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CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification								DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY / BA-4						R-1 ITEM NOMENCLATURE 0603860N, Joint Precision Approach and Landing System					
COST (\$ in Millions)	Prior Year Cost		FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program
Total PE Cost	2.825			1.500	11.932	30.645	41.500	19.467	21.091	627.259	756.219
W2329 JOINT PRECISION APPROACH AND LANDING SYSTEM (JPALS)	2.825			1.500	11.932	30.645	41.500	19.467	21.091	627.259	756.219
Quantity of RDT&E Articles					1	2				23	26
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This program element provides for the development, integration, and testing of JPALS on Navy, Marine Corps, and Coast Guard aircraft, ships, and ground stations. JPALS will allow equipped aircraft to land on any suitable surface world wide (land and sea), while minimizing impacts to aircraft recovery operations due to low ceiling or visibility. The JPALS program was established in response to the Joint Mission Need Statement (MNS) for Precision Approach and Landing Capability (PALC), which was approved by the Chief of Naval Operations on 28 July 94 and the Chief of Staff of the Air Force on 8 August 94. The PALC MNS was validated by the Joint Requirements Oversight Council on 29 August 95. Army Joint Service participation was included in the 28 May 96 Principal Deputy Under Secretary of Defense (Acquisition and Technology) Milestone 0 Acquisition Decision Memorandum (ADM) which also designated the Air Force as the lead Service. JPALS will provide a rapidly deployable, adverse weather, adverse terrain, day-night, survivable, and mobile precision approach and landing capability. Operating environments include fixed base, tactical, shipboard and special mission. Military and civil interoperability is required. The funds cited above will provide for completion of the JPALS Shipboard architecture and development of equipment satisfying the unique requirements for the data link and GPS user equipment which will support the high accuracy, integrity, availability, and continuity needed for JPALS to work in a shipboard environment. The program is funded under a special OSD dispensation for pre-milestone architecture and requirements definition.</p> <p>(U) B. JUSTIFICATION FOR BUDGET ACTIVITY: This program is funded under DEMONSTRATION AND VALIDATION (Component Advanced Development) because it develops and integrates hardware for experimental test related to specific ship or aircraft applications.</p> <p>* FY 2002 is funded through a Congressional add.</p>											

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EXHIBIT R-2a, RDT&E Project Justification								DATE: February 2002			
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME					PROJECT NUMBER AND NAME					
RDT&E, N / BA-4	0603860N, Joint Precision Approach and Landing System					W2329, Joint Precision Approach and Landing System					
COST (\$ in Millions)	Prior Years Cost	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	Cost to Complete	Total Program	
Project Cost	2.825	0.000	1.500	11.932	30.645	41.500	19.467	21.091	627.259	756.219	
RDT&E Articles Qty				1	2				23	26	
<p>(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: This project provides for the development, integration, and testing of JPALS on Navy, Marine Corps, and Coast Guard aircraft, ships, and ground stations. JPALS will allow equipped aircraft to land on any suitable surface world wide (land and sea), while minimizing impacts to aircraft recovery operations due to low ceiling and/or visibility. The JPALS program was established in response to the Joint Mission Need Statement (MNS) for Precision Approach and Landing Capability (PALC), which was approved by the Chief of Naval Operations on 28 July 94 and the Chief of Staff of the Air Force on 8 August 94. The PALC MNS was validated by the Joint Requirements Oversight Council on 29 August 95. Army Joint Service participation was included in the 28 May 96 Principal Deputy Under Secretary of Defense (Acquisition and Technology) Milestone 0 Acquisition Decision Memorandum (ADM) which also designated the Air Force as the lead Service. JPALS will provide a rapidly deployable, adverse weather, adverse terrain, day-night, survivable, and mobile precision approach and landing capability. Operating environments include fixed base, tactical, shipboard and special mission. Military and civil interoperability is required.</p> <p>(U) PROGRAM ACCOMPLISHMENTS AND PLANS:</p> <p style="margin-left: 40px;">1. FY 2001 ACCOMPLISHMENTS: Not applicable</p>											

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<p>2. FY 2002 PLANS:</p> <ul style="list-style-type: none"> (U) (1.200) Complete UCAV demonstrations. (U) (.300) Perform limited systems integration. <p>3. FY 2003 PLANS:</p> <ul style="list-style-type: none"> (U) (2.921) Complete shipboard system architecture (U) (1.293) Continue development of anti jam technologies (U) (0.940) Continue development of data link (U) (0.895) Continue development of shipboard integration (U) (1.282) Complete avionics architecture (U) (2.444) Complete aircraft integration architecture (U) (2.157) Continue technical maturation and testing 		

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4		PROGRAM ELEMENT NUMBER AND NAME 0603860N, Joint Precision Approach and Landing System			PROJECT NUMBER AND NAME W2329, Joint Precision Approach and Landing System			
(U) B. PROGRAM CHANGE SUMMARY:								
	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>					
(U) FY 2002 President's Budget:		0.000						
(U) Adjustments from the President's Budget:		1.500						
(U) FY 2003 President's Budget Submit:		1.500	11.932					
CHANGE SUMMARY EXPLANATION:								
(U) Funding: The FY 2002 increase of \$1.500 million is due to a Congressional add. Navy JPALS R&D requirements were funded in PE 0603860F during FY1999 through FY2001. Funding is started in FY2002 to reestablish the program in the Navy PE to fund Navy unique requirements.								
(U) Schedule: Not applicable.								
(U) Technical: Not applicable.								
(U) C. OTHER PROGRAM FUNDING SUMMARY:								
	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	<u>FY2004</u>	<u>FY2005</u>	<u>FY2006</u>	<u>FY2007</u>	<u>To Complete</u>
(U) PE 0603860F (JPALS) (Navy share of costs shown)	9.022	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4	PROGRAM ELEMENT NUMBER AND NAME 0603860N, Joint Precision Approach and Landing System	PROJECT NUMBER AND NAME W2329, Joint Precision Approach and Landing System																	
<p>(U) D. ACQUISITION STRATEGY: Navy JPALS will be developed with government owned or non-proprietary algorithms to an open system architecture. JPALS avionics will be modifications only to existing aircraft systems procured from existing prime contracts. Shipboard JPALS equipment will be competitively procured. Shore based JPALS units will be developed by the Air Force to meet the requirements of all the Services.</p>																			
<p>(U) E. SCHEDULE PROFILE:</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;"></th> <th style="width: 20%; text-align: center;"><u>FY 2001*</u></th> <th style="width: 20%; text-align: center;"><u>FY 2002</u></th> <th style="width: 20%; text-align: center;"><u>FY 2003</u></th> <th style="width: 20%; text-align: center;"><u>TO COMPLETE</u></th> </tr> </thead> <tbody> <tr> <td>(U) Program Milestones</td> <td></td> <td></td> <td></td> <td>4Q/04 MS B 4Q/10 MS C</td> </tr> <tr> <td>(U) Engineering Milestones</td> <td>3Q Development of demo system for sea trials 4Q Development of demonstration system for anti jam trials</td> <td></td> <td>3Q Integration of anti jam system into light aircraft for sea trials 4Q Completion of architecture development</td> <td>3Q/10 Integration into shore sites</td> </tr> </tbody> </table>						<u>FY 2001*</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>TO COMPLETE</u>	(U) Program Milestones				4Q/04 MS B 4Q/10 MS C	(U) Engineering Milestones	3Q Development of demo system for sea trials 4Q Development of demonstration system for anti jam trials		3Q Integration of anti jam system into light aircraft for sea trials 4Q Completion of architecture development	3Q/10 Integration into shore sites
	<u>FY 2001*</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>TO COMPLETE</u>															
(U) Program Milestones				4Q/04 MS B 4Q/10 MS C															
(U) Engineering Milestones	3Q Development of demo system for sea trials 4Q Development of demonstration system for anti jam trials		3Q Integration of anti jam system into light aircraft for sea trials 4Q Completion of architecture development	3Q/10 Integration into shore sites															

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* Efforts funded under USAF PE 0603860F.

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APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME		
RDT&E, N / BA-4	0603860N, Joint Precision Approach and Landing System	W2329, Joint Precision Approach and Landing System		
(U) E. SCHEDULE PROFILE CONTINUED:				
	<u>FY 2001*</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>TO COMPLETE</u>
(U) T&E Milestones	3Q Successful completion of shipboard autolandings in F/A-18A		3Q Successful completion of antijam testing in light aircraft at ship	4Q/07 Successful DT-I of initial JPALS avionics
	4Q Successful completion of anti-jam testing ashore.		4Q Successful completion of antijam testing in SH-60 at ship	2Q/10 Successful DT-I of CV JPALS
				3Q/10 Successful DT-I on second set of JPALS avionics
				4Q/10 Successful DT-II of CV JPALS and initial avionics
(U) Contract Milestones				1Q/08 Award of initial contracts for development and integration into ships and aircraft.
				1Q/11 LRIP contract award

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Exhibit R-3 Cost Analysis (page 1)										DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY			PROGRAM ELEMENT			PROJECT NUMBER AND NAME						
RDT&E, N / BA-4			0603860N, Joint Precision Approach and Landing System			W2329, Joint Precision Approach and Landing System						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
SRGPS Architecture Development	WR	NAWCAD Pax River MD	2.803					2.823	11/02		5.626	
SRGPS Anti-Jam Development	WR	NAWCAD Pax River MD						1.249	11/02	22.748	23.997	
SRGPS Data Link Development	WR	NAWCAD Pax River MD						0.908	11/02	21.000	21.908	
Ship Integration	WR	NAWCAD Pax River MD						0.865	11/02	26.854	27.719	
Avionics Architecture Development	WR	NAWCAD Pax River MD						1.238	11/02		1.238	
Aircraft Integration Architecture	WR	NAWCAD Pax River MD				0.275	01/02	2.362	11/02		2.637	
Other	Various	Various								594.004	594.004	
Subtotal Product Development			2.803			0.275		9.445		664.606	677.129	
Remarks: FY 1999-2001 efforts were funded under PE 0603860F.												
Subtotal Support												
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)										DATE: February 2002		
APPROPRIATION/BUDGET ACTIVITY RDT&E, N / BA-4			PROGRAM ELEMENT 0603860N, Joint Precision Approach and Landing System			PROJECT NUMBER AND NAME W2329, Joint Precision Approach and Landing System						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 01 Cost	FY 01 Award Date	FY 02 Cost	FY 02 Award Date	FY 03 Cost	FY 03 Award Date	Cost to Complete	Total Cost	Target Value of Contract
UCAV Demonstration	WR	NAWCAD Pax River MD				1.125	01/02				1.125	
Developmental Test & Evaluation	WR	NAWCAD Pax River MD						2.084	11/02	51.519	53.603	
Subtotal T&E						1.125		2.084		51.519	54.728	
Remarks:												
Program Management Support	Various	NAVAIR & NAWCAD	0.022			0.100	01/02	0.403	11/02	24.688	25.213	
Subtotal Management			0.022			0.100		0.403		24.688	25.213	
Remarks:												
Total Cost			2.825			1.500		11.932		740.813	757.070	
Remarks:												

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