



Code 70 Ship Signatures Department

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Mission and Vision

Mission: *To provide technical solutions to the warfighter that ensure a signatures advantage for Navy submarines, surface ships, and small craft and keep our Fleet at sea, capitalizing on the Navy's prior investments in stealth and attendant reduced susceptibility*

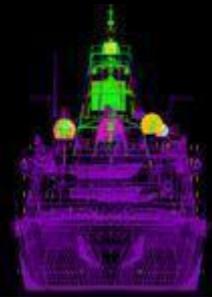
Vision: *To be a high performing technical organization recognized as a world class innovator for the underwater acoustic, underwater electromagnetic and topside signature reduction technologies required for advanced submarines, ships, unmanned vehicles and their respective systems*



Science and
Technology



Design and
Requirements



Acquisition and
Construction



Fleet Training
and Simulation

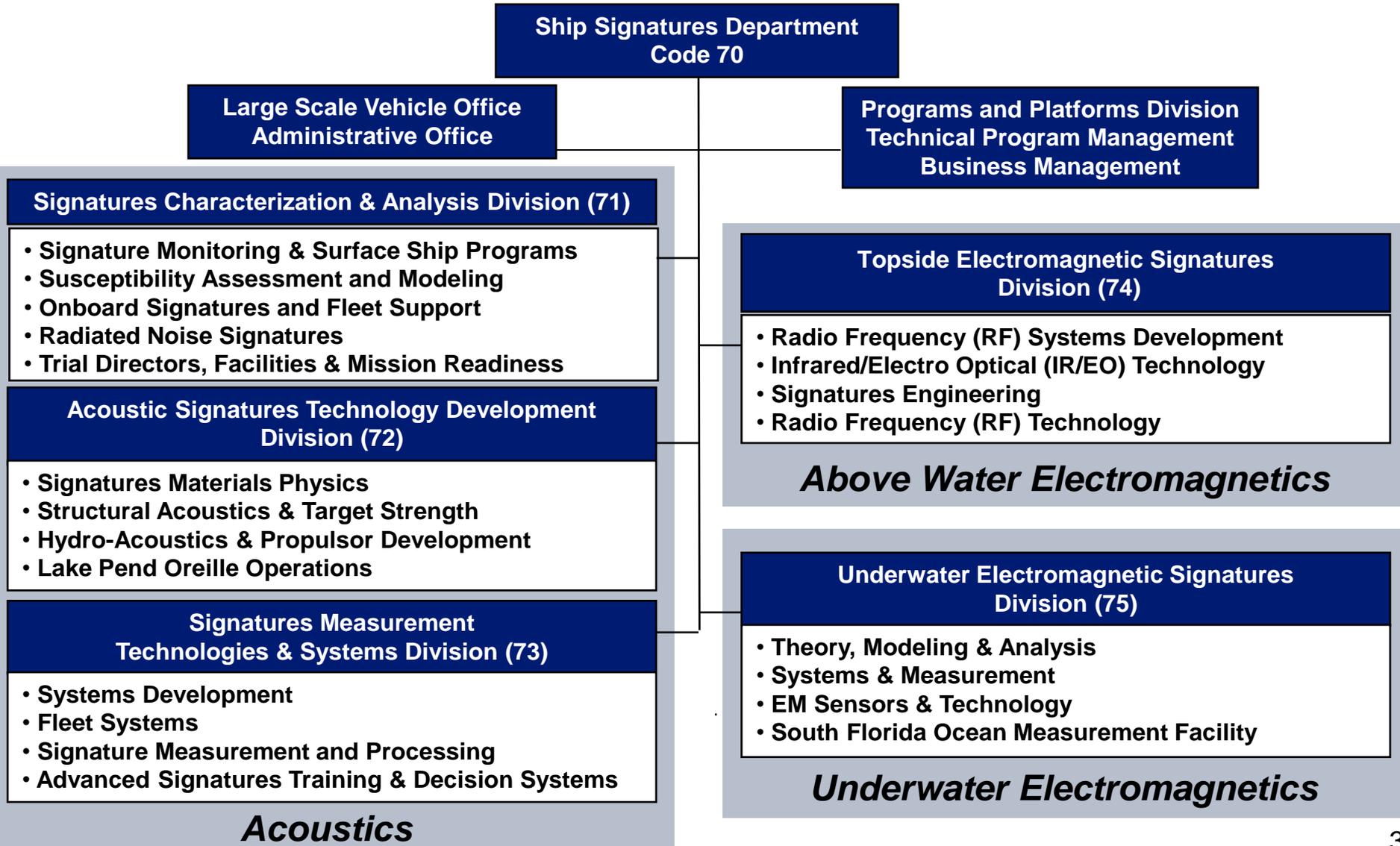


In-Service Testing
and Evaluation





Organizational Overview





Carderock Division

Signatures Department Sites





Signatures Characterization & Analysis Division 71

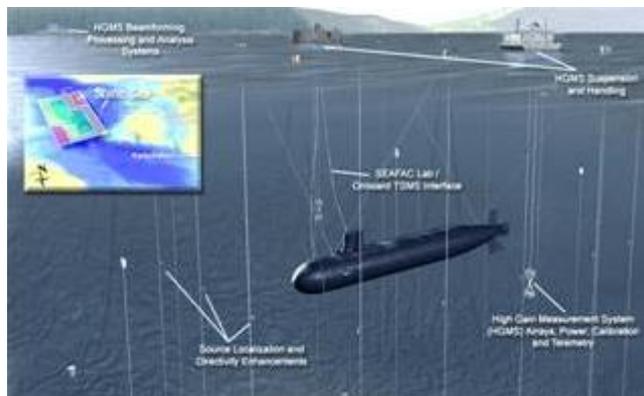
Direct Fleet Interaction ! Help ships stay undetected !

Technical Expertise in:

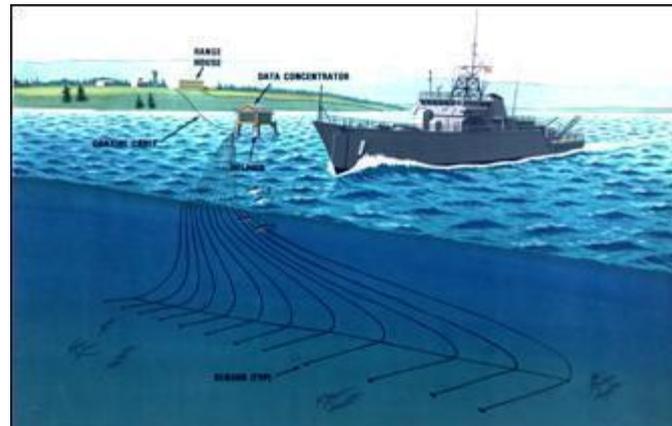
- Underwater Acoustics Measurement & Analysis
- Vibration Transmission Path Analysis
- Machinery Vibration Diagnostics
- Life Cycle Assessment
- Fleet Support



AESD Test Ship at Lake Pend Oreille



Static Ship Acoustic Testing



Mine Warfare Acoustic Ranging



High Resolution Array

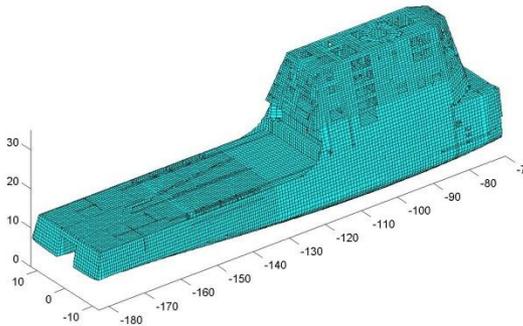


Acoustic Signatures Technology Division 72

Develop and Deliver Advanced Acoustic Silencing Solutions for the Fleet & Acquisition Communities

Technical Expertise In:

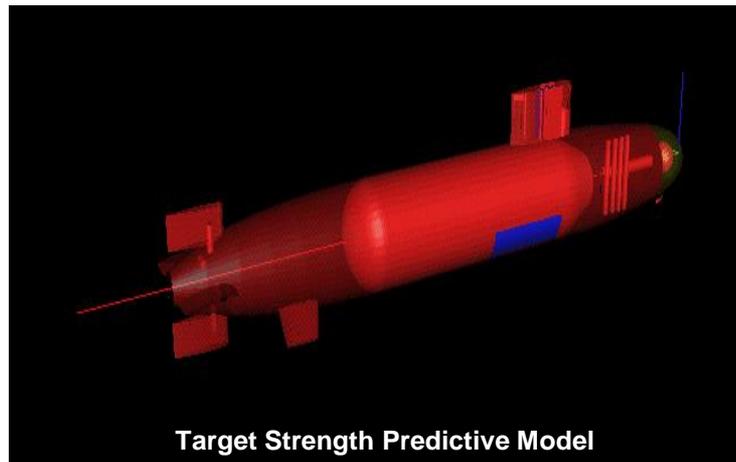
- Hydroacoustics
- Structural Acoustics
- Propulsor Acoustic Design
- Advanced Acoustic Materials
- Acoustic Target Strength
- Shipboard Airborne Noise and Vibration
- Scale Model and Laboratory Acoustic Evaluation



Stern/Propeller Model



Dolly Varden 1:4 Scale Buoyant Vehicle



Target Strength Predictive Model



Flow-Noise Studies



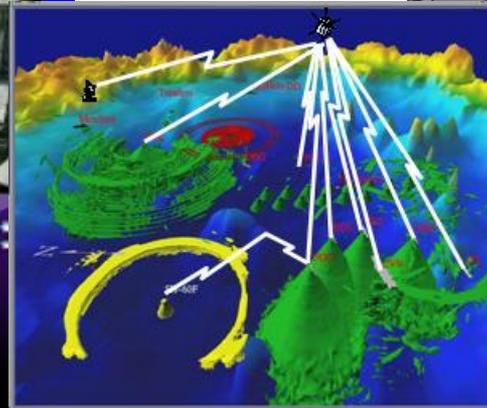
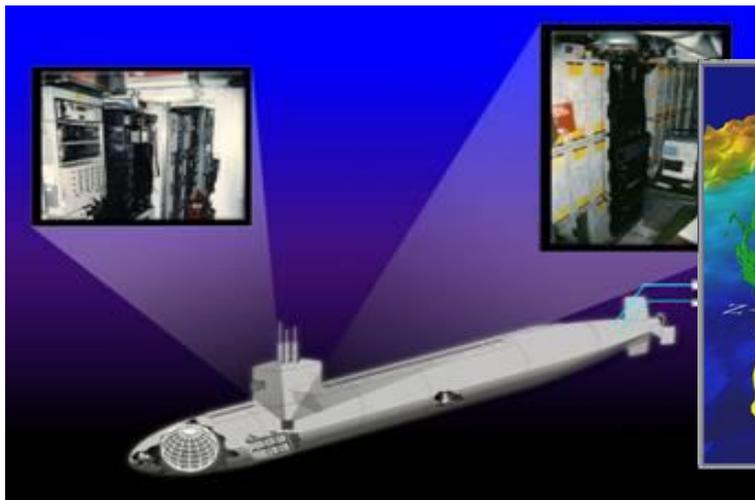
Signatures Measurement Technologies & Systems

Division 73

Develop acoustic measurement systems and more...

Expertise in Acoustic Measurement Technology forms the basis for our systems development capabilities and T&E programs

- Measurement Technology
- Sensor Technology
- Data Acquisition Systems
- Advanced Signal Processing
- Signatures Training and Guidance
- Fleet Support





Topside Electromagnetic Signatures

Division 74

Bring radar and IR stealth technology to the fleet

Technical Expertise In:

- Research and Development (R&D)
- Modeling & Simulation (M&S)
- Test and Evaluation (T&E)
- Measurement system development
- Fleet Support



Full Scale Test Article



Future Designs



IR/EO Measurement System On Navy MH-60S



RCS Measurements

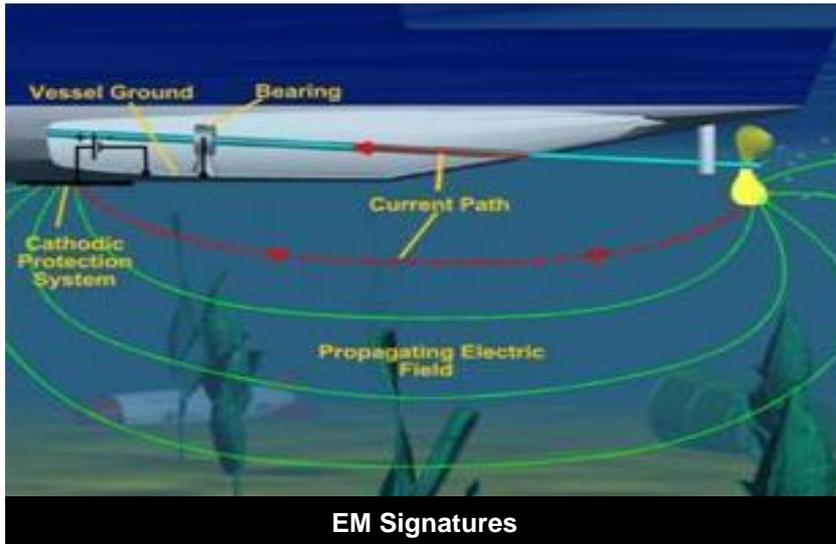


Underwater Electromagnetic Signatures Division 75

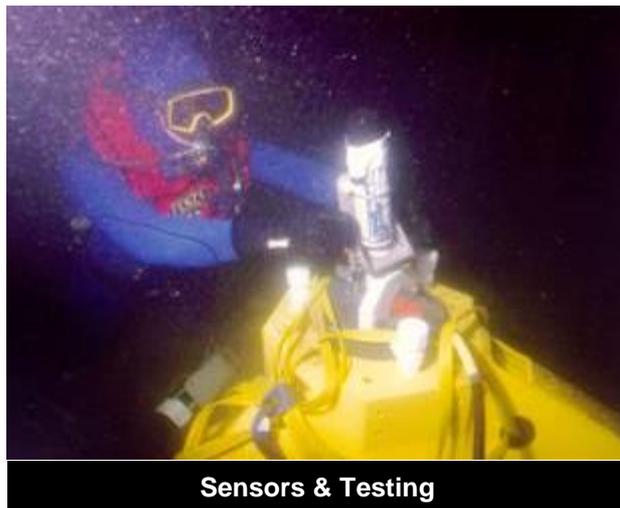
Mines and Ships Don't Mix

Technical Expertise In:

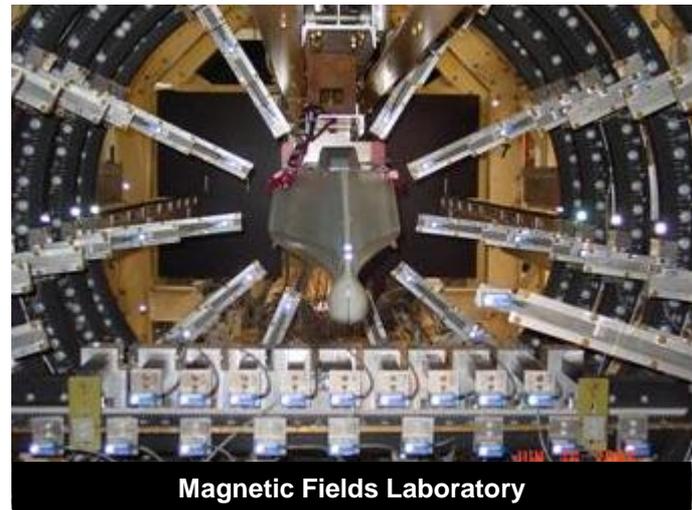
- Fields Modeling/ Measurement
- Silencing systems design
- Advanced modeling & simulation
- Finite element analysis
- Electromagnetic R&D
- Sensor development
- Fleet support



EM Signatures



Sensors & Testing



Magnetic Fields Laboratory



Ship Signatures Competitive Requirements Through 2017

Brief Description	Anticipated Announcement Date (QTR/FY)	Incumbent Contractor
Bangor Waterfront Operations	3rd Qtr. – FY16	ManTech
Measurements Systems, Control Technology, Advanced Signal Processing, & Advanced Technology Programs	3rd Qtr. – FY16	GDIT
SEAFAC & STAFAC System Support	3rd Qtr. – FY16	Leidos
SEAFAC Detachment Operations	3rd Qtr. – FY16	Leidos
Signature Guidance Systems Support	4 th Qtr. – FY16	GDIT
Towed Array Engineering & ACINT Data Acquisition Support	1 st Qtr. – FY17	ManTech
Platform Signature Control, Signature Mitigation and Signature Diagnostics Support	1 st Qtr. – FY17	Applied Physical Sciences
Signal Processing Systems, Acoustic Systems Modeling, & Future Data Acquisitions Systems Design Support	1 st Qtr. – FY17	Vencore
Stealth Technology & Ship Signatures Support	1 st Qtr. – FY17	NTI Corp

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