



Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-831



Longbow Apache AH-64D (LONGBOW APACHE)

As of FY 2011 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance
 ACAT - Acquisition Category
 ADM - Acquisition Decision Memorandum
 APB - Acquisition Program Baseline
 APPN - Appropriation
 APUC - Average Procurement Unit Cost
 \$B - Billions of Dollars
 BA - Budget Authority/Budget Activity
 Blk - Block
 BY - Base Year
 CAPE - Cost Assessment and Program Evaluation
 CARD - Cost Analysis Requirements Description
 CDD - Capability Development Document
 CLIN - Contract Line Item Number
 CPD - Capability Production Document
 CY - Calendar Year
 DAB - Defense Acquisition Board
 DAE - Defense Acquisition Executive
 DAMIR - Defense Acquisition Management Information Retrieval
 DoD - Department of Defense
 DSN - Defense Switched Network
 EMD - Engineering and Manufacturing Development
 EVM - Earned Value Management
 FOC - Full Operational Capability
 FMS - Foreign Military Sales
 FRP - Full Rate Production
 FY - Fiscal Year
 FYDP - Future Years Defense Program
 ICE - Independent Cost Estimate
 IOC - Initial Operational Capability
 Inc - Increment
 JROC - Joint Requirements Oversight Council
 \$K - Thousands of Dollars
 KPP - Key Performance Parameter
 LRIP - Low Rate Initial Production
 \$M - Millions of Dollars
 MDA - Milestone Decision Authority
 MDAP - Major Defense Acquisition Program
 MILCON - Military Construction
 N/A - Not Applicable
 O&M - Operations and Maintenance
 ORD - Operational Requirements Document
 OSD - Office of the Secretary of Defense
 O&S - Operating and Support
 PAUC - Program Acquisition Unit Cost

PB - President's Budget
 PE - Program Element
 PEO - Program Executive Officer
 PM - Program Manager
 POE - Program Office Estimate
 RDT&E - Research, Development, Test, and Evaluation
 SAR - Selected Acquisition Report
 SCP - Service Cost Position
 TBD - To Be Determined
 TY - Then Year
 UCR - Unit Cost Reporting
 U.S. - United States
 USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

Program Information

Program Name

AH-64D LONGBOW APACHE (LONGBOW APACHE)

DoD Component

Army

Responsible Office

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Date Assigned: August 14, 2008

References

SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated November 27, 1995

Approved APB

Army Acquisition Executive Approved Acquisition Program Baseline (APB) dated August 18, 2005

Mission and Description

The Longbow consists of a mast-mounted Fire Control Radar (FCR) that is integrated into the AH-64 airframe and a Radio Frequency (RF) autonomous seeker in an upgraded Hellfire missile (Longbow Hellfire). Longbow provides the AH-64 with a true fire-and-forget capability, greatly increasing weapon system effectiveness and aircraft survivability. The weapon system is employable day or night, in adverse weather and in obscurants. Hellfire is used to effectively engage and destroy advanced threat armor on the Air-Land Battlefield. To be effective and survive on this future battlefield, the attack helicopter team must rapidly engage multiple targets with minimum exposure time and deploy a system that is inherently resistant to threat countermeasures.

Executive Summary

The Apache Project Manager (PM) has accepted 501 Longbow Apache aircraft (LBA) over two previous multiyear (MY) contracts. In December 2006, a Firm Fixed Price (FFP) contract was awarded for 96 more aircraft to be delivered in Fiscal Year (FY) 2008 - FY 2010. The Vice Chief of Staff of the Army (VCSA) approved the modification of an additional 21 LBA to be delivered in FY 2010 - FY 2011. Additionally, a contracting strategy has also been established to allow the remanufacture of 72 Army National Guard aircraft to be delivered in FY 2010 - FY 2013. This brings the total number of Block II aircraft remanufactures to 189 after two previous MY contracts with a current contract value of \$1,864.8M.

An FFP is in place for 52 aircraft for attrition replacement (13 in FY 2005, 14 in FY 2006, 20 in FY 2007, and 15 in FY 2008). An undefinitized contract action for an additional 14 aircraft was awarded in January 2010 (12 in FY 2009 and 2 in FY 2010). This brings the total number of replacement aircraft to 66 with a current contract price of \$874.2M.

The Modernized Target Acquisition Designation Sight/Pilot Night Vision Sensor (MTADS/PNVIS) system replaces the current 1970's technology Forward Looking Infrared (FLIR) sensors with the advanced FLIR technology on the Apache Attack Helicopter. Currently, the program has awarded contracts covering seven production lots for a total of 739 U.S. Government (USG) systems and 144 Foreign Military Sales (FMS).

The following significant tests were completed during Calendar Year (CY) 2009:

- Airframe/701D engine with D power integration tests
- Version 6.2 Flight Regression Test (Block I)
- Version 13 Software Baseline and Weapons Verification Test (Block II) was begun in CY 2009 but will conclude in March 2010
- Electromagnetic Vulnerability (EMV) of Extended Block 2 (EB2) configuration with Integrated Aviation Survivability Equipment (ASE)
- Independent Assessment of Integrated ASE

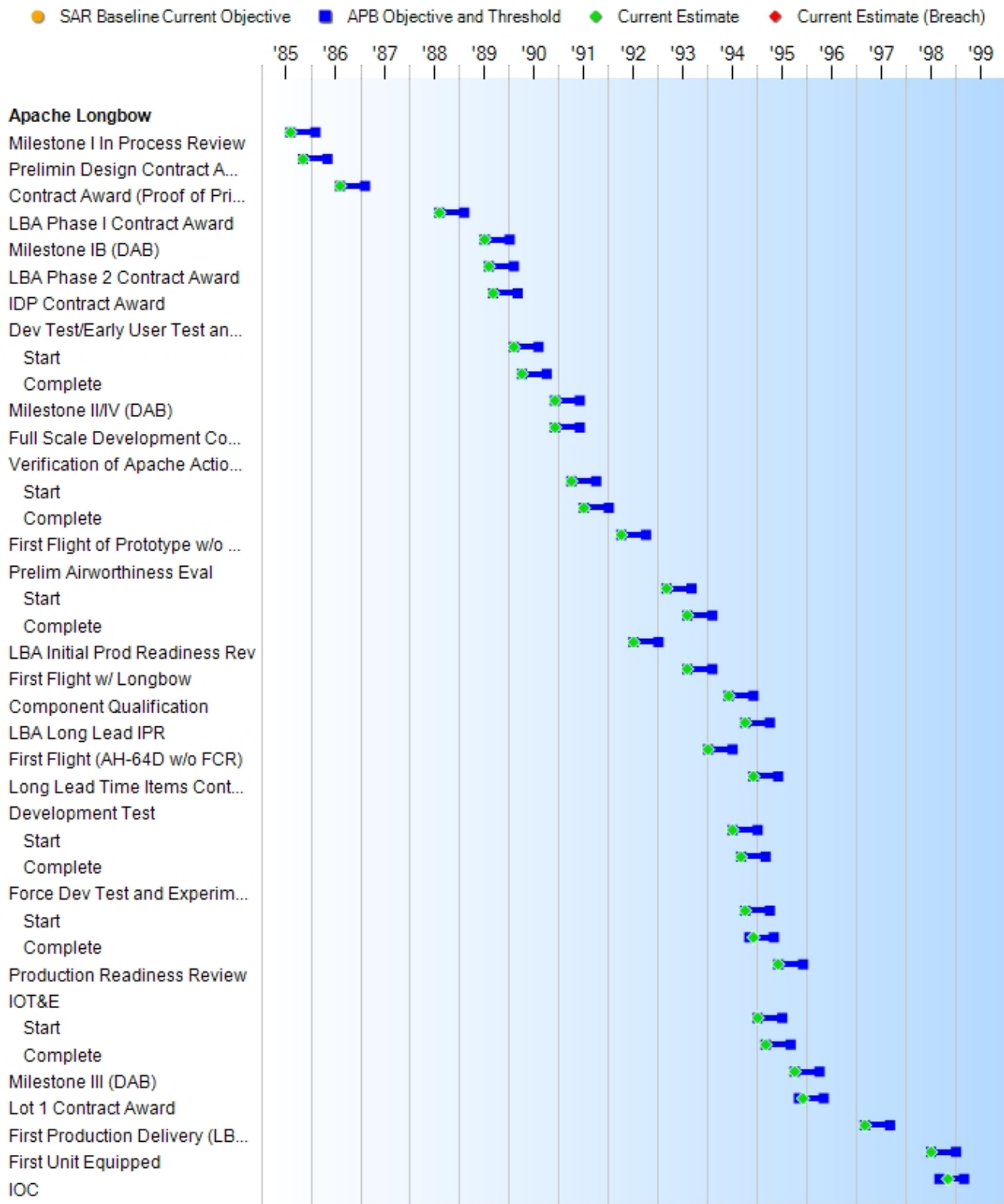
There are no significant software related issues with this program.

Threshold Breaches

APB Breaches		Explanation of Breach	
Schedule	<input type="checkbox"/>	The Acquisition Program Baseline (APB) breach in total procurement cost as well as the APUC is due to the 66 War Replacement Aircraft (WRA), 93 remanufactured aircraft and non-quantity related funding for items such as Video from Unmanned Aviation Systems (UAS) for Interoperability Teaming Level II (VUIT-2), Light Weight Missile Launchers, and Phase I of the Modernized Day Side Assembly added to the Longbow Apache program since the most recent APB, August 18, 2005. A revised APB will be submitted to the Army Acquisition Executive for approval.	
Performance	<input type="checkbox"/>		
Cost	RDT&E		<input type="checkbox"/>
	Procurement		<input checked="" type="checkbox"/>
	MILCON		<input type="checkbox"/>
	Acq O&M		<input type="checkbox"/>
O&S Cost	<input type="checkbox"/>		
Unit Cost	PAUC		<input type="checkbox"/>
	APUC		<input checked="" type="checkbox"/>

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

Schedule



Schedule Events				
Events	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate
Milestone I In Process Review	Aug 1985	Aug 1985	Feb 1986	Aug 1985
Prelimin Design Contract Award	Nov 1985	Nov 1985	May 1986	Nov 1985
Contract Award (Proof of Principle)	Aug 1986	Aug 1986	Feb 1987	Aug 1986
LBA Phase I Contract Award	Aug 1988	Aug 1988	Feb 1989	Aug 1988
Milestone IB (DAB)	Jul 1989	Jul 1989	Jan 1990	Jul 1989
LBA Phase 2 Contract Award	Aug 1989	Aug 1989	Feb 1990	Aug 1989
IDP Contract Award	Sep 1989	Sep 1989	Mar 1990	Sep 1989
Dev Test/Early User Test and Eval				
Start	Feb 1990	Feb 1990	Aug 1990	Feb 1990
Complete	Apr 1990	Apr 1990	Oct 1990	Apr 1990
Milestone II/IV (DAB)	Dec 1990	Dec 1990	Jun 1991	Dec 1990
Full Scale Development Contract Award	Dec 1990	Dec 1990	Jun 1991	Dec 1990
Verification of Apache Action Tm Fixes				
Start	Apr 1991	Apr 1991	Oct 1991	Apr 1991
Complete	Jul 1991	Jul 1991	Jan 1992	Jul 1991
First Flight of Prototype w/o Longbow	Apr 1992	Apr 1992	Oct 1992	Apr 1992
Prelim Airworthiness Eval				
Start	Mar 1993	Mar 1993	Sep 1993	Mar 1993
Complete	Aug 1993	Aug 1993	Feb 1994	Aug 1993
LBA Initial Prod Readiness Rev	Jul 1992	Jul 1992	Jan 1993	Jul 1992
First Flight w/ Longbow	Aug 1993	Aug 1993	Feb 1994	Aug 1993
Component Qualification	Jun 1994	Jun 1994	Dec 1994	Jun 1994
LBA Long Lead IPR	Oct 1994	Oct 1994	Apr 1995	Oct 1994
First Flight (AH-64D w/o FCR)	Jan 1994	Jan 1994	Jul 1994	Jan 1994
Long Lead Time Items Contract Award	Dec 1994	Dec 1994	Jun 1995	Dec 1994
Development Test				
Start	Jul 1994	Jul 1994	Jan 1995	Jul 1994
Complete	Sep 1994	Sep 1994	Mar 1995	Sep 1994
Force Dev Test and Experimentation				
Start	Oct 1994	Oct 1994	Apr 1995	Oct 1994
Complete	Nov 1994	Nov 1994	May 1995	Dec 1994
Production Readiness Review	Jun 1995	Jun 1995	Dec 1995	Jun 1995
IOT&E				
Start	Jan 1995	Jan 1995	Jul 1995	Jan 1995

Complete	Mar 1995	Mar 1995	Sep 1995	Mar 1995
Milestone III (DAB)	Oct 1995	Oct 1995	Apr 1996	Oct 1995
Lot 1 Contract Award	Nov 1995	Nov 1995	May 1996	Dec 1995
First Production Delivery (LBA & FCR)	Mar 1997	Mar 1997	Sep 1997	Mar 1997
First Unit Equipped	Oct 1997	Jul 1998	Jan 1999	Jul 1998
IOC	Sep 1998	Sep 1998	Mar 1999	Nov 1998

Change Explanations

None

Acronyms and Abbreviations

- DAB - Defense Acquisition Board
- FCR - Fire Control Radar
- IDP - Initial Design Phase
- IOC - Initial Operational Capability
- IOT&E - Initial Operational Test & Evaluation
- IPR - In Process Review
- LBA - Longbow Apache
- w/ - with
- w/o - without

Performance

Performance Characteristics				
SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
Vertical Rate of Climb for AH-64D with FCR Mission Kit (ft/min)				
450	450	450	705	450
Ordnance Load (primary mission config)				
Hellfire (no.)				
16	16	12	8	12
Target Handover				
No degradation	No degradation	15% degradation	13% Degradation	No degradation
Ao, Operational Availability (%) of AH-64D w/FCR Kit				
79	79	75	91.4	79

Classified Performance information is provided in the classified annex to this submission.

Requirements Reference

Operational Requirements Document (ORD), dated April 1, 1994.

Change Explanations

None

Track to Budget

RDT&E

Appn	BA	PE	
Army	2040	07	0203744A
	Project	Name	
	D12	Aircraft Modifications/Product Improvement Programs/Longbow Apache Operational Systems Development	
Army	2040	07	0603776A
	Project	Name	
		Longbow	(Sunk)
Army	2040	07	0604816A
	Project	Name	
		Longbow - ED	(Sunk)

Procurement

Appn	BA	PE	
Army	2031	03	0210101A
	Line Item	Name	
	AA0951	INITIAL SPARES-LONGBOW	(Sunk)
Army	2031	03	0210102A
	Line Item	Name	
	AA0978	SPARES	(Shared) (Sunk)
Army	2031	02	0210100A
	Line Item	Name	
	AA6605	AH-64	(Shared)
Army	2031	02	0210102A
	Line Item	Name	
	AA6607	Longbow Apache Mods	(Shared) (Sunk)
	AA6608	Apache Longbow FCR	(Shared) (Sunk)

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 1996 \$M			BY 1996 \$M	TY \$M		
	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Production Estimate	Current APB Production Objective	Current Estimate
RDT&E	638.4	760.5	836.5	783.5	592.3	733.0	762.4
Procurement	5052.2	7401.9	8142.1	10555.3 ¹	6435.5	8307.8	12342.1
Flyaway	--	--	--	9211.6	--	--	10832.0
Recurring	--	--	--	8971.4	--	--	10585.7
Non Recurring	--	--	--	240.2	--	--	246.3
Support	--	--	--	1343.7	--	--	1510.1
Other Support	--	--	--	1295.0	--	--	1454.7
Initial Spares	--	--	--	48.7	--	--	55.4
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	5690.6	8162.4	N/A	11338.8	7027.8	9040.8	13104.5

¹ APB Breach

Total Quantity			
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate
RDT&E		0	0
Procurement		758	597
Total		758	597

Cost and Funding

Funding Summary

Appropriation Summary									
FY 2011 President's Budget / December 2009 SAR (TY\$ M)									
Appropriation	Prior	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total
RDT&E	759.5	2.9	0.0	0.0	0.0	0.0	0.0	0.0	762.4
Procurement	11207.0	557.2	577.9	0.0	0.0	0.0	0.0	0.0	12342.1
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2011 Total	11966.5	560.1	577.9	0.0	0.0	0.0	0.0	0.0	13104.5
PB 2009 Total	10810.8	286.3	20.2	42.5	23.2	0.0	0.0	0.0	11183.0
Delta	1155.7	273.8	557.7	-42.5	-23.2	0.0	0.0	0.0	1921.5

Quantity Summary										
FY 2011 President's Budget / December 2009 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	717	27	12	0	0	0	0	0	756
PB 2011 Total	0	717	27	12	0	0	0	0	0	756
PB 2009 Total	0	655	16	0	0	0	0	0	0	671
Delta	0	62	11	12	0	0	0	0	0	85

Cost and Funding

Annual Funding By Appropriation

Annual Funding							
2040 RDT&E Research, Development, Test, and Evaluation, Army							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1988	--	--	--	--	--	--	18.7
1989	--	--	--	--	--	--	47.0
1990	--	--	--	--	--	--	68.9
1991	--	--	--	--	--	--	56.8
1992	--	--	--	--	--	--	73.2
1993	--	--	--	--	--	--	100.9
1994	--	--	--	--	--	--	86.9
1995	--	--	--	--	--	--	112.0
1996	--	--	--	--	--	--	22.0
1997	--	--	--	--	--	--	10.7
1998	--	--	--	--	--	--	--
1999	--	--	--	--	--	--	--
2000	--	--	--	--	--	--	31.8
2001	--	--	--	--	--	--	17.0
2002	--	--	--	--	--	--	39.6
2003	--	--	--	--	--	--	44.4
2004	--	--	--	--	--	--	1.7
2005	--	--	--	--	--	--	1.6
2006	--	--	--	--	--	--	--
2007	--	--	--	--	--	--	0.9
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	25.4
2010	--	--	--	--	--	--	2.9
Subtotal	--	--	--	--	--	--	762.4

Annual Funding							
2040 RDT&E Research, Development, Test, and Evaluation, Army							
Fiscal Year	Quantity	BY 1996 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1988	--	--	--	--	--	--	22.9
1989	--	--	--	--	--	--	55.3
1990	--	--	--	--	--	--	78.1
1991	--	--	--	--	--	--	62.0
1992	--	--	--	--	--	--	78.1
1993	--	--	--	--	--	--	105.2
1994	--	--	--	--	--	--	89.0
1995	--	--	--	--	--	--	112.5
1996	--	--	--	--	--	--	21.7
1997	--	--	--	--	--	--	10.4
1998	--	--	--	--	--	--	--
1999	--	--	--	--	--	--	--
2000	--	--	--	--	--	--	30.0
2001	--	--	--	--	--	--	15.8
2002	--	--	--	--	--	--	36.4
2003	--	--	--	--	--	--	40.1
2004	--	--	--	--	--	--	1.5
2005	--	--	--	--	--	--	1.4
2006	--	--	--	--	--	--	--
2007	--	--	--	--	--	--	0.7
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	20.1
2010	--	--	--	--	--	--	2.3
Subtotal	--	--	--	--	--	--	783.5

Annual Funding								
2031 Procurement Aircraft Procurement, Army								
Fiscal Year	Quantity	TY \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
1995	--	35.7	--	39.9	75.6	--	75.6	
1996	24	176.8	--	120.7	297.5	41.4	338.9	
1997	24	181.0	--	69.6	250.6	63.9	314.5	
1998	44	279.3	--	11.9	291.2	101.1	392.3	
1999	66	428.6	--	3.7	432.3	81.3	513.6	
2000	74	498.6	--	0.5	499.1	150.7	649.8	
2001	52	487.5	--	--	487.5	143.9	631.4	
2002	60	644.8	--	--	644.8	145.6	790.4	
2003	74	722.0	--	--	722.0	151.9	873.9	
2004	64	608.5	--	--	608.5	154.8	763.3	
2005	32	721.9	--	--	721.9	168.2	890.1	
2006	14	917.8	--	--	917.8	93.3	1011.1	
2007	56	1316.1	--	--	1316.1	48.9	1365.0	
2008	43	820.6	--	--	820.6	47.3	867.9	
2009	90	1664.8	--	--	1664.8	64.4	1729.2	
2010	27	526.8	--	--	526.8	30.4	557.2	
2011	12	554.9	--	--	554.9	23.0	577.9	
Subtotal	756	10585.7	--	246.3	10832.0	1510.1	12342.1	

Annual Funding								
2031 Procurement Aircraft Procurement, Army								
Fiscal Year	Quantity	BY 1996 \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
1995	--	35.4	--	39.5	74.9	--	74.9	
1996	24	172.8	--	118.0	290.8	40.5	331.3	
1997	24	175.0	--	67.3	242.3	61.8	304.1	
1998	44	267.5	--	11.4	278.9	96.8	375.7	
1999	66	407.4	--	3.5	410.9	77.3	488.2	
2000	74	467.8	--	0.5	468.3	141.4	609.7	
2001	52	452.2	--	--	452.2	133.4	585.6	
2002	60	589.7	--	--	589.7	133.2	722.9	
2003	74	646.0	--	--	646.0	135.9	781.9	
2004	64	529.6	--	--	529.6	134.7	664.3	
2005	32	611.4	--	--	611.4	142.5	753.9	
2006	14	757.0	--	--	757.0	77.0	834.0	
2007	56	1064.2	--	--	1064.2	39.6	1103.8	
2008	43	653.3	--	--	653.3	37.7	691.0	
2009	90	1309.4	--	--	1309.4	50.7	1360.1	
2010	27	409.0	--	--	409.0	23.7	432.7	
2011	12	423.7	--	--	423.7	17.5	441.2	
Subtotal	756	8971.4	--	240.2	9211.6	1343.7	10555.3	

Cost Quantity Information		
2031 Procurement Aircraft Procurement, Army		
Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned With Quantity) BY 1996 \$M
1995	--	--
1996	24	163.4
1997	24	195.7
1998	44	266.4
1999	66	402.5
2000	74	473.3
2001	52	443.5
2002	60	592.0
2003	74	636.0
2004	64	558.7
2005	32	623.8
2006	14	724.4
2007	56	1064.7
2008	43	652.4
2009	90	1327.5
2010	27	423.4
2011	12	423.7
Subtotal	756	8971.4

Low Rate Initial Production

Low Rate Initial Production (LRIP) was not approved for this program.

Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost \$M	Description
Taiwan	12/5/2008	30	2023.0	Effective Date - December 5, 2008 Quantity - 30 New Build Aircraft (includes MTADS and 17 FCRs/RFIs) Net estimated cost - \$2023M
Saudi Arabia	12/25/2006	12	349.0	11 Reman + 1 New Build for Total of 12 (includes M-TADS and FCRs/RFIs)
United Arab Emirates	12/12/2005	30	742.8	Effective date - December 31, 2007 Quantity - 2 Longbow Crew Trainers Net Estimated Cost - \$42M
Kuwait	9/29/2002	16	836.6	Includes MTADS, 8 FCRs/RFIs, and 1 LCT
Egypt	9/12/2000	35	440.0	Effective date - April 30, 2007 Quantity 1 Longbow Crew Trainer Net estimated cost \$20M
				Effective date - December 21, 2007 Quantity 36 MTADS upgrade kits Net Estimated Cost \$105M
Israel	2/23/2000	4	397.8	Effective date - March 2, 2001 Quantity - 8 New Build
				Effective Date - November 2, 2004 Quantity - 6 Remanufactured Aircraft (includes MTADS) Net estimated cost - \$397.8M
				Effective Date - June 30, 2007 Quantity - 14 MTADS upgrade kits Net Estimated Cost \$22M
Singapore	2/26/1999	8	399.0	Aircraft include MTADS and FCRs/RFIs
				Effective Date - September 5, 2001 Quantity - 12 New Build Aircraft (includes MTADS) Net estimated cost \$352M
Netherlands	2/11/1994	30	694.0	Effective Date - January 26, 2005 Quantity - 24 MTADS Upgrade Kits Net estimated cost - \$64M

Notes

Nuclear Costs

There are no nuclear costs associated with the Longbow Apache program.

Unit Cost

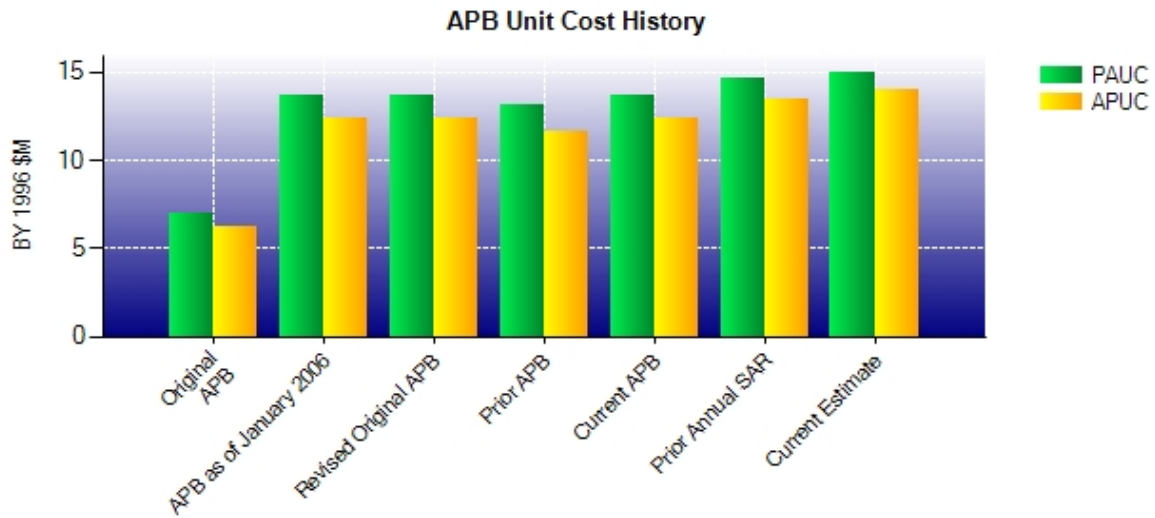
Unit Cost Report

Item	BY 1996 \$M	BY 1996 \$M	% Change
	Current UCR Baseline (Aug 2005 APB)	Current Estimate (Dec 2009 SAR)	
Program Acquisition Unit Cost			
Cost	8162.4	11338.8	
Quantity	597	756	
Item	13.672	14.998	+9.70
Average Procurement Unit Cost			
Cost	7401.9	10555.3	
Quantity	597	756	
Unit Cost	12.398	13.962¹	+12.61

Item	BY 1996 \$M	BY 1996 \$M	% Change
	Revised Original UCR Baseline (Aug 2005 APB)	Current Estimate (Dec 2009 SAR)	
Program Acquisition Unit Cost			
Cost	8162.4	11338.8	
Quantity	597	756	
Unit Cost	13.672	14.998	+9.70
Average Procurement Unit Cost			
Cost	7401.9	10555.3	
Quantity	597	756	
Unit Cost	12.398	13.962	+12.61

¹ APB Unit Cost Breach

Unit Cost History



Item	Date	BY 1996 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Mar 1994	6.932	6.191	8.097	7.405
APB as of January 2006	Aug 2005	13.672	12.398	15.144	13.916
Revised Original APB	Aug 2005	13.672	12.398	15.144	13.916
Prior APB	May 2001	13.155	11.636	14.220	12.756
Current APB	Aug 2005	13.672	12.398	15.144	13.916
Prior Annual SAR	Dec 2007	14.644	13.469	16.666	15.520
Current Estimate	Dec 2009	14.998	13.962	17.334	16.326

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY \$M)									
Initial PAUC Production Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
9.272	-0.355	0.970	0.032	4.749	2.023	0.000	0.644	8.062	17.334

Current SAR Baseline to Current Estimate (TY \$M)									
Initial APUC Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
8.490	-0.354	0.968	0.032	4.567	1.978	0.000	0.644	7.835	16.326

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone I	N/A	Jul 1989	Jul 1989	Jul 1989
Milestone II	N/A	Dec 1990	Dec 1990	Dec 1990
Milestone III	N/A	Nov 1995	Oct 1995	Oct 1995
IOC	N/A	Apr 1997	Sep 1998	Nov 1998
Total Cost (TY \$M)	N/A	5564.4	7027.8	13104.5
Total Quantity	N/A	758	758	756
PAUC	N/A	7.341	9.272	17.334

Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	592.3	6435.5	--	7027.8
Previous Changes				
Economic	-1.0	-250.1	--	-251.1
Quantity	--	+172.3	--	+172.3
Schedule	--	+22.3	--	+22.3
Engineering	+134.9	+2395.2	--	+2530.1
Estimating	+43.0	+1154.5	--	+1197.5
Other	--	--	--	--
Support	--	+484.1	--	+484.1
Subtotal	+176.9	+3978.3	--	+4155.2
Current Changes				
Economic	-0.3	-17.3	--	-17.6
Quantity	--	+542.7	--	+542.7
Schedule	--	+2.1	--	+2.1
Engineering	+2.9	+1057.3	--	+1060.2
Estimating	-9.4	+341.0	--	+331.6
Other	--	--	--	--
Support	--	+2.5	--	+2.5
Subtotal	-6.8	+1928.3	--	+1921.5
Total Changes	+170.1	+5906.6	--	+6076.7
Current Estimate	762.4	12342.1	--	13104.5

Summary BY 1996 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	638.4	5052.2	--	5690.6
Previous Changes				
Economic	--	--	--	--
Quantity	--	+178.5	--	+178.5
Schedule	--	--	--	--
Engineering	+123.7	+1960.1	--	+2083.8
Estimating	+26.5	+1395.8	--	+1422.3
Other	--	--	--	--
Support	--	+450.8	--	+450.8
Subtotal	+150.2	+3985.2	--	+4135.4
Current Changes				
Economic	--	--	--	--
Quantity	--	+423.3	--	+423.3
Schedule	--	+5.5	--	+5.5
Engineering	+2.3	+820.9	--	+823.2
Estimating	-7.4	+266.0	--	+258.6
Other	--	--	--	--
Support	--	+2.2	--	+2.2
Subtotal	-5.1	+1517.9	--	+1512.8
Total Changes	+145.1	+5503.1	--	+5648.2
Current Estimate	783.5	10555.3	--	11338.8

Previous Estimate: December 2007

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-0.3
Adjustment for current and prior escalation. (Estimating)	+0.2	+0.3
Decrease due to revised estimate for Rotor Blades, Training Devices, and Missile Launchers. (Estimating)	-7.6	-9.7
Increase due to incorporation of Electronic Image Intensifier (EI2) Technology Transition. (Engineering)	+2.3	+2.9
RDT&E Subtotal	-5.1	-6.8

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-17.3
Acceleration of procurement buy profile. (Schedule)	0.0	-4.9
Total Quantity variance resulting from an increase of 85 aircraft from 671 to 756. (Subtotal)	+1309.0	+1678.4
Quantity variance resulting from an increase of 85 aircraft from 671 to 756. (Quantity)	(+423.3)	(+542.7)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+286.4)	(+367.3)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(+593.8)	(+761.4)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+5.5)	(+7.0)
Correction to align support and flyaway. (Subtotal)	0.0	0.0
Change in support due to quantity change. (Estimating)	(+0.3)	(+0.5)
(Support)	(-0.3)	(-0.5)
Adjustment for current and prior escalation. (Estimating)	+10.0	+13.0
Deletion of Fleet Sustainment costs after production ends. (Estimating)	-43.9	-58.7
Increase in product improvements and upgrades to existing fleet. (Estimating)	+13.2	+18.9
Increase for Phase I of Modernized Day Side Assembly. (Engineering)	+14.1	+18.5
Increase for 6 battallions of Apache Video from Unmanned Aviation Systems (UAS) for Interoperability Teaming Level II (VUIT-2). (Engineering)	+201.6	+262.5
Increase for additional fielding of Light Weight Missile Launchers. (Engineering)	+11.4	+14.9
Adjustment for current and prior escalation. (Support)	+1.7	+2.1
Increase in Other Support. (Support)	+0.8	+0.9
Procurement Subtotal	+1517.9	+1928.3

(QR) Quantity Related

Contracts

Contract Identification

Appropriation: Procurement
Contract Name: R&S/Recapitalization
Contractor: McDonnell Douglas
Contractor Location: Mesa, AZ 85215-9797
Contract Number: DAAH23-01-C-0092
Contract Type: Firm Fixed Price (FFP)
Award Date: July 31, 2001
Definitization Date: July 31, 2001

Contract Price

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
20.7	N/A	559	363.8	N/A	559	366.2	366.2

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Notes

Initial contract was to purchase strap packs only. Contract was modified to include all the recapitalization components and a reliability and safety kit per each aircraft.

Contract Identification

Appropriation: Procurement
Contract Name: Lot 2 MTADS Production
Contractor: Lockheed Martin
Contractor Location: Orlando, FL 32822
Contract Number: W58RGZ-04-C-0302
Contract Type: Firm Fixed Price (FFP)
Award Date: March 31, 2005
Definitization Date: March 31, 2005

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
217.8	N/A	73	275.7	N/A	86	275.7	275.7

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Notes

Initial contract price is for 73 Arrowhead kits, spares, B-kits and installation. The current contract price includes a modification for an additional 13 complete MTADS-PNVS systems and one tooling and test set plus a modification for improvements in the Visible/Near Infrared (V/NIR) sensor system.

Contract Identification

Appropriation: RDT&E
Contract Name: War Replacement Aircraft
Contractor: McDonnell Douglas
Contractor Location: Mesa, AZ 85215-9797
Contract Number: W58RGZ-05-C-0274
Contract Type: Firm Fixed Price (FFP)
Award Date: September 23, 2005
Definitization Date: September 23, 2005

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
192.6	N/A	13	757.0	N/A	52	1313.8	1313.8

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Notes

Initial contract price was for production of 13 aircraft and did not include cost of Government Furnished Equipment (GFE). Current contract price is for the original 13 aircraft plus an additional 39 aircraft to include GFE and full mission kits.

Contract Identification

Appropriation: Procurement
Contract Name: Extended Block II (EBII)
Contractor: McDonnell Douglas
Contractor Location: Mesa, AZ 85215-9797
Contract Number: W58RGZ-06-C-0093
Contract Type: Firm Fixed Price (FFP)
Award Date: December 18, 2006
Definitization Date: December 18, 2006

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
380.7	N/A	36	1313.1	N/A	152	1965.1	1965.1

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Notes

Initial contract price was for the remanufacture of 36 aircraft. Current contract price increase due to additional quantities required for Army and National Guard units.

Contract Identification

Appropriation: Procurement
Contract Name: Lot 3 & 4 MTADS Production
Contractor: Lockheed Martin
Contractor Location: Orlando, FL 32822
Contract Number: W58RGZ-06-C-0169
Contract Type: Firm Fixed Price (FFP)
Award Date: July 21, 2006
Definitization Date: July 21, 2006

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
290.3	N/A	180	993.0	N/A	503	1200.0	1200.0

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Notes

The initial contract price of \$290.3M was for 180 each MTADS and associated spares under Lot 3. A modification to this contract added MTADS production Lot 4, executed February 28, 2007. The Lot 4 modification price includes an additional \$261.4M for 141 each MTADS with associated spares and 29 War Replacement Systems.

A modification to this contract added MTADS production Lot 5, executed January 24, 2008. The Lot 5 modification includes an additional \$171.8M for 94 each MTADS with associated spares.

In addition, there are Integrated Materiel Management Center (IMMC) spares totaling \$31.2M and FMS (Saudi Arabia and GOI) requirements totaling \$49.4M on this contract.

A modification to this contract added MTADS production Lot 6 option, executed March 26, 2009. The Lot 6 modification includes an additional \$142.5M for 55 each MTADS with associated spares and 33 each Sky Eagle. In addition, this modification included FMS requirements (Royal Netherlands Air Force).

A Undefinitized Contract Agreement (UCA) to this contract added additional MTADS production Lot 6 requirements, definitized January 14, 2010. The Lot 6 UCA includes an additional \$46.4M for IMMC and National Guard Requirements.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	756	622	756	82.28%
Total Program Quantity Delivered	756	622	756	82.28%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	13104.5	Years Appropriated	23
Expended to Date	9459.3	Percent Years Appropriated	95.83%
Percent Expended	72.18%	Appropriated to Date	12526.6
Total Funding Years	24	Percent Appropriated	95.59%

Operating and Support Cost

Assumptions and Ground Rules

Assumes the fielding of 676 aircraft, each flying 203.4 hours per year. Estimate is based on 20 year service life. The entire system service life (676 * 20) = 13520 aircraft years. At this point in the program schedule, 5,561 of those aircraft years have already been flown. Thus, this estimate allocates annual unit cost over a total of 7,959 years. The Mean Time Between Failure (MTBF) goal for the aircraft system is 22 hours at maturity (50,000 hours). The costs are updated annually to reflect the Operating and Support Management Information System (OSMIS) database. The Apache Longbow is the antecedent aircraft to the Apache BLK III.

Cost Estimate Reference:

None

Sustainment Strategy:

None

Antecedent Information:

None

Unitized O&S Costs BY1996 \$K		
Cost Element	Apache Longbow Avg Annual Cost Per Longbow Aircraft	Antecedent System (Antecedent) Avg Annual Cost Per Antecedent System
Mission Pay & Allowance	463.000	--
Unit Level Consumption	715.800	--
Intermediate Maintenance	--	--
Depot Maintenance	42.600	--
Contractor Support	22.100	--
Sustaining Support	95.200	--
Indirect	85.600	--
Other	--	--
Total	1424.300	--

Unitized Cost Comments:

None

Item	Total O&S Cost \$M			
	Apache Longbow		Antecedent System (Antecedent)	
	Current Production APB Objective/Threshold	Current Estimate		
Base Year	21462.1	23608.3	11335.4	N/A
Then Year	34019.1	N/A	19278.5	N/A

Total O&S Cost Comment

None

Disposal Estimate Details

Date of Estimate:

Source of Estimate:

Disposal/Demilitarization Total Cost (BY 1996 \$M):