Description And Mission

• Deliver an enduring, operationally effective and supportable ballistic missile defense capability in Aegis cruisers and destroyers, in defense of the U.S., our deployed forces, allies and friends

• Increase the effectiveness of the greater Ballistic Missile Defense System (BMDS) by both providing and gaining synergy from other BMDS elements

• Incrementally increase this capability by delivering evolutionary spiral upgrades as part of BMDS block upgrades
Leverages Aegis Fleet

- Leveraging existing Navy processes and infrastructure
- Evolving from 30 years of Aegis and 50 years of Standard Missile development
System Goals And Planned Upgrades

Block 2004
- Defeat SRBMs and MRBMs
- Long-Range Surveillance and Tracking (BMD 3.0E)
- Preliminary Engagement Capability (BMD 3.0)
- Launch on TADIL
- Block 2004 (BMD 3.6)
- SM-3
  - Block I
  - Block IA

Block 2006/08
- Improved Feature Extraction, Object Classification, Automated Designation and Kill Assessment
- Improved Engagement Capability
- Improved BMDS C2, BM&C Performance
- Increased Battlespace
- SM-3
  - Block IA
  - Block IB

Block 2010/12/14
- Enhanced Use and Support of BMDS ESGs
- SRBM, MRBM, Limited IRBM and Some ICBM Defense
- Convert Program for Broader U.S. and International Ship Population
  - Open Architecture
- Enhanced Feature Extraction, Object Classification, Automated Designation and Kill Assessment
- Improved Intercept Capability
  - Increased Divert Utilizing TDACS (SM-3 Blk IIA KW)
- Improved BMDS C2, BM&C Performance
- Increased Battlespace
  - SM-3 Blk IIA
  - Engage on Remote
- Upgrades to Core

Gray – Work planned w/ JMSDF
Light Gray – USN core-search work w/ Japan

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Aegis BMD Today – Block 2004

**Engagement And LRS&T**

- Preliminary capability
  - Spring 2005
    - Cruiser (USS LAKE ERIE)
    - Aegis BMD 3.0
    - SM-3 Block I
  - Block 2004 capability
    - Spring 2006
      - Cruiser (USS SHILOH)
      - Destroyer (End CY 06)
      - Aegis BMD 3.6
      - SM-3 Block IA

- Preliminary Capability SEP 04
  - Destroyers “On Alert”
  - Aegis BMD 3.0E

- Block 2004 Capability
  - Spring 2006
    - Cruiser Aegis BMD 3.0 and 3.6 (USS CURTIS WILBUR)
    - Destroyer (End of CY06) Aegis BMD 3.6

**Defeats SRBMs and MRBMs**

**Forward-Based BMDS Surveillance**

**Detect and track ICBMs**
- Transmit target data to GMD via satellite Link-16
  - Generate target acquisition cue for GMD radar
  - Support GMD interceptor Weapon Task Plan (WTP) initialization

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Emergency Engagement Capability

If Directed, Capability Available

First SM-3 Block I’s
"Ready For Fleet Issue" – November 2004
11 Rounds Delivered By August 2006

First SM-3 Block IA Encanned
2 Rounds Delivered By 31 AUG 06

USS LAKE ERIE

USS PORT ROYAL

FTM-10

Intercept

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Block 2004 Cruiser Configuration
(Aegis BMD 3.6 Engage / LRS&T)

Aegis Display System Mark 2
- BMD 3.6 Computer Program

Command & Decision System Mark 2
- BMD 3.6 Computer Program
- C&D Adjunct Computer
- Joint Tactical Terminal
- Integrated Mission Planner

Weapon Control System Mark 8
- BMD 3.6 Computer Program
- SM-3 BLOCK IA Sustain Mode or Pulse DACS
- SM-3 Launch on TADIL
  - SM-2 AAW

Fire Control System Mark 99
- Supports SM-2 Engagements

Missile Downlink System (T&E Only)
- Receives KW Downlink
- Supports Kill Assessment

Vertical Launching System Mark 41
- VLS – GPS Integration
- Upgraded Computer Program
- Supports any Missile – Any cell
- SM-3, SM-2 (all variants), VLA, TLAM

Radar System AN / SPY-1
- BMD 3.6 Computer Program
- Programmable Energy Sig Pro Mods
- Integrated Satellite System Calibration Computer

Aegis Combat Training System Mark 50
- Upgraded To Support BMD Training

Operational Readiness Test System Mark 7
- Upgraded To Monitor SPY BMD Functions

Tactical Data Links
- CDLMS 3.3 (3.4v)
- Supports BMD Messages

Standard Missile-3
- SM-3 Block I And IA
- Sustain Mode Or Pulse DACS

Block 2004 Cruiser Configuration
(Aegis BMD 3.6 Engage / LRS&T)

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Accomplished To Date

7 Out Of 8 Successful Intercepts

FM-2
FM-3
FM-4
FTM 10
FM-5
FM-6
FTM 04-1 (FM-7)
FTM 04-2 (FM-8)
GT-185
IFT-9
IFT-10
PAC EX III
PAC EX IV
IFT-10
JCTV-1

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Foreign Military Sales (FMS)

Japan’s KONGO Class Destroyers

JDS KONGO (DDG 173)

JDS KIRISHIMA (DDG 174)

JDS MYOKO (DDG 175)

JDS CHOKAI (DDG 176)

- Upgrade JDS KONGO class destroyers to Aegis BMD Block 2004 capability
- SM-3 Block IA missiles
- Live fire test events

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### Aegis BMD SM-3 Evolution Plan

<table>
<thead>
<tr>
<th>Block IA</th>
<th>Block IB</th>
<th>Block II</th>
<th>Block IIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block 2004</td>
<td>Block 2008</td>
<td>Block 2010 / 2012</td>
<td>Block 2012 / 2014</td>
</tr>
</tbody>
</table>
| • 2- Color Seeker  
  - Increased IR Acquisition  
  - Improved Discrimination  
  • TDACS  
  - Increased Divert  
  - Lowers AUR Cost  
  • All-Reflective Optics (ARO)  
  • Advanced Signal Processor (ASP) | | • High Velocity Variant  
  • Block IB Seeker  
  • 21" Propulsion  
  - 2nd & 3rd Stage  
  - Increased Missile Vbo = xx  
  • 21" Nosecone  
  • MK 41 VLS Compatible | • High Divert Variant  
  • Large Diameter KW  
  - Advanced Discrimination Seeker  
  - High Divert DACS  
  • 21" Propulsion  
  - 2nd & 3rd Stage  
  - Increased Missile Vbo = yy  
  • 21" Nosecone  
  • MK 41 VLS Compatible |

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Other International Interests

- Spain
- Germany
- Denmark
- Australia
- The Netherlands
- United Kingdom
- South Korea
Contractors Activity And Staffing Plan

Minneapolis, MN
BAE Systems
- VLS Design Agents
- Mechanical Systems Canisters

Arlington, VA
General Dynamics
- Contractor Support Services

Moorestown, NJ
Lockheed Martin
Maritime Systems & Sensors
- Combat System Engineering Agent
- Computer Programs
- Electronics
- System Integration

Boston, MA
MIT / Lincoln Labs
- Engineering Systems

Elkton, MD
ATK Tactical Systems
- Third Stage Rocket Motor
- Kinetic Warhead PACs

Baltimore, MD
Lockheed Martin
- VLS Launch Control Systems

Laurel, MD
Johns Hopkins / APL
- Systems Concepts Engineering

Dahlgren, VA
NSWC Dahlgren
- Systems Development Engineering

Anaheim, CA
Boeing North America
- Kinetic Warhead

Tucson, AZ
Raytheon Missile Systems
- Round Design Agent
- Guidance
- Kinetic Warhead
- Nose Cone
- Staging Assembly
- Steering Control

Camden, AR
Aerojet
- Mk 104 Mod 3 DTRM
- MK 72 Booster
- Raytheon
- All-Up Round Assembly

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## Major Prime Contractors

<table>
<thead>
<tr>
<th>Contractor</th>
<th>City, State</th>
<th>Role</th>
<th>FY06 Funding Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lockheed Martin Maritime Systems &amp; Sensors (LM/MS2)</td>
<td>Moorestown, NJ</td>
<td>Combat System Engineering Agent, VLS Design Agent, Computer Programs, Electronics, System Integration</td>
<td>27%</td>
</tr>
<tr>
<td><strong>Major Subcontractor</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Lockheed Martin (Baltimore) – VLS Design Agent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Raytheon Company</td>
<td>Tucson, AZ</td>
<td>Round Design Agent, Guidance, Kinetic Warhead, Nose Cone, Staging Assembly, Steering Control</td>
<td>45%</td>
</tr>
<tr>
<td><strong>Major Subcontractors</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Boeing North America (Canoga Park, CA) – Kinetic Warheads</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• ATK Tactical Systems (Elkton, MD) – Third Stage Rocket Motor, Kinetic Warhead PACs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
# New Prime Contractor Awards

<table>
<thead>
<tr>
<th>Contract Award</th>
<th>Effort</th>
<th>Planned Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lockheed Martin</td>
<td>Block 2006 / 08 Development</td>
<td>FY07</td>
</tr>
<tr>
<td>Raytheon</td>
<td>FMS (Japan) – SM-3 Block IA Missiles</td>
<td>FY07</td>
</tr>
<tr>
<td>Raytheon</td>
<td>FY07 SM-3 Missiles – 27 Block IA Missiles</td>
<td>FY07</td>
</tr>
</tbody>
</table>
Aegis BMD Contractor Support Services

- Aegis BMD has 2 program office support contracts
  - Systems engineering and program management support
    - Currently General Dynamics
    - 168 FTEs per year
    - Period of performance through 30 NOV 06 (bridged through September 2007)
  - Business / financial management support
    - Currently Paradigm Technologies
    - Competition in progress (8A set-aside)
    - Base plus 4 options (13 FTEs per year)
    - Award expected September 2006
## Aegis BMD Contractor Support Services

<table>
<thead>
<tr>
<th>Acquisition Strategy</th>
<th>Full And Open Competition Via SeaPort</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period of Performance</td>
<td>Base Plus 4 Options</td>
</tr>
<tr>
<td>Schedule (Approximate)</td>
<td>Industry Day – First Quarter FY07</td>
</tr>
<tr>
<td></td>
<td>Draft RFP Released – First Quarter FY07</td>
</tr>
<tr>
<td></td>
<td>Final RFP Released – First Quarter FY07</td>
</tr>
<tr>
<td></td>
<td>Award New Contract – 2/07</td>
</tr>
</tbody>
</table>
BACKUP
Why SeaPort

- SeaPort is the mandatory acquisition vehicle to obtain cost-effective services through competitive and efficient means at all Navy headquarters and field activities
  - History
    - NAVSEA support service contracts were costing too much
    - GSA was becoming the vehicle of choice (paying fees)
  - SeaPort provides single purchasing office
    - Achieving savings by competing task orders against indefinite-delivery indefinite-quantity Multiple Award Contracts (MAC) held by multiple vendors
  - Reduced acquisition time – decrease cycle time via automation
  - Pass through, escalation, and profit capped
  - 650 established MAC contractor teams
    - 78% prime MAC holders are small businesses