

CLASSIFICATION:

UNCLASSIFIED

[illegible]

* FY 02 funds were executed under Program Element 0603216N, Project W9035.

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 Global Positioning System GPS user equipment which will support the high accuracy, integrity, availability, and continuity needed for JPALS to work in a shipboard environment. These will include Shipboard Relative GPS (SRGPS) and Embedded GPS/Inertial Navigation System (EGI) components.

(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.

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2003	
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			
COST (\$ in Millions)	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Project Cost	5.452*	11.668	24.304	38.989	29.725	25.438	20.939	21.337
RDT&E Articles Qty			6	16				16

* FY 02 funds were executed under P.E. 0603216N, Project W9035.

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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																	
B. Accomplishments/Planned Program																			
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Exhibit R-2a, RDTEN Project Justification
(Exhibit R-2a, page 3 of 9)

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EXHIBIT R-2a, RDT&E Project Justification			DATE: February 2003																																																																																	
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Exhibit R-2a, RD TEN Project Justification
(Exhibit R-2a, page 4 of 9)

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EXHIBIT R-2a, RDT&E Project Justification							DATE: February 2003			
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					
D. OTHER PROGRAM FUNDING SUMMARY:										
<u>Line Item No. & Name</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>To Complete</u>	<u>Total Cost</u>
PE 0603216N Aviation Survivability	5.452									
 E. 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.										

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Exhibit R-3 Cost Analysis (page 1)								DATE: February 2003				
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 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Primary Hdw Develop - SRGPS	WR	NAWCAD, Pax River, MD	4.125	3.581	11/02	2.519	11/03				10.225	
Primary Hdw Develop - SRGPS 1	SS/CR	EMA Lexington Park, MD		1.600	12/02	2.800	12/03				4.400	4.400
Primary Hdw Develop - SRGPS 2	C/CR	ARINC, California, MD	2.600	3.475	12/02	9.617	12/03				15.692	15.692
Primary Hdw Develop - SRGPS	SS/CR	Honeywell, Clearwater, FL		0.900	12/02	1.100	12/03	3.283	12/04	2.500	7.783	7.783
Primary Hdw Develop - SRGPS	SS/CR	TISI, Bloomington IL				0.700	12/03				0.700	0.700
Primary Hdw Develop - SRGPS	C/CR	Various - TBD						27.241	12/04	205.281	232.522	
Primary Hdw Develop - Anti-jam	C/CR	TBD		0.800	12/02	3.958	12/03				4.758	
Systems Engineering	WR	NAWCAD, Pax River, MD						5.435	11/04	125.935	131.370	
Ship Integration	WR	NAWCAD, Pax River, MD	1.414	0.849	11/02	3.142	11/03	2.534	11/04	152.526	160.465	
Aircraft Integration	C/CR	Various - TBD								269.819	269.819	
Subtotal Product Development			8.139	11.205		23.836		38.493		756.061	837.734	
Remarks: 1 Subcontractor: Sierra Nevada Corp. Sparks, NV & Salt Lake City, UT 2 Subcontractor: Rockwell Collins Cedar Rapids, IA												
Development Support												
Software Development												
Integrated Logistics Support	WR	NAWCAD - Pax River, MD		0.075	11/02	0.075	11/03	0.075	11/04	0.525	0.750	
Configuration Management												
Technical Data												
Studies & Analyses	WR	NAWCAD - Pax River, MD		0.180	11/02	0.182	11/03	0.183	11/04	0.671	1.216	
GFE												
Award Fees												
Subtotal Support			0.000	0.255		0.257		0.258		1.196	1.966	
Remarks:												

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Exhibit R-3 Cost Analysis (page 2)										DATE: February 2003		
APPROPRIATION/BUDGET ACTIVITY RDTE, 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 03 Cost	FY 03 Award Date	FY 04 Cost	FY 04 Award Date	FY 05 Cost	FY 05 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NAWCAD - Pax River, MD								18.000	18.000	
Operational Test & Evaluation	WR	NAWCAD - Pax River, MD								9.000	9.000	
Live Fire Test & Evaluation												
Test Assets												
Tooling												
GFE												
Award Fees												
Subtotal T&E			0.000	0.000		0.000		0.000		27.000	27.000	
Remarks:												
Contractor Engineering Support												
Government Engineering Support												
Program Management Support	Various	NAWCAD & NSWC	0.060	0.158	11/02	0.161	11/03	0.163	11/04	1.835	2.377	
Travel	WR	NAWCAD - Pax River, MD	0.010	0.050	11/02	0.050	11/03	0.075	11/04	0.500	0.685	
Transportation												
SBIR Assessment			0.020								0.020	
Subtotal Management			0.090	0.208		0.211		0.238		2.335	3.082	
Remarks:												
Total Cost			8.229	11.668		24.304		38.989		786.592	869.782	
Remarks:												

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EXHIBIT R4, Schedule Profile																								DATE:											
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											
Fiscal Year	2002				2003				2004				2005				2006				2007				2008				2009						
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4							
Acquisition Milestones													MS B △														MS C △								
SRGPS System Development					SRGPS ARCHITECTURE								SRGPS ENGINEERING																						
Contract Award/Event	CAD △												SDD △																						
Test & Evaluation Milestones																																			
Operational Test																					INTEGRATION				DT-I			DT-II							
																											OA								
Production Milestones																																			
LRIP FY 09																												△ LRIP Start							
Deliveries (Start in 2010)																																			

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* Not required for Budget Activities 1, 2, 3, and 6

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Exhibit R-4, Schedule Profile
(Exhibit R-4, page 8 of 9)

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Exhibit R-4a, Schedule Detail						DATE: February 2003		
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		
Schedule Profile	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009
Prototype Phase								
System Design Review (SDR)								
Milestone II (MSII)				1Q				
Contract Preparation			4Q	1Q				
Software Specification Review (SSR)								
Preliminary Design Review (PDR)								
System Development				1-4Q	1-4Q			
Critical Design Review (CDR)								
Quality Design and Build								
Test Readiness Review (TRR)						3Q		
Developmental Testing (DT-IIA)							2-4Q	
Eng Dev Model (EDM) Radar Delivery - Lab								
Software Delivery 1XXSW								
Preproduction Readiness Review (PRR)								
EDM Radar Delivery - Flt Related								
Milestone C (MS C)								1Q
Operational Testing (OT-IIA)								
Start Low-Rate Initial Production I (LRIP I)								1Q
Software Delivery 2XXSW								
Developmental Testing (DT-IIB1)								
Developmental Testing (DT-IIB2)								
Start Low-Rate Initial Production II								
Operational Testing (OT-IIB)								
Developmental Testing (DT-IIC)								
Functional Configuration Audit (FCA)								
Low-Rate Initial Production I Delivery								
Technical Evaluation (TECHEVAL)								
Physical Configuration Audit								
Operational Evaluation (OT-IIC) (OPEVAL)								
Low-Rate Initail Production II Delivery								
IOC								
Full Rate Production (FRP) Decision								
Full Rate Production Start								
First Deployment								

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Exhibit R-4a, Schedule Detail
(Exhibit R-4a, page 9 of 9)