The Sea Land Air Military Research Initiative (SLAMR)

Thrive at the intersection of military, commercial, and academic research and development.

15 August 2021
Field Experimentation Program

• Participant benefits
  • Autonomous systems waivers
  • Cybersecurity Vulnerability Assessments
• Taking experimentation to the .mil
  • Collaboration space
  • Pre-event information on technologies and experiments
  • Access to CVAs
• Venues
  • Camp Roberts, CA
  • San Clemente Island, CA
  • Alameda, CA
  • Beach Laboratory, Monterey, CA (new)
  • Command Centers (new)

Joint Interagency Field Experimentation (JIFX)

• Focus areas
  • Autonomy
  • All domain UxS
  • AI and Machine Learning
  • Fully Networked C3
• Sponsors
  • OUSD(R&E) RRTO
  • CRUSER
  • Events/year: 4

Expeditionary Organic Tactical ISR Capability Set (EOTACS)

• Focus area: Small UAS
• Sponsor: USSOCOM
• Events/year: 2

Multi-Thread Experimentation (MTX)

• Focus area:
• Sponsors
  • OUSD(R&E) RRTO
  • CRUSER
• Events/year: As needed
Discussion Path

An Overview

Thrive at the Intersections

All Domain R&D Environments

Impacts

Evolving the Digital Enterprise Nationally

Business Relationship Innovation

Approved for public release: distribution unlimited.
Thrive at the Intersections

- A *Sputnik*-moment
- Tenets
  - “Whole of country” approach
  - One-stop for enabling adoption/adaption of technologies, processes, and people
  - Intellectual foundation for the Nation’s autonomous warfare team
- Three focus areas
- Active projects
  - Expeditionary Artificial Intelligence
  - Secure Maritime 5G
  - Rebalancing Cognitive Workloads to Improve Decision-Making
  - Aquatic and Air Environments
  - Sustainable Power Autonomous systems Research (SPAR) station
All Domain R&D Environments

- Modernizing NPS’ Beach Laboratory facilities
  - Three aquatic environments
  - Two aquatic-air environments
  - One reconfigurable subterranean environment
- Distributed capabilities
  - DREN expansion
  - SDREN deployment
- Distributed research and operations development
  - Warfare Centers and Divisions
  - Naval Research Laboratory
  - University Affiliated Research Centers
  - National Research Laboratories
Business Relationship Innovation

- Value proposition-centric
- Academic environment
- Accessible by business sectors and allies
- Leverage Navy-accredited and accessible IT networks
- Expand Public Private Partnerships
- Government partners
  - OUSD(R&E) Rapid Reaction Technology Office
  - U.S. SOCOM
  - NUWC Division, Keyport
  - Naval R&D Establishment Unmanned Vehicles and Autonomous Systems Working Group
- DREN expansion and SDREN deployment

- Secure Maritime 5G
- Autonomous VTOL logistics delivery system
- Renewable energy sources and deployable sensor platform
- Multi-system telemetry network
Engage Across Horizons

- Accelerate discovery for more robust S&T investment decision-making
  - Rebalance cognitive workloads with Human Enterprise Network Systems
  - Intelligent multi-institution Transactive Memory
- Address performance inversion from directed expertise systems
- Spin-off capabilities rapidly
- Application and domain agnostic

Support Robust Decision-Making at the Speed of War
Impact – Naval Enterprise

Focus Areas
• Expanding nationwide research enterprise collaboration
• Deploying distributed, all-domain autonomous systems experimentation
• NAVSEA Warfare Centers and NPS autonomous systems R&D coordination
• Educational programs (e.g., Robotics Engineering)

Threads
• Directed, intelligent crowdsourcing
• Accelerating information flow
• Public, .mil, and .gov domain persistent engagement

NPS-wide, SLAMR-led

Approved for public release: distribution unlimited.
Impact - Education

Projects, Theses, & Dissertations

- 5G Enabled Maritime Wi-Fi Buoy
- Enhanced Corpsman to Hospital Optical System
- Detecting and Tracking Dark Targets*
- 5G for Naval Objectives*
- Persistent and Emergent Maritime Domain Awareness*

5G integrated into courses

- Information Warfare
- Networks Operations & Technology
- Computer Science
- Electrical & Computer Engineering

NPS-wide, SLAMR-led
Impact – Fleet, Force, and OSD

Engagements

• Unmanned Campaign Framework
• Marine Corps Warfighting Laboratory
• Joint Artificial Intelligence Center Symposium
• USCG Detecting and Tracking Dark Targets*
• 5G Interference with Naval Systems
• Persistent and Emergent Maritime Domain Awareness
• Joint All Domain Information Systems Proposal
• USTRANSCOM Autonomous Aerial Cargo Syster
White Paper

NPS-wide, SLAMR-led
Impact – International Partners

NPS-wide, SLAMR-led

Approved for public release: distribution unlimited.
A Brief Tour

- R&D topic crowdsourcing
- Pacific Fleet experimentation ideas
- Defense landing page
- Homepage
- Events
- The Scuttlebutt
- DoD R&D Organizations
- S&T library (sample)
- Going to the audience

Click the links above for examples
Points of Engagement

Dr. Raymond Buettner, Jr.
- Associate Professor of Information Sciences, NPS
- Director, SLAMR
- Director, NPS Field Experimentation
- Email: rrbuettn@nps.edu

Mr. David Mortimore
- Co-Principal Investigator, Digital Enterprise, NPS
- Senior Technology Advisor and NPS Liaison, NUWC Division, Keyport
- Email: dbmortim1@nps.edu