

U. S. NAVY

SEABORNE TARGET OVERVIEW

44th Annual NDIA
Targets, UAV's & Range Operations
Symposium and Exhibition

Jeffrey L. Blume, P.E.

Head, Surface Targets Team
Naval Air Warfare Center Weapons Division
Pt. Mugu, California

jeffrey.blume@navy.mil

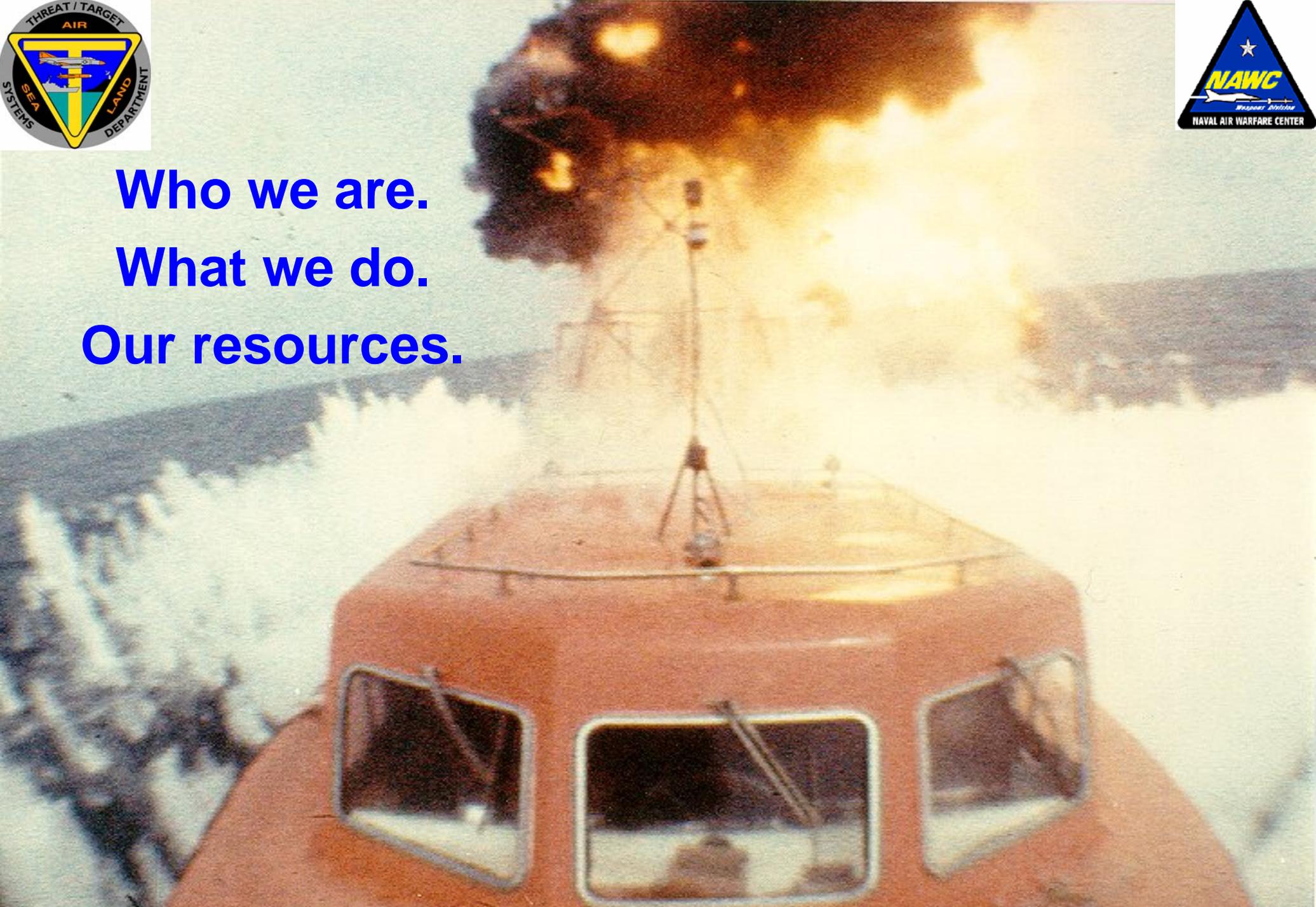


Unclassified





Who we are.
What we do.
Our resources.



Surface Targets Team Mission

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



Surface Targets Team

Customer Base

- **SEABORNE TARGET DEVELOPMENT AND PRODUCTION**
 - OSD
 - Chief of Naval Operations
 - PEO Ships
 - Army and Air Force
- **OPERATIONS**
 - Navy Weapon System Test and Evaluation
 - Naval Fleet Training
 - USAF Test and Evaluation
 - Foreign Military Customers



Surface Targets Team Organization

- **Leadership**
 - PEO Ships
 - Naval Air Warfare Center Weapons Division
- **Work site**
 - Naval Base Ventura County, Port Hueneme
 - Harbor essential to mission
 - Engineering prototype facilities
- **Workforce**
 - Combination of civil service and multiple support contractors



High-Speed Maneuvering Surface Target (HSMST)

Aluminum hull with foam sponson
8m LOA, 3m Beam
45+ kts speed capability (35 kts SS3)
Multiple-target presentation capability
Realistic littoral target



Ship-Deployable Surface Target (SDST)



**Remotely-controlled personal water craft
Potential to be deployed from aboard ship**

QST-35 SEPTAR

**17m x 4.5m x 14 LT Disp.
15-20 knots
10 Ton Payload
Varied Augmentation
Represents Threats to 40m+**



Evolution

Fast Attack Craft Target (FACT)

Requirement

- Open-ocean performance craft
 - 50+ feet
 - 50+ Knots
- Survivability
 - \$350K estimated production cost (vs. \$900K)
- Capable of hi-speed towing



FACT Prototypes



Donzi



Maximum Thunder

Ship-sized Platforms

The Old Days

Use of ex-combatants is now limited

Lack of threat realism

Poor survivability



Mobile Ship Target (MST)

**80 Meters (260 feet)
Fully Mobile to 15 Kts
Unmanned Operation
OTH Capable**

Very Low Life-cycle Cost

Built to Commercial Standards

Highly Survivable

Hardened Ship Systems

Low Repair Cost



Mobile Ship Target (MST)

Configurable superstructure
> 50 ton deck payload



Aerial Target Launch Ship (ATLS)



Unmanned Operation

Operation within hazard patterns

TBM testing

Manned ops/HVBSS

Built to commercial standards

Verified low life cycle cost

Suitable for multiple systems

GQM-163

BQM-34

BQM-74

others

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

Seaborne Target Control

- **SeaCAN (Seaborne Controller Area Network)**
 - A singular solution
 - Common architecture and hardware for **ALL** Seaborne powered targets
 - Operates with **ALL** Navy command links
 - Developed in-house
 - Government owns and manages design



Tow Targets

- Cost-effective threat simulation
- Mobile or freely floating
- Wide range of augmentation
- Can simulate multiple threats
- Continued development
- Used worldwide

A large, dark-colored ship with a prominent rectangular frame structure on its deck, floating on the water. The structure appears to be a target for simulation.

ISTT

A bright orange, sled-like target with a large, perforated rectangular panel mounted on a frame, floating on the water.

Williams
Sled

A red, rectangular target structure with a white container-like element on top, floating on the water. A large ship is visible in the background.

HARM/IR

Low Cost Tow Target (LCTT)



Recent development
Meets Fleet Training Requirements
Capable of 40+ Knots
Towable From Both HSMST & SDST
Self-righting With Full Augmentation
Survivable
 >1500 Rounds of 50 Cal
Durable
 170 Nm Transit in SS2

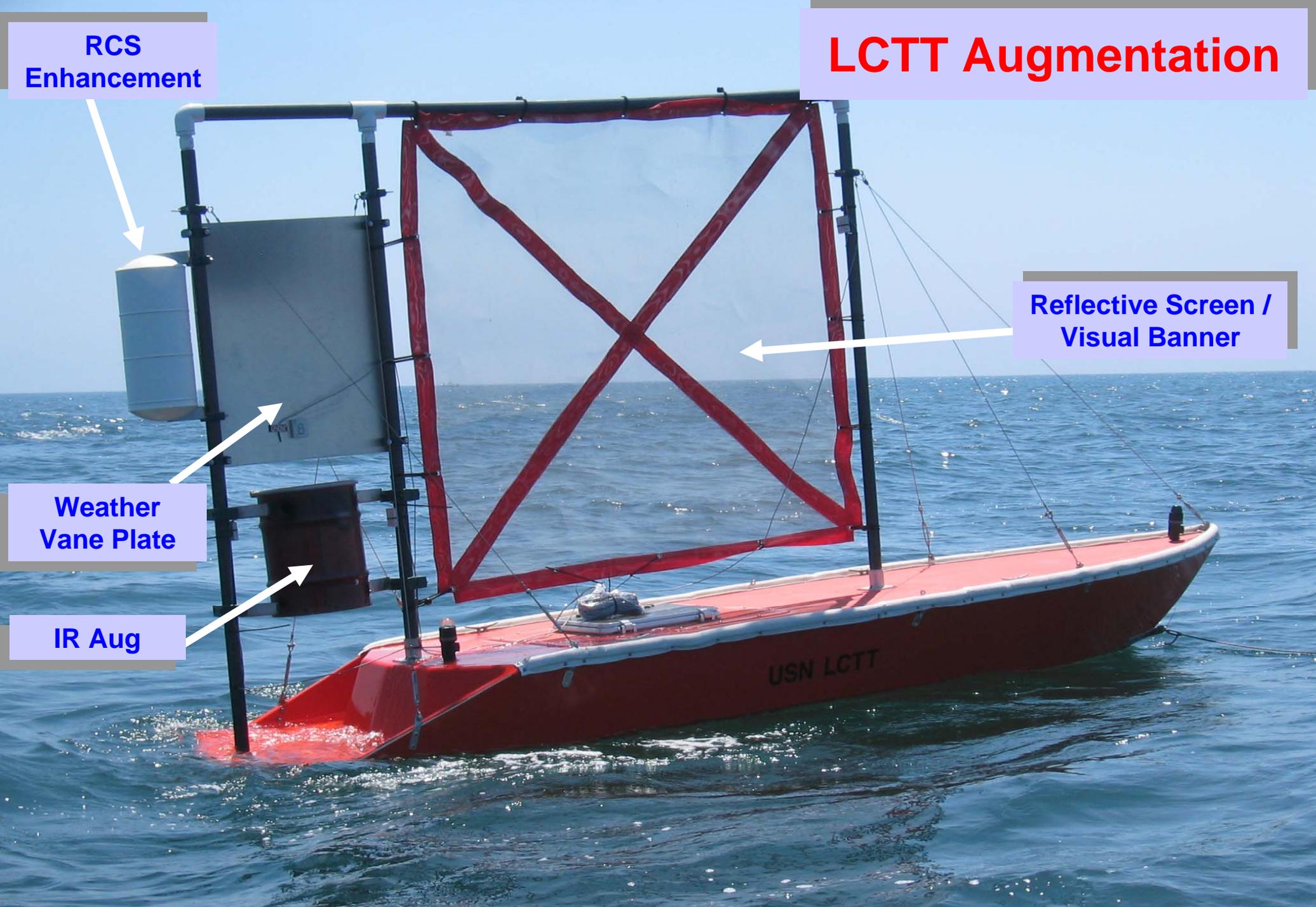
**RCS
Enhancement**

LCTT Augmentation

**Reflective Screen /
Visual Banner**

**Weather
Vane Plate**

IR Aug



Operating Sites and Resources

U. S. Navy Seaborne Targets											
Operating Activity	Powered						Towed / Static				
	MST	QST-35	FACT	HSMST	SDST	ATLS	HARM Barge	Williams Sled	ISTT	LCTT	Trimaran
NAWCWD, Point Mugu, CA	X	X	X	X	X	X	X	X	X	X	X
NAWCAD, Pax River, MD		X		X	X		X	X	X	X	X
VC-6, Norfolk, VA		X		X	X				X	X	X
CFAO, Okinawa				X	X		X	X	X	X	X
PMRF, Kauai, HI		X		X	X				X	X	X
SCORE, San Diego, CA				X	X					X	
MCAS, Cherry Point, NC				X						X	X
ATGL, Norfolk, VA					X					X	
ATGM, Mayport, FL					X					X	





Questions?

