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**Exhibit R-2, RDT&E Budget Item Justification:** PB 2017 Navy **Date:** February 2016

<b>Appropriation/Budget Activity</b> 1319: <i>Research, Development, Test &amp; Evaluation, Navy I BA 6: RDT&amp;E Management Support</i>					<b>R-1 Program Element (Number/Name)</b> PE 0605126N I (U) <i>Joint Theater Air and Missile Defense Org</i>							
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
Total Program Element	0.000	4.800	6.995	2.998	-	2.998	0.140	0.046	0.000	0.000	0.000	14.979
3307: <i>Maritime Integrated Air and Missile Defense (IAMD) Processing Sys (MIPS)</i>	0.000	4.800	6.995	2.998	-	2.998	0.140	0.046	0.000	0.000	0.000	14.979

**A. Mission Description and Budget Item Justification**

Maritime Integrated Air and Missile Defense (IAMD) Planning System (MIPS) is an automated air and missile defense planning tool that supports the Joint Force Maritime Component Commander at the operational level of war by automatically and optimally allocating and stationing ships in support of Ballistic Missile Defense (BMD) and Anti-Air Warfare (AAW). MIPS contains United States Army Patriot and Terminal High Altitude Air Defense (THAAD) models to ensure synergistic allocation and positioning of maritime units in relation to other joint units, providing optimized mutual defense for selected defended assets against selected BMD and AAW threats. MIPS completed developing significantly improved inorganic Ballistic Missile Defense planning capabilities through the incorporation of Long Range Surveillance and Training, Cued Engagement, and Launch on Tactical Digital Information Links (TADIL) planning functionality. In FY2015, MIPS began development to deliver an automated planning capability for Naval Integrated Fire Control-Counter Air (NIFC-CA) operations.

<b>B. Program Change Summary (\$ in Millions)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
Previous President's Budget	4.960	6.995	3.238	-	3.238
Current President's Budget	4.800	6.995	2.998	-	2.998
Total Adjustments	-0.160	0.000	-0.240	-	-0.240
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.160	0.000			
• Program Adjustments	0.000	0.000	-0.240	-	-0.240

**Change Summary Explanation**

Decrease in Joint Theater Air and Missile Defense Org by \$.125M was required for the Department of the Navy to comply with the Bipartisan Budget Act of 2015.

The FY 2017 funding request was reduced by \$.115 million to account for the availability of prior year execution balances.

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<b>Exhibit R-2A, RDT&amp;E Project Justification:</b> PB 2017 Navy										<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 1319 / 6					<b>R-1 Program Element (Number/Name)</b> PE 0605126N / (U)Joint Theater Air and Missile Defense Org				<b>Project (Number/Name)</b> 3307 / Maritime Integrated Air and Missile Defense (IAMD) Processing Sys (MIPS)			
<b>COST (\$ in Millions)</b>	<b>Prior Years</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>	<b>FY 2018</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>Cost To Complete</b>	<b>Total Cost</b>
3307: <i>Maritime Integrated Air and Missile Defense (IAMD) Processing Sys (MIPS)</i>	0.000	4.800	6.995	2.998	-	2.998	0.140	0.046	0.000	0.000	0.000	14.979
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

Maritime Integrated Air and Missile Defense (IAMD) Planning System (MIPS) is an automated air and missile defense planning tool that supports the Joint Force Maritime Component Commander at the operational level of war by automatically and optimally allocating and stationing ships in support of Ballistic Missile Defense (BMD) and Anti-Air Warfare (AAW). MIPS contains United States Army Patriot and Terminal High Altitude Air Defense (THAAD) models to ensure synergistic allocation and positioning of maritime units in relation to other joint units, providing optimized mutual defense for selected defended assets against selected BMD and AAW threats. MIPS completed developing significantly improved inorganic Ballistic Missile Defense planning capabilities through the incorporation of Long Range Surveillance and Training, Cued Engagement, and Launch on Tactical Digital Information Links (TADIL) planning functionality. In FY2015, MIPS began development to deliver an automated planning capability for Naval Integrated Fire Control-Counter Air (NIFC-CA) operations.

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

	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
<b>Title:</b> Systems Engineering	4.800	6.995	2.998	0.000	2.998
<b>Articles:</b>	-	-	-	-	-
<b>FY 2015 Accomplishments:</b> Developed Long Range Search and Track (LRS&T, Cued Engagement and Launch on TADIL (LoT) planning capability by: - Conducted Systems Engineering Technical Review (SETR). - Completed contractor testing and Development Testing & Operational Testing (DT&OT). - Achieved approval to field.					
Began developing CEC stationing, Bottom Contours and Naval Integrated Fire Control-Counter Air (NIFC-CA) planning capability by performing the following: - Completed NIFC-CA risk reduction prototyping. - Established development contract for design, development, implementation, testing and delivery of the NIFC-CA capability.					
<b>FY 2016 Plans:</b> Funding increase from FY2015 supports the development of the MIPS competitive contract.					

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<b>B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)</b>	<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017 Base</b>	<b>FY 2017 OCO</b>	<b>FY 2017 Total</b>
<p>Commence development of Phase 2, Increment I update to MIPS includes develop of Cooperative Engagement Capability (CEC) stationing, Bottom Contours and NIFC-CA planning capability by performing the following:</p> <ul style="list-style-type: none"> <li>- Receive required Government Furnished Information (GFI) to update the MIPS modeling to consider bottom contours, incorporate CEC capability in planning and NIFC-CA requirements.</li> <li>- Allocate the requirements for Bottom Contours, CEC Stationing and NIFC-CA to the MIPS system elements determining the area impacted and requiring development.</li> <li>- Conduct Production Design Review (PDR) and Critical Design Review (CDR) to ensure the development is properly managed and risks are properly managed.</li> <li>- Complete development of detailed design.</li> </ul> <p><b>FY 2017 Base Plans:</b></p> <ul style="list-style-type: none"> <li>- Conduct Test Readiness Review (TRR) to ensure system is ready for system level test.</li> <li>- Conduct acceptance testing, DT and perform testing planning for Initial Operational Test &amp; Evaluation (IOT&amp;E) in FY2018.</li> </ul> <p><b>FY 2017 OCO Plans:</b></p> <p>N/A</p>					
<b>Accomplishments/Planned Programs Subtotals</b>	4.800	6.995	2.998	0.000	2.998

**C. Other Program Funding Summary (\$ in Millions)**

N/A

**Remarks**

**D. Acquisition Strategy**

ACAT III designation granted February 2011 and will be initiated as a Program of Record at Milestone B. The MIPS Capabilities Development Document (CDD) is currently in Joint Staff Office and is expected to be completed early FY 2016.

Contracts:  
MIPS RDT&E FY15-FY17

**E. Performance Metrics**

FY15:  
- Commenced development of first increment NIFC-CA planning capability, and Bottom Contours, CEC stationing model updates.

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<ul style="list-style-type: none"><li>- Continued to conduct Developmental Tests (DT) and Operational Tests (OT) to support fielding the LRS&amp;T, Cued Engagement and Launch on TADIL updated.</li><li>- Conducted TIMs as needed to explore and resolve emergent design and requirement issues.</li></ul> <p>FY16:</p> <ul style="list-style-type: none"><li>- Continue development of first increment NIFC-CA planning capability, and Bottom Contours, CEC stationing model updates.</li><li>- Continue to conduct DT and OT to support fielding the new software.</li><li>- Continue TIMs as needed to explore and resolve emergent design and requirement issues.</li></ul> <p>FY17:</p> <p>Complete system development and prepare for IOT&amp;E occurring in FY2018.</p>		