



# Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-537



## National Airspace System (NAS)

As of FY 2015 President's Budget

Defense Acquisition Management  
Information Retrieval  
(DAMIR)

# Report Documentation Page

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## Common Acronyms and Abbreviations

Acq O&M - Acquisition-Related Operations and Maintenance  
APB - Acquisition Program Baseline  
APPN - Appropriation  
APUC - Average Procurement Unit Cost  
BA - Budget Authority/Budget Activity  
BY - Base Year  
DAMIR - Defense Acquisition Management Information Retrieval  
Dev Est - Development Estimate  
DoD - Department of Defense  
DSN - Defense Switched Network  
Econ - Economic  
Eng - Engineering  
Est - Estimating  
FMS - Foreign Military Sales  
FY - Fiscal Year  
IOC - Initial Operational Capability  
\$K - Thousands of Dollars  
LRIP - Low Rate Initial Production  
\$M - Millions of Dollars  
MILCON - Military Construction  
N/A - Not Applicable  
O&S - Operating and Support  
Oth - Other  
PAUC - Program Acquisition Unit Cost  
PB - President's Budget  
PE - Program Element  
Proc - Procurement  
Prod Est - Production Estimate  
QR - Quantity Related  
Qty - Quantity  
RDT&E - Research, Development, Test, and Evaluation  
SAR - Selected Acquisition Report  
Sch - Schedule  
Spt - Support  
TBD - To Be Determined  
TY - Then Year  
UCR - Unit Cost Reporting

## Program Information

**Program Name**

National Airspace System (NAS)

**DoD Component**

Air Force

**Joint Participants**

Army; Navy

## Responsible Office

**Responsible Office**

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**Date Assigned** July 16, 2012

## References

**SAR Baseline (Production Estimate)**

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated June 7, 2005

**Approved APB**

Air Force Acquisition Executive (AFAE) Approved Acquisition Program Baseline (APB) dated July 12, 2006

## Mission and Description

The DoD National Airspace System (NAS) is comprised of three systems: the Digital Airport Surveillance Radar (DASR), the DoD Advanced Automation System (DAAS), also known as the Standard Terminal Automation Replacement System (STARS) within the Federal Aviation Administration (FAA), and the Voice Communication Switching System (VCSS). The DoD NAS program is modernizing the DoD radar approach control facilities in parallel with the FAA. The DoD NAS program provides systems and facilities compatible/interoperable with the FAA modernization, prevents DoD flight delays and cancellations, continues DoD's access into Special Use Airspace, provides transparent services to military and civil aircraft, replaces aging DoD Air Traffic Control (ATC) systems, and increases flight safety. NAS is a Non-Developmental Item (NDI) acquisition. DoD will upgrade voice, data, and sensor systems as well as facility configurations and operations concepts to provide continued quantity and quality of ATC services to the aviation community. To supplement the DAAS, the DoD procured the Airfield Automation System (AFAS) to integrate weather, airport environmental data, and airfield equipment status at air traffic control positions. DoD military ATC and fighting/flying readiness will be maintained.

## Executive Summary

NAS program continued production and delivery of Digital Airport Surveillance Radars (DASR) and DoD Advanced Automation Systems (DAAS) for the Air Force (AF), Army and Navy in Calendar Year 2013.

DASR Configuration 5 Federal Aviation Administration contract was awarded February 5, 2013.

DASR Site Acceptance Test (SAT) was completed at Shaw Air Force Base (AFB), South Carolina (AF Site) on April 23, 2013 and the DD250 was signed on June 11, 2013.

DASR DD250 was signed at Fort Rucker, Alabama (Army Site) on February 1, 2013 and the DAAS DD250 was signed on June 27, 2013.

IOC attained at Incirlik Air Base (AB), Turkey on August 2, 2013.

DAAS DD250 was signed at McGuire AFB, New Jersey (AF Site) on June 6, 2013 (1<sup>st</sup> Tech Refresh Site), with the System Cutover to operational use on August 10, 2013.

DAAS DD250 was signed at Ft. Hood, Texas (Army Site) on August 29, 2013.

DASR Installation and Check-Out (INCO) started at Dobbins AFB, Georgia (AF Site) on February 25, 2013, with SAT completed on July 17, 2013 and DD250 signed on September 17, 2013.

DASR INCO at Aviano AB, Italy started on September 9, 2013.

DAAS DD250 was signed at Osan AB, Korea on April 4, 2013 with DASR SAT completed on September 20, 2013 and DASR DD250 signed on September 30, 2013.

DAAS Equipment Delivery (ED) was accomplished at Thule AB, Greenland on August 16, 2013; DASR SAT was completed on August 29, 2013; DASR DD250 was signed September 30, 2013; and DAAS DD250 was signed October 11, 2013.

Small Business contract was awarded to JVN Communications, Inc on October 31, 2013 for an Automated Protocol Exchanger (APEX) at the two (2) German DAAS sites to interface with the host nation automation system.

DASR SAT was completed at Selfridge AFB, Michigan on May 7, 2013; DAAS ED was accomplished on Aug 27, 2013; DASR DD250 was signed on June 6, 2013; and DAAS DD250 was signed on November 7, 2013.

The Annual Configuration Steering Board was accomplished on December 11, 2013.

DASR DD250 was signed at NAS North Island (Navy site) on December 16, 2013.

DASR INCO at Lajes Field, Portugal started on June 12, 2013; DASR SAT was completed on January 30, 2014.

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

## Threshold Breaches

APB Breaches		
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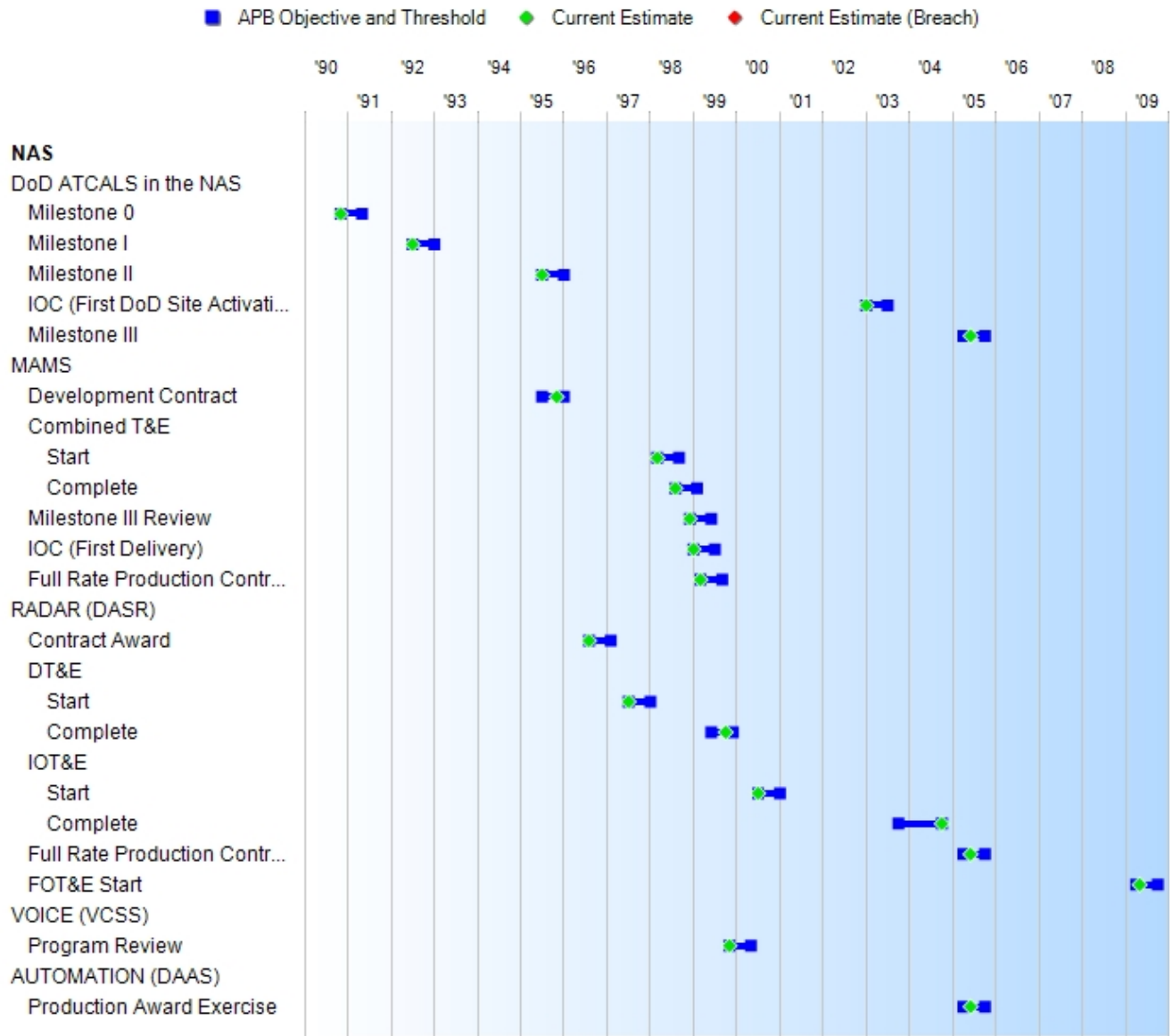
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	Procurement	<input type="checkbox"/>
	MILCON	<input type="checkbox"/>
	Acq O&M	<input type="checkbox"/>
<b>O&amp;S Cost</b>		<input type="checkbox"/>
<b>Unit Cost</b>	PAUC	<input type="checkbox"/>
	APUC	<input type="checkbox"/>

Nunn-McCurdy Breaches		
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<b>Current UCR Baseline</b>		
	PAUC	None
	APUC	None
<b>Original UCR Baseline</b>		
	PAUC	None
	APUC	None



# Schedule



<b>Milestones</b>	<b>SAR Baseline Prod Est</b>	<b>Current APB Production Objective/Threshold</b>		<b>Current Estimate</b>
DoD ATCALs in the NAS				
Milestone 0	NOV 1990	NOV 1990	MAY 1991	NOV 1990
Milestone I	JUL 1992	JUL 1992	JAN 1993	JUL 1992
Milestone II	JUL 1995	JUL 1995	JAN 1996	JUL 1995
IOC (First DoD Site Activation)	JAN 2003	JAN 2003	JUL 2003	JAN 2003
Milestone III	APR 2005	APR 2005	OCT 2005	JUN 2005
MAMS				
Development Contract	JUL 1995	JUL 1995	JAN 1996	NOV 1995
Combined T&E				
Start	MAR 1998	MAR 1998	SEP 1998	MAR 1998
Complete	AUG 1998	AUG 1998	FEB 1999	AUG 1998
Milestone III Review	DEC 1998	DEC 1998	JUN 1999	DEC 1998
IOC (First Delivery)	JAN 1999	JAN 1999	JUL 1999	JAN 1999
Full Rate Production Contract Award	MAR 1999	MAR 1999	SEP 1999	MAR 1999
RADAR (DASR)				
Contract Award	AUG 1996	AUG 1996	FEB 1997	AUG 1996
DT&E				
Start	JUL 1997	JUL 1997	JAN 1998	JUL 1997
Complete	JUN 1999	JUN 1999	DEC 1999	OCT 1999
IOT&E				
Start	JUL 2000	JUL 2000	JAN 2001	JUL 2000
Complete	OCT 2003	OCT 2003	OCT 2004	OCT 2004
Full Rate Production Contract Award	APR 2005	APR 2005	OCT 2005	JUN 2005
FOT&E Start	JUN 2006	APR 2009	OCT 2009	MAY 2009
VOICE (VCSS)				
Program Review	NOV 1999	NOV 1999	MAY 2000	NOV 1999
AUTOMATION (DAAS)				
Production Award Exercise	APR 2005	APR 2005	OCT 2005	JUN 2005

### Change Explanations

None

**Acronyms and Abbreviations**

ATCALs - Air Traffic Control and Landing Systems  
DAAS - DOD Advanced Automation System  
DASR - Digital Airport Surveillance Radar  
DT&E - Developmental Test & Evaluation  
FOT&E - Follow-on Operational Test & Evaluation  
IOT&E - Initial Operational Test and Evaluation  
MAMS - Military Airspace Management System  
T&E - Test and Evaluation  
VCSS - Voice Communications Switching System

## Performance

Characteristics	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
DoD ATCALs in the NAS					
Inter/Intrafacility Data Transfer					
Auto Transfer of Position Track Data	IAW ICD	IAW ICD	IAW ICD	IAW ICD	IAW ICD
Electronic Inter-facility Transfer of Flight Plans	IAW ICD	IAW ICD	IAW ICD	IAW ICD	IAW ICD
Aircraft Tracked Medium (LCF)	900	900	250	422	422
Radar Subclutter Visibility (dB)	55	55	42	47	47
Net-Ready	100% of applicable, approved key interface profiles	100% of applicable, approved key interface profiles	With FAA agreement, 100% of enterprise-level or critical applicable, approved key interface profiles	TBD	With FAA agreement, 100% of enterprise-level or critical applicable, approved key interface profiles
MAMS					
Conflict Identification	100% of conflicts identified; 85 % of conflicts identified <or = 10 (sec)	N/A	N/A	TBD	N/A
Interface with FAA	Transmittal Time for 85% of messages between Scheduler and FAA < or = 5 (min)	N/A	N/A	TBD	N/A

Reporting	Processing Time of Utilization Data Requests <or = 1 (min); Total Manual and Automatic Report Generation <or = 10 (min)	N/A	N/A	TBD	N/A
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**Requirements Source**

Operational Requirements Document (ORD) for DoD Air Traffic Control and Landing Systems (ATCALs) dated March 16, 2005

**Change Explanations**

None

**Acronyms and Abbreviations**

- ATCALs - Air Traffic Control and Landing Systems
- dB - decibels
- FAA - Federal Aviation Administration
- IAW - In Accordance With
- ICD - Interface Control Document
- LCF - Local Control Facility
- MAMS - Military Airspace Management System
- min - minute
- sec - second

### Track to Budget

**RDT&E**

Appn	BA	PE		
Navy	1319	05	0604504N	
	<b>Project</b>		<b>Name</b>	
	1657		Navy NAS Mod/Shore Air Traffic Control Systems	(Shared) (Sunk)
Army	2040	05	0604633A	
	<b>Project</b>		<b>Name</b>	
	D586		Army Airfield Support Equipment	(Sunk)
Air Force	3600	07	0305137F	
	<b>Project</b>		<b>Name</b>	
	4090		National Airspace System (NAS)	(Sunk)

**Procurement**

Appn	BA	PE		
Navy	1810	02	0204696N	
	<b>Line Item</b>		<b>Name</b>	
	284000		Navy NAS Mod	(Shared)
Navy	1810	08	0204696N	
	<b>Line Item</b>		<b>Name</b>	
	9020		Navy NAS Mod	(Shared) (Sunk)
Army	2031	04	0210100A	
	<b>Line Item</b>		<b>Name</b>	
	AA0050		Army Airfield Support Equipment	(Shared)
Air Force	3080	03	0305137F	
	<b>Line Item</b>		<b>Name</b>	
	833020		NAS	(Shared)
Air Force	3080	05	0305137F	
	<b>Line Item</b>		<b>Name</b>	
	861900		NAS	(Shared) (Sunk)

## Cost and Funding

### Cost Summary

#### Total Acquisition Cost and Quantity

Appropriation	BY2005 \$M			BY2005 \$M	TY \$M		
	SAR Baseline Prod Est	Current APB Production Objective/Threshold	Current Estimate		SAR Baseline Prod Est	Current APB Production Objective	Current Estimate
RDT&E	134.0	134.0	147.4	135.1	115.8	115.8	115.8
Procurement	1239.2	1239.2	1363.1	1270.0	1305.3	1305.3	1343.1
Flyaway	--	--	--	917.2	--	--	977.3
Recurring	--	--	--	917.2	--	--	977.3
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	352.8	--	--	365.8
Other Support	--	--	--	290.8	--	--	302.2
Initial Spares	--	--	--	62.0	--	--	63.6
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	1373.2	1373.2	N/A	1405.1	1421.1	1421.1	1458.9

Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E	0	0	0
Procurement	93	93	88
Total	93	93	88

The unit of measure of this program represents NAS operational sites. A NAS site (unit) represents at least one paired DoD Advanced Automation Systems (DAAS) and Digital Airport Surveillance Radars (DASR). This definition of a unit is not representative of the typical equipment installed at a NAS site. It does not account for Voice Communication Switching System equipment, stand-alone DAAS equipment, or sites that have multiple DASR systems. Costs vary significantly from site to site due to particular site unique configuration requirements.

## Cost and Funding

### Funding Summary

#### Appropriation and Quantity Summary FY2015 President's Budget / December 2013 SAR (TY\$ M)

Appropriation	Prior	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	To Complete	Total
RDT&E	115.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	115.8
Procurement	1284.3	24.3	17.1	11.9	2.7	2.8	0.0	0.0	1343.1
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 2015 Total	1400.1	24.3	17.1	11.9	2.7	2.8	0.0	0.0	1458.9
PB 2014 Total	1401.6	20.4	12.1	7.2	2.7	2.8	0.0	0.0	1446.8
Delta	-1.5	3.9	5.0	4.7	0.0	0.0	0.0	0.0	12.1

Quantity	Undistributed	Prior	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	88	0	0	0	0	0	0	0	88
PB 2015 Total	0	88	0	0	0	0	0	0	0	88
PB 2014 Total	0	88	0	0	0	0	0	0	0	88
Delta	0	0	0	0	0	0	0	0	0	0



## Cost and Funding

### Annual Funding By Appropriation

#### Annual Funding TY\$

#### 3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force

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
1990	--	--	--	--	--	--	4.0
1991	--	--	--	--	--	--	9.9
1992	--	--	--	--	--	--	4.2
1993	--	--	--	--	--	--	6.7
1994	--	--	--	--	--	--	14.2
1995	--	--	--	--	--	--	29.5
1996	--	--	--	--	--	--	13.3
1997	--	--	--	--	--	--	11.8
1998	--	--	--	--	--	--	11.6
1999	--	--	--	--	--	--	1.8
2000	--	--	--	--	--	--	1.8
<b>Subtotal</b>	--	--	--	--	--	--	<b>108.8</b>

**Annual Funding BY\$**

**3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway BY 2005 \$M</b>	<b>Non End Item Recurring Flyaway BY 2005 \$M</b>	<b>Non Recurring Flyaway BY 2005 \$M</b>	<b>Total Flyaway BY 2005 \$M</b>	<b>Total Support BY 2005 \$M</b>	<b>Total Program BY 2005 \$M</b>
1990	--	--	--	--	--	--	5.2
1991	--	--	--	--	--	--	12.4
1992	--	--	--	--	--	--	5.1
1993	--	--	--	--	--	--	8.0
1994	--	--	--	--	--	--	16.6
1995	--	--	--	--	--	--	33.9
1996	--	--	--	--	--	--	15.0
1997	--	--	--	--	--	--	13.1
1998	--	--	--	--	--	--	12.8
1999	--	--	--	--	--	--	2.0
2000	--	--	--	--	--	--	1.9
<b>Subtotal</b>	--	--	--	--	--	--	<b>126.0</b>

**Annual Funding TY\$**

**1319 | RDT&E | Research, Development, Test, and Evaluation, Navy**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway TY \$M</b>	<b>Non End Item Recurring Flyaway TY \$M</b>	<b>Non Recurring Flyaway TY \$M</b>	<b>Total Flyaway TY \$M</b>	<b>Total Support TY \$M</b>	<b>Total Program TY \$M</b>
1990	--	--	--	--	--	--	4.0
<b>Subtotal</b>	--	--	--	--	--	--	<b>4.0</b>

**Annual Funding BY\$**

**1319 | RDT&E | Research, Development, Test, and Evaluation, Navy**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway BY 2005 \$M</b>	<b>Non End Item Recurring Flyaway BY 2005 \$M</b>	<b>Non Recurring Flyaway BY 2005 \$M</b>	<b>Total Flyaway BY 2005 \$M</b>	<b>Total Support BY 2005 \$M</b>	<b>Total Program BY 2005 \$M</b>
1990	--	--	--	--	--	--	5.2
<b>Subtotal</b>	--	--	--	--	--	--	<b>5.2</b>

**Annual Funding TY\$**  
**2040 | RDT&E | Research, Development, Test, and Evaluation, Army**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway TY \$M</b>	<b>Non End Item Recurring Flyaway TY \$M</b>	<b>Non Recurring Flyaway TY \$M</b>	<b>Total Flyaway TY \$M</b>	<b>Total Support TY \$M</b>	<b>Total Program TY \$M</b>
1990	--	--	--	--	--	--	3.0
<b>Subtotal</b>	--	--	--	--	--	--	<b>3.0</b>

**Annual Funding BY\$**  
**2040 | RDT&E | Research, Development, Test, and Evaluation, Army**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway BY 2005 \$M</b>	<b>Non End Item Recurring Flyaway BY 2005 \$M</b>	<b>Non Recurring Flyaway BY 2005 \$M</b>	<b>Total Flyaway BY 2005 \$M</b>	<b>Total Support BY 2005 \$M</b>	<b>Total Program BY 2005 \$M</b>
1990	--	--	--	--	--	--	3.9
<b>Subtotal</b>	--	--	--	--	--	--	<b>3.9</b>

**Annual Funding TY\$**  
**2031 | Procurement | Aircraft Procurement, Army**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway TY \$M</b>	<b>Non End Item Recurring Flyaway TY \$M</b>	<b>Non Recurring Flyaway TY \$M</b>	<b>Total Flyaway TY \$M</b>	<b>Total Support TY \$M</b>	<b>Total Program TY \$M</b>
1997	--	--	0.7	--	0.7	--	0.7
1998	--	--	0.1	--	0.1	1.0	1.1
1999	--	--	1.6	--	1.6	0.1	1.7
2000	--	--	2.4	--	2.4	--	2.4
2001	--	--	12.0	--	12.0	1.2	13.2
2002	--	--	5.5	--	5.5	2.9	8.4
2003	1	6.7	2.4	--	9.1	4.6	13.7
2004	1	7.3	0.3	--	7.6	5.2	12.8
2005	2	7.7	1.0	--	8.7	4.8	13.5
2006	1	10.1	1.1	--	11.2	4.0	15.2
2007	2	18.6	4.8	--	23.4	4.8	28.2
2008	2	9.0	4.2	--	13.2	6.2	19.4
2009	1	19.1	4.1	--	23.2	5.1	28.3
2010	1	7.8	2.9	--	10.7	2.2	12.9
2011	--	--	3.2	--	3.2	1.3	4.5
2012	--	--	8.6	--	8.6	1.8	10.4
2013	--	--	5.3	--	5.3	0.2	5.5
2014	--	--	1.9	--	1.9	0.6	2.5
2015	--	--	2.8	--	2.8	0.9	3.7
2016	--	--	1.6	--	1.6	0.9	2.5
<b>Subtotal</b>	<b>11</b>	<b>86.3</b>	<b>66.5</b>	<b>--</b>	<b>152.8</b>	<b>47.8</b>	<b>200.6</b>

**Annual Funding BY\$**  
**2031 | Procurement | Aircraft Procurement, Army**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway BY 2005 \$M</b>	<b>Non End Item Recurring Flyaway BY 2005 \$M</b>	<b>Non Recurring Flyaway BY 2005 \$M</b>	<b>Total Flyaway BY 2005 \$M</b>	<b>Total Support BY 2005 \$M</b>	<b>Total Program BY 2005 \$M</b>
1997	--	--	0.8	--	0.8	--	0.8
1998	--	--	0.1	--	0.1	1.1	1.2
1999	--	--	1.7	--	1.7	0.1	1.8
2000	--	--	2.6	--	2.6	--	2.6
2001	--	--	12.6	--	12.6	1.3	13.9
2002	--	--	5.6	--	5.6	3.1	8.7
2003	1	6.8	2.4	--	9.2	4.8	14.0
2004	1	7.2	0.3	--	7.5	5.2	12.7
2005	2	7.4	1.0	--	8.4	4.6	13.0
2006	1	9.5	1.0	--	10.5	3.8	14.3
2007	2	17.1	4.5	--	21.6	4.4	26.0
2008	2	8.2	3.8	--	12.0	5.6	17.6
2009	1	17.1	3.7	--	20.8	4.5	25.3
2010	1	6.8	2.6	--	9.4	1.9	11.3
2011	--	--	2.8	--	2.8	1.1	3.9
2012	--	--	7.3	--	7.3	1.5	8.8
2013	--	--	4.4	--	4.4	0.2	4.6
2014	--	--	1.5	--	1.5	0.5	2.0
2015	--	--	2.2	--	2.2	0.7	2.9
2016	--	--	1.3	--	1.3	0.7	2.0
<b>Subtotal</b>	<b>11</b>	<b>80.1</b>	<b>62.2</b>	<b>--</b>	<b>142.3</b>	<b>45.1</b>	<b>187.4</b>



## Annual Funding TY\$

## 3080 | Procurement | Other Procurement, Air Force

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
1998	--	--	4.5	--	4.5	11.3	15.8
1999	--	--	5.9	--	5.9	9.2	15.1
2000	3	28.0	7.9	--	35.9	12.7	48.6
2001	2	33.7	12.0	--	45.7	14.5	60.2
2002	4	32.4	0.3	--	32.7	21.1	53.8
2003	1	13.3	2.9	--	16.2	21.5	37.7
2004	--	--	13.2	--	13.2	16.8	30.0
2005	1	28.3	2.5	--	30.8	12.8	43.6
2006	3	34.3	5.5	--	39.8	24.5	64.3
2007	6	40.6	2.2	--	42.8	26.7	69.5
2008	4	50.3	--	--	50.3	15.1	65.4
2009	6	49.9	--	--	49.9	14.5	64.4
2010	4	42.2	--	--	42.2	14.5	56.7
2011	7	74.8	--	--	74.8	16.6	91.4
2012	3	34.5	--	--	34.5	10.8	45.3
2013	--	--	15.3	--	15.3	7.4	22.7
2014	--	--	3.3	--	3.3	4.0	7.3
2015	--	--	0.2	--	0.2	2.0	2.2
2016	--	--	0.2	--	0.2	2.0	2.2
2017	--	--	0.2	--	0.2	2.5	2.7
2018	--	--	0.3	--	0.3	2.5	2.8
<b>Subtotal</b>	<b>44</b>	<b>462.3</b>	<b>76.4</b>	<b>--</b>	<b>538.7</b>	<b>263.0</b>	<b>801.7</b>

**Annual Funding BY\$****3080 | Procurement | Other Procurement, Air Force**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway BY 2005 \$M</b>	<b>Non End Item Recurring Flyaway BY 2005 \$M</b>	<b>Non Recurring Flyaway BY 2005 \$M</b>	<b>Total Flyaway BY 2005 \$M</b>	<b>Total Support BY 2005 \$M</b>	<b>Total Program BY 2005 \$M</b>
1998	--	--	4.9	--	4.9	12.3	17.2
1999	--	--	6.3	--	6.3	9.9	16.2
2000	3	29.7	8.4	--	38.1	13.4	51.5
2001	2	35.1	12.6	--	47.7	15.1	62.8
2002	4	33.2	0.3	--	33.5	21.6	55.1
2003	1	13.8	3.0	--	16.8	22.3	39.1
2004	--	--	13.4	--	13.4	17.1	30.5
2005	1	27.9	2.5	--	30.4	12.6	43.0
2006	3	32.9	5.3	--	38.2	23.4	61.6
2007	6	37.9	2.1	--	40.0	25.0	65.0
2008	4	46.1	--	--	46.1	13.8	59.9
2009	6	45.1	--	--	45.1	13.1	58.2
2010	4	37.6	--	--	37.6	12.9	50.5
2011	7	65.5	--	--	65.5	14.5	80.0
2012	3	29.6	--	--	29.6	9.3	38.9
2013	--	--	12.9	--	12.9	6.3	19.2
2014	--	--	2.7	--	2.7	3.4	6.1
2015	--	--	0.2	--	0.2	1.6	1.8
2016	--	--	0.2	--	0.2	1.6	1.8
2017	--	--	0.2	--	0.2	1.9	2.1
2018	--	--	0.2	--	0.2	2.0	2.2
<b>Subtotal</b>	<b>44</b>	<b>434.4</b>	<b>75.2</b>	<b>--</b>	<b>509.6</b>	<b>253.1</b>	<b>762.7</b>

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

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway TY \$M</b>	<b>Non End Item Recurring Flyaway TY \$M</b>	<b>Non Recurring Flyaway TY \$M</b>	<b>Total Flyaway TY \$M</b>	<b>Total Support TY \$M</b>	<b>Total Program TY \$M</b>
1998	--	--	0.9	--	0.9	1.3	2.2
1999	2	5.3	--	--	5.3	3.4	8.7
2000	5	27.0	--	--	27.0	6.4	33.4
2001	--	--	23.6	--	23.6	7.8	31.4
2002	3	13.3	--	--	13.3	5.3	18.6
2003	2	5.1	--	--	5.1	1.9	7.0
2004	1	11.3	--	--	11.3	4.6	15.9
2005	1	8.4	--	--	8.4	4.7	13.1
2006	4	14.4	--	--	14.4	3.8	18.2
2007	4	22.8	--	--	22.8	4.5	27.3
2008	1	19.9	--	--	19.9	4.1	24.0
2009	3	21.5	--	--	21.5	1.5	23.0
2010	3	27.8	--	--	27.8	1.1	28.9
2011	1	16.6	--	--	16.6	0.8	17.4
2012	2	23.4	--	--	23.4	1.2	24.6
2013	1	13.2	--	--	13.2	1.0	14.2
2014	--	--	13.7	--	13.7	0.8	14.5
2015	--	--	10.6	--	10.6	0.6	11.2
2016	--	--	7.0	--	7.0	0.2	7.2
<b>Subtotal</b>	<b>33</b>	<b>230.0</b>	<b>55.8</b>	<b>--</b>	<b>285.8</b>	<b>55.0</b>	<b>340.8</b>

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

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway BY 2005 \$M</b>	<b>Non End Item Recurring Flyaway BY 2005 \$M</b>	<b>Non Recurring Flyaway BY 2005 \$M</b>	<b>Total Flyaway BY 2005 \$M</b>	<b>Total Support BY 2005 \$M</b>	<b>Total Program BY 2005 \$M</b>
1998	--	--	1.0	--	1.0	1.4	2.4
1999	2	5.7	--	--	5.7	3.7	9.4
2000	5	28.9	--	--	28.9	6.8	35.7
2001	--	--	25.0	--	25.0	8.2	33.2
2002	3	13.9	--	--	13.9	5.5	19.4
2003	2	5.2	--	--	5.2	2.0	7.2
2004	1	11.3	--	--	11.3	4.6	15.9
2005	1	8.1	--	--	8.1	4.6	12.7
2006	4	13.5	--	--	13.5	3.6	17.1
2007	4	20.9	--	--	20.9	4.2	25.1
2008	1	18.0	--	--	18.0	3.7	21.7
2009	3	19.2	--	--	19.2	1.3	20.5
2010	3	24.3	--	--	24.3	1.0	25.3
2011	1	14.3	--	--	14.3	0.7	15.0
2012	2	19.8	--	--	19.8	1.1	20.9
2013	1	11.0	--	--	11.0	0.8	11.8
2014	--	--	11.2	--	11.2	0.7	11.9
2015	--	--	8.5	--	8.5	0.5	9.0
2016	--	--	5.5	--	5.5	0.2	5.7
<b>Subtotal</b>	<b>33</b>	<b>214.1</b>	<b>51.2</b>	<b>--</b>	<b>265.3</b>	<b>54.6</b>	<b>319.9</b>

## Low Rate Initial Production

	<b>Initial LRIP Decision</b>	<b>Current Total LRIP</b>
<b>Approval Date</b>	7/1/1995	8/8/2001
<b>Approved Quantity</b>	8	20
<b>Reference</b>	Milestone II ADM	ADM
<b>Start Year</b>	1995	1995
<b>End Year</b>	2001	2001

The Current Total LRIP Quantity is more than 10% of the total production quantity due to Air Force approved amendment to the Acquisition Decision Memorandum (ADM) dated August 8, 2001, which authorized LRIP of up to 20 Digital Airport Surveillance Radars (DASRs) and 13 DoD Advanced Automation Systems (DAAS). This keeps DoD DASR production and deployment efforts on track avoiding shutdown, restart, and retraining impacts.

The LRIP quantity of eight DASR and zero DAAS approved at Milestone II during July 1995 was for the radar and automation portions of NAS.

## **Foreign Military Sales**

None

## **Nuclear Costs**

None

**Unit Cost**

**Unit Cost Report**

	<b>BY2005 \$M</b>	<b>BY2005 \$M</b>	
<b>Unit Cost</b>	<b>Current UCR Baseline (JUL 2006 APB)</b>	<b>Current Estimate (DEC 2013 SAR)</b>	<b>BY % Change</b>

Program Acquisition Unit Cost (PAUC)

Cost	1373.2	1405.1	
Quantity	93	88	
Unit Cost	14.766	15.967	+8.13

Average Procurement Unit Cost (APUC)

Cost	1239.2	1270.0	
Quantity	93	88	
Unit Cost	13.325	14.432	+8.31

	<b>BY2005 \$M</b>	<b>BY2005 \$M</b>	
<b>Unit Cost</b>	<b>Original UCR Baseline (JUL 1995 APB)</b>	<b>Current Estimate (DEC 2013 SAR)</b>	<b>BY % Change</b>

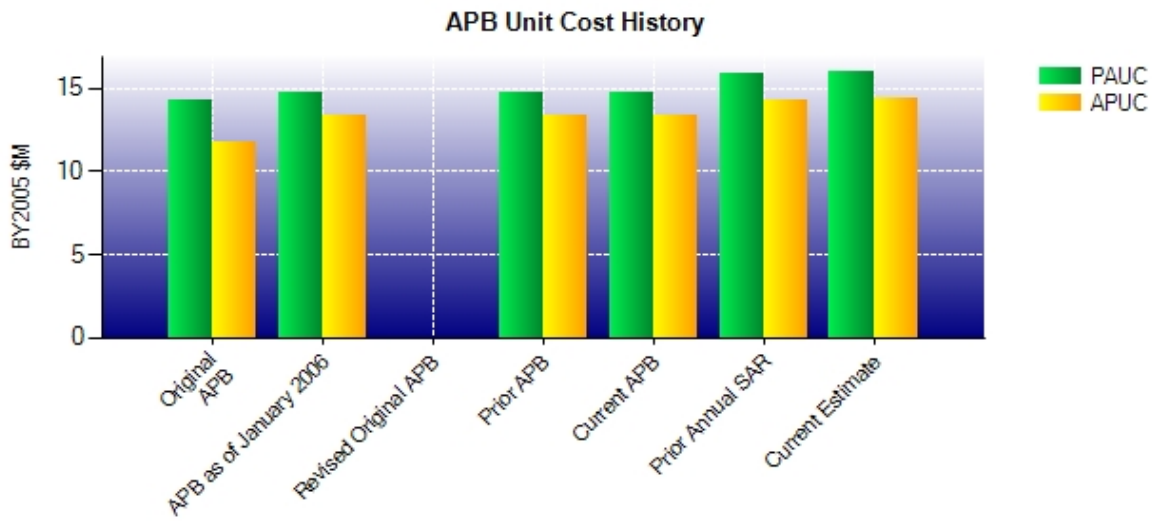
Program Acquisition Unit Cost (PAUC)

Cost	762.1	1405.1	
Quantity	53	88	
Unit Cost	14.379	15.967	+11.04

Average Procurement Unit Cost (APUC)

Cost	629.7	1270.0	
Quantity	53	88	
Unit Cost	11.881	14.432	+21.47

### Unit Cost History



	Date	BY2005 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
<b>Original APB</b>	JUL 1995	14.270	11.789	14.926	12.711
<b>APB as of January 2006</b>	JUN 2005	14.766	13.325	15.281	14.035
<b>Revised Original APB</b>	N/A	N/A	N/A	N/A	N/A
<b>Prior APB</b>	JUN 2005	14.766	13.325	15.281	14.035
<b>Current APB</b>	JUL 2006	14.766	13.325	15.281	14.035
<b>Prior Annual SAR</b>	DEC 2012	15.842	14.307	16.441	15.125
<b>Current Estimate</b>	DEC 2013	15.967	14.432	16.578	15.262

### SAR Unit Cost History

#### Initial SAR Baseline to Current SAR Baseline (TY \$M)

Initial PAUC Dev Est	Changes								PAUC Prod Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
14.926	-0.815	-3.104	1.517	1.544	-0.791	0.000	2.004	0.355	15.281



**Current SAR Baseline to Current Estimate (TY \$M)**

PAUC Prod Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
15.281	0.011	0.327	0.091	0.000	1.383	0.000	-0.515	1.297	16.578

**Initial SAR Baseline to Current SAR Baseline (TY \$M)**

Initial APUC Dev Est	Changes								APUC Prod Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
12.711	-0.747	-2.152	1.517	1.544	-0.842	0.000	2.004	1.324	14.035

**Current SAR Baseline to Current Estimate (TY \$M)**

APUC Prod Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
14.035	0.023	0.256	0.091	0.000	1.372	0.000	-0.515	1.227	15.262

**SAR Baseline History**

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone I	JUL 1992	JUL 1992	JUL 1992	JUL 1992
Milestone II	JAN 1994	JUL 1995	JUL 1995	JUL 1995
Milestone III	MAR 1997	JUN 1998	APR 2005	JUN 2005
IOC	OCT 1999	APR 2000	JAN 2003	JAN 2003
Total Cost (TY \$M)	122.6	791.1	1421.1	1458.9
Total Quantity	N/A	53	93	88
Prog. Acq. Unit Cost (PAUC)	N/A	14.926	15.281	16.578

**Cost Variance**

<b>Summary Then Year \$M</b>				
	<b>RDT&amp;E</b>	<b>Proc</b>	<b>MILCON</b>	<b>Total</b>
SAR Baseline (Prod Est)	115.8	1305.3	--	1421.1
Previous Changes				
Economic	-1.0	+3.5	--	+2.5
Quantity	--	-47.6	--	-47.6
Schedule	--	+8.0	--	+8.0
Engineering	--	--	--	--
Estimating	+1.0	+108.4	--	+109.4
Other	--	--	--	--
Support	--	-46.6	--	-46.6
Subtotal	--	+25.7	--	+25.7
Current Changes				
Economic	--	-1.5	--	-1.5
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	--	+12.3	--	+12.3
Other	--	--	--	--
Support	--	+1.3	--	+1.3
Subtotal	--	+12.1	--	+12.1
Total Changes	--	+37.8	--	+37.8
CE - Cost Variance	115.8	1343.1	--	1458.9
CE - Cost & Funding	115.8	1343.1	--	1458.9

Summary Base Year 2005 \$M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	134.0	1239.2	--	1373.2
Previous Changes				
Economic	--	--	--	--
Quantity	--	-38.5	--	-38.5
Schedule	--	+10.9	--	+10.9
Engineering	--	--	--	--
Estimating	+1.1	+89.6	--	+90.7
Other	--	--	--	--
Support	--	-42.2	--	-42.2
Subtotal	+1.1	+19.8	--	+20.9
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	--	+9.5	--	+9.5
Other	--	--	--	--
Support	--	+1.5	--	+1.5
Subtotal	--	+11.0	--	+11.0
Total Changes	+1.1	+30.8	--	+31.9
CE - Cost Variance	135.1	1270.0	--	1405.1
CE - Cost & Funding	135.1	1270.0	--	1405.1

Previous Estimate: December 2012

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-1.5
Army sites pulled forward to align with changes to Federal Aviation Administration fielding schedule. (Estimating)	+4.0	+5.0
Revised estimate reflects sequestration reduction in FY 2012 and FY 2013 (Air Force). (Estimating)	-3.2	-3.6
Congressional reduction early in FY 2013 resulted in a significant shift to many program efforts and a realignment of installations from FY 2013 to FY 2015 (Navy). (Estimating)	+8.0	+10.2
Adjustment for current and prior escalation. (Estimating)	+0.7	+0.7
Adjustment for current and prior escalation. (Support)	+0.5	+0.5
Increase in Other Support (Air Force). (Support)	+1.0	+0.9
Decrease in Other Support (Navy). (Support)	0.0	-0.1
Procurement Subtotal	+11.0	+12.1

**Contracts**

**Appropriation: Procurement**

Contract Name **Digital Airport Surveillance Radar II**  
 Contractor Raytheon Company  
 Contractor Location Marlborough, MA 01752  
 Contract Number, Type FA8730-08-D-0001/1, FFP/IDIQ  
 Award Date May 22, 2008  
 Definitization Date September 30, 2008

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price at Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
36.8	N/A	7	326.1	N/A	37	326.1	326.1

**Target Price Change Explanation**

**Cost and Schedule Variance Explanations**

Cost and Schedule Variance reporting is not required on this FFP/IDIQ contract.

**Contract Comments**

The Initial Contract Price of \$36.8M and the initial quantity of 7 represents the Delivery Orders (DOs) 0001-0009 awarded May 22, 2008, which encompass annual Program Management Operations, Technical Support Services and the initial 7 system orders.

The Current Contract Price of \$326.1M and the current quantity of 37 represent contract funding and quantities ordered to date.

37 Quantities ordered to date:

- United States Air Force - 20
- United States Navy - 13
- United States Army - 4

The maximum price and quantity and that could be contracted for under this Digital Airport Surveillance Radar Phase II FFP/IDIQ contract are \$679M and 95 units respectively.

## Deliveries and Expenditures

Delivered to Date	Plan to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	78	78	88	88.64%
Total Program Quantity Delivered	78	78	88	88.64%

### Expended and Appropriated (TY \$M)

Total Acquisition Cost	1458.9	Years Appropriated	25
Expended to Date	1275.5	Percent Years Appropriated	86.21%
Percent Expended	87.43%	Appropriated to Date	1424.4
Total Funding Years	29	Percent Appropriated	97.64%

The above data is current as of 3/20/2014.

## Operating and Support Cost

### NAS

**Assumptions and Ground Rules**

Cost Estimate Reference:

The O&S cost estimate is based on analysis performed for the Milestone III decision, letter titled "Department of Defense (DOD) National Airspace System (NAS) Air Force Cost Analysis Improvement Group (AFCAIG) Service Cost Position (SCP)" from the Air Force Financial Management and Comptroller Cost and Economics office dated March 18, 2005.

Sustainment Strategy:

The estimate assumes a 34 year life from year FY 2000 to FY 2034 for the 88 sites.

Antecedent Information:

There is no antecedent system.

Unitized O&S Costs BY2005 \$M			
Cost Element	NAS Avg Annual Cost Per NAS Site	Avg Annual Cost Per (Antecedent) Antecedent	
Unit-Level Manpower	2.100		0.000
Unit Operations	0.200		0.000
Maintenance	0.000		0.000
Sustaining Support	0.100		0.000
Continuing System Improvements	0.400		0.000
Indirect Support	0.300		0.000
Other	0.000		0.000
<b>Total</b>	<b>3.100</b>		<b>--</b>

Unitized Cost Comments:

Total Cost = average annual cost per site\* number of sites \*planned service years = 3.1 \* 88 \* 34 = 9275.2

	Total O&S Cost \$M			
	Current Production APB Objective/Threshold		Current Estimate	
	NAS	NAS	NAS	Avg Annual Cost Per (Antecedent)
<b>Base Year</b>	N/A	N/A	9275.2	N/A
<b>Then Year</b>	N/A	N/A	11000.1	N/A

Total O&S Costs Comments:

None

**Disposal Costs:**

None