Steve Kundrat

PEO-Maritime Chief Engineer

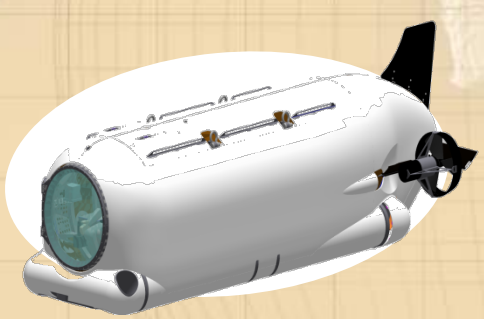
CHENG & Systems Engineering

Overview

- PEO-M Principle For Safety (PFS)
- Test And Evaluation
- Program Management Support
- Advanced Technology

PEO-M Principal For Safety (PFS)

- Lead PEO-M System Safety Certification
  - (Dry Submersibles And SOF Surface Craft)
- Perform Engineering And Risk Assessments During Design And Build
- Perform Hazard Risk Analyses During Testing
- Manage Hazard Reports And Hazard Mitigation During Testing
- PEO-M System Safety Working Group
- Coordinate System Safety With NAVSEA SOF Maritime PMs
  - (Wet Submersibles, Diving, DDS)



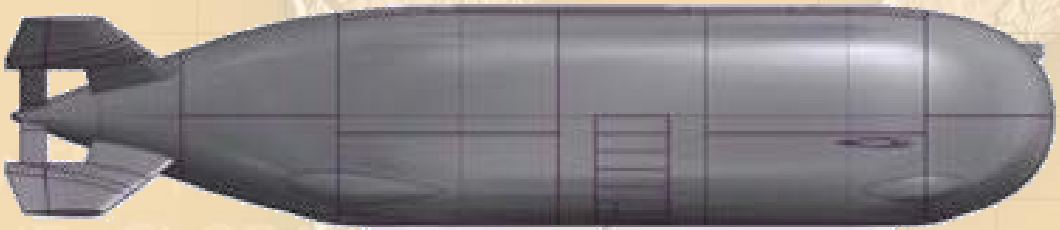
Test and Evaluation

- Synchronize T&E Efforts Across The PEO-M Platform Portfolio And Technology Insertions
- Leverage Testing For Cross-platform Systems

- T&E IPT
  - PEO-M CHENG
  - PM Undersea
  - PM Surface
  - PEO-M Test

Program Management Support

- Support Program Management With SORDAC Portal
- Imagery Rich, Structured, Web-based Alternatives To Documentation As-usual
- Leverage Similar Program Docs And Sops
- Menu-driven Programmatic Docs
- More Point-click, Less Cut-paste



Advanced Technology

- Management
  - Scheduling
  - Requirements Tracking
  - RFP Preparation
- S&T / R&D Initiatives
  - FCT
  - JCTD
  - CWP
- Partner With Multiple Agencies And Coalition

POINTS OF CONTACT

- Steven.Kundrat@socom.mil
- Mackenzie.Clark@socom.mil
- Garrett.Leavitt@socom.mil
- Gary.Formet.ctr@socom.mil
- Scott.Unites@socom.mil
- David.Vann@socom.mil
- Christopher.Abdnour@socom.mil

Advanced Technologies Topics

- PEO-M Goals Addressing Technologies
- Desired Technologies For SOF Maritime Mobility Beyond The FYDP (Navy After Next)
- How To Get Your Technology Or Capability Noticed By PEO-M

PEO-Maritime Goals

- Essential (E)
  - Identify Cross Cutting Equipment And Assign Lead Integrator For Undersea And Surface Programs By 2015.
  - Identify And Communicate Maritime Mobility Common Requirements To The S&T Community (SOF/Service/National) On A Yearly Basis.
- Enhancing (H)
  - Build Strong Working Relationships With External Resource Providers For Technical Advice And Program Support.
  - Increase Participation In Requirements Generation Process.
  - Develop S&T Transition Agreements And Link Them To Program POM Cycles.

SOF Maritime Mobility Perspective

- Current Inventory
  - Surface: NSWRIB, SOCR, CRRC
  - Undersea: SDV, DDS
- POM Inventory
  - Surface: CCA, CCM, CCH
  - Undersea: SWCS, DDS, DCS
- Beyond-POM Enabling Technologies
  - Surface: Low Signature, Shock Redux, Wireless Secure Crew Comms
  - Undersea: Energy Storage, Submarine Transport Capability

SOF Maritime Mobility Perspective

- Current Enabling Technologies
  - Surface: GPS, SATCOM, Reliable Diesels, Waterjets, Stabilized FLIR
  - Undersea: Silver-Zinc Batteries
- POM Technology Advances
  - Surface: Light Weight Diesels, Surface Drives, Low Signature, Stabilized Weapons
  - Undersea: Silver-Zinc Batteries, DDS, Imaging Sonar
- Beyond-POM Enabling Technologies
  - Surface: Signature Redux, Shock Redux, Wireless Secure Crew Comms
  - Undersea: Safe High-capacity Energy Storage, New Submarine Transport Capability

SOF Maritime Priority RDT&E

- Power and Energy (P&E)
- Underwater Communications and Situational Awareness
- Underwater Sensing
- Common Integrated C4ISR

P&E Batteries

- Development Of A Safe, High Energy Battery For A Manned Submersible Application
  - Operation Of Lithium-ion Batteries Housed Such That Hazardous Events Are Prevented, Or If They Occur The Consequences Are Mitigated

- Safe Chemistry Li-ion Battery
  - Develop A Safe/ Non Flammable Chemistry With An Energy Density That Still Meets Operational Needs.

P&E Fuel Cells

- Development Of A Fuel Cell Technology Which Will Meet Undersea Power Requirements
- Internal Or External To Vessel
- Safety
- Logistics Infrastructure

Communications And Situational Awareness

- Wired Intercom Weaknesses
  - Trip Hazards
  - Cable Damage Susceptibility
  - Temporary Communications Loss With Special Warfare Combatant Crewmen (SWCC) Station Changes
- The SWCC Requires Wireless Intercom
  - NSA Approved Type-1 Encrypted Full Duplex
  - Provides SWCC Access To Existing Boat Radios
  - No EMI/EMC Issues

EO/IR Sensor

- Develop And Demonstrate A Sensor System (And Associated Electronics) For A Periscope That Will Meet Prescribed Requirements And Enable 360 Degree Coverage

- Design, Develop, Manufacture, Install, Test, Demonstrate And Deliver A 360 Degree Sensor System Engineering Development Model (EDM) Periscope

- EDM Delivery Sep 2013

- TRL 4 - Component And/Or Breadboard Validation In Laboratory Environment

C4ISR

A Common, Integrated C4ISR Solution For Maritime Surface Systems

Strategic Effort To Move From Multiple, Independent, And Platform-Specific C4ISR Projects Into A Common, Extensible, Integrated Solution For Application Across All Platforms.

Reaching PEO-M with Technology

- SORDAC Online
  - Http://www.socom.mil/sordac/pages/default.Aspx
- Primary: SORDAC Technology And Industry Liaison Office (TILO)
  - "Doing Business" Tab
- Maritime Centered TNT In Work For Feb 2014 Timeframe
  - http://www.socom.mil/sordac/pages/expwithus.aspx

- Cooperative Research And Development Agreement (CRADA)
- Small Business Innovation Research (SBIR) Program
- Broad Agency Announcement (BAA)
- Foreign Comparative Testing (FCT)
- Joint Concept Technology Demonstrations

Never Say “Never.”