LCS and their Mission Modules in Asymmetric Warfare

CAPT John Uhl
10 September 2012
LCS Capabilities

- LCS mission package
- LCS inherent capability

- HA/DR
- ISR/IW
- MCM
- SUW
- SOF Support
- Anti-Piracy
- ASW
- TSC
- MIO Support
Inherent Capabilities
Regardless of Mission Package Embarked

- **Maritime Domain Awareness Operations (MDA)**
  - Exclusive Economic Zones (EEZ) Patrols
    - Theater security/enforce laws/deter piracy
  - Coordinated patrols with regional partners
    - Increase area coverage
    - Improve proficiency operating with foreign navies

- **Theater Security Cooperation (TSC) Operations**
  - Community Relations(COMREL)/Distinguished Visitor(DV)/Media Engagement
    - Unique opportunities for diplomatic and mil-to-mil engagement

- **Bi-lateral / Multi-lateral Operations**
  - Joint exercises with regional partners

- **Humanitarian Assistance / Disaster Relief Operations**
  - Sprint Speed enables LCS to be the first responder
  - Mission Bay can be loaded with relief supplies
  - Shallow Draft enables greater access to remote areas
SUW: MIO/EMIO

- SUW with Maritime Security Module (MSM) capability is in high demand
- MH-60R & Vertical take-off and landing Tactical Unmanned Aerial Vehicle (VTUAV) detection & tracking
- High-speed intercept – 40+ knots
- MSM supports Level II Visit Board Search and Seizure (VBSS)
  - (2) 11M RHIBs / (2) Boarding Teams
  - Counter-illicit Trafficking (CIT)
  - Maritime Interdiction Operations (MIO)
  - Extended Maritime Interdiction Operations (EMIO)

2010 deployment: FREEDOM completed 29 RHIB operations interdicting 5.5 tons of drugs
- LCS speed and maneuverability shapes engagements
  - Speed and maneuver extend engagement opportunity and provide significant tactical advantage

- MH-60R is an integral surveillance and engagement asset
  - Detect and classify inbound raids beyond range of LCS
  - Rapid engagement of high priority threats with Hellfire

- Gun systems provide layered defensive capability
  - 57mm, 30mm, Crew Served Weapons (CSW)

- Surface-to-Surface Missile Module (SSMM) Development
  - FY14: Griffin Missile; short-range
  - FY17: Follow-on, fire-and-forget missile will extend range to/beyond horizon
SUW MP Capabilities

FY14

Increment I

- FIAC / FAC
- Gun Mission Module (GMM)
  - 30 MM Gun
- Maritime Interdiction
  - Maritime Security Module (MSM)
  - Intelligence, Surveillance, & Reconnaissance (ISR)
  - Aviation Module
  - MH-60R
- Enhances Fleet Counter
- Fast Inshore Attack Craft (FIAC) / Fast Attack Craft (FAC) Capability

FY15

Increment II

- Maritime Interdiction
  - Maritime Security Module (MSM)
  - NOTE: Increment I included a prototype version of the MSM Module for use on LCS 1 early deployment. Production version will be delivered as Increment II capability.

FY19

Increment III

- Irregular Challenges
  - Irregular Challenges Module
- FIAC / FAC
  - Gun Mission Module (GMM)
  - 30 MM Gun + Upgraded Ammo
- Surface-to-Surface Missile Module (SSMM)
  - Griffin Block IIIB Missile
  - ISR
  - Aviation Module
  - VTUAV
- Fills Current Capability Gaps

Inc IV

- SSMM
  - TBD *** Griffin-like Missile
- Fills Current Capability Gaps

* Prototype version of the Maritime Security Module deployed on LCS 1.
** Irregular Challenges Module will provide a new Medical and Training capability to LCS and will be incorporated into the SUW MP beginning in Increment III.
*** Increment II SSMM solution will be based on a full & open competition for a Griffin-like missile solution.
LCS SUW CONOPS

Classify

MH-60R Radar
MH-60R
Fire Scout
EO/IR
EO/IR

Ship's Radar
LCS 1 (LM)
Surface Missile System

Engage

LCS 2 (GD/Austal)
MH-60R
Fire Scout
Laser Designator
Laser Designator
HO/IR: Electro-Optical / Infra-Red

67mm
30mm
Hell Fire
MIW: OPAREA and SLOC Clearance

Blue Operating Area

Sea Lane of Communication

Enables Freedom of Action in and Safe Transit Through Mined Waters
MCM MP Capabilities

FY14
- Increment I
  - Rapid Minehunting & Clearing
    - Organic Airborne Mine Countermeasures Module
      - ALMDS
      - MH-60s
      - AMNS
  - Sustained Minehunting
    - Remote Minehunting Module
      - RMMV
      - AQS-20As
      - RMMV

Replaces Legacy Minehunting and Neutralization Capabilities
Removes sailors from the minefield
Improves Clearance Speed/Endurance

FY15
- Increment II
  - Beach Zone Detection
    - Coastal Mine Reconnaissance Module
      - VTUV
      - COBRA Block I
  - Sustained Influence Sweep
    - Influence Mine Sweep Module
      - USV
      - USWS

Fills Current Capability Gaps

FY17
- Increment III
  - Near Surface Neutralization
    - Organic Airborne Mine Countermeasures Module
      - AMNS Inc II

Replaces Legacy Minesweeping Capabilities and Adds Capacity

FY19
- Increment IV
  - Buried Mine Detection
    - Unmanned Undersea Module
      - Knifefish UUV

Fills Current Capability Gaps
LCS MCM CONOPS

Detect, Classify & Identify

Engage (Neutralize)

Engage (Sweep)

Fire Scout

MH-60S

ALMDS

AMNS

AQS-20

RMMV

Knifefish

USSS

LCS 1 (LM)

LCS 2 (GD/Austral)

USV

LCS 1 (LM)

LCS 2 (GD/Austral)

LCS in Asymmetric Warfare

- LCS capabilities are both inherent and MP-specific
  - Ship’s speed, maneuverability, weapons...
  - MPs’ mission-focused systems...

- LCS flexibility provides potential for growth/enhancement
  - To increase capabilities and pace the threat

LCS CAPABILITIES SPAN THE OPERATIONAL SPECTRUM