



Calhoun: The NPS Institutional Archive
DSpace Repository

CRUSER (Consortium for Robotics and Unmanned Systems Education and Research)

2017-04-11

Developing a Training System for Web Fires [video]

DeCicco, Dan; SEA 25; TDSI Cohort; Beall, Ryan; Tilus, Preston; Petty, Clayton; Kronzilber, Dor; Beng, Ang Chin; Siang, Ang Pak; Sheng, Kan Wei...

Naval Postgraduate School, Monterey, California

<http://hdl.handle.net/10945/53357>

This publication is a work of the U.S. Government as defined in Title 17, United States Code, Section 101. Copyright protection is not available for this work in the United States.

Downloaded from NPS Archive: Calhoun



Calhoun is the Naval Postgraduate School's public access digital repository for research materials and institutional publications created by the NPS community. Calhoun is named for Professor of Mathematics Guy K. Calhoun, NPS's first appointed -- and published -- scholarly author.

Dudley Knox Library / Naval Postgraduate School
411 Dyer Road / 1 University Circle
Monterey, California USA 93943

<http://www.nps.edu/library>



SEA-25 CAPSTONE Project

Develop Warfighter Training for Webfires





SEA25 Cohort

LCDR Daniel DeCicco, USN (Naval Aviator)
djdecicc@nps.edu

LT Matthew Alvarez, USN
(Naval Aviator)
mtalvare@nps.edu

LT Benjamin Arnett, USN
(Naval Aviator)
bjarnett@nps.edu

LT Michael Hook, USN
(Surface Warfare Officer)
mjhook@nps.edu

LT Austin Thompson, USN
(Submarine Warfare Officer)
anthomps@nps.edu

LT Kevin Weeks, USN
(Surface Warfare Officer)
weeksk@nps.edu

LT Seng Yee, USN
(Information Professional Officer)
sfyee@nps.edu

SEA Chair:

CAPT Jeff Kline, USN(Ret)

Faculty Advisors:

Dr. Fotis Papoulias, Systems Engineering

Dr. Michael Atkinson, Operational Research

Mr. Bill Hatch, Business/Public Policy



SEA25 Tasking Statement

- Design a fleet system of systems and concept of operations for employment of a cost effective training system capable of preparing naval warfighters to employ and leverage the web fires concepts and technologies in the 2025-2030 timeframe.
 - Consider training across warfare specialties and missions.
 - Conduct research to provide a solid foundation of knowledge requirements for a web fires fleet concept.
 - Complete a gap analysis by comparing current fleet training with the required training to leverage cross domain and cross-platform capabilities in a warfighting environment.
 - Scan for current examples of cross-domain training and current training simulation from DoD and industry.
 - Develop a system architecture addressing responsible command, training requirements, training and exercise venues, and training participants to fill discovered gaps in meeting the knowledge requirements.
 - Assess the proposed system against the principles of high velocity learning found in the CNO's "A Design for Maintaining Maritime Superiority"



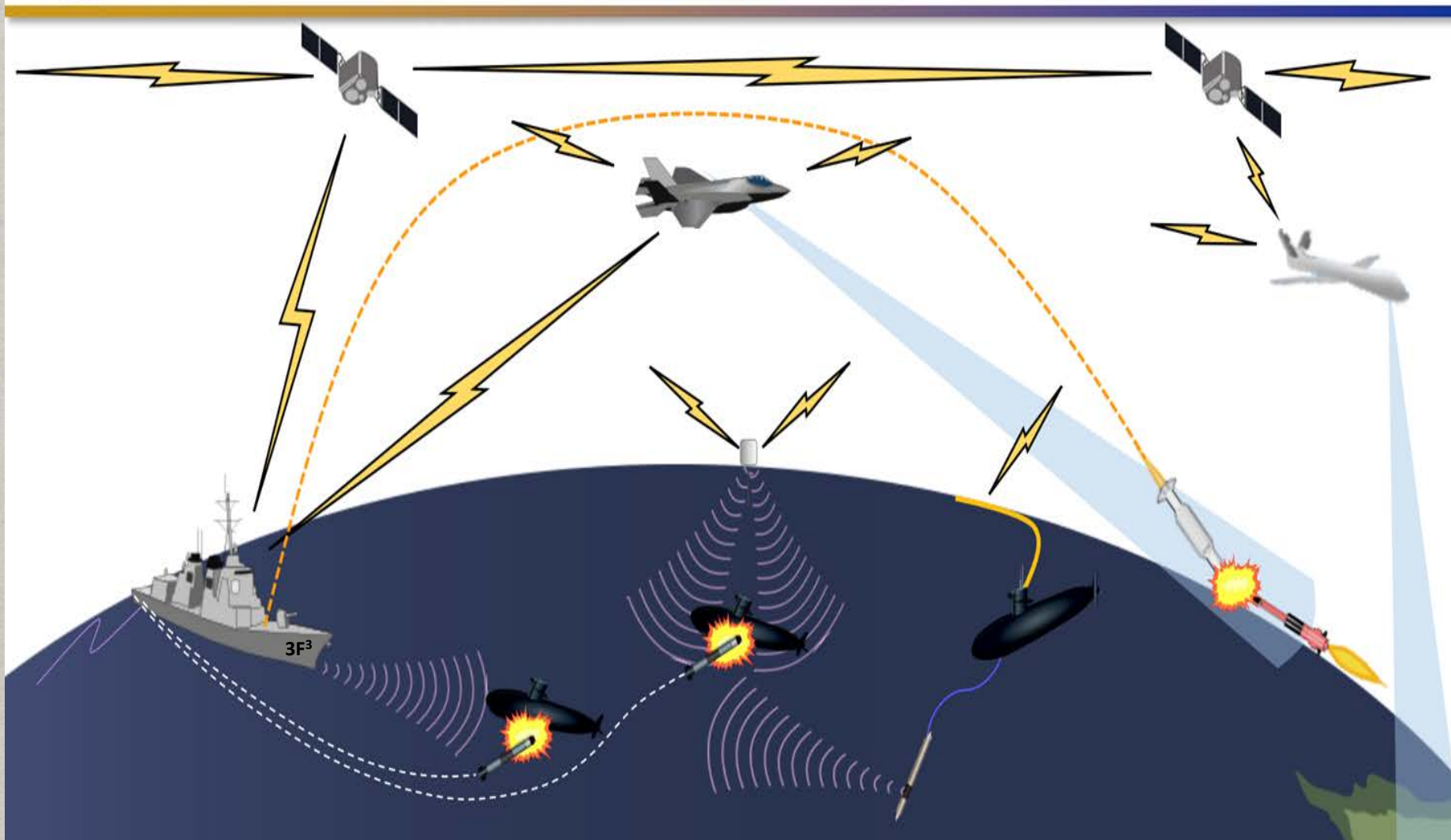
SEA25 Defined Problem

Develop a cost effective operational training system architecture for webfires.

- The system will support initial and sustainment training on concepts and operations to a carrier strike group (CSG) or Expeditionary Strike Group (ESG)
- Leverage technology and high velocity learning in the 2025-2030 time frame



Webfires Concept of Operation (OV-1)





Webfires Training Architecture (OV-1)

Webfires Training

Update Training

Train

Evaluate



Artificial Intelligence
Live Virtual Constructive Training
Simulation



High Velocity Learning



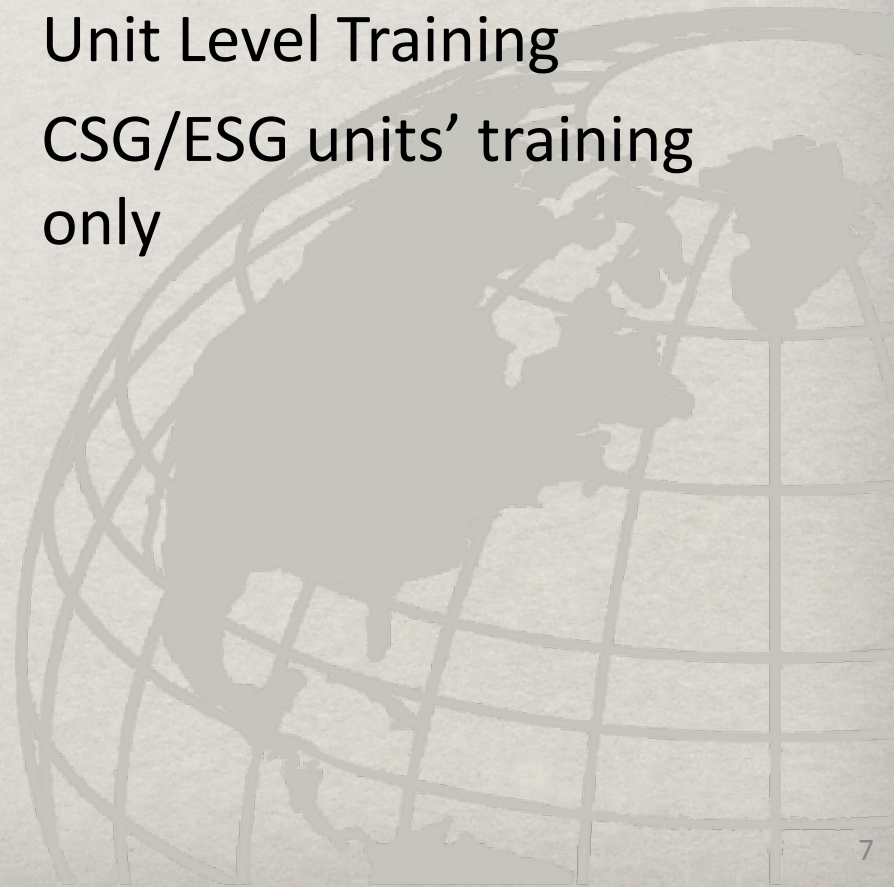
Critical Assumptions and Boundaries

Assumptions

- Funding will be available
- Fully developed tactics for Webfires
- Current training infrastructure will support
- Personnel requirements similar to current levels
- 2025-2030 technological levels will support Webfires

Areas of Focus

- Sustainment Training
- Integrated Training
- Unit Level Training
- CSG/ESG units' training only





Stakeholder Engagement

Stakeholders Visited

- Naval Air Warfare Development Center
- Tactical Training Group Pacific
- Expeditionary Warfare Training Group Pacific
- Surface Mine Warfare Development Center
- 3rd Fleet
- COMNAVSURFOR (Surface TYCOM)

Research Topics Discovered

- Stove piping by community
- Acquisition Problem (integration issue)
- Resource Problem (simulation management)
- IA issue/requirements
- Value of face-to-face briefing
- Value of SMEs/WTIs
- Qualification/Proficiency/Currency Tracking Problems
- Integrated Training Timeline problems
- Data management problems



SEA25 Capstone Focus

- Stove piping by community
 - Traditional training, acquisition, and resource methods isolate communities
- Training Infrastructure Issues
 - Limited Cross Domain Simulator Integration
 - Limited Operational Equipment Integration
 - Limited Focus on Integrated Tactical Training
- Resource Problem
 - Equipment
 - People
 - Time





Questions?

