Special Operations Forces
Industry Conference
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Undersea Systems
Dry Combat Submersible

MARITIME SYSTEMS
Dry Combat Submersible
Objective & Approach

• Objective: To Develop Affordable Dry Combat Submersibles (DCS) to Satisfy Maritime Mobility Requirements

• Approach: Leverage Existing Technology, Practices and Standards Used by the International Commercial/Research Submersible Industry
  – In order to reduce Dry Combat Submersible Technical and Cost Risks by Prototyping and Integrated Testing
Technical Challenges

• Design Submersibles That are Small Enough to be Strategically Transportable, Yet Large Enough to Meet Minimum Requirements for Cargo, Range, Speed and Endurance

• Develop and Implement High Quality Processes, Procedures, Safe Equipment and Material to Ensure USSOCOM Safety Certification of Submersibles

• Reduce and Control Design, Manufacturing, and Certification Costs to Enable the Construction of Affordable SOF Submersibles

• Reduce and Control Prototype Design and Manufacturing Time to Enable the Rapid Completion of Prototypes and Their Testing
DCS Attributes

- Transportable by C-17 & C-5 Aircraft, Cargo/Host Ships
- Sustained Speeds to \( \geq 5 \text{ kts} \)
- Shallow Operating Depth
- Shallow Lock-In/Lock-Out of Combat Swimmers
- Two pilots (Pilot/Co-Pilot or Pilot/Relief Pilot)
- Pilots/Combat Swimmers Maintained in Dry, 1 Atm Environment
- Much Greater Endurance Than Wet Submersibles
  - \( \geq 24 \text{ Hrs Normal Life Spt, } \geq 72 \text{ Hrs Reserve Life Spt} \)
- Common Sonars, Radios, Electronics w/Wet Submersibles
- Design to Cost Goal
What’s Changed Since SOFIC 2011

• FY13 PB unfunded DDS-X
• FY13 PB unfunded DCSL
• Conduct an Analysis of Alternatives for Next Generation Submersible Shelter to Accommodate a Family of Combat Submersibles
• DCSL BAA
  – Awarded Phase I - Concept Design: GDEB, LM, OII, L3
• SORDAC -T BAA
  – Negotiating contract modification for detailed design and construction with Submergence Group
  – Continued Contract with Submergence Group to Develop Technology Demonstrator Prototype (UOES 2)
What Hasn’t Changed Since SOFIC 2011

• Requirement is still valid
• Technology Development Phase Funding in Place
• DCS M Acquisition Program MS B (~FY15/16)
  – KPPs, KSAs TBD
DCS Technology Development

**DCS UOES 1**
- Demonstrate Attainment of KPPs and KSAs
- Prove the Possible

**UOES 2 & 3**
- Define KPPs & KSAs
- Reduce Risk
- Commercial Design & Construction
- Commercial Classing Processes

**DCS**
- Acquisition Program

2009-2011

2012-2016

2016
DCS Acquisition Strategy

- FY 15/16 What Happens
  - Prototype Testing Complete ~FY15
  - Market Survey
  - Draft RFP DCS Lead Ship
    - Releasing Prototype Design, Technical, Performance Data (Government Rights)
Safety Certification

• USSOCOM Safety Certification Authority Inherent in Acquisition Authority
  Confirmed by USSOCOM-NAVSEA MOA (March 2011)
  – Submersibles Operating With Submarines
    ▪ NAVSEA 05 is Technical Authority
    ▪ NAVSEA 07 is Certification Authority

• Submersibles Not Operating With Submarines
  – USSOCOM is Technical & Certification Authority
  – Certification Processes Under Development
    ▪ IACS Class Minimum Baseline
  – UOES Projects are Pathfinders for Certification Processes
  – Preliminary Draft Directive
  – Policy Memorandum: SOF Embarkation on IACS Classed Submersibles for Assessment