



## Selected Acquisition Report (SAR)

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



### NAS

As of December 31, 2010

Defense Acquisition Management  
Information Retrieval  
(DAMIR)

UNCLASSIFIED

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## Program Information

**Designation And Nomenclature (Popular Name)**

National Airspace System (NAS)

**DoD Component**

Air Force

**Joint Participants**

Army; Navy

## Responsible Office

**Responsible Office**

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## References

**SAR Baseline (Production Estimate)**

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

**Approved APB**

Air Force Acquisition Executive 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**

The National Airspace System (NAS) program continued full scale production of Digital Airport Surveillance Radars (DASR) and DoD Advanced Automation Systems (DAAS) for the Air Force, Army and Navy in CY10.

In July 2010, the NAS program office negotiated Indefinite Delivery/Indefinite Quantity (ID/IQ) pricing for continued procurements on the DASR Phase II contract for the period of FY10 through FY12.

AFOTEC completed NAS Follow-on Operational Test and Evaluation (FOT&E) in 2009; the NAS system was deemed effective and suitable. The Director, Operational Test and Evaluation (DOT&E), however, decided to keep NAS on its oversight list until operational assessments (OA) of the DASR Advanced Signal Data Processor (ASDP) Diminishing Manufacturing Source (DMS) replacement, the DASR Monopulse Secondary Surveillance Radar (MSSR) DMS replacement, and the NAS Automated Protocol Exchanger (APEX) are completed by Air Force Flight Standards Agency (AFFSA). AFFSA completed the APEX assessment in November 2010 and declared APEX to be "effective" and "suitable with comments." Development Test (DT) of both the ASDP and MSSR have been successfully completed. The DT report for the ASDP is complete and the DT report for the MSSR is expected in 3QFY11. Upon receipt of all DT reports, the NAS program manager will certify the MSSR and ASDP as ready for OA. AFFSA will conduct the OA at Lakenheath AB, UK after receipt of this certification.

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

### Threshold Breaches

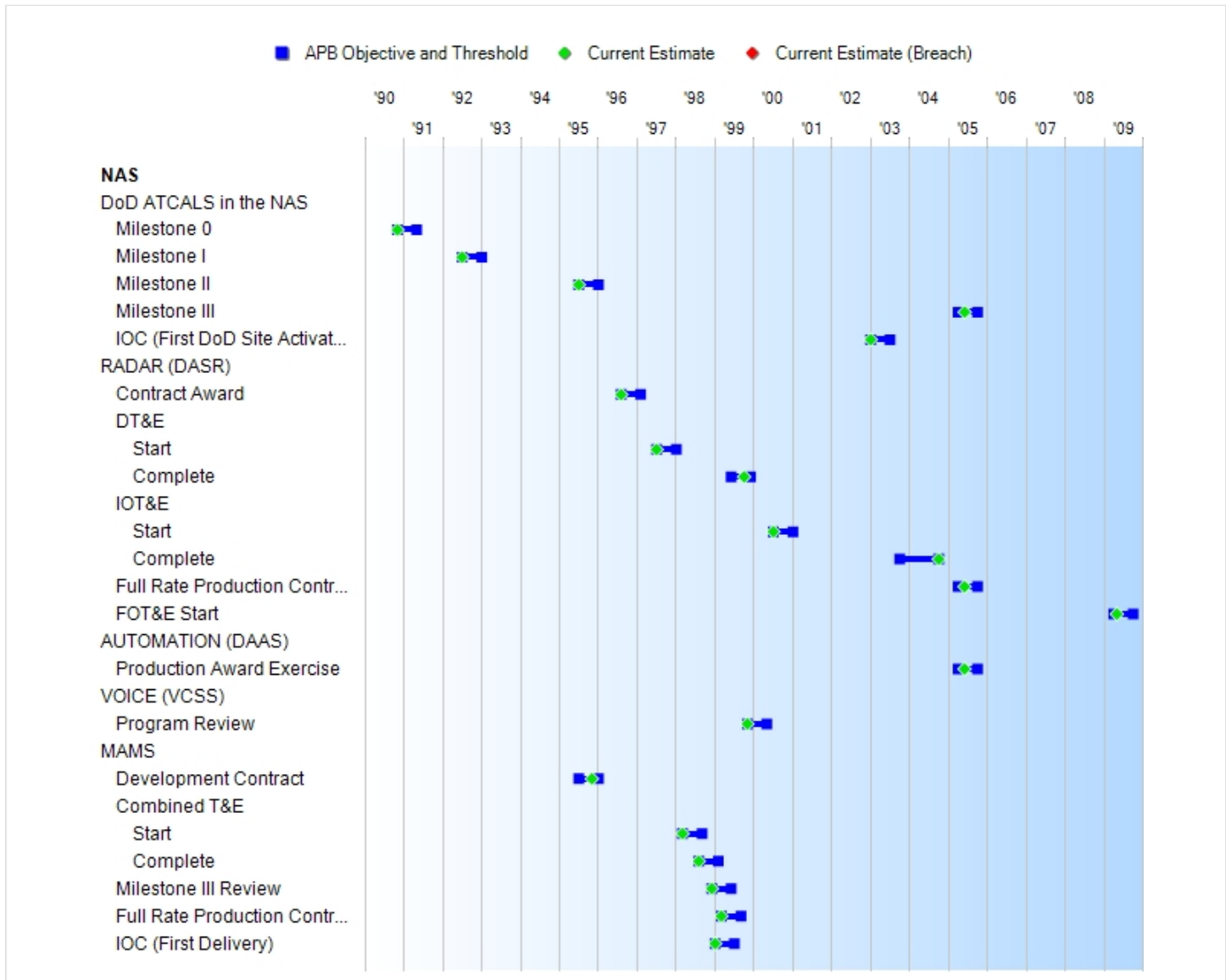
APB Breaches		
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<b>Schedule</b>		<input type="checkbox"/>
<b>Performance</b>		<input type="checkbox"/>
<b>Cost</b>	RDT&E	<input type="checkbox"/>
	Procurement	<input type="checkbox"/>
	MILCON	<input type="checkbox"/>
	Acq O&M	<input type="checkbox"/>
<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
Milestone III	APR 2005	APR 2005	OCT 2005	JUN 2005
IOC (First DoD Site Activation)	JAN 2003	JAN 2003	JUL 2003	JAN 2003
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
AUTOMATION (DAAS)				
Production Award Exercise	APR 2005	APR 2005	OCT 2005	JUN 2005
VOICE (VCSS)				
Program Review	NOV 1999	NOV 1999	MAY 2000	NOV 1999
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
Full Rate Production Contract Award	MAR 1999	MAR 1999	SEP 1999	MAR 1999
IOC (First Delivery)	JAN 1999	JAN 1999	JUL 1999	JAN 1999

### 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  
 IOC - Initial Operational Capability  
 IOT&E - Initial Operational Test and Evaluation  
 MAMS - Military Airspace Management System  
 VCSS - Voice Communications Switching System

### Change Explanations

None

**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		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	N/A	N/A		N/A
Interface with FAA	Transmittal Time for 85% of messages between Scheduler and FAA < or = 5 (min)	N/A	N/A		N/A
Reporting	Processing Time of Utilization Data Requests	N/A	N/A		N/A

(Ch-1)



**Requirements Source:** Operational Requirements Document (ORD) for DoD Air Traffic Control and Landing Systems (ATCALs) in the National Airspace System (NAS) dated March 16, 2005.

#### **Acronyms And Abbreviations**

AFOTEC - Air Force Operational Test and Evaluation Center  
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  
MOT&E - Multiservice Operational Test and Evaluation  
TBD - To Be Determined

#### **Change Explanations**

(Ch-1) Modified Aircraft Tracked Medium (LCF) Demonstrated Performance from 522 to 422 and Current Estimate from 900 to 422. Both changes reflect actual test results from AFOTEC's NAS MOT&E III Final Test Report.

**Track To Budget****RDT&E**

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

**Procurement**

APPN 1810	BA 02	PE 0204696N	(Navy)	
	ICN 284000	Navy NAS Mod	(Shared)	
APPN 1810	BA 08	PE 0204696N	(Navy)	
	ICN Y8JC	Navy NAS Mod	(Shared)	
APPN 2031	BA 04	PE 0210100A	(Army)	
	ICN AA0050	Army Airfield Support Equipment	(Shared)	
APPN 3080	BA 03	PE 0305137F	(Air Force)	
	ICN 833020	NAS	(Shared)	
APPN 3080	BA 05	PE 0305137F	(Air Force)	
	ICN 86190A	NAS	(Shared)	

## 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	1319.8	1305.3	1305.3	1397.8
Flyaway	845.8	--	--	962.0	894.9	--	1026.8
Recurring	845.8	--	--	962.0	894.9	--	1026.8
Non Recurring	0.0	--	--	0.0	0.0	--	0.0
Support	393.4	--	--	357.8	410.4	--	371.0
Other Support	327.3	--	--	295.4	342.2	--	307.0
Initial Spares	66.1	--	--	62.4	68.2	--	64.0
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
<b>Total</b>	<b>1373.2</b>	<b>1373.2</b>	<b>N/A</b>	<b>1454.9</b>	<b>1421.1</b>	<b>1421.1</b>	<b>1513.6</b>

Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E		0	0
Procurement		93	92
<b>Total</b>		<b>93</b>	<b>92</b>

The unit of measure of this program represents National Airspace System (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 (VCSS) 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 FY2012 President's Budget / December 2010 SAR (TY\$ M)

Appropriation	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
RDT&E	115.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	115.8
Procurement	1048.3	137.0	78.2	48.0	32.3	35.7	15.6	2.7	1397.8
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 2012 Total	1164.1	137.0	78.2	48.0	32.3	35.7	15.6	2.7	1513.6
PB 2011 Total	1162.1	133.0	69.2	41.0	25.8	32.3	12.9	0.0	1476.3
Delta	2.0	4.0	9.0	7.0	6.5	3.4	2.7	2.7	37.3

Note: As a result of a Below Threshold Reprogramming (BTR) action, there is a delta between the 2009 NAS SAR and 2010 NAS SAR in fiscal years 2008 and 2009 in the 3080 Procurement Air Force line (-\$2.1M in 2008 and +\$2.1M in 2009)

Quantity	Undistributed	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	74	8	6	1	1	1	1	0	92
PB 2012 Total	0	74	8	6	1	1	1	1	0	92
PB 2011 Total	0	73	9	6	1	1	0	1	0	91
Delta	0	1	-1	0	0	0	1	0	0	1

## 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	--	--	4.0	--	4.0	1.8	5.8
2013	--	--	4.0	--	4.0	1.9	5.9
2014	--	--	3.0	--	3.0	1.7	4.7
2015	--	--	2.5	--	2.5	1.5	4.0
2016	--	--	3.4	--	3.4	1.0	4.4
<b>Subtotal</b>	<b>11</b>	<b>86.3</b>	<b>63.2</b>	<b>--</b>	<b>149.5</b>	<b>51.3</b>	<b>200.8</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	4.6	25.4
2010	1	6.9	2.6	--	9.5	1.9	11.4
2011	--	--	2.8	--	2.8	1.1	3.9
2012	--	--	3.4	--	3.4	1.6	5.0
2013	--	--	3.4	--	3.4	1.6	5.0
2014	--	--	2.5	--	2.5	1.4	3.9
2015	--	--	2.0	--	2.0	1.2	3.2
2016	--	--	2.7	--	2.7	0.8	3.5
<b>Subtotal</b>	<b>11</b>	<b>80.2</b>	<b>59.5</b>	<b>--</b>	<b>139.7</b>	<b>48.2</b>	<b>187.9</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	98.4	--	--	98.4	16.6	115.0
2012	3	36.4	--	--	36.4	9.9	46.3
2013	--	--	17.2	--	17.2	7.7	24.9
2014	--	--	3.4	--	3.4	4.2	7.6
2015	--	--	0.3	--	0.3	2.3	2.6
2016	--	--	0.3	--	0.3	2.4	2.7
2017	--	--	0.3	--	0.3	2.4	2.7
<b>Subtotal</b>	<b>44</b>	<b>487.8</b>	<b>78.4</b>	<b>--</b>	<b>566.2</b>	<b>260.7</b>	<b>826.9</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	38.0	2.1	--	40.1	24.9	65.0
2008	4	46.1	--	--	46.1	13.8	59.9
2009	6	45.1	--	--	45.1	13.1	58.2
2010	4	37.7	--	--	37.7	13.0	50.7
2011	7	86.8	--	--	86.8	14.7	101.5
2012	3	31.6	--	--	31.6	8.6	40.2
2013	--	--	14.7	--	14.7	6.6	21.3
2014	--	--	2.9	--	2.9	3.5	6.4
2015	--	--	0.2	--	0.2	2.0	2.2
2016	--	--	0.2	--	0.2	2.0	2.2
2017	--	--	0.2	--	0.2	2.0	2.2
<b>Subtotal</b>	<b>44</b>	<b>457.9</b>	<b>77.0</b>	<b>--</b>	<b>534.9</b>	<b>251.9</b>	<b>786.8</b>

Note: As a result of a Below Threshold Reprogramming (BTR) action, there is a delta between the 2009 NAS SAR and 2010 NAS SAR in fiscal years 2008 and 2009 in the 3080 Procurement Air Force line (-\$2.1M in 2008 and +\$2.1M in 2009)

## 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
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	16.7	--	--	16.7	0.8	17.5
2012	3	24.9	--	--	24.9	1.2	26.1
2013	1	16.1	--	--	16.1	1.1	17.2
2014	1	18.1	--	--	18.1	1.9	20.0
2015	1	27.0	--	--	27.0	2.1	29.1
2016	1	7.0	--	--	7.0	1.5	8.5
<b>Subtotal</b>	<b>37</b>	<b>286.6</b>	<b>24.5</b>	<b>--</b>	<b>311.1</b>	<b>59.0</b>	<b>370.1</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	21.0	--	--	21.0	4.1	25.1
2008	1	18.0	--	--	18.0	3.7	21.7
2009	3	19.2	--	--	19.2	1.4	20.6
2010	3	24.6	--	--	24.6	0.9	25.5
2011	1	14.5	--	--	14.5	0.7	15.2
2012	3	21.3	--	--	21.3	1.1	22.4
2013	1	13.6	--	--	13.6	0.9	14.5
2014	1	15.0	--	--	15.0	1.6	16.6
2015	1	22.0	--	--	22.0	1.7	23.7
2016	1	5.6	--	--	5.6	1.2	6.8
<b>Subtotal</b>	<b>37</b>	<b>261.4</b>	<b>26.0</b>	<b>--</b>	<b>287.4</b>	<b>57.7</b>	<b>345.1</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 Decision	Acquisition Decision Memorandum (ADM) dated August 8, 2001
<b>Start Year</b>	1995	1995
<b>End Year</b>	2001	2001

The LRIP quantity of eight Digital Airport Surveillance Radar (DASR) and zero DOD Advanced Automation System (DAAS) approved at MS II during July 1995 was for the radar and automation portions of NAS. Air Force approved an Acquisition Decision Memorandum (ADM) on June 30, 1997 increasing the LRIP up to 20 DASRs and 20 DAAS. Air Force approved an ADM on August 8, 2001 authorizing a second LRIP of 20 DASR and 13 DAAS to keep DoD DASR production and deployment efforts on track avoiding shutdown, restart, and retraining impacts.



**Foreign Military Sales**

None

**Nuclear Cost**

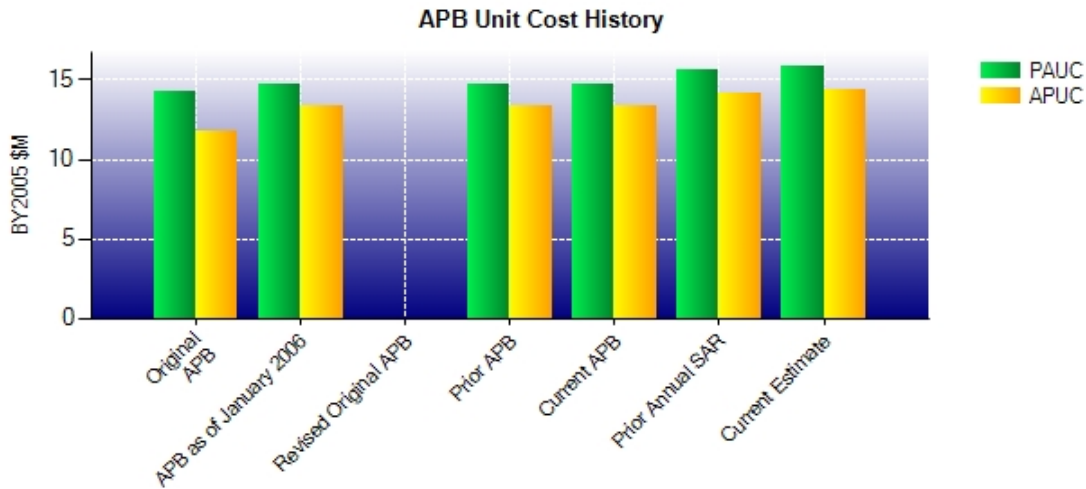
None

**Unit Cost****Unit Cost Report**

	BY2005 \$M	BY2005 \$M	
Unit Cost	Current UCR Baseline (JUL 2006 APB)	Current Estimate (DEC 2010 SAR)	BY % Change
<b>Program Acquisition Unit Cost (PAUC)</b>			
Cost	1373.2	1454.9	
Quantity	93	92	
Unit Cost	14.766	15.814	+7.10
<b>Average Procurement Unit Cost (APUC)</b>			
Cost	1239.2	1319.8	
Quantity	93	92	
Unit Cost	13.325	14.346	+7.66

	BY2005 \$M	BY2005 \$M	
Unit Cost	Original UCR Baseline (JUL 1995 APB)	Current Estimate (DEC 2010 SAR)	BY % Change
<b>Program Acquisition Unit Cost (PAUC)</b>			
Cost	762.1	1454.9	
Quantity	53	92	
Unit Cost	14.379	15.814	+9.98
<b>Average Procurement Unit Cost (APUC)</b>			
Cost	629.7	1319.8	
Quantity	53	92	
Unit Cost	11.881	14.346	+20.75

### 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 2009	15.637	14.153	16.223	14.951
<b>Current Estimate</b>	DEC 2010	15.814	14.346	16.452	15.193

### 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	-0.036	0.070	0.096	0.000	1.467	0.000	-0.426	1.171	16.452

**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	-0.025	0.057	0.096	0.000	1.457	0.000	-0.426	1.158	15.193

**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	1513.6
Total Quantity	N/A	53	93	92
Prog. Acq. Unit Cost (PAUC)	N/A	14.926	15.281	16.452

**Cost Variance****Cost Variance Summary**

<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	-1.6	--	-2.6
Quantity	--	-18.5	--	-18.5
Schedule	--	+9.0	--	+9.0
Engineering	--	--	--	--
Estimating	+1.0	+111.7	--	+112.7
Other	--	--	--	--
Support	--	-45.4	--	-45.4
Subtotal	--	+55.2	--	+55.2
Current Changes				
Economic	--	-0.7	--	-0.7
Quantity	--	+9.7	--	+9.7
Schedule	--	-0.2	--	-0.2
Engineering	--	--	--	--
Estimating	--	+22.3	--	+22.3
Other	--	--	--	--
Support	--	+6.2	--	+6.2
Subtotal	--	+37.3	--	+37.3
Total Changes	--	+92.5	--	+92.5
CE - Cost Variance	115.8	1397.8	--	1513.6
CE - Cost & Funding	115.8	1397.8	--	1513.6

<b>Summary Base Year 2005 \$M</b>				
	<b>RDT&amp;E</b>	<b>Proc</b>	<b>MILCON</b>	<b>Total</b>
SAR Baseline (Prod Est)	134.0	1239.2	--	1373.2
Previous Changes				
Economic	--	--	--	--
Quantity	--	-15.1	--	-15.1
Schedule	--	+11.6	--	+11.6
Engineering	--	--	--	--
Estimating	+1.1	+93.0	--	+94.1
Other	--	--	--	--
Support	--	-40.8	--	-40.8
<b>Subtotal</b>	<b>+1.1</b>	<b>+48.7</b>	<b>--</b>	<b>+49.8</b>
Current Changes				
Economic	--	--	--	--
Quantity	--	+7.8	--	+7.8
Schedule	--	+0.1	--	+0.1
Engineering	--	--	--	--
Estimating	--	+18.8	--	+18.8
Other	--	--	--	--
Support	--	+5.2	--	+5.2
<b>Subtotal</b>	<b>--</b>	<b>+31.9</b>	<b>--</b>	<b>+31.9</b>
<b>Total Changes</b>	<b>+1.1</b>	<b>+80.6</b>	<b>--</b>	<b>+81.7</b>
CE - Cost Variance	135.1	1319.8	--	1454.9
CE - Cost & Funding	135.1	1319.8	--	1454.9

Previous Estimate: December 2009

Procurement	\$M	
	Base Year	Then Year
<b>Current Change Explanations</b>		
Revised escalation indices. (Economic)	N/A	-0.7
Total Quantity variance resulting from an increase of 1 NAS site (unit) increasing the Navy site (unit) count from 36 to 37. (Subtotal)	+9.5	+11.9
Quantity variance resulting from an increase of 1 NAS site (unit) increasing the Navy site (unit) count from 36 to 37. (Quantity)	(+7.8)	(+9.7)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+0.1)	(+0.1)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+1.6)	(+2.1)
Acceleration of Navy procurement buy profile. (Schedule)	0.0	-0.2
Acceleration of Air Force procurement buy profile. (Schedule)	0.0	-0.1
Adjustment for current and prior escalation. (Estimating)	+0.3	0.0
Decrease in Army funding reflects February 2012 President's Budget. (Estimating)	-2.2	-2.3
Increase in Air Force funding reflects February 2012 President's Budget. (Estimating)	+7.0	+8.6
Increase in Navy funding reflects extension of the baselined program into FY16. (Estimating)	+12.1	+13.9
Adjustment for current and prior escalation. (Support)	-0.1	+0.2
Decrease in Army Other Support. (Support)	-0.8	-0.9
Increase in Army Initial Spares. (Support)	+1.0	+1.0
Increase in Air Force Other Support for contract closeout activities in FY16 & FY17. (Support)	+4.6	+5.3
Decrease in Air Force Initial Spares as part of FY08 Below Threshold Re-Programming (Support)	-0.9	-1.0
Increase in Navy Other Support. (Support)	+1.4	+1.6
Procurement Subtotal	+31.9	+37.3

(QR) Quantity Related

**Contracts**

**Appropriation: Procurement**

Contract Name	<b>DASR</b>
Contractor	Raytheon Company
Contractor Location	Marlborough, MA 01752
Contract Number, Type	F19628-96-D-0038/1, FFP
Award Date	August 09, 1996
Definitization Date	August 09, 1996

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
17.9	N/A	0	17.9	N/A	0	17.9	17.9

**Cost And Schedule Variance Explanations**

Cost and Schedule variance reporting is not required on this FFP contract.



**Appropriation: Procurement**

Contract Name **DASR**  
 Contractor Raytheon Company  
 Contractor Location Marlborough, MA 01752  
 Contract Number, Type F19628-96-D-0038/2, FFP  
 Award Date August 09, 1996  
 Definitization Date August 09, 1996

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
372.0	N/A	92	678.0	N/A	91	678.0	678.0

**Cost And Schedule Variance Explanations**

Cost and Schedule variance reporting is not required on this FFP contract.

**Contract Comments**

The current contract price and estimated price at completion have increased from the initial contract price due to contract extension.

Note: Updates to the "Current Contract Price (\$ in Millions)" were neglected in previous NAS SARs. The value that should have been reported in the 2009 NAS SAR was \$678M, not \$476.8M.

**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  
 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
679.0	N/A	N/A	679.0	N/A	N/A	679.0	679.0

**Cost And Schedule Variance Explanations**

Cost and Schedule variance reporting is not required on this FFP contract.

## Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	54	54	92	58.70%
Total Program Quantities Delivered	54	54	92	58.70%

Expenditures and Appropriations (TY \$M)			
Total Acquisition Cost	1513.6	Years Appropriated	22
Expenditures To Date	1009.8	Percent Years Appropriated	78.57%
Percent Expended	66.72%	Appropriated to Date	1301.1
Total Funding Years	28	Percent Appropriated	85.96%

Deliveries to date totals changed from 66 to 54 to reflect NAS units *delivered*, not NAS units *procured*, as was reported in prior SARs. Total quantity increased from 91 to 92 to reflect transfer of NAS Upgrade responsibility for 1 site from Federal Aviation Administration (FAA) to US Navy.

## Operating and Support Cost

### Assumptions And Ground Rules

The Operating and Support (O&S) cost estimate is based on analysis performed for the MS III decision, letter from SAF/FMC dated March 18, 2005. The estimate assumes a 34 year life from year FY00 to FY34 for the 92 sites. There is no antecedent system.

Costs BY2005 \$M		
Cost Element	NAS Avg Annual Cost Per NAS Site	Avg Annual Cost Per Antecedent
Unit-Level Manpower	2.100	--
Unit Operations	0.200	--
Maintenance	0.000	--
Sustaining Support	0.100	--
Continuing System Improvements	0.400	--
Indirect Support	0.300	--
Other	--	--
Total Unitized Cost (Base Year 2005 \$)	3.100	--

Total O&S Costs \$M	NAS	Avg Annual Cost Per
Base Year	9726.6	--
Then Year	14115.2	--