6th Annual IAMD Symposium:
Acquisition of Navy IAMD Capabilities

“Sea Power to the Hands of Our Sailors”

RDML Jon A. Hill
25 June 2015
Navy IAMD Capabilities
Providing an Advantage for Today’s Forward Deployed Navy

- NIFC-CA
- SM Improvements
- Ballistic Missile Defense
- Radar Improvements
### U.S. Navy IAMD Foundation
#### AEGIS Baseline 9

#### AEGIS Common Source Library

<table>
<thead>
<tr>
<th>Modernized Air Defense Cruisers</th>
<th>AEGIS Ashore</th>
<th>Modernized IAMD Destroyers</th>
<th>New Construction IAMD Destroyers</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Modernized Air Defense Cruiser" /></td>
<td><img src="image2.png" alt="AEGIS Ashore" /></td>
<td><img src="image3.png" alt="Modernized IAMD Destroyer" /></td>
<td><img src="image4.png" alt="New Construction IAMD Destroyer" /></td>
</tr>
</tbody>
</table>

**BL 9A Capability:**
- Naval Integrated Fire Control-Counter Air (NIFC-CA)
- SM-6
- Interoperability Improvements

**BL 9B Capability:**
- BMD 5.0 Capability Upgrade
- SM-3 Block IA, IB
- Remote Launcher

**BL 9C Capability:**
- Integrated Air and Missile Defense (IAMD)
- BMD 5.0 Capability Upgrade
- SM-3 Block IA, IB and Sea Based Terminal Increment I
- Naval Integrated Fire Control-Counter Air (NIFC-CA)
- SM-6
- Interoperability Improvements

#### Base Computer Program

<table>
<thead>
<tr>
<th>Development</th>
<th>Demo</th>
<th>AEGIS Light Off</th>
<th>At-Sea</th>
<th>DT/CSSQT</th>
<th>Cert</th>
<th>OT</th>
<th>Code Reuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ ESSM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>99%</td>
</tr>
<tr>
<td>✓ SM-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ SM-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Progress

<table>
<thead>
<tr>
<th>Development</th>
<th>Demo</th>
<th>AEGIS Light Off</th>
<th>At-Sea</th>
<th>DT/CSSQT</th>
<th>Cert</th>
<th>OT</th>
<th>Code Reuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ ESSM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>99%</td>
</tr>
<tr>
<td>✓ SM-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ SM-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Progress

<table>
<thead>
<tr>
<th>Development</th>
<th>Demo</th>
<th>AEGIS Light Off</th>
<th>At-Sea</th>
<th>DT/CSSQT</th>
<th>Cert</th>
<th>OT</th>
<th>Code Reuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ ESSM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>99%</td>
</tr>
<tr>
<td>✓ SM-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ SM-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Progress

<table>
<thead>
<tr>
<th>Development</th>
<th>Demo</th>
<th>AEGIS Light Off</th>
<th>At-Sea</th>
<th>DT/CSSQT</th>
<th>Cert</th>
<th>OT</th>
<th>Code Reuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ ESSM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>97%</td>
</tr>
<tr>
<td>✓ SM-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ SM-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Progress

<table>
<thead>
<tr>
<th>Development</th>
<th>Demo</th>
<th>AEGIS Light Off</th>
<th>At-Sea</th>
<th>DT/CSSQT</th>
<th>Cert</th>
<th>OT</th>
<th>Code Reuse</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ ESSM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>99%</td>
</tr>
<tr>
<td>✓ SM-2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>✓ SM-6</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Progress
Dynamic Radar Resource Management

- Mission Priority Modes
- AAW Search Frame Time Management
- Scheduling and Prioritization Rules
- BMD Waveform / Data Rate Management

Real-Time Performance Assessment and Mission Display
AEGIS Baseline 9 IAMD Success

FIRST LIVE FIRE IN IAMD MODE

USS JOHN PAUL JONES PAU-2 (AW Target)
FEB 2014

USS JOHN PAUL JONES FTM-25 (BMD Target)
OCT 2014

FIRST IAMD LIVE FIRE

FIRST IAMD FDNF

FEB 14  JUN 14  OCT 14  FEB 15

FIRST IAMD TRACKEX
USS JOHN PAUL JONES CSSQT
JUN 2014

MULTIPLE FIRING UNITS WITH DWES
USS BARRY FTX-19
FEB 15
Increasing IAMD Capacity

Continual Increase of IAMD Capacity through:
- Modernization of AEGIS Baseline 5.3 and 6.3 Destroyers
- AEGIS New Construction

AEGIS Meeting the Increasing Demand for IAMD Capability and Capacity

DISTRIBUTION STATEMENT A: - Approved for Public Release
Future: DDG Flt III with AMDR-S
Expanding the IAMD Capability with Multi-Beam Design

- BMD
- AMDR-S
- CIWS Sensor Integration
- MK 160 Upgrade
- ESSM Block 2 (Active Seeker)
- AMDR BMD Search Sector
- AMDR AAW Search Sector
- SEWIP Block 3
- J3.4 Message Link 16 Upgrade
Conclusion

- U.S. Navy IAMD Program is in development with continual increasing capability

- AEGIS Baseline 9 is the successful foundation for future Navy programs

- AEGIS delivers sea control and power projection against the Anti-Access/Area Denial opponent

AEGIS ENABLES INCREASING IAMD AND JOINT FORCE ACCESS
“Sea Power to the Hands of Our Sailors”