



Seaborne Target Overview

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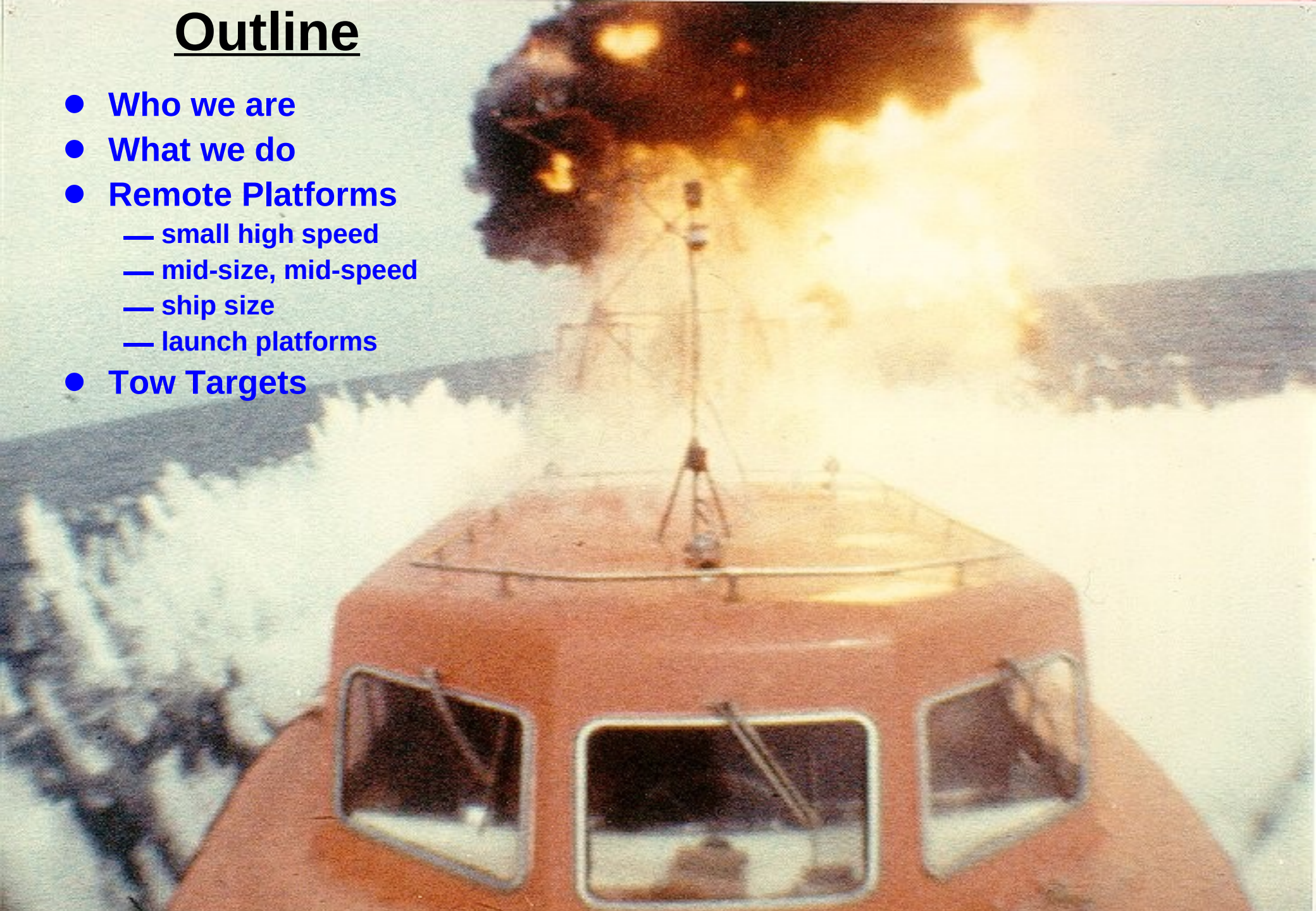


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Outline

- 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



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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)



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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

Midsized, 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



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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



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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



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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



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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



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Seaborne Target Overview

Mobile Ship Target



Mobile Ship Target
80m Version

- Configurable superstructure
- > 50 ton deck payload



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Mobile Ship Target (MST)



*MOBILE SHIP TARGET
(MST)*



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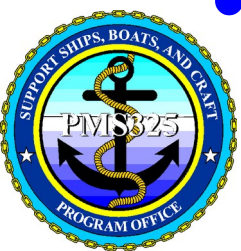




Seaborne Target Overview

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





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



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Aerial Target Launch Ship (ATLS)



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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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Seaborne Target Overview

Tow Targets

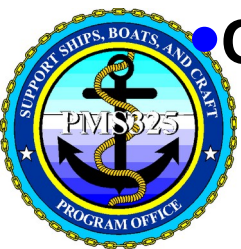
- Used to simulate threats
- May be more cost effective
- Can be mobile or freely floating
- Survivable HARM/IR target
- Utilizes wide range of augmentation
- Can simulate multiple targets
- Continued development



ISTT



Williams Sled



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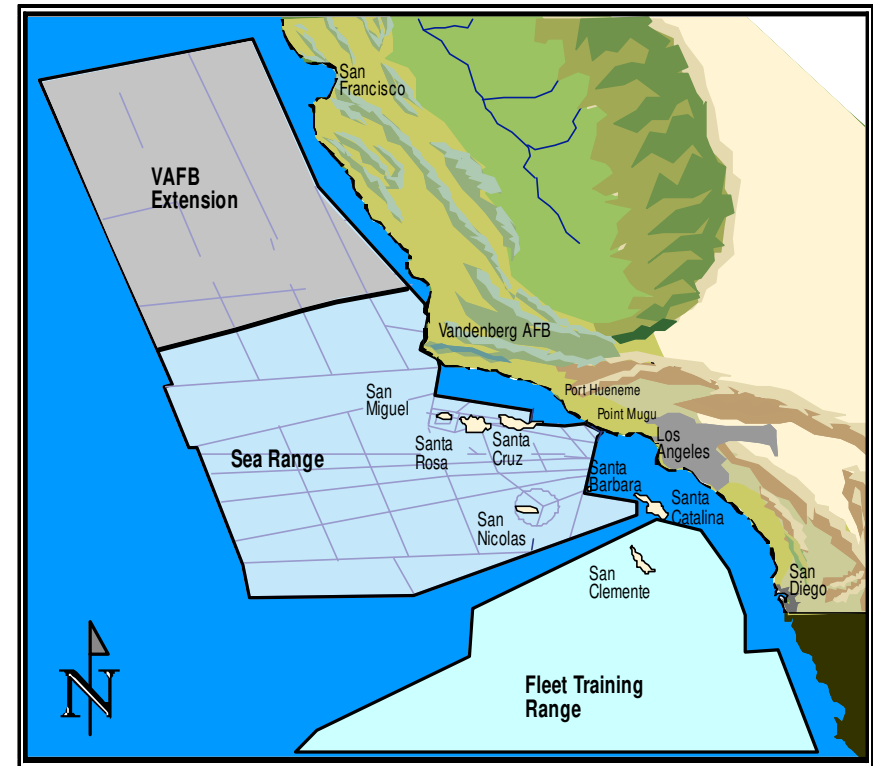




Seaborne Target Overview

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



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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



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Questions?

