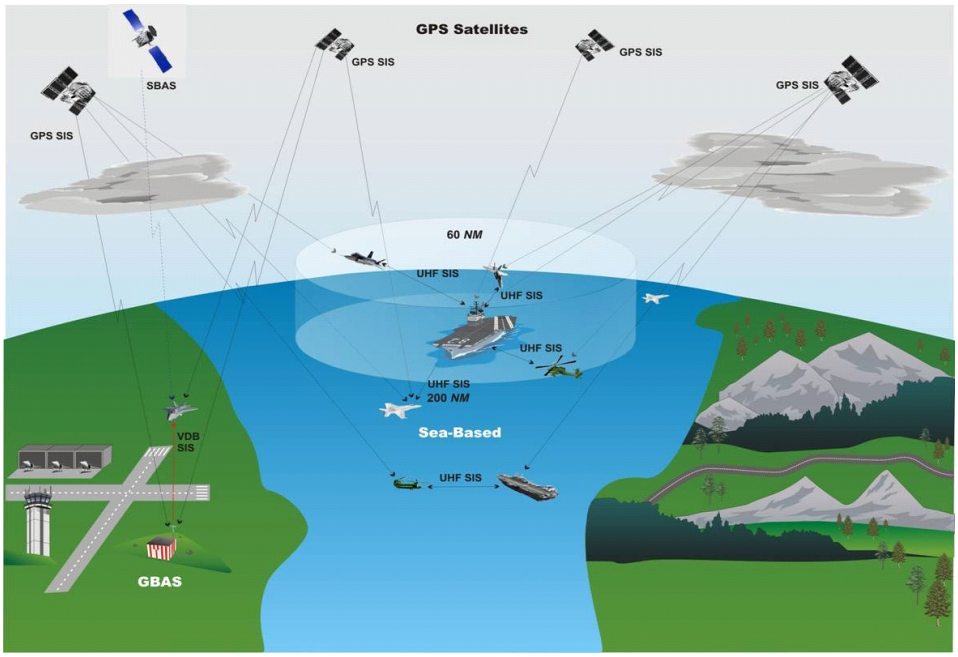
Selected Acquisition Report (SAR)

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



JPALS Increment 1A

As of December 31, 2011

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Designation And Nomenclature (Popular Name)

Joint Precision Approach and Landing System Increment 1A (JPALS Increment 1A)

DoD Component

Navy

Responsible Office

Responsible Office

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Date Assigned July 25, 2011

References

SAR Baseline (Development Estimate)

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

Approved APB

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

Mission and Description

The Joint Precision Approach and Landing System (JPALS) program is a Joint 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 aircraft landing systems with a family of systems that is more affordable and will function in more operational environments, and 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 acquisition broken 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 JPALS Increment 1 Capability Development Document (CDD) approved by a Joint Requirements Oversight Council Memorandum (JROCM) on March 16, 2007 included direction for the U.S. Navy to be the lead Service for JPALS.

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. The JPALS Increment 2 CDD was signed on January 19, 2010.

Increment 3 encompasses Fixed and Mobile Systems to support Federal Aviation Administration (FAA) 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 NM (Nautical Mile) visibility, including auto-land and Unmanned Aerial Vehicle (UAV) 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 2011 was maturing Engineering, Design, and Manufacturing of the JPALS Increment 1A program. All Critical Design Review (CDR) Requests for Action (RFAs) have been completed and the product baseline is stable. There have been no Capability Development Document (CDD) requirements changes. Direct feedback from the Naval Air Systems Command (NAVAIR) Technical Review Board is that the JPALS Increment 1A Technical Baseline is stable and performance, cost, and schedule risks are acceptable. The program office has continued to use the should-cost initiative process to offset cost growth within the existing program budget. In July 2011, the program completed early testing of the Global Positioning System (GPS) receivers onboard Landing Helicopter Deck (LHD-1), which has mitigated several program risks prior to the beginning of formal developmental test. The program office participated in a Navy-chaired Configuration Steering Board as part of a Gate 6 review on August 29, 2011, which resulted in two action items. Both actions were successfully closed with the Assistant Secretary of the Navy, Research, Development and Acquisition (ASN(RDA)) on September 28, 2011. The program office received Engineering Development Model (EDM) 2 on October 7, 2011 and Avionics Test Kits (AVTKs) 2-4 on November 9, 2011 in preparation for Government testing. The contractor also delivered EDM 3 to the contractor system integration lab on December 15, 2011.

The program is preparing for a Test Readiness Review (TRR) and entry into the Integrated Test (IT) phase in 2012.

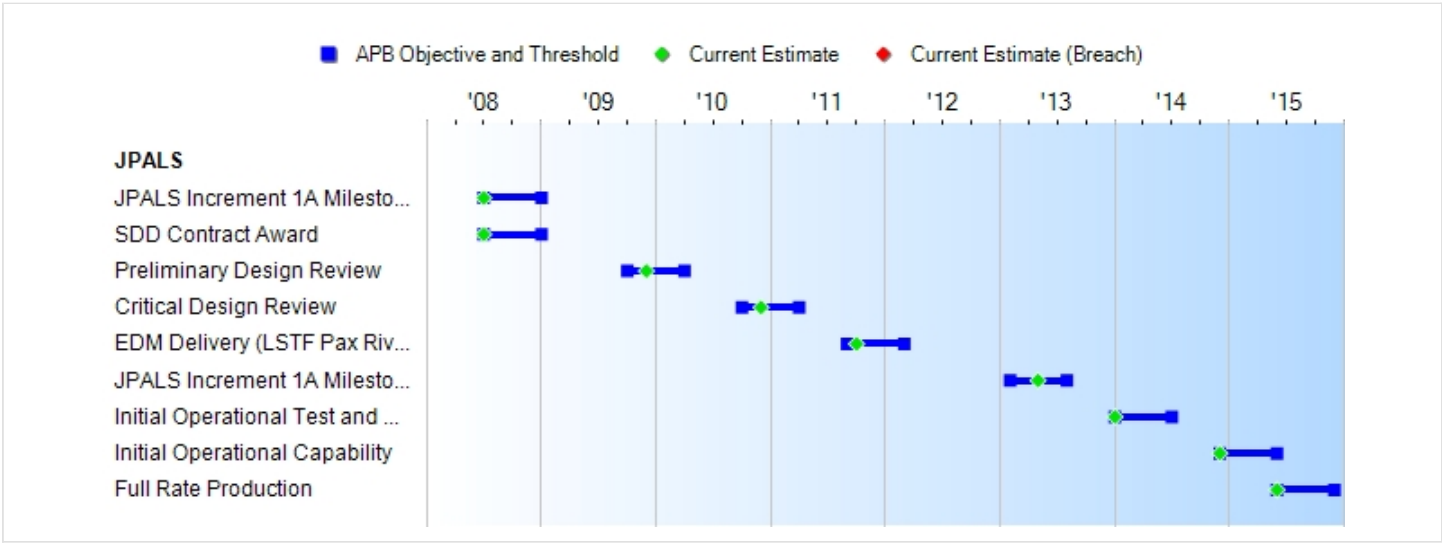
There are no significant software-related issues with this program at this time.

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	
EDM Delivery (LSTF Pax River)	SEP 2011	SEP 2011	MAR 2012	OCT 2011	(Ch-1)
JPALS Increment 1A Milestone C	FEB 2013	FEB 2013	AUG 2013	MAY 2013	(Ch-2)
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
LSTF - Landing Systems Test Facility
SDD - System Development and Demonstration

Change Explanations

(Ch-1) EDM Delivery (LSTF Pax River) current estimate changed from the scheduled September 2011 date to the actual October 2011 date, due to a one-week extension in the Government Functional Acceptance Test (FAT).

(Ch-2) JPALS Increment 1A Milestone C current estimate changed from February 2013 to May 2013 to align with the most current Integrated Master Schedule.

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.	confidential-ity, and nonrepudiat-ion, 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.	authenticat-ion, confidential-ity, and nonrepudiat-ion, 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.		authenticatio n, 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	99.1%	(Ch-1)

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
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

(Ch-1) Operational Availability in Clear Air current estimate changed from 99.8% to 99.1% due to the change in the location of the ship Global Positioning System (GPS) sensor units from the deck to the mast.

Track To Budget

RDT&E			
APPN 1319	BA 04	PE 0603860N	(Navy)
	Project 2329		
Procurement			
APPN 1810	BA 02	PE 0305014N	(Navy)
	ICN 2867		
APPN 1810	BA 08	PE 0204161N	(Navy)
	ICN 902010		
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	710.1	781.4	781.4	730.6
Procurement	202.9	202.9	223.0	221.9	243.7	243.7	258.6
Flyaway	153.9	--	--	138.4	185.0	--	161.3
Recurring	153.9	--	--	138.4	185.0	--	161.3
Non Recurring	0.0	--	--	0.0	0.0	--	0.0
Support	49.0	--	--	83.5	58.7	--	97.3
Other Support	38.9	--	--	48.0	46.6	--	56.0
Initial Spares	10.1	--	--	35.5	12.1	--	41.3
MILCON	6.6	6.6	7.3	6.6	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	938.6	1031.9	1031.9	996.0

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
FY2013 President's Budget / December 2011 SAR (TY$ M)

Appropriation	Prior	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	To Complete	Total
RDT&E	542.7	72.5	78.4	37.0	0.0	0.0	0.0	0.0	730.6
Procurement	0.0	0.0	0.0	18.5	77.1	78.5	78.8	5.7	258.6
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 2013 Total	549.5	72.5	78.4	55.5	77.1	78.5	78.8	5.7	996.0
PB 2012 Total	551.8	72.5	78.8	53.2	72.9	74.1	62.7	18.3	984.3
Delta	-2.3	0.0	-0.4	2.3	4.2	4.4	16.1	-12.6	11.7

Quantity	Undistributed	Prior	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	To Complete	Total
Development	11	0	0	0	0	0	0	0	0	11
Production	0	0	0	0	2	9	9	6	0	26
PB 2013 Total	11	0	0	0	2	9	9	6	0	37
PB 2012 Total	11	0	0	0	2	9	9	6	0	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	--	--	--	--	--	--	66.7
2009	--	--	--	--	--	--	74.1
2010	--	--	--	--	--	--	135.2
2011	--	--	--	--	--	--	118.8
2012	--	--	--	--	--	--	72.5
2013	--	--	--	--	--	--	78.4
2014	--	--	--	--	--	--	37.0
Subtotal	**11**	**--**	**--**	**--**	**--**	**--**	**730.6**

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	--	--	--	--	--	--	66.0
2009	--	--	--	--	--	--	72.4
2010	--	--	--	--	--	--	130.1
2011	--	--	--	--	--	--	112.2
2012	--	--	--	--	--	--	67.3
2013	--	--	--	--	--	--	71.6
2014	--	--	--	--	--	--	33.2
Subtotal	**11**	**--**	**--**	**--**	**--**	**--**	**710.1**

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	13.4	--	--	13.4	5.1	18.5
2015	9	44.6	--	--	44.6	32.5	77.1
2016	9	49.2	--	--	49.2	29.3	78.5
2017	6	49.6	--	--	49.6	29.2	78.8
2018	--	4.5	--	--	4.5	1.2	5.7
Subtotal	**26**	**161.3**	**--**	**--**	**161.3**	**97.3**	**258.6**

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	11.9	--	--	11.9	4.5	16.4
2015	9	38.9	--	--	38.9	28.3	67.2
2016	9	42.2	--	--	42.2	25.1	67.3
2017	6	41.7	--	--	41.7	24.6	66.3
2018	--	3.7	--	--	3.7	1.0	4.7
Subtotal	**26**	**138.4**	**--**	**--**	**138.4**	**83.5**	**221.9**

Cost Quantity Information
1810 | Procurement | Other Procurement, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2008 $M
2014	2	12.9
2015	9	52.4
2016	9	42.3
2017	6	30.8
2018	--	--
Subtotal	**26**	**138.4**

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	6.6
Subtotal	**6.6**

Low Rate Initial Production

There are currently no Low Rate Initial Production (LRIP) quantities for the JPALS Increment 1A program.

Foreign Military Sales

None

Nuclear Cost

None

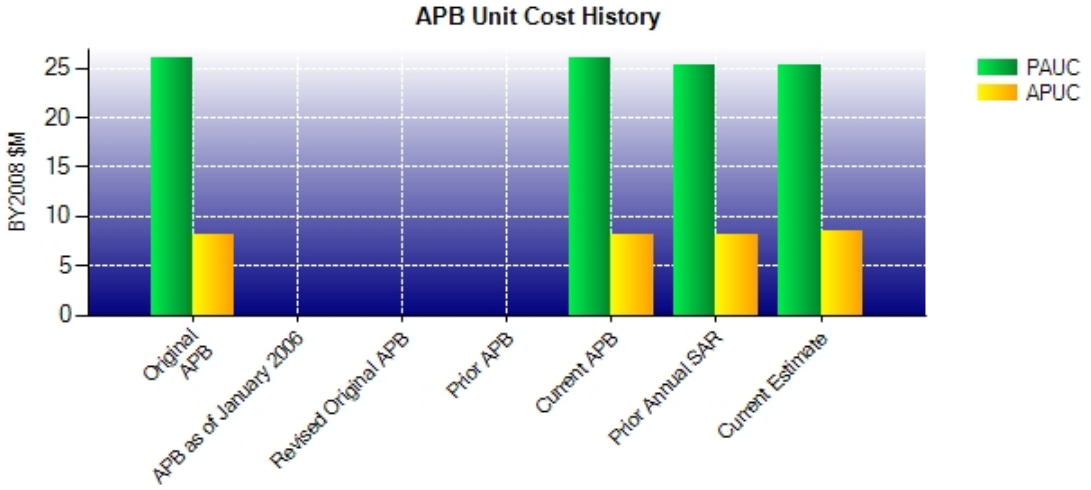
Unit Cost

Unit Cost Report

Unit Cost	BY2008 $M Current UCR Baseline (DEC 2008 APB)	BY2008 $M Current Estimate (DEC 2011 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	963.2	938.6	
Quantity	37	37	
Unit Cost	26.032	25.368	-2.55
Average Procurement Unit Cost (APUC)			
Cost	202.9	221.9	
Quantity	25	26	
Unit Cost	8.116	8.535	+5.16

Unit Cost	BY2008 $M Original UCR Baseline (DEC 2008 APB)	BY2008 $M Current Estimate (DEC 2011 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	963.2	938.6	
Quantity	37	37	
Unit Cost	26.032	25.368	-2.55
Average Procurement Unit Cost (APUC)			
Cost	202.9	221.9	
Quantity	25	26	
Unit Cost	8.116	8.535	+5.16

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 2010	25.286	8.150	26.603	9.373
Current Estimate	DEC 2011	25.368	8.535	26.919	9.946

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	-0.119	0.041	-0.016	0.000	-1.957	0.000	1.081	-0.970	26.919

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	-0.277	-0.105	-0.023	0.000	-0.935	0.000	1.538	0.198	9.946

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	MAY 2013
IOC	N/A	DEC 2014	N/A	DEC 2014
Total Cost (TY $M)	N/A	1031.9	N/A	996.0
Total Quantity	N/A	37	N/A	37
Prog. Acq. Unit Cost (PAUC)	N/A	27.889	N/A	26.919

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	-1.5	-10.7	-0.1	-12.3
Quantity	-5.5	+7.0	--	+1.5
Schedule	--	-0.6	--	-0.6
Engineering	--	--	--	--
Estimating	-40.6	-23.2	+0.1	-63.7
Other	--	--	--	--
Support	--	+27.5	--	+27.5
Subtotal	-47.6	--	--	-47.6
Current Changes				
Economic	+4.3	+3.5	+0.1	+7.9
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-7.5	-1.1	-0.1	-8.7
Other	--	--	--	--
Support	--	+12.5	--	+12.5
Subtotal	-3.2	+14.9	--	+11.7
Total Changes	-50.8	+14.9	--	-35.9
CE - Cost Variance	730.6	258.6	6.8	996.0
CE - Cost & Funding	730.6	258.6	6.8	996.0

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	-31.6	-21.0	+0.1	-52.5
Other	--	--	--	--
Support	--	+24.0	--	+24.0
Subtotal	-36.7	+9.0	+0.1	-27.6
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-6.9	-0.5	-0.1	-7.5
Other	--	--	--	--
Support	--	+10.5	--	+10.5
Subtotal	-6.9	+10.0	-0.1	+3.0
Total Changes	-43.6	+19.0	--	-24.6
CE - Cost Variance	710.1	221.9	6.6	938.6
CE - Cost & Funding	710.1	221.9	6.6	938.6

Previous Estimate: December 2010

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+4.3
Adjustment for current and prior escalation. (Estimating)	-2.6	-2.8
Miscellaneous Congressional and DoD budget adjustments. (Estimating)	-4.3	-4.7
RDT&E Subtotal	-6.9	-3.2

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+3.5
Miscellaneous Congressional and DoD budget adjustments. (Estimating)	-0.5	-1.1
Increase in Initial Spares to fund requirements not previously included in the budget. (Support)	+14.6	+17.0
Decrease in Other Support due to a change in ship availability for installs outside of JPALS control. (Support)	-4.1	-4.5
Procurement Subtotal	+10.0	+14.9

MILCON	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+0.1
Adjustment for current and prior escalation. (Estimating)	-0.1	-0.1
MILCON Subtotal	-0.1	0.0

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	259.4	N/A	13	268.6	275.3

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/31/2011)	-19.0	-2.2
Previous Cumulative Variances	-8.6	-4.6
Net Change	-10.4	+2.4

Cost And Schedule Variance Explanations

The unfavorable net change in the cost variance is due to a direct result of Engineering Development Model (EDM) red line/redesign post Critical Design Review (CDR). Post-CDR changes to the EDM design caused additional unbudgeted work at Raytheon Indianapolis. Indianapolis added additional staff to the program in an attempt to maintain schedule.

The favorable net change in the schedule variance is due to several factors. The schedule has trended more favorable since the December 2010 reporting. The contract schedule variance has improved by 3.7% over the last year. This is a result of an Interactive Electronic Technical Manual replan, behind schedule integration, test activities completing and early delivery of EDM 2. The JPALS Increment 1A program team continues to work with the contractor to identify opportunities on the program.

Contract Comments

The difference between the initial contract price target and the current contract price target is due to contract modifications to adjudicate technical review action items.

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 quantity of 13 consists of eight EDM units and five 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	3	3	11	27.27%
Production	0	0	26	0.00%
Total Program Quantities Delivered	3	3	37	8.11%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	996.0	Years Appropriated	12
Expenditures To Date	539.4	Percent Years Appropriated	66.67%
Percent Expended	54.16%	Appropriated to Date	622.0
Total Funding Years	18	Percent Appropriated	62.45%

Deliveries and expenditures are current as of January 31, 2012.

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. 569 system years
4. 3,500 hours per year sea-based-ashore proficiency trainer operational tempo
5. Organizational to Depot maintenance concept based on Performance Based Logistics
6. Additional man year determined necessary to support LH-Class ships only
7. Total of 26 retrofit ship and sea-based-ashore units (does not include Operating and Support (O&S) for Shipbuilding and Conversion (SCN) funded ships)
8. Estimate updated in December 2011 based on revised JPALS Cost Analysis Requirements Description (CARD)

Costs BY2008 $M		
Cost Element	**JPALS Average Annual Cost Per System**	**AN/SPN-46(V)3**
Unit-Level Manpower	0.005	0.716
Unit Operations	--	--
Maintenance	0.308	0.051
Sustaining Support	0.146	0.027
Continuing System Improvements	0.096	0.408
Indirect Support	--	--
Other	0.010	--
Total Unitized Cost (Base Year 2008 $)	0.565	1.202

Total O&S Costs $M	JPALS	AN/SPN-46(V)3
Base Year	321.5	--
Then Year	462.6	--

The Office of the Secretary of Defense Cost Assessment and Program Evaluation organization conducted an estimate in support of the Milestone B decision on July 14, 2008.

Base Year values decrease from prior estimate and timephasing was adjusted resulting in lower Then Year values.

Operating and Support (O&S) value is based on 26 fielded Other Procurement Navy (OPN) systems. O&S covers 20 year life cycle at an average of 4,000 operating hours per ship system per year and 3,500 operating hours per sea-based-ashore proficiency trainer system per year. O&S costs span the years 2015 to 2038. Disposal costs are not included.

Initial estimate placed hardware modifications and software maintenance under Sustaining Support and not under Continuing System Improvements.

Hardware modifications and software maintenance were refined resulting in a reduction over the 2008 estimate.

Reliability projections for maintenance were refined resulting in a reduction over the 2008 estimate. There was an addition of a 3% Cost Growth Above Inflation (CGAI) factor to Depot Level Repairables (DLRs).

In-Service Engineering Activity (ISEA) was added as part of the Supply Chain Management (SCM) under Sustaining

Support due to its current cost benefit to legacy landing systems.

Over the course of their lives, legacy systems have experienced and continue to experience service life adjustments and system modifications that make the compilation of Total O&S Costs by assuming a static service life (e.g., 25 years) not credible. In addition, the capture of O&S data in available reporting systems has changed significantly over time. Visibility and Management of Operating and Support Costs (VAMOSC), the Navy's official system for collecting and reporting O&S costs, provides costs from 1997 - present. The cost data for platforms in existence prior to 1997 is either unavailable or incomplete. In summary, sufficient historical data and resources do not exist to create comparable, credible Total O&S Costs.