Expeditionary Warfare

OPNAV N85

MajGen Timothy Hanifen

OPNAV N85

NDIA

6 Oct 2010

The Navy and Marine Corps Team …thriving in an uncertain world












Major Combat Operations
Building Partner Capacity
Train / Advise / Assist
Forcible Entry
Relief Operations
Limited War
Hybrid
Peace Enforcement
Civil War
Show of Force
Counter Insurgency
Combating Terrorism
Non-combatant Evacuation Operations

A Flexible, Balanced Expeditionary Force to meet Operational Demands

Over-Arching Challenges

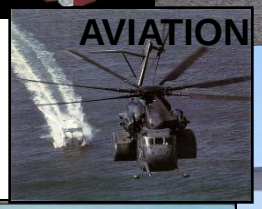
- **Shipbuilding/Modernization**
- **Evolving and improving MCM Capabilities**
- **Integration of Expeditionary Forces across the Range of Military Operations (ROMO)**
- **Synchronization of Special Warfare Capabilities**
- **Employment and Sustainment from the sea**
- **Energy Conservation**
- **Seabasing**

All of these challenges require…	**Innovative Thinking** **Acquisition Agility** **Rapid Science & Technology Integration** **Requirements Development**

Amphibious Warfare

Amphibious Fleet Transformation

- Capability Driven Recapitalization
- Supports Larger/Heavier USMC Footprint
- Full Service Life Ship Modernization
- Supports Joint Strike Fighter Ops
- Supports MV-22 Osprey Ops
- Improved Command & Control
- Improved Self-Defense
- Increased Survivability



Operations from 1- 5 miles off beach…Sea-Based Operations from 25+ miles

Amphibious Warfare Challenges

- C2 configuration (space/function) and C4I capabilities for future ships and back fitting on current shipping - focusing on LHA(R) and developing the configuration and capabilities that will allow for centralize control and serve to unify the expeditionary effort

- Combat Systems - defense of the expeditionary forces i.e. ARG

- High Speed Displacement Craft Technology – LCU(R)/ LCM(R)

- Flight Deck heat mitigation in support of JSF and MV 22

- Imbedded Shipboard Virtual Training Systems

- Diesel Engines - off the shelf, easily converted to at-sea applications for use on LCU

- Interoperability of Enhanced MSPRON capabilities with commercial national/international and allied shipping

Mine Warfare

Removing the Sailor from the Minefield
To Increase Clearance Rates

- Slow
- Heavy
- Large footprint
- Stovepiped
- Primarily CONUS-based
- Manpower Training Intensive

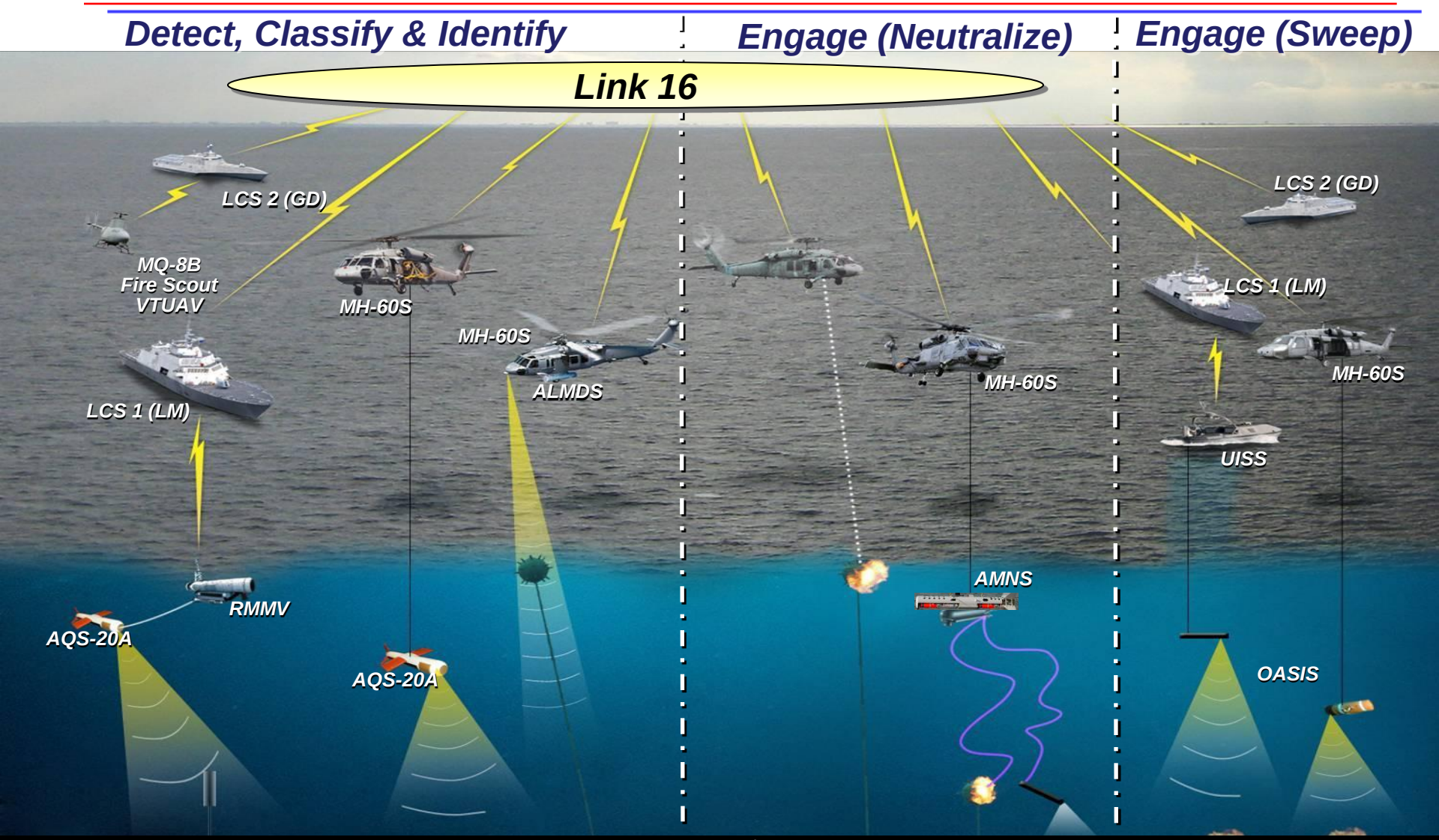
- Innovative Combination of COTS Technology for Mining and MCM
- Distributed and Netted
- Unmanned Operations
- Cooperative Behavior
- Computer Aided Detect/Classify
- Common Operational Picture
- Sea Warrior Transformation
- Closing the Technology Gaps

- Fast and Agile
- Precise
- Lethal
- Modular
- Organic
- Optimized Manpower Requirements

MCM VISION:

Field a Common Set of Unmanned, Modular MCM Systems Employable from a Variety of Host Platforms or Shore Sites that can Quickly Counter the Spectrum of Mines to Enable Assured Access with Minimum Risk from Mines

LCS Mine Countermeasures Concept



OASIS: Organic Airborne and Surface Influence Sweep / **AMNS**: Airborne Mine Neutralization System
RMMV: Remote Multi Mission Vehicle / **UISS**: Unmanned Influence Sweep System / **ALMDS**: Airborne Laser Mine Detection System

Mine Warfare Challenges

- Revitalizing U.S. Naval Mining Capability--let's give our adversaries this problem

- Low Cost Innovative Field Expedient/COTS solutions for MCM

- Solving the Mine Clearance Issue in the cluttered VSW environment

- Increase Speed of Kill Chain for all MCM Systems via Single Pass Detect-To-Engage

Low Cost Field Expedient/COTS Solutions

for High Capacity Mining and Clearance

Expeditionary Combat

Developing a Fully Integrated Dual-Use Force

Naval Construction (Seabees)

Maritime Expeditionary Security

Riverine Forces

Expeditionary Logistics

- **Investments in high-demand/ low density SFA-capable forces**
- **Common, upgraded C4I infrastructure**
- **Small boat standardization**
- **Evolving Force Structure**
- **Continued EOD technology development**
- **Robust non-lethal capabilities**

NECC Forces Link Maritime & Land Domains Across the Challenging Littoral Battlespace

Expeditionary Combat Challenges

- Integrating technologies
  - Robust, common C2 infrastructure
  - Improved "networkable" sensors
  - Upgraded tactical radios, expeditionary satellite communications,
  - GDFS replacement.

- Unmanned systems (UUVs, USVs, & robotics) beyond simple observation/surveillance such as Advanced EOD Robot System
  - Open architecture (cost effective upgrades)
  - Reduction of personnel requirements,

- Non lethal weapons that provide our sailors additional options along the escalation of force continuum
  - Directed energy systems (lasers, high power microwave, & radio frequency systems)
  - Extend the range of currently fielded systems

Naval Special Warfare

Sustained/Improved Service-Common Support

SCAN EAGLE UAS

LEGACY TACTICAL COMMS

LEGACY COMBATANT CRAFT

INLAND OPERATIONS

- **Capability Driven Recapitalization**
- **Support NSW movement towards SFA**
- **Ensure NSW compatibility with Fleet assets**
- **Exploit Navy-SOF system commonality**
- **Improve tactical ISR capabilities**
- **Improve Command & Control**

SMALL TACTICAL UAS

COMMON TACTICAL COMMS

COMMON COMBATANT CRAFT

MARITIME/SFA OPERATIONS

OIF/OEF Centric **Post-OIF/OEF Engagement**

Naval Special Warfare Challenges

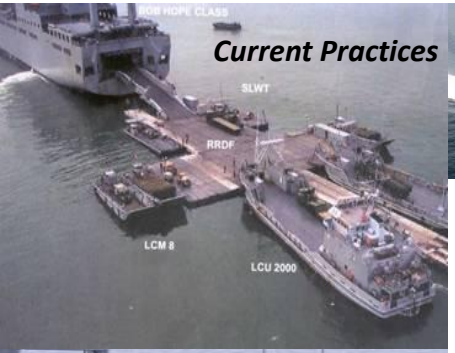
- Common Combatant Craft
  - A common hull form that meets Navy and SOF requirements

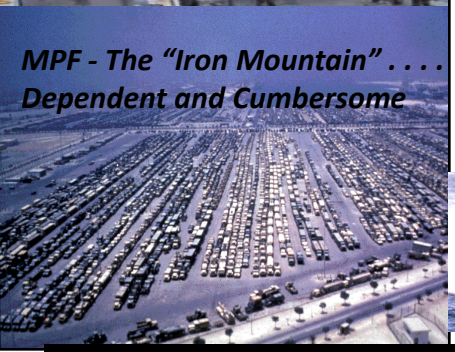
- Modular Armor
  - Evolving armor for people and equipment to meet the threat of the operational environment

- Naval Expeditionary Package for AFSB
  - Support SOF,NECC and USMC forces from various AFSB (LCS,JHSV,MLP)

- Power Sources
  - Power density is never small even for the large demand

Seabasing via Enhanced MPSRON

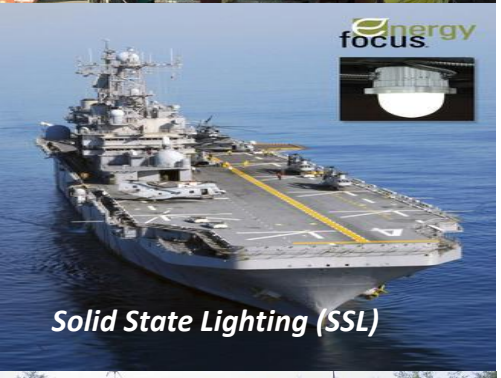




- Delivery of equipment and supplies through restricted access environments (arrival and assembly ashore)
- Rapid employment of forces from OTH
- Transfer of equipment at sea in non-anchorage depths
- Selectively offloadable, tailorable force packages
- Employable in emergent, partnership and combat across complete ROMO

Flexibility To Influence Events Ashore Or At Sea, Particularly When Denied Access Or A Small Footprint Ashore Desired

Expeditionary Energy Initiatives



- **Actively leveraging promising energy technologies and innovative practices.**
- **Developing a Expeditionary Power Management and Distribution System.**
- **Integrated Propulsion Power plants and hybrid electric drive.**
- **Integration of bio-fuel into ships and aircraft**

"In order to lower our reliance on fossil fuels, we need to improve the efficiencies of systems and develop platforms that operate as a system of systems, are integrated together, and reduce our tactical vulnerability."
SECNAV Mabus, Naval Energy Forum, 14 Oct 2009

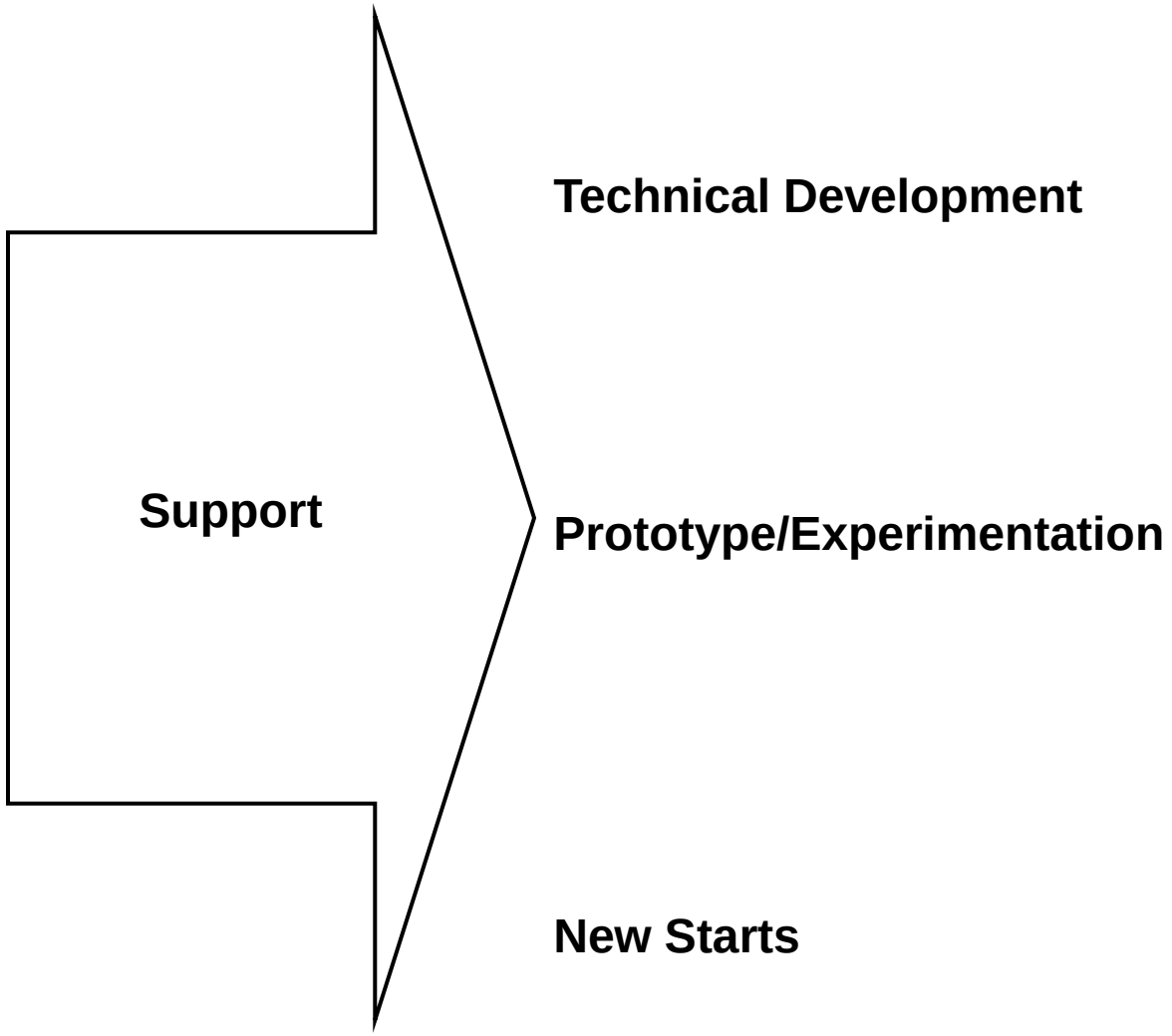
How To Reach Us

N851
-Mr. Jon Wright
jon.r.wright@navy.mil
(703)

N852
- LtCol M. Greeno
michael.greeno@navy.mil
(703) 697-9795

N853
Col C. Arantz
christopher.arantz@navy.mil
(703) 614-0395

N857
Mr. W. Williams
wellington.williams@navy.mil
(703) 692-1511



Discussion