Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Navy

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
1319: Research, Development, Test & Evaluation, Navy
BA 4: Advanced Component Development & Prototypes (ACD&P)

R-1 ITEM NOMENCLATURE
PE 0603790N: NATO Research and Deve

|----------------------|---------|---------|--------------|--------------|---------------|---------|---------|---------|---------|----------------|------------|

A. Mission Description and Budget Item Justification

In accordance with Title 10 United States Code, Section 2350a, this Program Element (PE) provides funding for research and development (R&D) programs with approved allies under international agreements. These funds can only be applied to work efforts in the U.S., and the Under Secretary of Defense, Acquisition and Technology and Logistics (USD, AT&L) must approve each international agreement. The program provides funds for multiple projects under separately approved international agreements as well as funds that support the establishment of such agreements. Each international agreement is summarized in a separate Summary Statement of Intent (SSOI) that also states why the project serves to increase the defense capabilities of the U.S. The SSOI is used to obtain Project approval by the Department of the Navy and the Office of the Secretary of Defense.

This program historically does not meet established execution benchmarks. NATO R&D cooperative programs differ from other Research, Development, Test and Evaluation (RDT&E) programs because issuance of funding from this PE coincides with the signature of international agreements. These signatures occur throughout the fiscal year and often encounter unexpected delays during the staffing and negotiation phases of agreement processing prior to signature.

B. Program Change Summary ($ in Millions)

<table>
<thead>
<tr>
<th>FY 2010</th>
<th>FY 2011</th>
<th>FY 2012 Base</th>
<th>FY 2012 OCO</th>
<th>FY 2012 Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous President's Budget</td>
<td>10.152</td>
<td>9.196</td>
<td>9.962</td>
<td>-</td>
</tr>
<tr>
<td>Total Adjustments</td>
<td>-0.348</td>
<td>-</td>
<td>-0.822</td>
<td>-</td>
</tr>
</tbody>
</table>

- Congressional General Reductions
- Congressional Directed Reductions
- Congressional Rescissions
- Congressional Adds
- Congressional Directed Transfers
- Reprogrammings | 0.107 | - |
- SBIR/STTR Transfer | -0.361 | - |
- Program Adjustments | - | - | -0.509 | - | -0.509 |
- Section 219 Reprogramming | -0.093 | - | - | - | - |
- Rate/Misc Adjustments | - | - | -0.313 | - | -0.313 |
- Congressional General Reductions | -0.001 | - | - | - | - |
A. Mission Description and Budget Item Justification

In accordance with Title 10 U.S. Code Section 2350a, this project provides funding for research and development projects with approved allies under international agreements. These funds can only be applied to work efforts in the U.S., and the Office of Secretary of Defense must approve each international agreement. The program provides funds for multiple projects under separately approved international agreements as well as funds that support the establishment of such agreements. Each international agreement is summarized in a separate SSOI which also states why the project serves to increase the conventional defense capabilities of the U.S. The SSOI is used to obtain project approval by the Department of the Navy and the Office of the Secretary of Defense.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)

Title: NATO Cooperative R & D

|---------|---------|--------------|-------------|--------------|---------|---------|---------|---------|-----------------|------------|

A. Mission Description and Budget Item Justification

In accordance with Title 10 U.S. Code Section 2350a, this project provides funding for research and development projects with approved allies under international agreements. These funds can only be applied to work efforts in the U.S., and the Office of Secretary of Defense must approve each international agreement. The program provides funds for multiple projects under separately approved international agreements as well as funds that support the establishment of such agreements. Each international agreement is summarized in a separate SSOI which also states why the project serves to increase the conventional defense capabilities of the U.S. The SSOI is used to obtain project approval by the Department of the Navy and the Office of the Secretary of Defense.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)

Title: NATO Cooperative R & D

<table>
<thead>
<tr>
<th>FY 2010</th>
<th>FY 2011</th>
<th>FY 2012</th>
</tr>
</thead>
</table>

Articles:

- Continued to plan and/or support approved cooperative projects.
- Continued support for Advanced Non-Acoustic Sensing Technologies cooperative project between the U.S. and Sweden.
- Continued support for the Defensive Aids Suite/Next Generation Torpedo Defense cooperative project between the U.S. and the U.K.
- Continued support for Enhancing and Validating the Dynamic System Mechanics Advanced Simulation (DYSMAS) to meet Emerging Modeling and Simulation Changes cooperative project between the U.S. and Germany.
- Continued support for the Failure Prediction of Composite and Hybrid Naval Structures (DYOSS-3D) cooperative project between the U.S. and the Netherlands.
- Continued support for the Surface Combatant Aluminum Structure Design cooperative project between the U.S., Finland and Germany.
- Continued support for the Submarine Hydrodynamics Maneuvering & Control cooperative project between the U.S. and the U.K.
- Continued support for Torpedo Guidance and Control; False Targets cooperative project between the U.S. and the U.K.
- Completed support for the Next Generation Infra-Red Search and Track (NGIRST) project among the U.S. and multiple nations.
- Completed support for the Coalition Maritime Missile Defense Battle Management C4I (BMCM4A PA2) Architecture Definition cooperative project between the U.S. and multiple nations.
- Initiated support for the Submarine Sonar Telemetry cooperative project between the U.S. and the U.K.
- Initiated support for the Defensive Aids Suite project between the U.S. and the U.K.
**Exhibit R-2A, RDT&E Project Justification: PB 2012 Navy**

**DATE:** February 2011

**APPROPRIATION/BUDGET ACTIVITY**  
1319: Research, Development, Test & Evaluation, Navy  
BA 4: Advanced Component Development & Prototypes (ACD&P)

**R-1 ITEM NOMENCLATURE**  
PE 0603790N: NATO Research and Deve

**PROJECT**  
2293: NATO Cooperative R & D

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### B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)

<table>
<thead>
<tr>
<th></th>
<th>FY 2010</th>
<th>FY 2011</th>
<th>FY 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Initiated support for</td>
<td></td>
<td></td>
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<tr>
<td>the Advanced Electromagnetic Silencing project between the U.S. and the U.K.</td>
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<tr>
<td>- Initiated support for</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the Submarine Communication Buoy project between the U.S. and the U.K.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Initiated support for</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>the Maritime Missile Defense Modeling and Simulation Synthetic Interoperability Testing and Evaluation (Site) cooperative project between the U.S. and multiple nations.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>- Planned support for the Alternate Material Propeller cooperative project between the U.S. and Australia.</td>
<td></td>
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<tr>
<td>- Planned support for the Coalition Distributed Engineering Plant Baseline Architecture (CDEP-BA) cooperative project between the U.S. and multiple nations.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>- Planned support for the Coalition Network for Secure Information Sharing (CoNSIS) cooperative project between the U.S. and multiple nations.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>- Planned support for the Six Degrees of Freedom (6DOF) Amendment 1 cooperative project between the U.S. and Italy.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Planned support for the Submarine Advanced Autopilot project between the U.S. and U.K.</td>
<td></td>
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</tr>
<tr>
<td>- Planned support for the Ice Capable Surface Combatant project between the U.S. and Finland.</td>
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</tr>
<tr>
<td>- Planned support for the Ultra Heavy-Lift Amphibious Connector (UHAC) project between the U.S. and Singapore.</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**FY 2011 Plans:**
- Continue to plan and/or support FY10 approved cooperative projects less those noted as completed above.
- Plan support for the Submarine Composite Structures project between the U.S. and the U.K.
- Plan support for the Fiber Optic Mini Acoustic project between the U.S. and Australia.
- Plan support of Ballistic Missile Defense Open Architecture Research project between the U.S. and Japan.

**FY 2012 Plans:**
- Continue to plan and/or support FY11 approved cooperative projects.

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### Accomplishments/Planned Programs Subtotals

<table>
<thead>
<tr>
<th></th>
<th>FY 2010</th>
<th>FY 2011</th>
<th>FY 2012</th>
</tr>
</thead>
</table>

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### C. Other Program Funding Summary ($ in Millions)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>N/A</td>
<td></td>
</tr>
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</table>

### D. Acquisition Strategy

Not applicable.

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### E. Performance Metrics

The intent of the North Atlantic Treaty Organization (NATO) cooperative R&D program is to provide "start-up" funds for projects seeking allied contributions into cooperative research and development projects with the U.S. The primary metric used in the program is foreign contributions into projects supported by the program. The performance goal is met if total foreign contributions into projects exceed total NATO cooperative R&D program funds by over 100%.
### Product Development ($ in Millions)

<table>
<thead>
<tr>
<th>Cost Category Item</th>
<th>Contract Method &amp; Type</th>
<th>Performing Activity &amp; Location</th>
<th>Total Prior Years Cost</th>
<th>Cost</th>
<th>Award Date</th>
<th>FY 2011</th>
<th>FY 2012 Base</th>
<th>FY 2012 OCO</th>
<th>FY 2012 Total</th>
<th>Cost To Complete</th>
<th>Total Cost</th>
<th>Target Value of Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developmental Test and Evaluation</td>
<td>C/FP</td>
<td>NUWC:Newport, RI</td>
<td>1.002</td>
<td>-</td>
<td>-</td>
<td>0.350</td>
<td>Sep 2012</td>
<td>-</td>
<td>0.350</td>
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<td>Continuing</td>
<td>Continuing</td>
</tr>
<tr>
<td>Developmental Test and Evaluation</td>
<td>C/FP</td>
<td>SPAWAR:San Diego, CA</td>
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<td>1.750</td>
<td>Sep 2012</td>
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<td>1.750</td>
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<td>Continuing</td>
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<tr>
<td>Developmental Test and Evaluation</td>
<td>C/FP</td>
<td>NAVAIR:Pax River, MD</td>
<td>0.500</td>
<td>0.500</td>
<td>Sep 2011</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>Continuing</td>
<td>Continuing</td>
<td>Continuing</td>
</tr>
<tr>
<td>Developmental Test and Evaluation</td>
<td>C/FP</td>
<td>NRL:Washington, DC</td>
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<td>Sep 2011</td>
<td>1.500</td>
<td>Sep 2012</td>
<td>-</td>
<td>1.500</td>
<td>Continuing</td>
<td>Continuing</td>
<td>Continuing</td>
</tr>
<tr>
<td>Developmental Test and Evaluation</td>
<td>C/FP</td>
<td>NAWC:Port Mugu, CA</td>
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<td>Continuing</td>
<td>Continuing</td>
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<tr>
<td>Developmental Test and Evaluation</td>
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<tr>
<td><strong>Subtotal</strong></td>
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<td>9.140</td>
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</tbody>
</table>

### Support ($ in Millions)

<table>
<thead>
<tr>
<th>Cost Category Item</th>
<th>Contract Method &amp; Type</th>
<th>Performing Activity &amp; Location</th>
<th>Total Prior Years Cost</th>
<th>Cost</th>
<th>Award Date</th>
<th>FY 2011</th>
<th>FY 2012 Base</th>
<th>FY 2012 OCO</th>
<th>FY 2012 Total</th>
<th>Cost To Complete</th>
<th>Total Cost</th>
<th>Target Value of Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACQ Workforce Fund</td>
<td>Various</td>
<td>Various:Various</td>
<td>0.049</td>
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<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>0.049</td>
<td></td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td></td>
<td></td>
<td>0.049</td>
<td>-</td>
<td></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.049</td>
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<td></td>
</tr>
</tbody>
</table>

### Project Cost Totals

<table>
<thead>
<tr>
<th>Total Prior Years Cost</th>
<th>FY 2011</th>
<th>FY 2012 Base</th>
<th>FY 2012 OCO</th>
<th>FY 2012 Total</th>
<th>Cost To Complete</th>
<th>Total Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>20.919</td>
<td>9.196</td>
<td>9.140</td>
<td>-</td>
<td>9.140</td>
<td>0.049</td>
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</tbody>
</table>

Remarks
<table>
<thead>
<tr>
<th>APPROPRIATION/BUDGET ACTIVITY</th>
<th>R-1 ITEM NOMENCLATURE</th>
<th>PROJECT</th>
</tr>
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<tbody>
<tr>
<td>1319: Research, Development, Test &amp; Evaluation, Navy</td>
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</tr>
<tr>
<td>BA 4: Advanced Component Development &amp; Prototypes (ACD&amp;P)</td>
<td></td>
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</tr>
</tbody>
</table>

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Navy

DATE: February 2011
### Schedule Details

<table>
<thead>
<tr>
<th>Events by Sub Project</th>
<th>Start</th>
<th>End</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Quarter</td>
<td>Year</td>
</tr>
<tr>
<td><strong>NATO Agreements</strong></td>
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</tr>
<tr>
<td>International Agreements</td>
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<td>2010</td>
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</tbody>
</table>