
Fast Inshore Attack Craft Target
HSMST

• Characteristics
  – 8 meters long
  – 7.5 ft beam
  – 400 Hp
  – 5700 Lb
  – Additional size contributed to performance

• Requirement
  • 35 Kts SS3

• Capability
  • 46+ Kts
  • 35 Kts SS3
Fast Attack Craft Target

FACT Requirements
- 50+ feet
- 50+ Knots SS2
- Survivability
- High-speed towing
- Realistic signatures

QST-35 Deficiencies
- Marginal IR and RF signature representation
- Inadequate speed in developed seaway
  - 15 knot capability
  - 50 knots required
- Survivability
  - High amortized cost/impact
Fast-Attack Craft Target

FACT

50 foot length
50 knots sustained SS2
Fast Attack Craft Simulator
Control Systems

• Seaborne Controller Area Network (SeaCAN )
  – A singular solution
  • Common architecture and hardware for **ALL** Seaborne powered targets
  • Operates with **ALL** Navy command links
  • Portable Command Control Unit (PCCU) is primary command link
Multi-Target Control

- Simultaneous and independent control with PCCU
- Multiple target types
  - 15 demonstrated to date, but more are possible
- Formations as desired and variable in real time
Augmentation

• Focus on realistic and repeatable IR and RF signatures
  – Developing compendium of signature data for all Program-of-Record targets

• Signature management
  – Users may assess signatures and request modifications
Humannequin

• Threat surface craft can be disabled by rendering either propulsion systems or the craft operator inoperative. Currently there is no real-time means to assess whether operator has been incapacitated.

• Commercial mannequins will be outfitted with heat sources and sensors to provide realistic human signatures and vulnerability measurements.
New Roles

• Seaborne targets as USV
  – Targets can be configured to execute other USV missions either operationally or as developmental prototypes

• Seaborne targets as UAV surrogate test beds
  – Good payload test beds
  – Impervious to traditional flight risks
  – Long endurance
# Operating Sites and Resources

## U. S. Navy Seaborne Targets

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Summary

• US Navy has a robust inventory of threat-representative targets including Fast Attack Craft simulators available at many locations worldwide.

• These targets are deployable.
Questions?