



# U.S. NAVY MARINE DIESEL ENGINES AND THE ENVIRONMENT

2002 Diesel Engine Emission Reduction Workshop

25-29 August 2002  
San Diego CA

Presented by  
Messrs Michael Osborne  
and  
Jonathan DeHart



AOE 10



CG 49



YTB 791



PBL



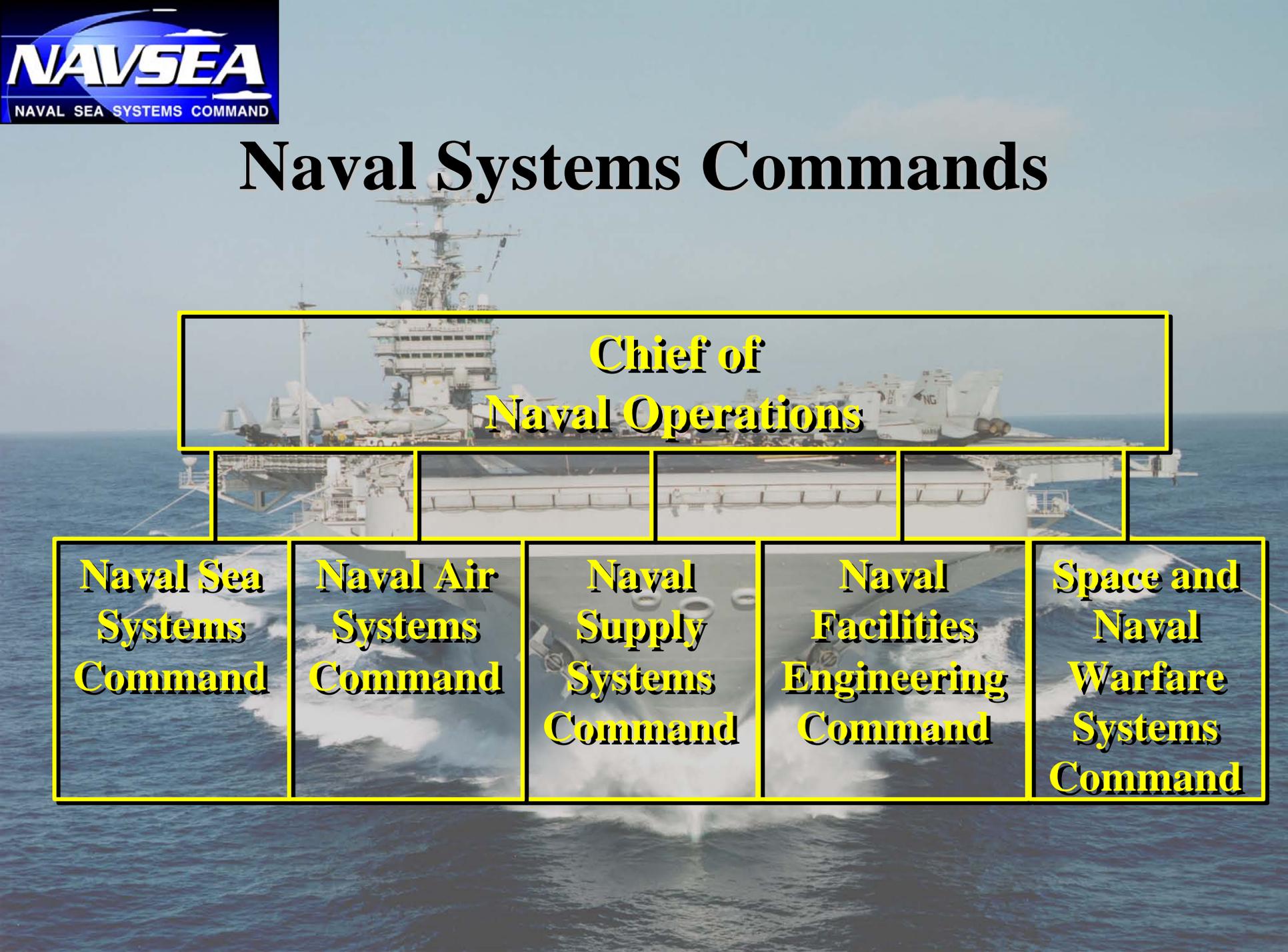
# Agenda

- Who We Are and What We Do
- Unique Navy Needs
- Navy Environmental Technologies
- Emerging Issues
- Future Plans





# Naval Systems Commands



**Chief of  
Naval Operations**

**Naval Sea  
Systems  
Command**

**Naval Air  
Systems  
Command**

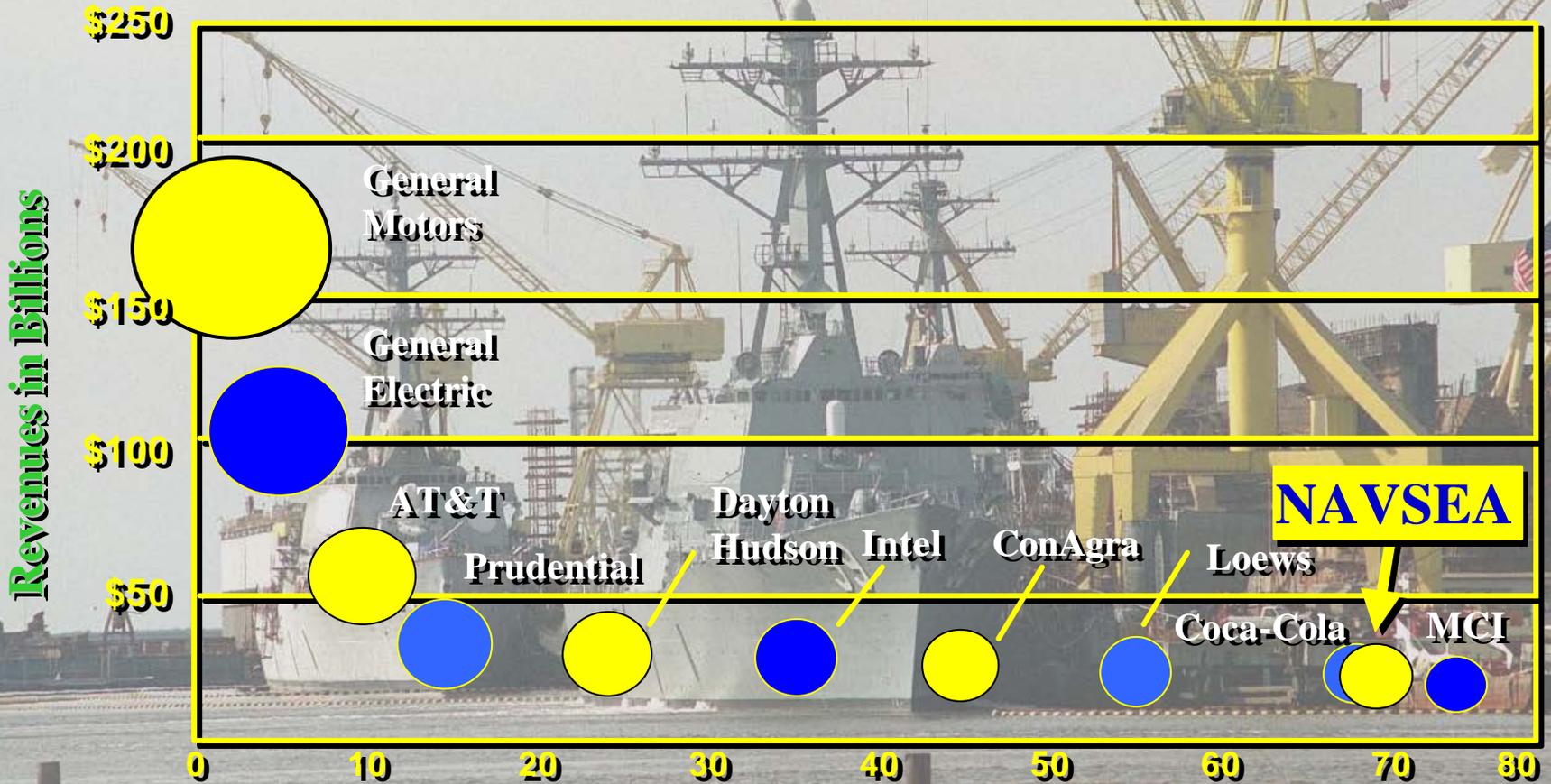
**Naval  
Supply  
Systems  
Command**

**Naval  
Facilities  
Engineering  
Command**

**Space and  
Naval  
Warfare  
Systems  
Command**

# NAVSEA Today

## Business Comparison



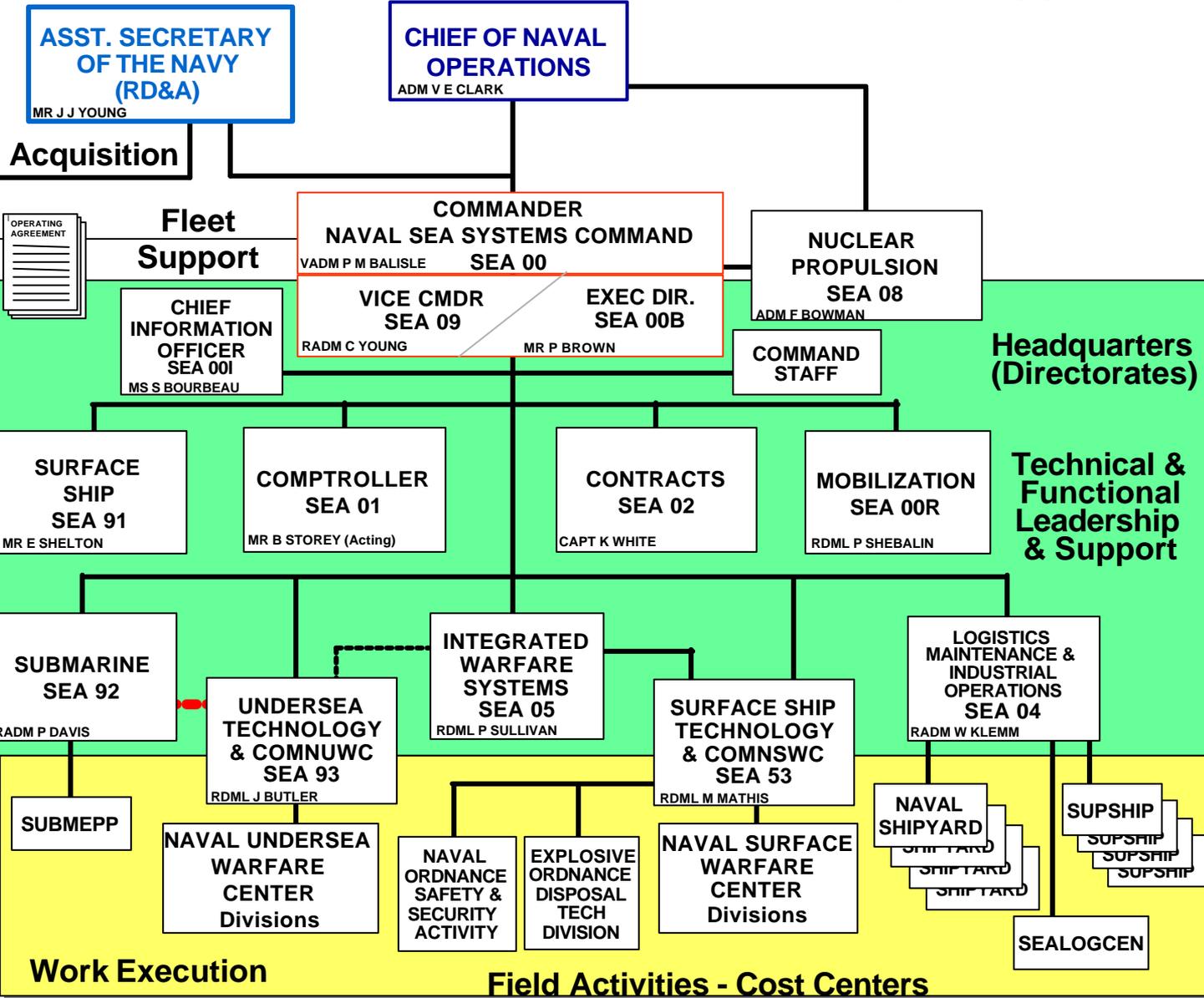
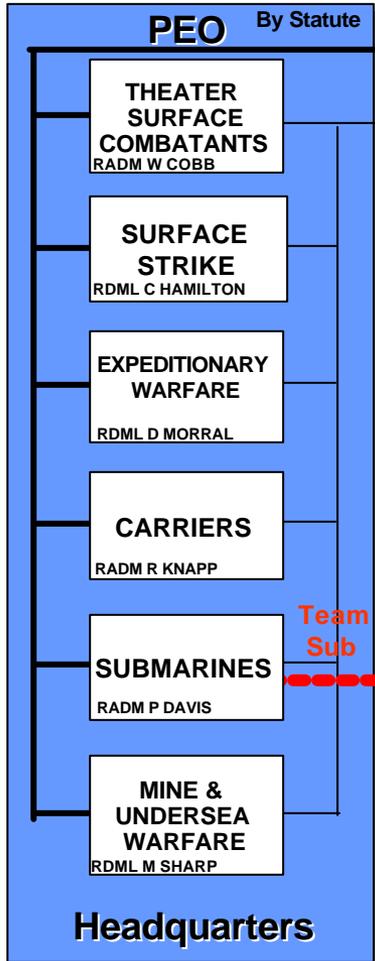
Fortune 500 Rank of Selected Companies



# Naval Sea Systems Command

June 2002

## Major Product Lines





# Naval Shipyards

**Puget Sound  
NSY**



**Portsmouth  
NSY**

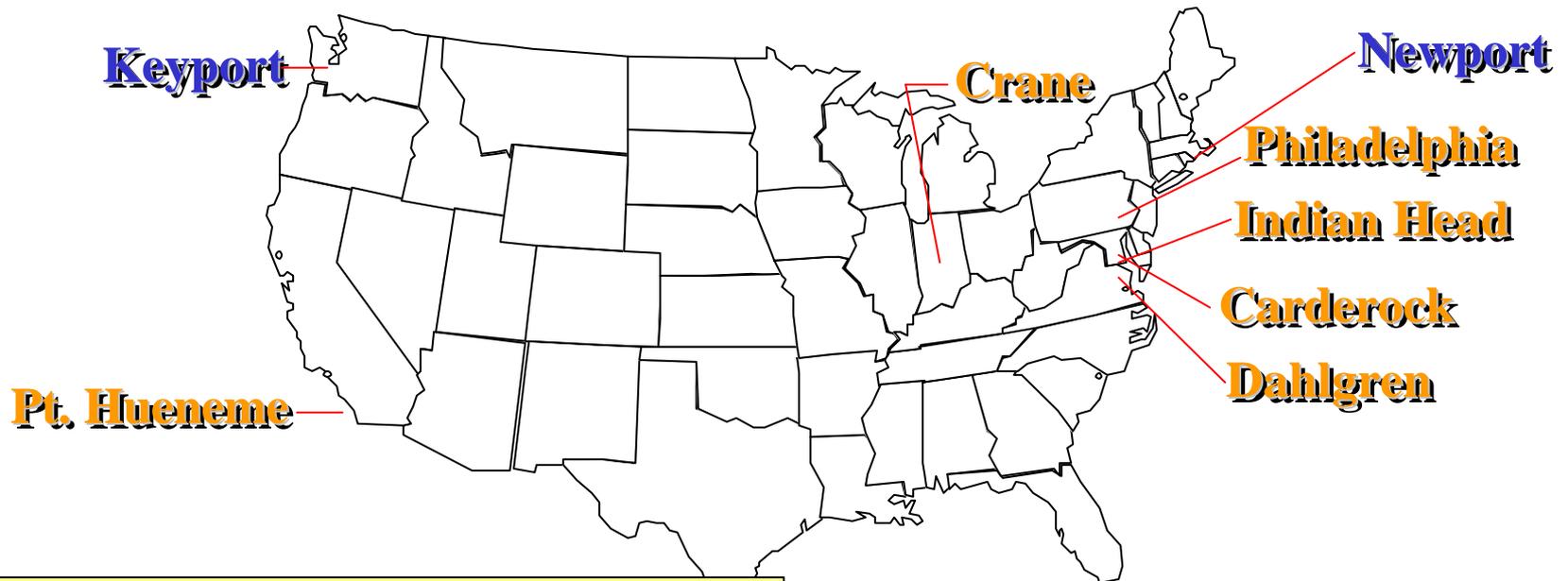
**Norfolk  
NSY**

**Pearl Harbor  
NSY/IMF**

**Naval Shipyards**



# Naval Surface and Undersea Warfare Centers



Surface Warfare Centers operate RDT&E, engineering, and Fleet support centers for

- Ship hull, mechanical and electrical systems
- Surface ship combat systems
- Coastal warfare systems
- Other offensive and defensive systems associated with surface warfare

Undersea Warfare Centers operate RDT&E, engineering, and Fleet support center for

- Submarines
- Autonomous underwater systems
- Offensive and defensive weapons systems associated with undersea warfare







Super Dvora





Russian FAC



XFPB W/ MM 15 Missiles



Halter "Mk V-A"  
Mirage





Halter Mk V-A



France "La Fayette" Class  
Guided Missile Frigate





U.S “Sea Shadow “  
Test Platform