

# UNCLASSIFIED

CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification								DATE: <b>June 2001</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RESEARCH DEVELOPMENT TEST &amp; EVALUATION, NAVY / BA-7</b>						R-1 ITEM NOMENCLATURE 0207163N AMRAAM					
COST (\$ in Millions)	Prior Year Cost	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Total PE Cost	40.301	13.063	12.011	10.795							
E0981 AMRAAM	40.301	13.063	12.011	10.795							
Quantity of RDT&E Articles	<b>Not Applicable</b>										
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:            This joint Navy/Air Force program is structured in response to the Joint Service Operational Requirement and Mission Element Need Statement to develop an air superiority air-to-air missile with significant improvements in operational utility and combat effectiveness. This program supports the integration of the AMRAAM into Navy aircraft with analysis of Navy unique applications, simulation capability development, aircraft missile integration tasks, pre-planned product improvement (P3I) efforts, and procurement of hardware to support Navy test and evaluation tasks.</p> <p>(U) JUSTIFICATION FOR BUDGET ACTIVITY:            This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it encompasses engineering and manufacturing development for upgrade of existing, operational systems.</p>											

R-1 SHOPPING LIST - Item No. 200

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**Exhibit R-2, RDTE Budget Item Justification**  
(Exhibit R-2, page 1 of 6)

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**CLASSIFICATION:**

EXHIBIT R-2a, RDT&E Project Justification								DATE: <b>June 2001</b>			
APPROPRIATION/BUDGET ACTIVITY <b>RDT&amp;E, N / BA-7</b>		PROGRAM ELEMENT NUMBER AND NAME 0207163N AMRAAM				PROJECT NUMBER AND NAME E0981 AMRAAM					
COST (\$ in Millions)	Prior Year Cost	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Project Cost	40.301	13.063	12.011	10.795							
RDT&E Articles Qty	<b>Not Applicable</b>										

**(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:**

This joint Navy/Air Force program is structured in response to the Joint Service Operational Requirement and Mission Element Need Statement to develop an air superiority air-to-air missile with significant improvements in operational utility and combat effectiveness. This program supports the integration of the AMRAAM into Navy aircraft with analysis of Navy unique applications, simulation capability development aircraft missile integration tasks, pre-planned product improvement (P3I) efforts, and procurement of hardware to support Navy test and evaluation tasks.

**(U) PROGRAM ACCOMPLISHMENTS AND PLANS:**

**1. FY 2000 ACCOMPLISHMENTS:**

- (U) (\$11.351) Continued systems engineering/aircraft integration activities in AMRAAM P3I Phase 3 EMD program (incorporating additional Air Force funding of \$49.597) conducting proof of design (POD) testing of Phase 3 components with emphasis on Navy unique compatibility requirements and aircraft integration/compatibility requirements. Conducted Phase 3 Preliminary Design Reviews. Continued Joint Tactical Air-to-Air Management Office (JTAAMO) Air-to-Air Roadmap activities including technology studies.

- (U) (\$1.462) Continued engineering support of AMRAAM, including investigation and analysis of technologies that offer potential improvements in AMRAAM lethality/performance and compatibility with related weapons systems.

- (U) (\$.250) Continued aircraft integration activities and test and evaluation for Navy unique requirements.

**2. FY2001 Plans:**

- (U) (\$9.855) Continue system engineering activities in AMRAAM P3I Phase 3 EMD program (incorporating Air Force funding of \$53.214) which include conducting proof of design (POD) testing of Phase 3 components, developing, coding, and testing P3I Phase 3 software, and integrating hardware and software into missile test articles for use in ground testing.

- (U) (\$1.534) Continue engineering support of AMRAAM, including investigation and analysis of technologies that offer potential improvements in AMRAAM lethality/performance and compatibility with related weapons systems.

- (U) (\$.250) Continue aircraft integration activities and test and evaluation for Navy unique requirements.

- (U) (.372) Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 USC 68.

**3. FY2002 Plans:**

- (U) (\$8.842) Continue system engineering activities in AMRAAM P3I Phase 3 EMD program (incorporating Air Force funding of \$57.707) which include fabrication and integration of proof of manufacturing (POM) hardware, and unit all-up-round missile ground qualification testing. Captive carriage flight-testing will also begin.

- (U) (\$1.503) Continue engineering support of AMRAAM, including investigation and analysis of technologies that offer potential improvements in AMRAAM lethality/performance and compatibility with related weapons systems.

- (U) (\$.450) Continue aircraft integration activities and test and evaluation for Navy unique requirements.

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<p>(U) B. PROGRAM CHANGE SUMMARY:</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"></th> <th style="text-align: center;"><u>FY2000</u></th> <th style="text-align: center;"><u>FY2001</u></th> <th style="text-align: center;"><u>FY2002</u></th> </tr> </thead> <tbody> <tr> <td>(U) FY 2001 President's Budget:</td> <td style="text-align: right;">13.469</td> <td style="text-align: right;">12.140</td> <td style="text-align: right;">10.831</td> </tr> <tr> <td>(U) Adjustments from the President's Budget:</td> <td style="text-align: right;">(0.406)</td> <td style="text-align: right;">(0.129)</td> <td style="text-align: right;">(0.036)</td> </tr> <tr> <td>(U) FY 2002 President's Budget:</td> <td style="text-align: right;">13.063</td> <td style="text-align: right;">12.011</td> <td style="text-align: right;">10.795</td> </tr> </tbody> </table> <p>CHANGE SUMMARY EXPLANATION:</p> <p>(U) Funding: The FY 2000 net decrease of \$.406 million reflects a reduction of \$.343 million for a Small Business Innovative Research assessment, \$.010 million decrease for reprioritization of requirements within the Navy, and a decrease of \$.053 million for a Congressional rescission. The FY 2001 net decrease of \$.129 million reflects a decrease of \$.085 million for a congressional rescission and a decrease of \$.044 million for reprioritization of requirements within the Navy. The FY 2002 net decrease of \$.036 million reflects a decrease of \$.065 for reprioritization of requirements within the Navy and an increase of \$.027 million for economic assumptions.</p> <p>(U) Schedule: Not applicable.</p> <p>(U) Technical: Not applicable.</p> <p>(U) C. OTHER PROGRAM FUNDING SUMMARY:</p> <table style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Line Item No. &amp; Name</th> <th style="text-align: center;"><u>FY 2000</u></th> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>FY 2002</u></th> </tr> </thead> <tbody> <tr> <td>WPN/P1#6 QTY</td> <td style="text-align: center;">91</td> <td style="text-align: center;">63</td> <td style="text-align: center;">57</td> </tr> <tr> <td style="padding-left: 20px;">\$</td> <td style="text-align: right;">45.825</td> <td style="text-align: right;">38.585</td> <td style="text-align: right;">40.028</td> </tr> </tbody> </table> <p>Related RDT&amp;E</p> <ul style="list-style-type: none"> <li>(U) PE 0207130F F-15</li> <li>(U) PE 0204126N F/A-18 Squadrons</li> <li>(U) PE 0207163F AMRAAM P3I</li> <li>(U) PE 0207133F F-16</li> <li>(U) PE 0604239F F-22</li> <li>(U) PE 0207134F F-15E</li> </ul>				<u>FY2000</u>	<u>FY2001</u>	<u>FY2002</u>	(U) FY 2001 President's Budget:	13.469	12.140	10.831	(U) Adjustments from the President's Budget:	(0.406)	(0.129)	(0.036)	(U) FY 2002 President's Budget:	13.063	12.011	10.795	Line Item No. & Name	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	WPN/P1#6 QTY	91	63	57	\$	45.825	38.585	40.028
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<p>(U) D. ACQUISITION STRATEGY: With the December 1997 merger of Raytheon and Hughes into the Raytheon Systems Company, the government implemented a new acquisition strategy labeled AMRAAM Vision 2000. The Vision 2000 strategy capitalizes on a multi-year hardware pricing agreement between Raytheon and the government under the auspices of the Department of Justice which supported the Raytheon/Hughes merger and a shift in government business practices toward a more "commercial" business arrangement. The lot 12 procurement contract award includes an overarching price control strategy and a transfer of Total System Performance Responsibility (TSPR) to the prime contractor, Raytheon Defense Systems Segment in Tucson, Arizona. The purchase includes missiles, warranties, spares, missile performance tracking, and reliability tests. Raytheon assumes responsibility for all specifications below missile performance. Also included in the Lot 12 contract are pre-priced options for Lots 13 thru 15 (FY19 thru FY2001).</p> <p>(U) E. SCHEDULE PROFILE:</p> <table style="width: 100%; border: none;"> <thead> <tr> <th style="width: 70%;"></th> <th style="width: 10%; text-align: center;"><u>FY 2000</u></th> <th style="width: 10%; text-align: center;"><u>FY 2001</u></th> <th style="width: 10%; text-align: center;"><u>FY 2002</u></th> </tr> </thead> <tbody> <tr> <td>(U) Program Milestones</td> <td></td> <td></td> <td></td> </tr> <tr> <td>(U) Engineering Milestones</td> <td style="text-align: center;">3Q P3I-3 PDR</td> <td style="text-align: center;">4Q P3I-3 CDR</td> <td></td> </tr> <tr> <td>(U) T&amp;E Milestones</td> <td></td> <td></td> <td style="text-align: center;">2Q Begin P3I FLT TEST</td> </tr> <tr> <td>(U) Contract Milestones</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	(U) Program Milestones				(U) Engineering Milestones	3Q P3I-3 PDR	4Q P3I-3 CDR		(U) T&E Milestones			2Q Begin P3I FLT TEST	(U) Contract Milestones			
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R-1 SHOPPING LIST - Item No. 200

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Exhibit R-3 Cost Analysis (page 1)							DATE: <b>June 2001</b>					
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-7			0207163N AMRAAM			E0981 AMRAAM						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date			Cost to Complete	Total Cost	Target Value of Contract
Primary Hardware Development	SS/CPAF	AAC Eglin AFB FL	19.526	7.731	11/00	6.913	11/01					
Primary Hardware Development	WX	NAWC-WD China Lake CA		0.050	11/00	0.051	11/01					
Award Fees	SS/CPAF	AAC Eglin AFB FL	2.089	1.364	11/00	1.220	11/01					
SBIR Assessment				0.372								
Prior Years Development			21.653									
Subtotal Product Development			43.268	9.517		8.184						
Remarks: Prior year award fees were \$2.089 and are estimated to be approximately 15% of contract value for future years.												
Development Support	SS/FFP	JHU/APL Laurel MD		0.435	05/01	0.374	05/02					
Development Support	RX	NSMA VA		1.055	12/00	1.006	12/01					
Development Support	WX	NAWC-WD China Lake CA		0.050	10/00	0.123	10/01					
Prior Years Support			6.467									
Subtotal Support			6.467	1.540		1.503						
Remarks:												

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<b>RDT&amp;E, N / BA-7</b>			0207163N AMRAAM			E0981 AMRAAM						
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date			Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WX	NAWC WD China Lake CA		0.250	10/00	0.450	10/01					
Prior Years Test & Evaluation			0.956									
Subtotal T&E			0.956	0.250		0.450						
Remarks:												
Program Management Support	WX	NAWC WD China Lake CA		0.404	10/00	0.408	10/01					
Travel	MIPR	PMA-259 Eglin AFB FL		0.200	10/00	0.250	10/01					
Program Management Support	WX	NAWC AD Patuxent River		0.100	10/00							
Prior Years Management Support			2.673									
Subtotal Management			2.673	0.704		0.658						
Remarks:												
Total Cost			53.364	12.011		10.795						
Remarks:												

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