Secure Maritime 5G

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

16 September 2021

Path Forward

Nationwide Collaboration

Educational Programs

Deployment Plan

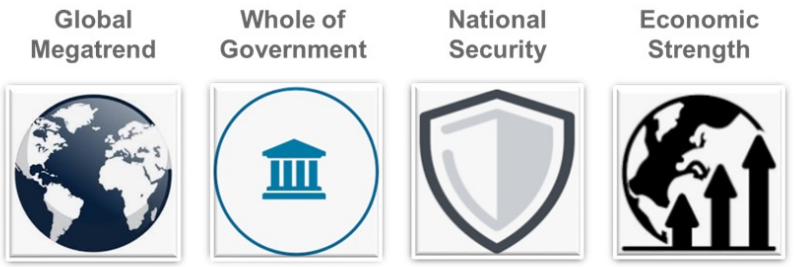
5G From The Sea

Distributed R&D

Thrive at Intersections

Brief Tour

Accelerating Nationwide S&T



Global competition for information advantage, economic power, and military might

Economics	A high speed, high capacity wireless network to…***connect billions of devices to create the 4th Industrial Revolution***
Paradigms	A high speed, high capacity wireless network to…***enable human-human, human-machine, machine-machine services***
Advantage	A high speed, high capacity wireless network to…***enhance Readiness, Survivability, and Lethality in Great Power Competition***

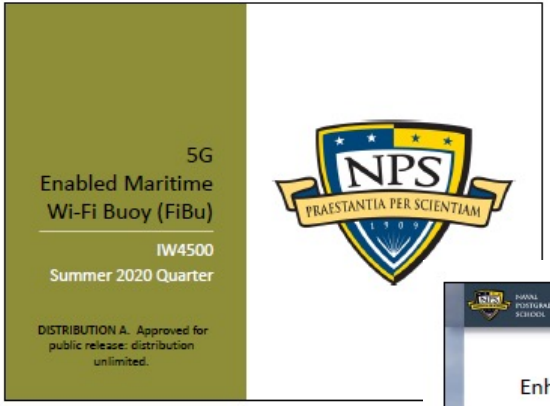
5G Capabilities

- Enables
  - Augmented Reality
  - Virtual Reality
  - Machine Learning applications
  - AI applications
- Technology benefits
  - Higher bandwidth
  - Multiple standards
  - Multi-frequency
  - Enclave capability
  - Peer-to-Peer networking

Educational Program Integration

- 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

*Being considered



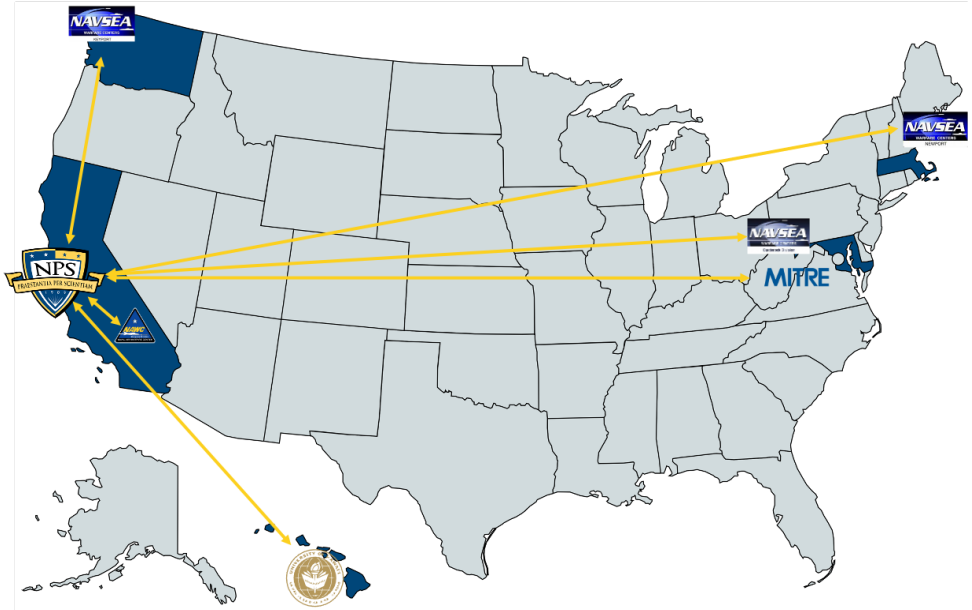
Deployment Plan

- Anticipated R&D areas
  - Autonomous Systems
  - Networked Command and Control
  - High Performance Computing Access
  - AR/VR
- SLAMR Beach Lab
  - U.S. Government
  - Private Sector
  - Academia
  - Non-Governmental Organizations
  - Allied Partners
- Campus
  - Classrooms
  - Research Centers
  - Labs

5G From the Sea

- Operational applications
  - Illegal, unreported, and unregulated fishing
  - Off-shore surveillance and Dark Targets
  - Maritime Domain Awareness
- U.S. Government
  - OUSD(Research & Engineering)
  - U.S. Coast Guard
  - U.S. Marine Corps
- Private Sector
  - AeroVironment
  - AT&T
  - Liquid Robotics
  - Ocean Power Technologies (OPT)
  - Houston Mechatronics
  - Kaman Aerospace

Distributed R&D Enabled



- DREN expansion
- SDREN deployment
- JIFX 21-2 experiment
  - AFRL
  - MITRE Corp.
  - NPS Camp Roberts Field Experimentation Lab
  - Univ. of Hawaii ARL
- JIFX 22-2 experiment (anticipated)
  - AFRL
  - NPS Camp Roberts Field Experimentation Lab
  - NAWC Weapons Division
  - NSWC Carderock
  - NUWC Divisions, Keyport and Newport

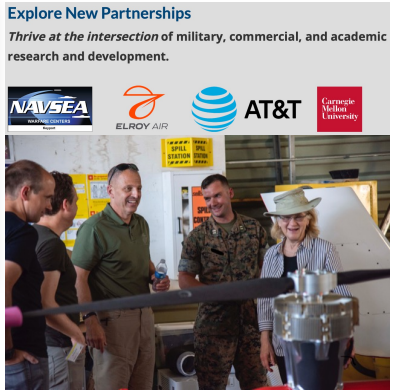
Thrive at the Intersections

- A *Sputnik*-moment
- Tenets
  - "Whole of country" approach
  - One-stop shopping for developing technologies, processes, and people
  - Intellectual home for the Nation's autonomous warfare community
- 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

Three Focus Areas

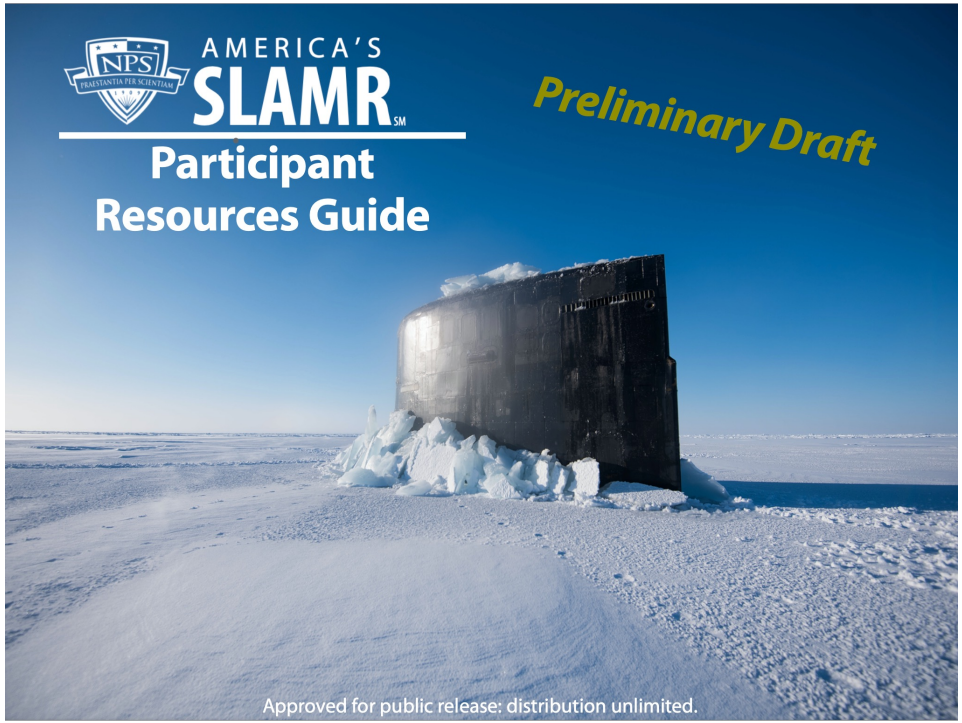
All-domain R&D environments

Business Relationship Innovation



Evolving the Digital Enterprise Nationally (EDEN)

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

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