



# SURFTECH

Prepared for  
ONR Naval-Industry R&D Partnership Conference

July 2004



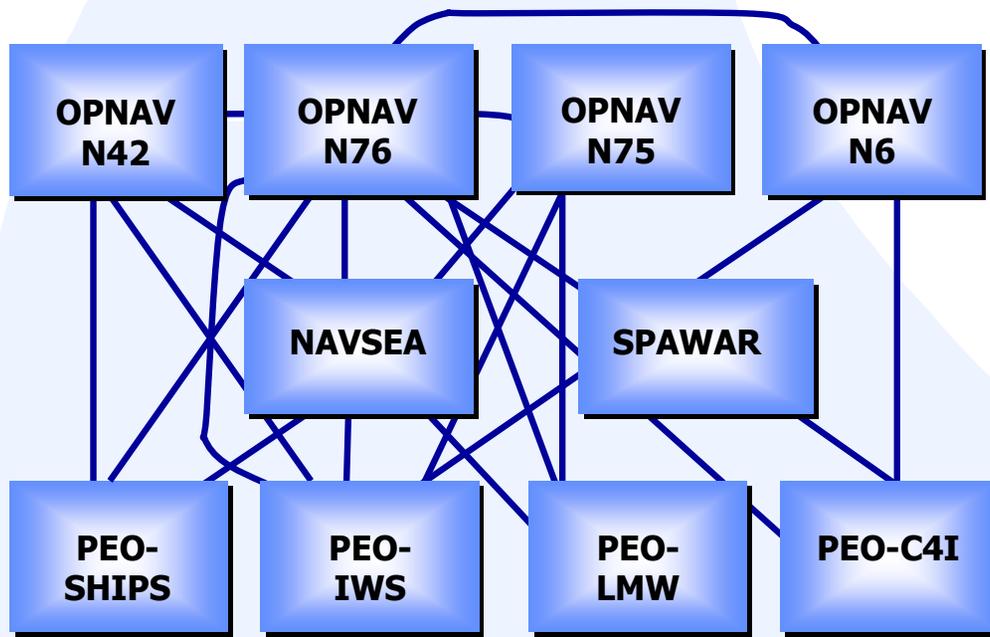
# Presentation Objective

- **Provide Introduction to SURFTECH**
  - Mission
  - Organization
  - Processes
  - Products
  - NAVAL Surface Fleet Technology Needs
  - Points of Contact
  - Summary

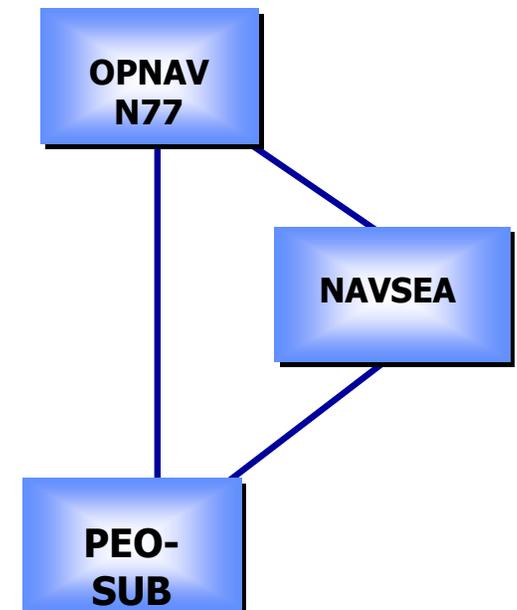


# SURFTECH Background

- Chartered 16 July 2002 by COMNAVSURFOR, COMNAVSEASYS COM and N76
- Based on SUBTECH but.....



**versus**





# SURFTECH

## Goal:

**Process that provides context for R&D Investment**

- **Balance priorities across Surface Community**
- **Promote timely, planned transitions**
- **Improve budget decisions**
- **Effective technology management**

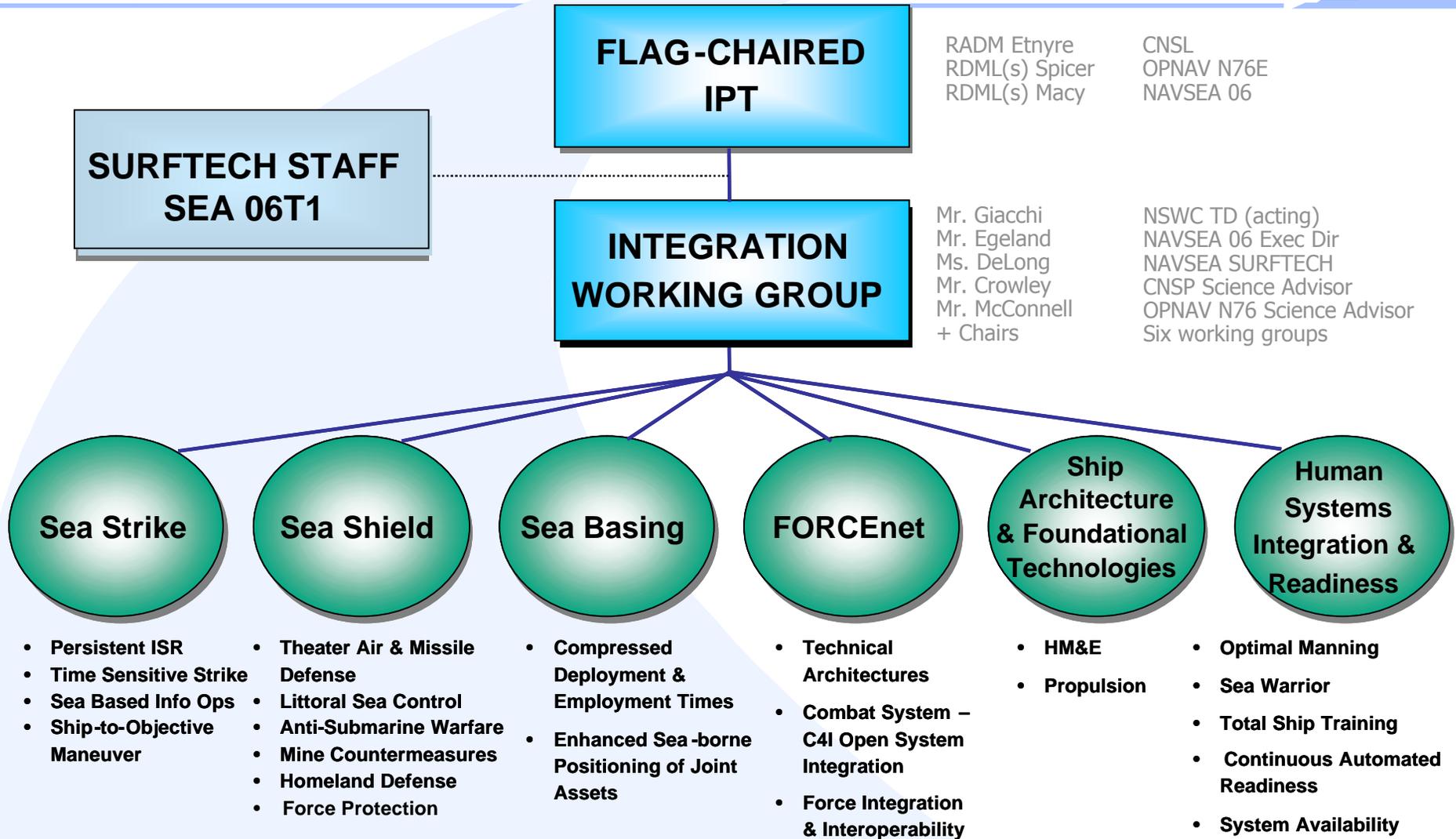
## Mission

**Develop a coordinated, integrated Surface Navy Technology Plan focused on the needs of the Surface Navy**

**Benefits: Strategic Continuity, Shared Vision  
(Warfighter To Engineer)**



# Organization

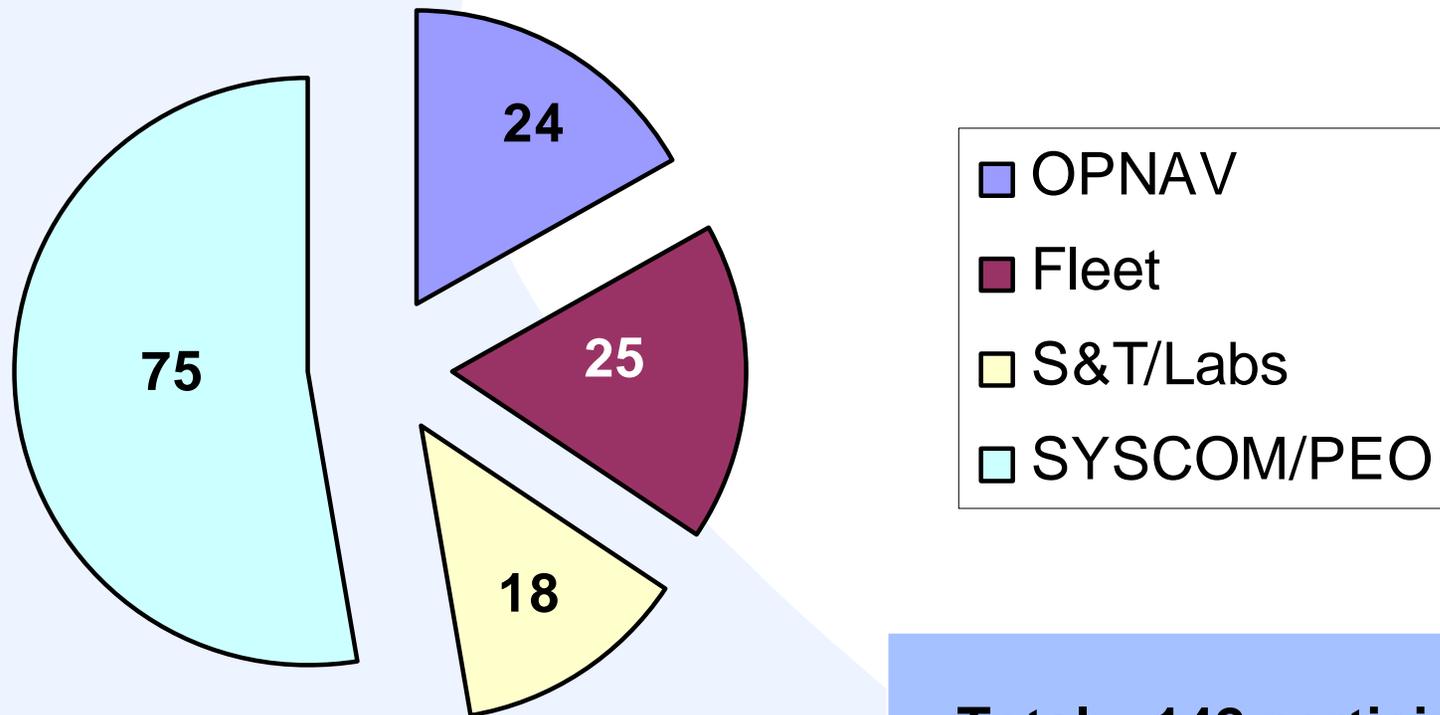


## SUPPORTING WORKING GROUPS



# SURFTECH Accomplishments

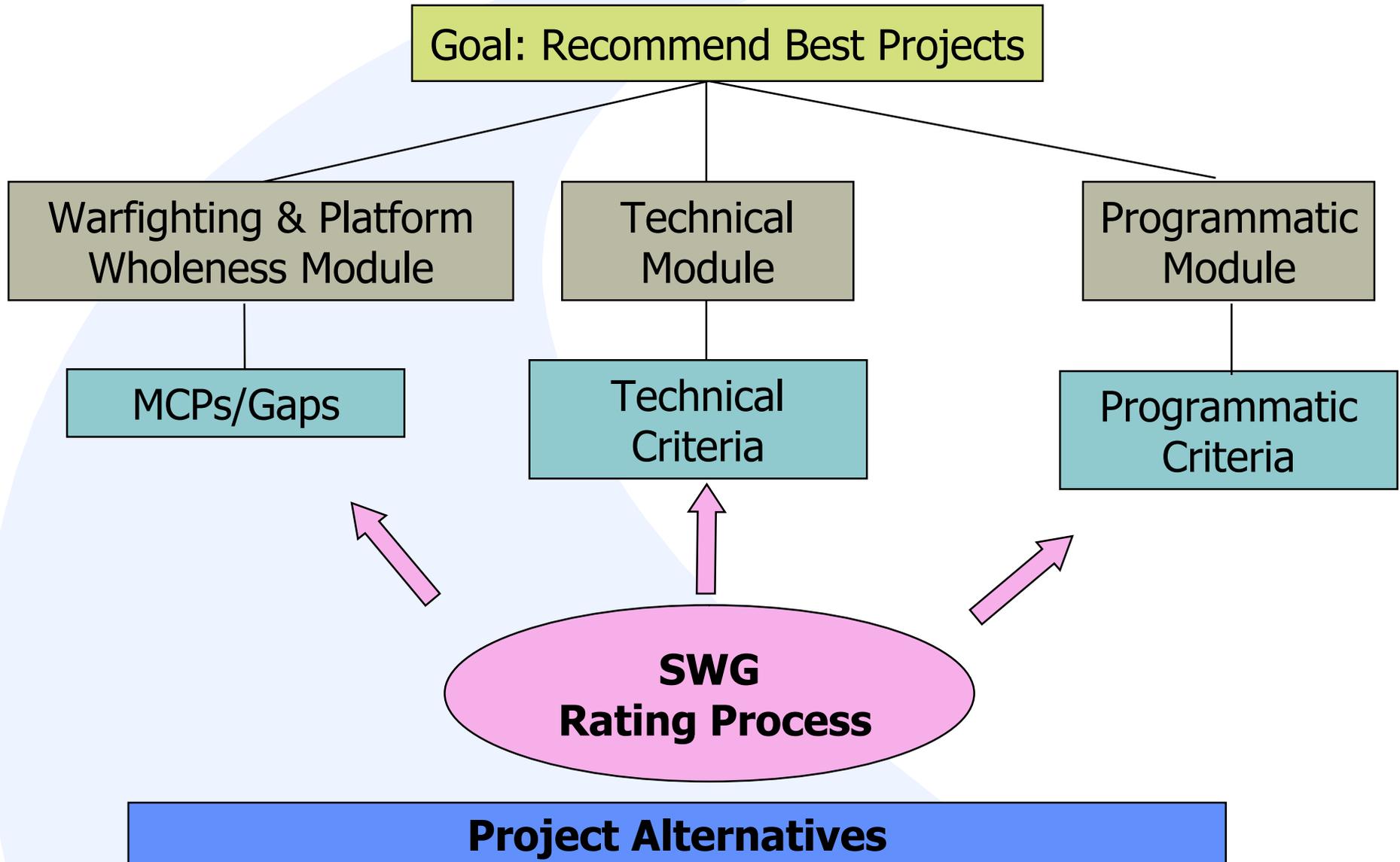
## Participation over last 12 months



**Total – 142 participants**



# Surftech Ranking Process





# SURFTECH Products

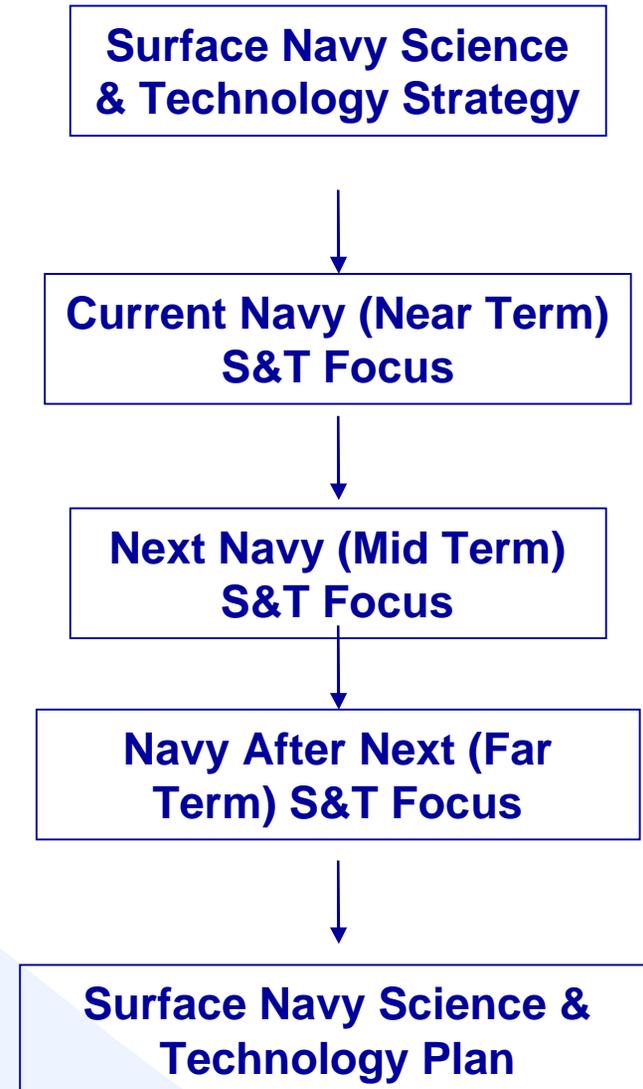
- **Letters to CNR/N70 on Surface Navy Technology Needs**
  - Warfighting assessment and Surface Fleet Gap identification and prioritization
  - Identification of critical Surface Community technologies
  - General S&T guidance and guidance for investment in each pillar
- **Assessments of on-going technology programs/ investment**
- **Prioritization of FY04 and FY05 ACTD candidates for DASN (RD&A)**
- **SURFACE Navy Technology Plan**



# SNTP Overview

## Technology Plan

- Links Strategic Vision of SEAPOWER 21 with an Investment Recommendation
  - Introduction
  - Methodology and Assumptions
  - Current Navy (Near Term) S&T Focus
  - Next Navy (Mid Term) S&T Focus
  - Navy After Next (Far Term) S&T Focus
  - Technology Roadmaps



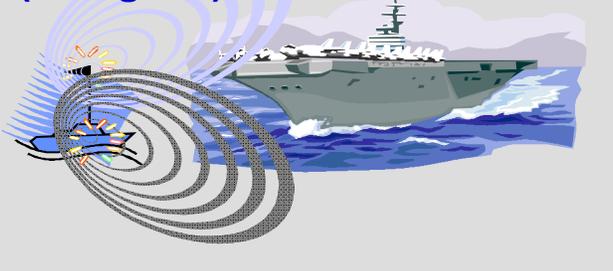


# SURFACE Fleet Technology Needs

## Sea Strike

- Cost efficiencies for sea-based strike wpns
- Extended ISRT asset endurance
- Improved sensing and tools for timely BDA
- Distributed autonomous vehicle infrastructure

Wide-area mine deception  
(Hologram)



## Sea Shield

- Improved Surface Combatant Damage Tolerance and Automate Responses
- Modular Sea Power Systems
- Ship Signatures Management Below and Above Surface
- Subsurface Swimmer Detection and Engagement
- Upgraded CBRN Detection and Decontamination



# SURFACE Fleet Technology Needs

## Sea Basing

- At Sea Transfer
- Heavy Lift Aircraft Shipboard Ops
- Distributed, collaborative operational logistics planning
- Shipboard Robotics

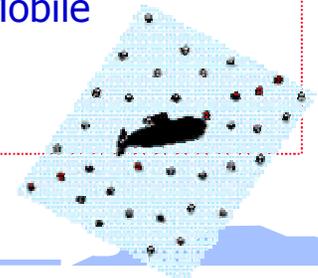
## FORCEnet

- Information Assurance/Fault Tolerant Processing & Networks
- Multi-path beyond line of sight communications
- Common Undersea Picture via collaborative network
- Combat ID
- COTS Open Architecture Computing for track management

Future Technologies needed for tomorrow



- Autonomous, organic, long-dwell sensors
- Knowledge enhancement Systems
- Unmanned combat vehicles
- Advanced hull forms
- Organic mine countermeasures
- Modular power systems (fuel cells, etc.)
- Addressable, Self Forming Networks
- Energy Harvesting
- Precision underwater geo-registration
- Wide Area ASW Sensing – Mobile
- Underway Track/Tag



# SURFTECH Points of Contact

## SURFTECH Management

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Working Group	Example Focus Areas	POC	Email	Phone
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Sea Shield	Mine CNTMSR, Directed Energy, Force Protection, TMD, Signatures ....	D. Marker CDR D. Footman	<a href="mailto:Markerdl@navsea.navy.mil">Markerdl@navsea.navy.mil</a> <a href="mailto:Durante.footman@navy.mil">Durante.footman@navy.mil</a>	202.781.2137 757.836.3294
Sea Basing	Heavy Equip Transfer, Vertical Delivery, Data sharing...	M. Fink	<a href="mailto:Finkmd@navsea.navy.mil">Finkmd@navsea.navy.mil</a>	202.781.0574
FORCEnet	Force Integration, Off Board Sensors, Tactical LOS & BLOS, ....	M. Rice M. Crowley	<a href="mailto:Riceml@navsea.navy.mil">Riceml@navsea.navy.mil</a> <a href="mailto:Michael.I.crowley@navy.mil">Michael.I.crowley@navy.mil</a>	202.781.3556 619.437.9670
Ship Architecture & Foundational Technologies	Power Sources, Automated Damage Control, Platform Survivability, ....	M. Bosworth J. King CDR. T. Heatter	<a href="mailto:Bosworthmr@navsea.navy.mil">Bosworthmr@navsea.navy.mil</a> <a href="mailto:Kingjr@onr.navy.mil">Kingjr@onr.navy.mil</a> <a href="mailto:Thomas.heatter@navsea.mil">Thomas.heatter@navsea.mil</a>	202.781.3072 703.696.4714 703.604.7641
HSI and Readiness	Habitability, Manpower, Training, ...	R. Bost M. McCullough	<a href="mailto:Bostjr@navsea.navy.mil">Bostjr@navsea.navy.mil</a> <a href="mailto:Mcculloughmd@navsea.navy.mil">Mcculloughmd@navsea.navy.mil</a>	202.781.2653 202.781.0835



# **SURFTECH Summary**

- **SURFTECH benefits the Surface Warfare community by providing an effective means to capture Fleet S&T needs**
- **SURFTECH benefits OPNAV by providing expertise to assess and prioritize investments**
- **SURFTECH benefits the PEOs/SYSCOMs by linking technology to transition windows**

**Providing a better ROI on S&T Investment**



**BACK UP**



# Unfolding SURFTECH Process

