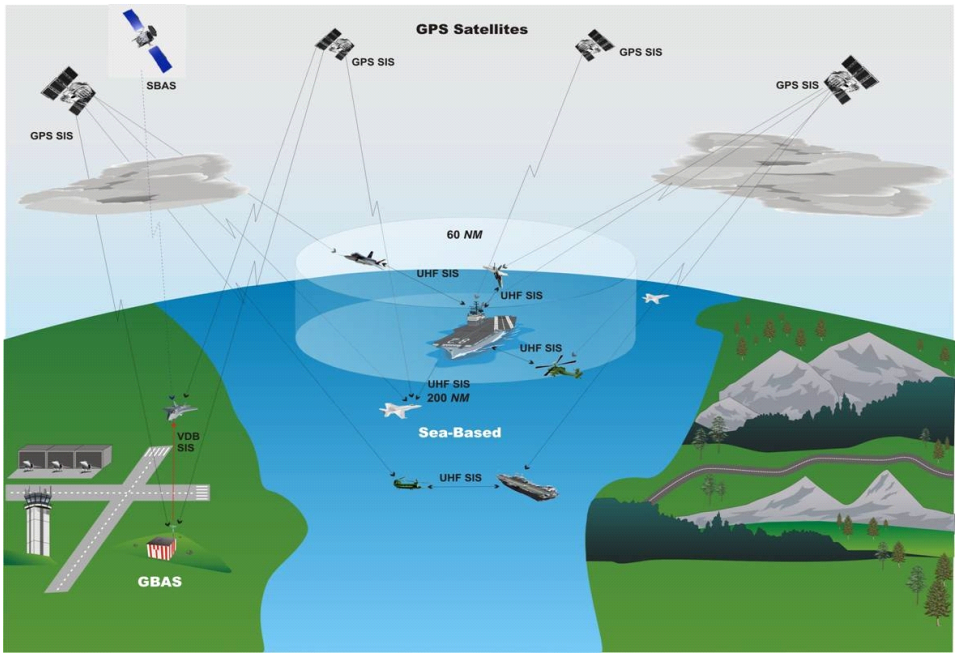
Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-238



JPALS

As of December 31, 2010

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Designation And Nomenclature (Popular Name)

Joint Precision Approach and Landing System (JPALS)

DoD Component

Navy

Responsible Office

Responsible Office

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Date Assigned October 11, 2007

References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated December 19, 2008

Approved APB

DAE Approved Acquisition Program Baseline (APB) dated December 19, 2008

Mission and Description

Joint Precision Approach and Landing System (JPALS) is a program with Tri-Service partners for acquisition of JPALS including the Navy (PEO(T)/PMA213, Patuxent River, MD), Air Force (653rd Electronic Systems Wing (653 ELSW)), Hanscom Air Force Base (AFB), MA), and Army (PEO Aviation, Redstone Arsenal, AL). JPALS is a Global Positioning System (GPS)-based precision approach and landing system that will replace several aging and obsolete unique aircraft landing systems. JPALS will provide a family of systems that is more affordable, will function in more operational environments, and will support all Department of Defense (DoD) Land and Sea Based applications. The National Defense Strategy of the United States of America calls for highly mobile forces that can rapidly respond to crises worldwide. Success in meeting this challenge requires the ability to land aviation assets virtually anywhere, at any time. JPALS will provide this capability by being rapidly deployable, survivable and interoperable among the U.S. Services and with U.S. allies, as well as with civil aircraft and landing facilities. JPALS will eventually support unmanned and highly automated aircraft, and will be able to operate during restricted Emission Control (EMCON) conditions.

The approved JPALS Acquisition Strategy has broken acquisition into seven increments, based on technology maturity and Service needs. Increment 1 Sea Based JPALS is separated into two phases: Increment 1A ship based systems and Increment 1B aircraft integration. The program initiated at Milestone B and reported in this SAR reflects Increment 1A only.

The JPALS Capability Development Document (CDD) approved by a Joint Requirements Oversight Council (JROC) memorandum dated March 16, 2007, included direction for the U.S. Navy to be the lead service for JPALS. JPALS Increments 2 through 7 are as follows:

Increment 2, to be executed by the Air Force, encompasses all Fixed and Mobile Systems that support 200 feet Decision Height (DH) and ½ Statute Mile (SM) visibility that supports auto-land for properly equipped aircraft.

Increment 3 encompasses Fixed and Mobile Systems to support Federal Aviation Administration certification to 100 feet DH and ¼ SM visibility and a Sea Based system that supports auto-land for properly equipped aircraft.

Increment 4 will provide a Sea Based JPALS capability that supports 100 feet DH and ¼ Nautical Mile (NM) visibility, including auto-land and unmanned aerial vehicle support.

Increment 5 will encompass land based man-pack systems certified to minimums based on service needs.

Increment 6 will support Special Operations Forces, mobility missions, and subsequent combat operations with an autonomous approach and landing capability.

Increment 7 is an upgrade to the Sea Based back-up capability, involving reliability, maintainability, and life cycle improvements to the AN/SPN-41 Instrument Carrier Landing System (ICLS).

Currently, only Increments 1 and 2 have been approved by the JROC.

Executive Summary

The program initiated at Milestone B and reporting in this SAR reflects Increment 1A only.

The focus of 2010 for the JPALS Increment 1A program was detailed design. The program office participated in a Navy chaired Configuration Steering Board (CSB) as a part of a Gate 6 Post Preliminary Design Review (PDR) in May 2010. The CSB/Gate 6 review resulted in no changes to Capability Development Document (CDD) requirements or the acquisition strategy. The JPALS Critical Design Review (CDR) was completed December 16, 2010. The CDR resulted in a minimal number of action items, none of which are outside the current program baseline. As a result, the program anticipates executing the remaining technical effort within schedule and has adequate funding to execute the next phase of the program. The program office will continue to assess schedule and technical risk during system integration and make the appropriate tradeoffs within the program baseline. There have been no CDD requirement changes and, based on direct feedback of the Naval Air Systems Command (NAVAIR) Technical Review Board, the JPALS Increment 1A Technical Baseline is stable and performance, cost, and schedule risks are acceptable. The program is ready to proceed into System Integration and Manufacturing. Other significant milestones accomplished in 2010 included the completion of the aircraft performance requirements specification and delivery of the first Engineering Development Model (EDM) system to the contractor system integration lab.

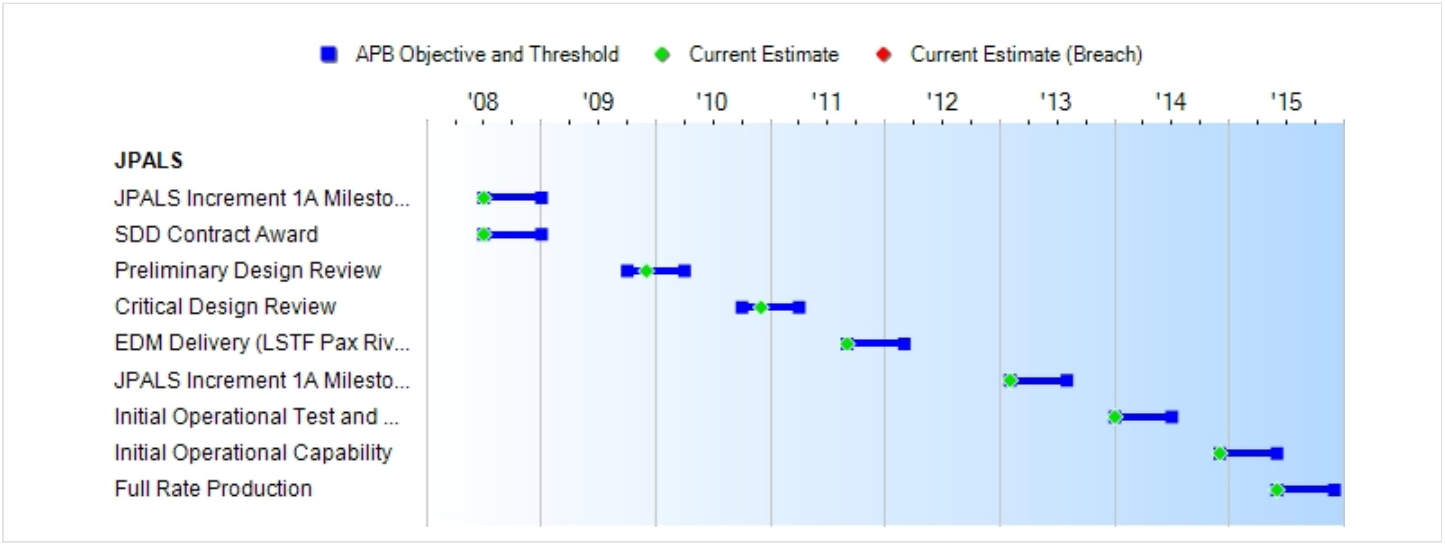
There are no significant software related issues with this program at this time.

Threshold Breaches

APB Breaches		
Schedule		☐
Performance		☐
Cost	RDT&E	☐
	Procurement	☐
	MILCON	☐
	Acq O&M	☐
Unit Cost	PAUC	☐
	APUC	☐

Nunn-McCurdy Breaches		
Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Schedule



Milestones	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	
JPALS Increment 1A Milestone B	JUL 2008	JUL 2008	JAN 2009	JUL 2008	
SDD Contract Award	JUL 2008	JUL 2008	JAN 2009	JUL 2008	
Preliminary Design Review	OCT 2009	OCT 2009	APR 2010	DEC 2009	
Critical Design Review	OCT 2010	OCT 2010	APR 2011	DEC 2010	(Ch-1)
EDM Delivery (LSTF Pax River)	SEP 2011	SEP 2011	MAR 2012	SEP 2011	
JPALS Increment 1A Milestone C	FEB 2013	FEB 2013	AUG 2013	FEB 2013	
Initial Operational Test and Evaluation	JAN 2014	JAN 2014	JUL 2014	JAN 2014	
Initial Operational Capability	DEC 2014	DEC 2014	JUN 2015	DEC 2014	
Full Rate Production	JUN 2015	JUN 2015	DEC 2015	JUN 2015	

Acronyms And Abbreviations

EDM - Engineering Development Model
JPALS - Joint Precision Approach and Landing System
LSTF - Landing Systems Test Facility
SDD - System Development and Demonstration

Change Explanations

(Ch-1) Date of Critical Design Review (CDR) changed from November 2010 to December 2010 to reflect the actual CDR completion date of December 16, 2010.

Performance

Characteristics	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate
Network Ready: The system must support Net-Centric military operations. The system must be able to enter and be managed in the network, and exchange data in a secure manner to enhance mission effectiveness. The system must continuously provide survivable, interoperable, secure, and operationally effective information exchanges to enable a Net-Centric military capability.	The system must fully support execution of operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include: 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services, 4) IA requirements including availability, integrity, authenticatio n,	The system must fully support execution of operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include: 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services, 4) IA requirements including availability, integrity, authenticat-ion,	The system must fully support execution of joint critical operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for transition to Net-Centric military operations to include: 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services, 4) IA requirements including availability, integrity,	TBD	The system must fully support execution of joint critical operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for transition to Net-Centric military operations to include: 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services, 4) IA requirements including availability, integrity,

	confidentiality, and nonrepudiation, and issuance of an ATO by the DAA, and 5) Operationally effective information exchanges; mission critical performance and IA attributes; data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.	confidentiality, and nonrepudiation, and issuance of an ATO by the DAA, and 5) Operationally effective information exchanges; mission critical performance and IA attributes; data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.	authentication, confidentiality, and nonrepudiation, and issuance of an IATO by the (DAA), and 5) Operationally effective information exchanges; mission critical performance and IA attributes; data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.		authentication, confidentiality, and nonrepudiation, and issuance of an IATO by the (DAA), and 5) Operationally effective information exchanges; mission critical performance and IA attributes; data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.
Guidance Quality	Certification for operations in 0 ft ceiling and 0 NM visibility conditions.	Certification for operations in 0 ft ceiling and 0 NM visibility conditions.	Sufficient quality to allow the Service to certify the sea-based system for use in 200 ft ceiling and ½ NM visibility weather conditions.	TBD	Exceeding Threshold with margin. Sufficient quality to allow the Service to certify the sea-based system for use in 200 ft ceiling and ½ NM visibility weather conditions.
Manpower	Should reduce current	Should reduce current	The total number of dedicated	TBD	Current manning level

	manning levels when currently fielded systems are phased out. Should require no dedicated personnel. Should be reduced to no more than one qualified air traffic controller.	manning levels when currently fielded systems are phased out. Should require no dedicated personnel. Should be reduced to no more than one qualified air traffic controller.	maintenance and/or logistics personnel needed to support Sea-Based JPALS per shift shall be no more than one person. The number of qualified final controller positions per shift on CVN/LH ship classes shall be no more than two air traffic controllers.		
Operational Availability in Clear Air	JPALS Ao requirement in clear air for manned aircraft to 200 ft - ½ NM mins should be at least 99.7%.	JPALS Ao requirement in clear air for manned aircraft to 200 ft - ½ NM mins should be at least 99.7%.	JPALS Ao requirement in clear air for manned aircraft to 200 ft - ½ NM mins shall be at least 99.0%.	TBD	99.8%

Requirements Source: The JPALS requirements are documented in the Capability Development Document (CDD), which was approved by the Joint Requirements Oversight Council (JROC) on March 16, 2007.

Acronyms And Abbreviations

Ao - Operational Availability
ATO - Approval to Operate
CVN - Carrier Vessel Nuclear
DAA - Designated Approval Authority
DISR - DOD Information Technology Standards and Profile Registry
ft - Feet
GIG - Global Information Grid
IA - Information Assurance
IATO - Interim Approval to Operate
IT - Information Technology
JPALS - Joint Precision Approach and Landing System
KIP - Key Interface Profile
LH - Amphibious Assault Ship
mins - Minimums
NCOW RM - Net Centric Operations and Warfare Reference Model

NM - Nautical Mile
TBD - To Be Determined
TV - Technical Standards View

Change Explanations

None

Track To Budget

RDT&E			
APPN 1319	BA 04	PE 0603860N	(Navy)
	Project E2329		
Procurement			
APPN 1810	BA 02	PE 0305014N	(Navy)
	ICN 2867		
MILCON			
APPN 1205	BA 01	PE 0805376N	(Navy)
	Project P977		

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

	BY2008 $M			BY2008 $M	TY $M		
Appropriation	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Dev Est	Current APB Development Objective	Current Estimate
RDT&E	753.7	753.7	829.1	717.0	781.4	781.4	733.8
Procurement	202.9	202.9	223.0	211.9	243.7	243.7	243.7
Flyaway	153.9	--	--	138.9	185.0	--	160.0
Recurring	153.9	--	--	138.9	185.0	--	160.0
Non Recurring	0.0	--	--	0.0	0.0	--	0.0
Support	49.0	--	--	73.0	58.7	--	83.7
Other Support	38.9	--	--	33.4	46.6	--	38.5
Initial Spares	10.1	--	--	39.6	12.1	--	45.2
MILCON	6.6	6.6	7.3	6.7	6.8	6.8	6.8
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	963.2	963.2	N/A	935.6	1031.9	1031.9	984.3

Quantity	SAR Baseline Dev Est	Current APB Development	Current Estimate
RDT&E	12	12	11
Procurement	25	25	26
Total	37	37	37

Unit of Measure: The physical architecture of a JPALS system consists of multiple equipment racks, processing equipment, sensors, radios, and antennas.

Cost and Funding

Funding Summary

Appropriation and Quantity Summary
FY2012 President's Budget / December 2010 SAR (TY$ M)

Appropriation	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
RDT&E	423.8	121.2	72.5	78.8	37.5	0.0	0.0	0.0	733.8
Procurement	0.0	0.0	0.0	0.0	15.7	72.9	74.1	81.0	243.7
MILCON	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.8
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2012 Total	430.6	121.2	72.5	78.8	53.2	72.9	74.1	81.0	984.3
PB 2011 Total	433.6	121.2	74.7	79.7	55.0	72.8	70.3	79.7	987.0
Delta	-3.0	0.0	-2.2	-0.9	-1.8	0.1	3.8	1.3	-2.7

Quantity	Undistributed	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
Development	11	0	0	0	0	0	0	0	0	11
Production	0	0	0	0	0	2	9	9	6	26
PB 2012 Total	11	0	0	0	0	2	9	9	6	37
PB 2011 Total	11	0	0	0	0	2	9	9	6	37
Delta	0	0	0	0	0	0	0	0	0	0

Cost and Funding

Annual Funding By Appropriation

Annual Funding TY$
1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2001	--	--	--	--	--	--	7.4
2002	--	--	--	--	--	--	13.2
2003	--	--	--	--	--	--	15.3
2004	--	--	--	--	--	--	17.7
2005	--	--	--	--	--	--	25.9
2006	--	--	--	--	--	--	32.4
2007	--	--	--	--	--	--	36.0
2008	--	--	--	--	--	--	66.8
2009	--	--	--	--	--	--	74.1
2010	--	--	--	--	--	--	135.0
2011	--	--	--	--	--	--	121.2
2012	--	--	--	--	--	--	72.5
2013	--	--	--	--	--	--	78.8
2014	--	--	--	--	--	--	37.5
Subtotal	**11**	**--**	**--**	**--**	**--**	**--**	**733.8**

Annual Funding BY$
1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2008 $M	Non End Item Recurring Flyaway BY 2008 $M	Non Recurring Flyaway BY 2008 $M	Total Flyaway BY 2008 $M	Total Support BY 2008 $M	Total Program BY 2008 $M
2001	--	--	--	--	--	--	8.5
2002	--	--	--	--	--	--	15.0
2003	--	--	--	--	--	--	17.2
2004	--	--	--	--	--	--	19.3
2005	--	--	--	--	--	--	27.6
2006	--	--	--	--	--	--	33.4
2007	--	--	--	--	--	--	36.3
2008	--	--	--	--	--	--	66.1
2009	--	--	--	--	--	--	72.5
2010	--	--	--	--	--	--	130.5
2011	--	--	--	--	--	--	115.6
2012	--	--	--	--	--	--	68.1
2013	--	--	--	--	--	--	72.8
2014	--	--	--	--	--	--	34.1
Subtotal	**11**	**--**	**--**	**--**	**--**	**--**	**717.0**

Annual Funding TY$
1810 | Procurement | Other Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2014	2	12.9	--	--	12.9	2.8	15.7
2015	9	36.1	--	--	36.1	36.8	72.9
2016	9	47.0	--	--	47.0	27.1	74.1
2017	6	48.1	--	--	48.1	14.6	62.7
2018	--	15.9	--	--	15.9	2.4	18.3
Subtotal	**26**	**160.0**	**--**	**--**	**160.0**	**83.7**	**243.7**

Annual Funding BY$
1810 | Procurement | Other Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2008 $M	Non End Item Recurring Flyaway BY 2008 $M	Non Recurring Flyaway BY 2008 $M	Total Flyaway BY 2008 $M	Total Support BY 2008 $M	Total Program BY 2008 $M
2014	2	11.6	--	--	11.6	2.5	14.1
2015	9	31.9	--	--	31.9	32.5	64.4
2016	9	40.9	--	--	40.9	23.5	64.4
2017	6	41.1	--	--	41.1	12.5	53.6
2018	--	13.4	--	--	13.4	2.0	15.4
Subtotal	**26**	**138.9**	**--**	**--**	**138.9**	**73.0**	**211.9**

Cost Quantity Information
1810 | Procurement | Other Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2008 $M
2014	2	11.6
2015	9	48.7
2016	9	49.3
2017	6	29.3
2018	--	--
Subtotal	**26**	**138.9**

Annual Funding TY$
1205 | MILCON | Military Construction, Navy and Marine Corps

Fiscal Year	Total Program TY $M
2008	6.8
Subtotal	**6.8**

Annual Funding BY$
1205 | MILCON | Military Construction, Navy and Marine Corps

Fiscal Year	Total Program BY 2008 $M
2008	6.7
Subtotal	**6.7**

Low Rate Initial Production

JPALS currently has no approved Low Rate Initial Production quantities.

Foreign Military Sales

There are no Foreign Military Sales data to display.

Nuclear Cost

There are no Nuclear Cost data to display.

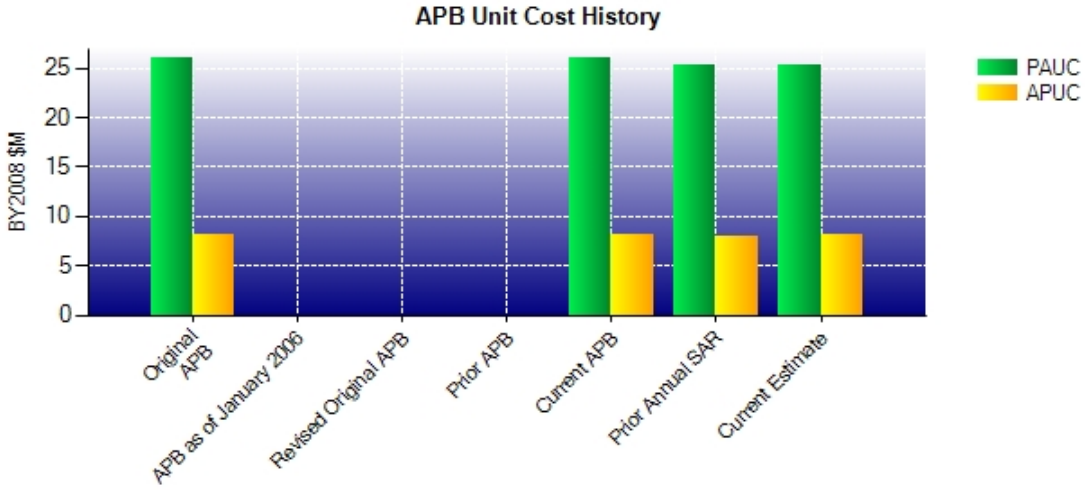
Unit Cost

Unit Cost Report

Unit Cost	BY2008 $M Current UCR Baseline (DEC 2008 APB)	BY2008 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	963.2	935.6	
Quantity	37	37	
Unit Cost	26.032	25.286	-2.87
Average Procurement Unit Cost (APUC)			
Cost	202.9	211.9	
Quantity	25	26	
Unit Cost	8.116	8.150	+0.42

Unit Cost	BY2008 $M Original UCR Baseline (DEC 2008 APB)	BY2008 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	963.2	935.6	
Quantity	37	37	
Unit Cost	26.032	25.286	-2.87
Average Procurement Unit Cost (APUC)			
Cost	202.9	211.9	
Quantity	25	26	
Unit Cost	8.116	8.150	+0.42

Unit Cost History



		BY2008 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	DEC 2008	26.032	8.116	27.889	9.748
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	N/A	N/A	N/A	N/A	N/A
Current APB	DEC 2008	26.032	8.116	27.889	9.748
Prior Annual SAR	DEC 2009	25.359	7.969	26.676	9.177
Current Estimate	DEC 2010	25.286	8.150	26.603	9.373

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)

Initial PAUC Dev Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
27.889	-0.332	0.041	-0.016	0.000	-1.722	0.000	0.743	-1.286	26.603

Current SAR Baseline to Current Estimate (TY $M)

Initial APUC Dev Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
9.748	-0.412	-0.106	-0.023	0.000	-0.892	0.000	1.058	-0.375	9.373

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	JUL 2008	N/A	JUL 2008
Milestone C	N/A	FEB 2013	N/A	FEB 2013
IOC	N/A	DEC 2014	N/A	DEC 2014
Total Cost (TY $M)	N/A	1031.9	N/A	984.3
Total Quantity	N/A	37	N/A	37
Prog. Acq. Unit Cost (PAUC)	N/A	27.889	N/A	26.603

Cost Variance

Cost Variance Summary

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	781.4	243.7	6.8	1031.9
Previous Changes				
Economic	-1.6	-10.3	-0.1	-12.0
Quantity	-5.5	+7.0	--	+1.5
Schedule	--	-0.6	--	-0.6
Engineering	--	--	--	--
Estimating	-32.7	-11.9	+0.1	-44.5
Other	--	--	--	--
Support	--	+10.7	--	+10.7
Subtotal	-39.8	-5.1	--	-44.9
Current Changes				
Economic	+0.1	-0.4	--	-0.3
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-7.9	-11.3	--	-19.2
Other	--	--	--	--
Support	--	+16.8	--	+16.8
Subtotal	-7.8	+5.1	--	-2.7
Total Changes	-47.6	--	--	-47.6
CE - Cost Variance	733.8	243.7	6.8	984.3
CE - Cost & Funding	733.8	243.7	6.8	984.3

Summary Base Year 2008 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	753.7	202.9	6.6	963.2
Previous Changes				
Economic	--	--	--	--
Quantity	-5.1	+6.0	--	+0.9
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-24.2	-10.9	+0.1	-35.0
Other	--	--	--	--
Support	--	+9.2	--	+9.2
Subtotal	-29.3	+4.3	+0.1	-24.9
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-7.4	-10.1	--	-17.5
Other	--	--	--	--
Support	--	+14.8	--	+14.8
Subtotal	-7.4	+4.7	--	-2.7
Total Changes	-36.7	+9.0	+0.1	-27.6
CE - Cost Variance	717.0	211.9	6.7	935.6
CE - Cost & Funding	717.0	211.9	6.7	935.6

Previous Estimate: December 2009

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+0.1
Adjustment for current and prior escalation. (Estimating)	-0.2	-0.2
Miscellaneous Congressional and DoD budget adjustments. (Estimating)	-7.2	-7.7
RDT&E Subtotal	-7.4	-7.8

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	-0.4
Revised estimate due to more refined technical baseline along with change from Contractor Furnished Equipment (CFE) to Government Furnished Equipment (GFE) procurement on multiple components. (Estimating)	-27.7	-31.8
Revised installation and certification costs to reflect the refined technical baseline. (Estimating)	+18.7	+21.8
Revised estimate to delete non-recurring costs as current baseline includes no such requirment during production phase. (Estimating)	-1.1	-1.3
Decrease in Other Support due to reduced effort associated with planned Government oversight along with reductions in data, training, and support equipment type costs as they are derived from a Cost Estimating Relationship (CER) of a cost element which decreased. (Support)	-17.6	-20.1
Increase in Initial Spares due to change in estimating methodology from CER to bottoms up analysis performed by Naval Inventory Control Point. (Support)	+32.4	+36.9
Procurement Subtotal	+4.7	+5.1

Contracts

Appropriation: RDT&E

Contract Name	**JPALS Development Contract**
Contractor	Raytheon Company
Contractor Location	Fullerton, CA 92833-2200
Contract Number, Type	N00019-08-C-0034, CPAF/CPIF
Award Date	September 15, 2008
Definitization Date	September 15, 2008

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
232.8	N/A	12	252.9	N/A	12	259.5	264.8

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/28/2011)	-8.6	-4.6
Previous Cumulative Variances	-2.1	-2.9
Net Change	-6.5	-1.7

Cost And Schedule Variance Explanations

The unfavorable net change in the cost variance is a result of underestimation of personnel support requirements, Hardware design deficiencies resulting from more modification of Commercial Off the Shelf (COTS) Hardware/Software than originally anticipated, Guidance Quality (GQ) Algorithms, and more design drawings than originally budgeted.

The unfavorable net change in the schedule variance is a result of late completion of GQ Algorithms and validation. Hardware delays arebeing driven by late material orders.

Contract Comments

The JPALS development contract was competitively awarded to Raytheon in July 2008; however, a stop work order was issued after a Government Accountability Office (GAO) bid protest, which was subsequently withdrawn, allowing the contract to restart on September 15, 2008.

The Contract Price increased from $232.8M to $252.9M due to contract modifications to adjudicate technical review action items.

The contract quantity of 12 consists of eight Engineering Development Model (EDM) units and four non-end item representative Avionics Test Kits (AVTKs).

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	1	1	11	9.09%
Production	0	0	26	0.00%
Total Program Quantities Delivered	1	1	37	2.70%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	984.3	Years Appropriated	11
Expenditures To Date	436.2	Percent Years Appropriated	61.11%
Percent Expended	44.32%	Appropriated to Date	551.8
Total Funding Years	18	Percent Appropriated	56.06%

Current as of January 28, 2011.

Operating and Support Cost

Assumptions And Ground Rules

1. 20 year life after introduction to the fleet
2. 4,000 hours per year operational tempo
3. Organizational to Depot maintenance concept based on Performance Based Logistics
4. No change to current manpower
5. Total of 29 retrofit ship and seabased ashore units (does not include Operating and Support (O&S) for Shipbuilding and Conversion (SCN) funded ships)
6. Estimate to be updated in late FY 2011 based on revised JPALS Cost Analysis Requirments Description (CARD)
7. FY 2012 President's Budget SAR corrected $8M error in previous base year input

Costs BY2008 $M		
Cost Element	**JPALS Average Annual Cost Per System**	**No Antecedent System**
Unit-Level Manpower	--	--
Unit Operations	--	--
Maintenance	0.35	--
Sustaining Support	0.23	--
Continuing System Improvements	--	--
Indirect Support	--	--
Other	0.01	--
Total Unitized Cost (Base Year 2008 $)	0.59	--

Total O&S Costs $M	JPALS	No Antecedent System
Base Year	338.6	--
Then Year	472.6	--

The Office of the Secretary of Defense Cost Assessment and Program Evaluation organization conducted an estimate in support of the Milestone B decision on June 27, 2008.

Base Year values remained constant, but timephasing was adjusted resulting in lower Then Year values.

O&S value is based on 29 fielded Other, Procurement Navy systems. O&S covers 20 year life cycle at an average of 4,000 operating hours per system per year. O&S costs span the years 2014 to 2038.

There is no antecedent system.