Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy

DATE: February 2012

APPROPRIATION/BUDGET ACTIVITY
1319: Research, Development, Test & Evaluation, Navy
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
PE 0101402N: Navy Strategic Comms

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A. Mission Description and Budget Item Justification

The Shore to Ship Communications System develops communication system elements which provide positive command and control of deployed submarines. The Shore to Ship Communications System provides continuous assessment of the command and control links between the National Command Authority and missile platforms and is conducted to ensure compliance with Nuclear Technical Performance Criteria (NTPC). The Shore to Ship Communications System addresses joint system design issues for Emergency Action Message (EAM) distribution to all nuclear platforms and provides evaluation of joint interoperability of EAM delivery systems. Tools are developed to provide strategic command and control planning within the submarine shore infrastructure to support deployed ballistic missile submarines.

Funds will be used for development activities necessary to increase development in Low Band Universal Communications System (LBUCS) to reach Milestone C.

The E-6B Block I modification program corrects Airborne National Command Post program Follow-On Operational Test and Evaluation operational suitability deficiencies and addresses legacy system obsolescence issues. Without the Block I program, legacy system obsolescence will result in several unsupportable mission systems. Block I designs, develops, integrates, and tests a multi-level security system, open systems architecture; replaces the intercommunications and Mission Computer Set; modifies the cooling, electrical, and Ultra-High Frequency Command, Control and Communications system; and addresses internet protocol bandwidth expansion impacts to pre-Block I baseline aircraft. Block I adds operator workstations throughout the aircraft to reduce workload and improve system interoperability, and provides a foundation for evolutionary upgrades. Other modifications (Block IIA engineering change proposal) include: an additional auxiliary power unit to enhance power and cooling capabilities supporting the additional systems in the multi-level security system, open systems architecture, a very low frequency transmitter obsolescence replacement, and a high power transmit set subsystem refurbishment.
## B. Program Change Summary ($ in Millions)

<table>
<thead>
<tr>
<th>Description</th>
<th>FY 2011</th>
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<th>FY 2013 Base</th>
<th>FY 2013 OCO</th>
<th>FY 2013 Total</th>
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<td>• Congressional Directed Reductions</td>
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<td>• Congressional Rescissions</td>
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<td>• Congressional Adds</td>
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<td>• Congressional Directed Transfers</td>
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<td>• Reprogrammings</td>
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<td>Adjustments</td>
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</table>

### Change Summary Explanation

**Schedule:**

(1083) LBUCS: LBUCS Transmit incurred a one-year delay to Milestone C. Schedule delays were realized due to two issues: award of the LBUCS Transmit development contract was delayed due to longer than anticipated proposal evaluation; and implementation of technical changes were necessary after review of the contractor's Preliminary Design Review (PDR) package.

(3002) Due to testing deficiencies and delays, the Systems Integration Lab (SIL) and Aircraft Developmental Testing for Block I was extended to 4Q FY10. This caused a delay in the Block I operational testing and operational evaluation (OPEVAL). The Low Rate Initial Production was extended to 3Q FY13. The Block I full rate production decision and contract award was delayed until 3Q FY12 - until the completion of the Block I operational testing and OPEVAL.

Technical: Not applicable.
**A. Mission Description and Budget Item Justification**

This program develops communication system elements which provide positive Nuclear Command, Control and Communications (NC3) from originator to execution platforms. This portfolio of programs provides design and development for shore-to-ship transmit and receive communications systems.

The Low Band Universal Communications System (LBUCS) is a modernization program that will upgrade the transmit and receive subsystems of the Fixed Submarine Broadcast System (FSBS) which are approaching their operational end of life. LBUCS will ensure operational capability through the Very Low Frequency (VLF) architecture by providing system life extension and flexibility of submarine broadcast traffic to submarines operating in a stealth posture. The flexibility includes enhanced throughput and anti-jam capability, ensuring more operational products are delivered to a submarine without risking mast exposure. The flexibility further includes a simplified shore architecture to maintain capability while maximizing use of shore nodes (Broadcast Keying Sites). LBUCS also provides an upgrade to the VLF receive system, with all interoperable waveforms, to ensure continued compliance with Nuclear Technical Performance Criteria.

The NC3 Long Term Solution (LTS) will provide an assessment of Information Assurance (IA) measures and alternatives to the legacy Nova messaging system and NC3 Information eXchange Terminal (NIXT) which supports the dissemination of Emergency Action Messages (EAMs) and other NC2 messages between Senior Leadership (The President of the United States, Secretary of Defense, and Chairman of the Joint Chiefs of Staff), Combatant Commanders and United States nuclear force elements.

The Strategic Communications Assessment Program /Continued Evaluation Program provides constant assessment of the effectiveness of the end-to-end NC2 network and analysis of system performance in various mission locations.

Concept Development/System Planning provides Network Enabled Operation (NEO) that addresses Allied interoperability issues for submarine communications in an internet protocol environment. As new technologies are realized, coalition architectures are developed and tested to ensure continued interoperability. The United States/United Kingdom VLF Project Agreement provides mutual improvements to VLF transmission and reception capabilities for submarine operations by evolving and demonstrating modern technologies and advanced waveform techniques. Concept Development/System Planning also provides for the modeling of unique Very Low Frequency/Low Frequency (VLF/LF) submarine communications capabilities which include large physical shore broadcast antennas, underwater depth penetration studies and interoperable VLF waveform analysis. Technologies to improve high voltage insulators, helix house bushings and antenna components used in the fixed VLF transmit systems are evaluated and tested through the High Voltage Improvement Program. Development of information assurance solutions for the Broadcast Control Authority (BCA) and Submarine Operating Authority wide area network are being investigated to mitigate vulnerability concerns.
**UNCLASSIFIED**

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy

Appropriation/Budget Activity

<table>
<thead>
<tr>
<th>1319: Research, Development, Test &amp; Evaluation, Navy</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA 7: Operational Systems Development</td>
</tr>
</tbody>
</table>

PE 0101402N: Navy Strategic Comms

Project

| 1083: Shore To Ship Com System |

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

<table>
<thead>
<tr>
<th>Title</th>
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<th>FY 2012</th>
<th>FY 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Title:</strong> Low Band Universal Communication System (LBUCS)</td>
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<tr>
<td><strong>FY 2012 Plans:</strong></td>
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<tr>
<td>- Complete technical readiness review for transmit terminal.</td>
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<tr>
<td>- Take receipt of LBUCS Transmit production representative articles.</td>
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<tr>
<td>- Complete statutory and regulatory acquisition documentation in preparation for FY13 LBUCS Transmit Milestone C, including the capability production document and information support plan.</td>
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<tr>
<td>- Commence LBUCS Transmit Developmental Testing (DT) and Operational Assessment (OA).</td>
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<tr>
<td><strong>FY 2013 Plans:</strong></td>
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<td></td>
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<tr>
<td>- Complete LBUCS Transmit DT and OA.</td>
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<tr>
<td>- Achieve LBUCS Transmit Milestone C.</td>
<td></td>
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<tr>
<td>- Commence LBUCS Receive development.</td>
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<tr>
<td>- Complete LBUCS Receive Preliminary Design Review (PDR) and Critical Design Review (CDR).</td>
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<tr>
<td>- Commence development of a new Very Low Frequency (VLF) mode, which will be incorporated into the LBUCS Receive development effort.</td>
<td></td>
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</tr>
<tr>
<td>- Commence Submarine Operating Authority Wide Area Network (SWAN) Information Assurance (IA) upgrade development.</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Title</th>
<th>FY 2011</th>
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<th>FY 2013</th>
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</thead>
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<tr>
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<tr>
<td>- Complete Navy NC3 Assessment.</td>
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<td><strong>FY 2013 Plans:</strong></td>
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<tr>
<td><strong>Title:</strong> Strategic Communications Assessment Program (SCAP)/Continuing Evaluation Program (CEP)</td>
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<td><strong>FY 2012 Plans:</strong></td>
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<tr>
<td>- Provide reports on performance, adherence to delivery time requirements and shortfalls.</td>
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<tr>
<td>- Continue development of automated data collection and analysis tools to reduce latency time between missions and results availability.</td>
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<tr>
<td><strong>FY 2013 Plans:</strong></td>
<td></td>
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<tr>
<td>- Continue mission analysis of SSBN EAM reception for SSBN patrols.</td>
<td></td>
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<tr>
<td>- Provide reports on performance, adherence to delivery time requirements and shortfalls.</td>
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</table>
### B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)

**Title:** Concept Development/Systems Planning

<table>
<thead>
<tr>
<th>FY 2011</th>
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<th>FY 2013</th>
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<tbody>
<tr>
<td>-</td>
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<td>0.804</td>
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</table>

**FY 2012 Plans:**
- Continue the integration of Joint/Allied Network Enabled Operation (NEO) with C4I applications.

**FY 2013 Plans:**
- Prepare and submit final NEO report to include results and recommendations.
- Assess US/UK performance requirements to determine which concepts to pursue.

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**Title:** High Voltage Improvement Program

<table>
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<tr>
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**FY 2012 Plans:**
- Complete examination of aging for laminated wood used in VLF/LF Helix Houses.
- Complete examination of new ferrites to reduce the loss and size of the VLF/LF Helix House enclosure.
- Complete examination of partial-discharge for early detection of Helix House issues.
- Complete examination of outdoor Helix House effort.
- Commence examination of aging for multi-conductor High-Q inductor cable used in VLF/LF Helix Houses.

**FY 2013 Plans:**
- Continue examination of aging for multi-conductor High-Q inductor cable used in VLF/LF Helix Houses.
- Commence examination of innovative lighting methods for high voltage VLF/LF towers.

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**Title:** Broadcast Control Authority

<table>
<thead>
<tr>
<th>FY 2011</th>
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<tbody>
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<td>-</td>
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</table>

**FY 2012 Plans:**
- Commence development of Submarine Operating Authority (SUBOPAUTH) communications tools including file repository, Operation Schedule (OpSked) Editor, Submarine Notes (SubNotes) Editor, and Web Off The Air Monitor (WebOTAM).
- Continue to develop candidate SUBOPAUTH options for information assurance integration.

**FY 2013 Plans:**
UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy

APPROPRIATION/BUDGET ACTIVITY
1319: Research, Development, Test & Evaluation, Navy
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
PE 0101402N: Navy Strategic Comms

PROJECT
1083: Shore To Ship Com System

DATE: February 2012

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

FY 2011 FY 2012 FY 2013
-Continue development of SUBOPAUTH communications tools including file repository, OpSked Editor, SubNotes Editor, and WebOTAM.

Accomplishments/Planned Programs Subtotals - 14.430 18.187

C. Other Program Funding Summary ($ in Millions)

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D. Acquisition Strategy

Low Band Universal Communications System (LBUCS): LBUCS is the modernization program that will upgrade the Transmit and Receive subsystems of the Fixed Submarine Broadcast System which are approaching their operational end of life. A cost plus incentive fee contract was awarded for Transmit subsystem development in 4Q FY09 with three sequential fixed price options Contract Line Item Numbers for production and deployment. The development of LBUCS Receive will commence in FY13.

E. Performance Metrics

LBUCS FY13: Complete LBUCS Transmit developmental testing and operational assessment. Achieve LBUCS Transmit Milestone C. Complete LBUCS Receive preliminary design review and critical design review.

Strategic Communications Assessment Program/Continuing Evaluation Program FY13: Delivery of Submersible Ballistic Nuclear Submarine (SSBN) patrol reports.


Broadcast Control Authority FY13: Delivery of design options to incorporate information assurance capability.
## Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy

### APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

### R-1 ITEM NOMENCLATURE

PE 0101402N: Navy Strategic Comms

### PROJECT

1083: Shore To Ship Com System

### Product Development ($ in Millions)

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<th>FY 2013 Base</th>
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<th>FY 2013 Total</th>
<th>Cost To Complete</th>
<th>Total Cost</th>
<th>Target Value of Contract</th>
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**Remarks**

Total prior years cost amounts shown are from PE 0204163N and are provided for context.

### Support ($ in Millions)

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<th>Cost Category Item</th>
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<th>FY 2013 OCO</th>
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<th>Cost To Complete</th>
<th>Total Cost</th>
<th>Target Value of Contract</th>
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<tr>
<td>Software Development</td>
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<td>0.466 Oct 2012</td>
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<td>Acquisition/Program Development</td>
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<td>LBUCS: Logistics Support</td>
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<td>LBUCS: Information Assurance</td>
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<td>Oct 2011</td>
<td>0.272 Oct 2012</td>
<td>-</td>
<td>0.272</td>
<td>0.000 0.272</td>
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</tr>
<tr>
<td>LBUCS: Information Assurance</td>
<td>WR</td>
<td>SSC PAC:San Diego, CA</td>
<td>- -</td>
<td>-</td>
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<td>-</td>
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<td>LBUCS: Technical Data</td>
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<td>0.000 0.236</td>
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### Support ($ in Millions)

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<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>FY 2012&lt;br&gt;Award Date</th>
<th>FY 2013&lt;br&gt;Award Date</th>
<th>FY 2013 Total</th>
<th>Cost To Complete</th>
<th>Target Value of Contract</th>
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<tbody>
<tr>
<td>LBUCS: Acquisition/Program Development</td>
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<td>LBUCS: Cost Estimating</td>
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<td>Oct 2011</td>
<td>0.235</td>
<td>Oct 2012</td>
<td>-</td>
<td>0.235</td>
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<tr>
<td>NC3 LTS: Information Assurance</td>
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</tr>
<tr>
<td>NC3 LTS: Technical Data</td>
<td>C/CPFF</td>
<td>ANSOL:San Diego, CA</td>
<td>0.884</td>
<td>Oct 2011</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>NC3 LTS: Acquisition/Program Development</td>
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<td>CSA:San Diego, CA</td>
<td>1.208</td>
<td>Oct 2011</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>NC3 LTS: Logistics Support</td>
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<td>0.972</td>
<td>Oct 2011</td>
<td>-</td>
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<tr>
<td>NC3 LTS: Systems Engineering</td>
<td>C/CPFF</td>
<td>FSI:San Diego, CA</td>
<td>0.920</td>
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<td>-</td>
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<tr>
<td>NC3 LTS: Systems Engineering</td>
<td>MIPR</td>
<td>MITRE:San Diego, CA</td>
<td>7.622</td>
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<td>-</td>
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<tr>
<td>NC3 LTS: Cost Estimating</td>
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<tr>
<td>Shore to Ship: Software Development</td>
<td>WR</td>
<td>SSC PAC:San Diego, CA</td>
<td>0.229</td>
<td>Oct 2011</td>
<td>0.207</td>
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<tr>
<td>Shore to Ship: Studies and Design</td>
<td>WR</td>
<td>SSC PAC:San Diego, CA</td>
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<tr>
<td>Shore to Ship: Broadcast Control Authority</td>
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<td><strong>Subtotal</strong></td>
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<td><strong>34.908</strong></td>
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<td><strong>10.516</strong></td>
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</table>

**Remarks**
Total prior years cost amounts shown are from PE 0204163N and are provided for context.

---

**Exhibit R-3, RDT&E Project Cost Analysis:** PB 2013 Navy

**R-1 Item Nomenclature:** PE 0101402N: Navy Strategic Comms

**Project:** 1083: Shore To Ship Com System

**Date:** February 2012

**Appropriation/Budget Activity:** 1319: Research, Development, Test & Evaluation, Navy

**BA 7:** Operational Systems Development
### Test and Evaluation ($ 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>FY 2012</th>
<th>FY 2013 Base</th>
<th>FY 2013 OCO</th>
<th>FY 2013 Total</th>
<th>Cost To Complete</th>
<th>Total Cost</th>
<th>Target Value of Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>LBUCS: System Testing</td>
<td>WR</td>
<td>COTF:Norfolk, VA</td>
<td>0.177</td>
<td>0.150</td>
<td>Oct 2011</td>
<td>0.300 Oct 2012</td>
<td>-</td>
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<tr>
<td>LBUCS: System Testing</td>
<td>WR</td>
<td>SSC PAC:San Diego, CA</td>
<td>0.238</td>
<td>0.260</td>
<td>Oct 2011</td>
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<tr>
<td>NC3 LTS: System Testing</td>
<td>WR</td>
<td>COTF:Norfolk, VA</td>
<td>0.206</td>
<td>0.142</td>
<td>Oct 2011</td>
<td>- Oct 2012</td>
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<td><strong>Subtotal</strong></td>
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### Remarks
- Total prior years cost amounts shown are from PE 0204163N and are provided for context.

### Management Services ($ in Millions)

<table>
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<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>FY 2012</th>
<th>FY 2013 Base</th>
<th>FY 2013 OCO</th>
<th>FY 2013 Total</th>
<th>Cost To Complete</th>
<th>Total Cost</th>
<th>Target Value of Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractor Engineering Support</td>
<td>MIPR</td>
<td>MITRE:San Diego, CA</td>
<td>1.777</td>
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<td>-</td>
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<tr>
<td>LBUCS: Travel</td>
<td>WR</td>
<td>SSC PAC:San Diego, CA</td>
<td>0.266</td>
<td>0.100</td>
<td>Oct 2011</td>
<td>0.100 Oct 2012</td>
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<td>NC3 LTS: Government Engineering Support</td>
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<td>NC3: Travel</td>
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<td><strong>Subtotal</strong></td>
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<td>11.977</td>
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</table>

### Remarks
- Total prior years cost amounts shown are from PE 0204163N and are provided for context.
### Project Cost Analysis

**Exhibit R-3, RDT&E Project Cost Analysis:** PB 2013 Navy

**DATE:** February 2012

**APPROPRIATION/BUDGET ACTIVITY**

<table>
<thead>
<tr>
<th>PE 0101402N: Navy Strategic Comms</th>
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</table>

**R-1 ITEM NOMENCLATURE**

<table>
<thead>
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</thead>
</table>

**PROJECT**

<table>
<thead>
<tr>
<th>1083: Shore To Ship Com System</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Total Prior Years Cost</th>
<th>FY 2012</th>
<th>FY 2013 Base</th>
<th>FY 2013 OCO</th>
<th>FY 2013 Total</th>
<th>Cost To Complete</th>
<th>Total Cost</th>
<th>Target Value of Contract</th>
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</table>

**Remarks**

- FY 2011 amounts shown are from PE 0204163N and are provided for context.
<table>
<thead>
<tr>
<th>APPROPRIATION/BUDGET ACTIVITY</th>
<th>R-1 ITEM NOMENCLATURE</th>
<th>PROJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1319: Research, Development, Test &amp; Evaluation, Navy</td>
<td>PE 0101402N: Navy Strategic Comms</td>
<td>1083: Shore To Ship Com System</td>
</tr>
<tr>
<td>BA 7: Operational Systems Development</td>
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</tbody>
</table>

**DATE:** February 2012
<table>
<thead>
<tr>
<th>APPROPRIATION/BUDGET ACTIVITY</th>
<th>R-1 ITEM NOMENCLATURE</th>
<th>PROJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1319: Research, Development, Test &amp; Evaluation, Navy</td>
<td>PE 0101402N: Navy Strategic Comms</td>
<td>1083: Shore To Ship Com System</td>
</tr>
</tbody>
</table>

**DATE:** February 2012
<table>
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<tr>
<th>APPROPRIATION/BUDGET ACTIVITY</th>
<th>R-1 ITEM NOMENCLATURE</th>
<th>PROJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1319: Research, Development, Test &amp; Evaluation, Navy</td>
<td>PE 0101402N: Navy Strategic Comms</td>
<td>1083: Shore To Ship Com System</td>
</tr>
<tr>
<td>BA 7: Operational Systems Development</td>
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</table>

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy

DATE: February 2012

PE 0101402N: Navy Strategic Comms

Navy
<table>
<thead>
<tr>
<th>EXHIBIT R-4, RDT&amp;E SCHEDULE PROFILE: PB 2013 Navy</th>
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</thead>
<tbody>
<tr>
<td>DATE: February 2012</td>
</tr>
<tr>
<td>APPROPRIATION/BUDGET ACTIVITY</td>
</tr>
<tr>
<td>1319: Research, Development, Test &amp; Evaluation, Navy</td>
</tr>
<tr>
<td>BA 7: Operational Systems Development</td>
</tr>
<tr>
<td>R-1 ITEM NOMENCLATURE</td>
</tr>
<tr>
<td>PE 0101402N: Navy Strategic Comms</td>
</tr>
<tr>
<td>PROJECT</td>
</tr>
<tr>
<td>1083: Shore To Ship Com System</td>
</tr>
<tr>
<td>Events by Sub Project</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
</tr>
<tr>
<td>Proj 1083</td>
</tr>
<tr>
<td>LBUCS: Production Representative Article (PRA) - Transmit</td>
</tr>
<tr>
<td>LBUCS: Capability Production Document (CPD) - Transmit</td>
</tr>
<tr>
<td>LBUCS: Critical Design Review (CDR) - Transmit</td>
</tr>
<tr>
<td>LBUCS: Technology Readiness Review (TRR) - Transmit</td>
</tr>
<tr>
<td>LBUCS: Developmental Test/Operational Assesment (DT/OA)</td>
</tr>
<tr>
<td>LBUCS: Production Representative Article (PRA) - Receive</td>
</tr>
<tr>
<td>LBUCS: Milestone-C (MS-C) - Transmit</td>
</tr>
<tr>
<td>LBUCS: Production Design Review (PDR) - Receive</td>
</tr>
<tr>
<td>LBUCS: Critical Design Review (CDR) - Receive</td>
</tr>
<tr>
<td>LBUCS: Low Rate Initial Production (LRIP) - Transmit</td>
</tr>
<tr>
<td>LBUCS: Developmental Test/Technical Evaluation (DT/TE)</td>
</tr>
<tr>
<td>LBUCS: Integrated Test (IT) - Transmit</td>
</tr>
<tr>
<td>LBUCS: Operational Test Readiness Review (OTRR) - Transmit</td>
</tr>
<tr>
<td>LBUCS: Operational Test (OT) - Transmit</td>
</tr>
<tr>
<td>LBUCS: Initial Operational Capability (IOC) - Transmit</td>
</tr>
<tr>
<td>LBUCS: Developmental Test/Operational Assesment (DT/OA)</td>
</tr>
<tr>
<td>LBUCS: Full Rate Production Milestone (FRP) - Transmit</td>
</tr>
<tr>
<td>LBUCS: EDM/Fielding Program Review (FPR) - Receive</td>
</tr>
<tr>
<td>LBUCS: Broadcast Keying Site (BKS) Full Rate Production (FRP) - Transmit</td>
</tr>
<tr>
<td>LBUCS: Broadcast Transmit Site (BTS) Full Rate Production (FRP) - Transmit</td>
</tr>
<tr>
<td>LBUCS: Full Rate Production (FRP) - Receive</td>
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### Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy

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<th>R-1 ITEM NOMENCLATURE</th>
<th>PROJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1319: Research, Development, Test &amp; Evaluation, Navy</td>
<td>PE 0101402N: Navy Strategic Comms</td>
<td>1083: Shore To Ship Com System</td>
</tr>
<tr>
<td>BA 7: Operational Systems Development</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### DATE: February 2012

<table>
<thead>
<tr>
<th>Events by Sub Project</th>
<th>Start Quarter</th>
<th>Start Year</th>
<th>End Quarter</th>
<th>End Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>LBUCS: Installation Broadcast Keying Site (BKS) - Transmit</td>
<td>1</td>
<td>2016</td>
<td>4</td>
<td>2016</td>
</tr>
<tr>
<td>LBUCS: Installation - Receive</td>
<td>1</td>
<td>2016</td>
<td>4</td>
<td>2017</td>
</tr>
<tr>
<td>LBUCS: Installation Broadcast Transmit Site (BTS) - Transmit</td>
<td>1</td>
<td>2017</td>
<td>4</td>
<td>2017</td>
</tr>
<tr>
<td>LBUCS: Full Operational Capability (FOC) - Transmit</td>
<td>4</td>
<td>2017</td>
<td>4</td>
<td>2017</td>
</tr>
<tr>
<td>NC3 LTS: Capabilities Design Document (CDD)</td>
<td>1</td>
<td>2011</td>
<td>2</td>
<td>2011</td>
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<td>NC3 LTS: Test &amp; Evaluation Master Plan (TEMP)</td>
<td>1</td>
<td>2011</td>
<td>1</td>
<td>2012</td>
</tr>
<tr>
<td>NC3 LTS: Navy NC3 Assessment</td>
<td>4</td>
<td>2012</td>
<td>4</td>
<td>2012</td>
</tr>
<tr>
<td>CEP: Studies and Analysis</td>
<td>1</td>
<td>2011</td>
<td>4</td>
<td>2017</td>
</tr>
<tr>
<td>CEP: Analysis Automation</td>
<td>3</td>
<td>2013</td>
<td>3</td>
<td>2013</td>
</tr>
<tr>
<td>CEP: Task Order</td>
<td>1</td>
<td>2013</td>
<td>1</td>
<td>2013</td>
</tr>
</tbody>
</table>
A. Mission Description and Budget Item Justification
The E-6B Block I modification program corrects Airborne National Command Post program Follow-On Operational Test and Evaluation operational suitability deficiencies and addresses legacy system obsolescence issues. Without the Block I program, legacy system obsolescence will result in several unsupportable mission systems. Block I designs, develops, integrates, and tests a Multi-Level Security (MLS) system, Open Systems Architecture (OSA); replaces the intercommunications and Mission Computer Set; modifies the cooling, electrical, and Ultra-High Frequency Command, Control and Communications system; and addresses Internet Protocol Bandwidth Expansion impacts to pre-Block I baseline aircraft. Block I adds operator workstations throughout the aircraft to reduce workload and improve system interoperability, and provides a foundation for evolutionary upgrades. Other modifications (Block IA Engineering Change Proposal (ECP)) include: an additional Auxiliary Power Unit to enhance power and cooling capabilities supporting the additional systems in the MLS system, OSA, a Very Low Frequency Transmitter obsolescence replacement, and a High Power Transmit Set subsystem refurbishment.

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

<table>
<thead>
<tr>
<th>Title:</th>
<th>Conduct Developmental Test (DT) Governmental Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2011 Accomplishments:</td>
<td>Completed Block I Developmental Testing (DT) and continued Block IA ECP DT Governmental Training efforts.</td>
</tr>
<tr>
<td>FY 2012 Plans:</td>
<td>Continue Block IA ECP DT Governmental Training efforts.</td>
</tr>
<tr>
<td>FY 2013 Plans:</td>
<td>Complete Block IA ECP DT Governmental Training efforts.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title:</th>
<th>Conduct DT Support Training</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2011 Accomplishments:</td>
<td>Continued work towards completion of Block IA ECP DT Support Training efforts.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title:</th>
<th>Prototype Aircraft Installation</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY 2011 Accomplishments:</td>
<td>Continued work towards completion of Block IA ECP DT Support Training efforts.</td>
</tr>
</tbody>
</table>
UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy

DATE: February 2012

APPROPRIATION/BUDGET ACTIVITY
1319: Research, Development, Test & Evaluation, Navy
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
PE 0101402N: Navy Strategic Comms

PROJECT
3002: Navy Strategic Comm Project

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

<table>
<thead>
<tr>
<th>FY 2011</th>
<th>FY 2012</th>
<th>FY 2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completed Block I Prototype Aircraft installation efforts and continued Block IA ECP Prototype Aircraft installation efforts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY 2012 Plans:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Continue Block IA ECP Prototype Aircraft installation efforts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FY 2013 Plans:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complete Block IA ECP Prototype Aircraft installation efforts.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Title:</strong> Developmental/Operational Testing</td>
<td></td>
<td></td>
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<tr>
<td><strong>Articles:</strong></td>
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<tr>
<td>-</td>
<td>0.498</td>
<td>-</td>
</tr>
<tr>
<td>FY 2012 Plans:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Begin and complete Block IA ECP operational testing to obtain a successful OPEVAL report.</td>
<td></td>
<td></td>
</tr>
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</table>

| Accomplishments/Planned Programs Subtotals | 9.492 | 8.778 | 1.021 |

C. Other Program Funding Summary ($ in Millions)

<table>
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<tr>
<th></th>
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<tbody>
<tr>
<td>APN 056400: E-6 A/B Series</td>
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<td>158.332</td>
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<td>201.178</td>
<td>204.704</td>
<td>270.319</td>
<td>1,868.795</td>
</tr>
</tbody>
</table>

D. Acquisition Strategy

Competitively awarded Cost Plus Award Fee development contract. The current contract was modified on 13 April 2007 to a Cost Plus Incentive Fee contract. A new sole source Firm Fixed Price (FFP) contract was awarded for LRIP in 4th quarter of FY2010 with Full Rate Production being a new sole source follow-on FFP contract.

E. Performance Metrics

Block I Milestone C decision achieved in 3rd quarter FY2010.
FRP Contract Award planned for 3rd quarter FY2012.
Block I IOC planned for 1st quarter FY2014.
## Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy

**APPROPRIATION/BUDGET ACTIVITY**
1319: Research, Development, Test & Evaluation, Navy  
BA 7: Operational Systems Development

**R-1 ITEM NOMENCLATURE**
PE 0101402N: Navy Strategic Comms

**PROJECT**
3002: Navy Strategic Comm Project

---

### 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>Award Date</th>
<th>Cost</th>
<th>Award Date</th>
<th>Award Date</th>
<th>Cost</th>
<th>Award Date</th>
<th>Award Date</th>
<th>Cost</th>
<th>Award Date</th>
<th>Target Value of Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary Hardware Development Block I *</td>
<td>C/CPIF</td>
<td>Rockwell Collins:Cedar Rapids, IA</td>
<td>142.880</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>142.880</td>
</tr>
<tr>
<td>Award Fees</td>
<td>C/CPAF</td>
<td>Rockwell Collins:Cedar Rapids, IA</td>
<td>3.751</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>3.751</td>
</tr>
<tr>
<td>Primary Hardware Development Block IA ECP**</td>
<td>C/CPIF</td>
<td>Rockwell Collins:Cedar Rapids, IA</td>
<td>31.641 8.000 Dec 2011</td>
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**Remarks**
* The Rockwell Collins Primary Hardware Development Block I contract was converted from a Competitively Awarded/Cost plus Award Fee to a Cost Plus Incentive Fee beginning in FY07.  
** The Rockwell Collins Primary Hardware Development Block IA Engineering Change Proposal (ECP) contract was definitized in July 2010.

### 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>Award Date</th>
<th>Cost</th>
<th>Award Date</th>
<th>Award Date</th>
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<th>Cost</th>
<th>Award Date</th>
<th>Target Value of Contract</th>
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<tbody>
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<td>Studies &amp; Analyses</td>
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### Test and Evaluation ($ in Millions)

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## Test and Evaluation ($ in Millions)

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<th>Contract Method &amp; Type</th>
<th>Performing Activity &amp; Location</th>
<th>Total Prior Years Cost</th>
<th>FY 2012 Cost</th>
<th>FY 2013 Base Cost</th>
<th>FY 2013 OCO Cost</th>
<th>FY 2013 Total Cost</th>
<th>Cost To Complete</th>
<th>Total Cost</th>
<th>Target Value of Contract</th>
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<tbody>
<tr>
<td>Other Support</td>
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## Management Services ($ in Millions)

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<th>Performing Activity &amp; Location</th>
<th>Total Prior Years Cost</th>
<th>FY 2012 Cost</th>
<th>FY 2013 Base Cost</th>
<th>FY 2013 OCO Cost</th>
<th>FY 2013 Total Cost</th>
<th>Cost To Complete</th>
<th>Total Cost</th>
<th>Target Value of Contract</th>
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<td>Travel</td>
<td>WR</td>
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<td><strong>64.859</strong></td>
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## Total Prior Years Cost

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<th>Total Prior Years Cost</th>
<th>FY 2012</th>
<th>FY 2013 Base</th>
<th>FY 2013 OCO</th>
<th>FY 2013 Total</th>
<th>Cost To Complete</th>
<th>Total Cost</th>
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<tbody>
<tr>
<td><strong>Project Cost Totals</strong></td>
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## Remarks
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<th>R-1 ITEM NOMENCLATURE</th>
<th>PROJECT</th>
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<tr>
<td>1319: Research, Development, Test &amp; Evaluation, Navy</td>
<td>PE 0101402N: Navy Strategic Comms</td>
<td>3002: Navy Strategic Comm Project</td>
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<tr>
<td>BA 7: Operational Systems Development</td>
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</table>

DATE: February 2012

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy
## Schedule Details

<table>
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<tr>
<th>Events by Sub Project</th>
<th>Start</th>
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<tr>
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<td>Quarter</td>
<td>Year</td>
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<tr>
<td><strong>Navy Strategic Communications</strong></td>
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<td>Acquisition Milestones: Production: LRIP Phase (APN)</td>
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<td>Acquisition Milestones: Production: Full Rate Production (FRP) (Blk I)</td>
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<td>Test and Evaluation: Operational Evaluation: Operational Testing (OPEVAL) (Blk I)</td>
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<td>Production Milestones: Decisions: Full Rate Production (FRP) Decision/Start (Blk I)</td>
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<td>Deliveries: FRP Deliveries: FRP Block I Deliveries</td>
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