



Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-292



Global Positioning System III (GPS III)

As of December 31, 2012

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Program Name

Global Positioning System III (GPS III)

DoD Component

Air Force

Responsible Office

Responsible Office

Col Bernard Gruber
483 N. Aviation Blvd
El Segundo, CA 90245

bernard.gruber@us.af.mil

Phone	310-653-3001
Fax	310-653-3005
DSN Phone	633-3001
DSN Fax	633-3005
Date Assigned	July 19, 2010

References

SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated January 31, 2011

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated January 31, 2011

Mission and Description

The Global Positioning System (GPS) is a satellite-based radio navigation system that provides worldwide military and civil users satellite signals they can process to determine accurate position, velocity, and time. On May 8, 2000, the Under Secretary of Defense for Acquisition, Technology and Logistics (USD (AT&L)) approved entry into the initial modernization efforts for Navstar GPS. GPS III, an Acquisition Category 1D program, is the next generation Space Vehicle (SV) that will provide significant enhancements to complete the modernization of the constellation. GPS III complies with 10 United States Code (USC) § 2281, ensuring the continued sustainment and operation of GPS for military and civilian purposes, and 42 USC § 14712, continuing as an international standard available on a continuous worldwide basis free of direct user fees.

As captured in a November 6, 2006 Memorandum, the Joint Requirement Oversight Council validated and endorsed the GPS III Capability Development Document for vehicles 01-08, validating the requirements for the GPS III program. As a result, the GPS Directorate is on contract to deliver GPS III SV 03 through 08, as reflected in this Selected Acquisition Report (SAR). Follow-on vehicles 09+ will be procured in a future increment(s) and are not reflected in this SAR.

The primary GPS III missions are positioning, navigation, and precise time transfer. GPS provides strategic and tactical support to the following Department of Defense (DoD) missions: Joint Operations by providing capabilities for Position Navigation and Timing (PNT); Command, Control, Communications, and Intelligence; Special Operations; Military Operations in Urban Terrain; Defense-Wide Mission Support; Air Mobility; and Space Launch Orbital Support.

For military users, the GPS III program provides Precise Positioning Service (PPS) to military operations and force enhancement. It also provides increased anti-jam power to the earth coverage M-Code signals and anti-exploitation techniques in order to prevent unauthorized use of the GPS PPS signal. Additionally, the program will support, via a hosted payload, the United States Nuclear Detonation Detection System mission for worldwide monitoring and detection of nuclear events.

For civilian users, the GPS III program provides a Standard Positioning Service to a broad spectrum of civil users. It will also transmit a new civil signal (L1C), which is compatible with the European Galileo satellite navigation system signal, E1. L1C is also compatible with those signals planned for broadcast on Japan's Quasi-Zenith Satellite System, a system meant to augment GPS services. Once implemented, the common civil signal will be jointly broadcast by up to 60 satellites from both GPS and Galileo constellations, further increasing the accuracy and availability of civil PNT solutions.

Executive Summary

GPS III received Milestone B approval in May 2008 and was authorized to procure development Space Vehicles (SV) 01 and 02. Milestone C approval in December 2010 authorized the program to begin long lead procurement of production SVs 03 through 08. The Milestone Decision Authority, Under secretary of Defense (Acquisitions, Technology, and Logistics) (USD (AT&L)), signed an Acquisition Decision Memorandum, an updated Acquisition Strategy Document and an updated Acquisition Program Baseline on January 31, 2011. The currently approved acquisition strategy for production reflects a GPS III SV03 through 08 production buy schedule profile of 2 SVs per year. The program recognizes increased cost due to decreased economies and efficiencies from a reduced production rate from 4 SVs per year. In May 2012, GPS III received approval to convert unexecuted space vehicle cost-plus options to fixed price incentive beginning with SV05. The impact of these changes will be fully recognized during renegotiation of those fixed price vehicles with the prime contractor in FY 2014.

The program has experienced some technical challenges primarily in the navigation payload and bus elements with overall Research, Development, Test, and Evaluation (RDT&E) cost growth of \$298M. These technical challenges are primarily in the Navigation Payload Element which include a Radio Frequency Isolation issue, a TRAK Isolator/Combiner part failure (a key transmitter component), and a Rubidium Atomic Clock life-test failure. In addition, the program experienced an SV01 Spacecraft Bus wire harness workmanship issue. As a result, schedule is impacted and will affect the SV01 available for launch date.

Significant accomplishments have been made with the GPS Non-Flight Satellite Test bed (GNST), SV01 development, and the GPS III Satellite Simulator (GSS):

The GNST, a fully functioning, less redundant prototype, is the first vehicle through the assembly, integration and test flow. This pathfinder is a major risk reduction activity for SV01. All planned boxes, mass simulators, and flight harnesses are installed on the GNST, to include the GNST Navigation Payload. Prior to delivery of this Payload, a partial "surrogate panel" was used to reduce the schedule impacts and integration risks associated with the GNST Navigation Payload delay. The GNST System Module and Core Module was mated on July 18, 2012 and was subsequently de-mated on November 6, 2012 to remove the navigation "surrogate panel" in preparation for the actual GNST Navigation Panel integration. The GNST Navigation Payload completed thermal vacuum testing on November 8, 2012 with final integration testing being completed on March 8, 2013.

SV01 production is underway and is tracking to a Government SV01 "available for launch" date in October 2014. There are significant learning curves in the manufacturing and production builds. The Propulsion Core was delivered to the GPS Processing Facility on September 23, 2012. Plans for 2013 include the SV01 initial power turn-on for the Bus as well as delivery of the SV01 Navigation Payload. In addition, the launch and checkout readiness exercises #1 and #2 between GPS III and the Next Generation Operational Control System (OCX) were successfully completed in August 2012 and February 2013.

Early software deliveries of the GSS were delivered to OCX on June 22, 2011, November 28, 2011, and August 30, 2012. These critical steps support continued integration in development of future GPS Space and Ground Systems. Final acceptance of the GSS hardware and software will complete in 2013.

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

Threshold Breaches

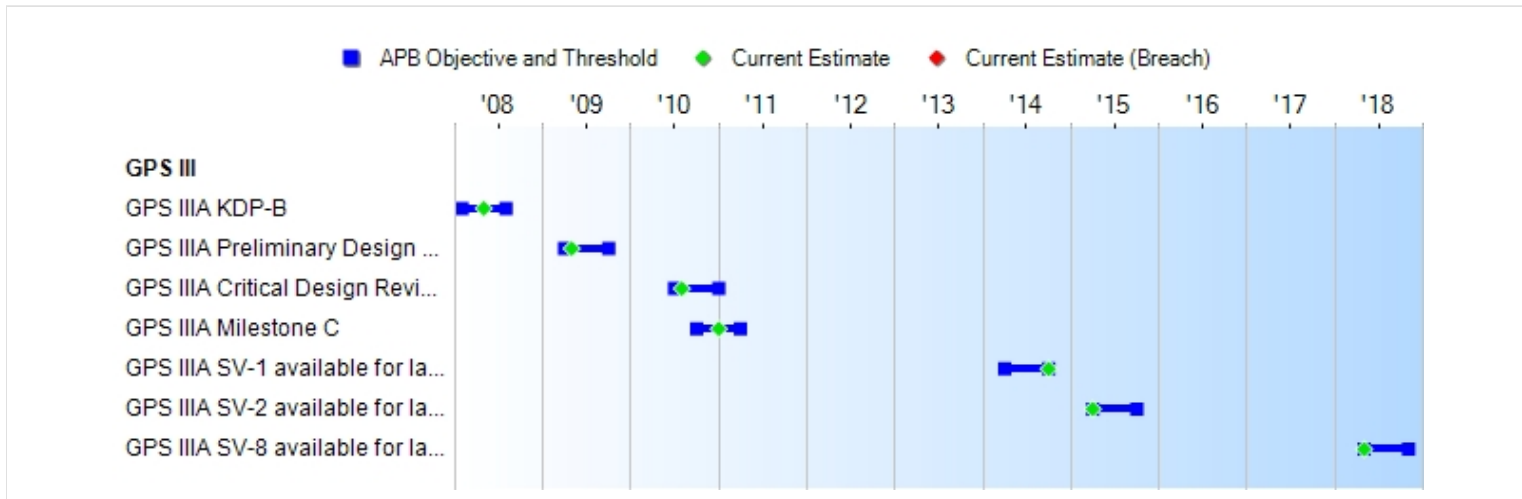
APB Breaches

Schedule		<input type="checkbox"/>
Performance		<input type="checkbox"/>
Cost	RDT&E	<input type="checkbox"/>
	Procurement	<input 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 type="checkbox"/>

Nunn-McCurdy Breaches

Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Schedule



Milestones	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate
GPS IIIA KDP-B	FEB 2008	FEB 2008	AUG 2008	MAY 2008
GPS IIIA Preliminary Design Review	APR 2009	APR 2009	OCT 2009	MAY 2009
GPS IIIA Critical Design Review	JUL 2010	JUL 2010	JAN 2011	AUG 2010
GPS IIIA Milestone C	OCT 2010	OCT 2010	APR 2011	JAN 2011
GPS IIIA SV-1 available for launch	APR 2014	APR 2014	OCT 2014	OCT 2014 (Ch-1)
GPS IIIA SV-2 available for launch	APR 2015	APR 2015	OCT 2015	APR 2015
GPS IIIA SV-8 available for launch	MAY 2018	MAY 2018	NOV 2018	MAY 2018

Acronyms And Abbreviations

GPS - Global Positioning System
 KDP - Key Decision Point
 SV - Space Vehicle

Change Explanations

(Ch-1) GPS IIIA SV-1 available for launch went from April 2014 to October 2014. SV01 production is underway and is tracking to a Government SV01 "available for launch" date in October 2014. There are significant learning curves in the manufacturing and production builds

Memo

GPS III consists of what was previously known as GPS IIIA (SVs 01-08) and future vehicles SV 09+, not covered in this report. The Schedule graphic and Milestone table above is drawn from the Acquisition Program Baseline.

Performance

Characteristics	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
Backward Compatibility	All modifications made to the existing GPS Space Segment and Control Segment shall allow continued operation of existing ICD-GPS-200 and 700, IS-GPS-705, and SS-GPS-001 compliant User Equipment (UE) and continued operation of legacy receivers (to include Federal augmentation system receivers).	All modifications made to the existing GPS Space Segment and Control Segment shall allow continued operation of existing ICD-GPS-200 and 700, IS-GPS-705, and SS-GPS-001 compliant User Equipment (UE) and continued operation of legacy receivers (to include Federal augmentation system receivers).	All modifications made to the existing GPS Space Segment and Control Segment shall allow continued operation of existing ICD-GPS-200 and 700, IS-GPS-705, and SS-GPS-001 compliant User Equipment (UE) and continued operation of legacy receivers (to include Federal augmentation system receivers).	TBD	All modifications made to the existing GPS Space Segment and Control Segment shall allow continued operation of existing ICD-GPS-200 and 700, IS-GPS-705, and SS-GPS-001 compliant User Equipment (UE) and continued operation of legacy receivers (to include Federal augmentation system receivers).
User Range Error (meters)	.2	.2	1.1	TBD	1.0
Net-Ready	The system must fully support execution of all joint operational activities identified in the applicable joint and system	The system must fully support execution of all joint operational activities identified in the applicable joint and system	The system must fully support execution of joint critical operational activities identified in the applicable joint and system	TBD	The system must fully support execution of all joint operational activities identified in the applicable joint and system

	integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations.	integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations.	integrated architectures and the system must satisfy the technical requirements for transition to Net-Centric military operations.		integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations.
Satellite Availability	0.984	0.984	0.984	TBD	0.984
Boosted Earth-Coverage M-Code Power (dBW)	-148	-148	-153	TBD	-153
Minimum L1C Signal Power	-157	-157	-157	TBD	-157
Position and Time Transfer Integrity (Probability of Misleading SIS Information)	0.00000001	0.00000001	0.00001	TBD	0.00000001

Requirements Source: Capability Development Document (CDD) for Increment A dated November 6, 2006

Acronyms And Abbreviations

dBW - Decibel-watt
GPS - Global Positioning System
ICD - Interface Control Document
IS - Interface Specifications
M-Code - Military Code
SIS - Signal in Space
SS - System Specifications
TBD - To Be Determined

Change Explanations

None

Track To Budget**RDT&E**

APPN 3600	BA 07	PE 0305265F	(Air Force)
	Project 67A019		(Shared)
APPN 3600	BA 04	PE 0603421F	(Air Force)
	Project 644993		(Sunk)

The shared funding line includes funding for Space Vehicle (SV) 09+; beginning in FY 2008, however the SV09+ funds are not included in this SAR.

Procurement

APPN 3020	BA 05	PE 0305265F	(Air Force)
	ICN GPSIII		(Shared)

The shared funding line includes funding for SV09+ beginning in FY 2014 (long lead) which is not reported in this SAR.

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

Appropriation	BY2010 \$M			BY2010 \$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	2623.9	2623.9	2886.3	2587.3	2653.8	2653.8	2642.6
Procurement	1519.0	1519.0	1670.9	1464.0	1616.0	1616.0	1608.2
Flyaway	1519.0	--	--	1323.7	1616.0	--	1442.0
Recurring	1519.0	--	--	1320.2	1616.0	--	1438.1
Non Recurring	0.0	--	--	3.5	0.0	--	3.9
Support	0.0	--	--	140.3	0.0	--	166.2
Other Support	0.0	--	--	140.3	0.0	--	166.2
Initial Spares	0.0	--	--	0.0	0.0	--	0.0
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
Total	4142.9	4142.9	N/A	4051.3	4269.8	4269.8	4250.8

Confidence Level for Current APB Cost 60% - The Milestone C Acquisition Program Baseline (APB) was established at the 60% confidence level. This estimate is built upon a product-oriented work breakdown structure, based on historical actual cost information to the maximum extent possible, and most importantly, based on conservative assumptions that are consistent with actual demonstrated contractor and government performance for a series of acquisition programs in which the Directorate has been successful.

The Base Year (BY) of the program is BY 2010 as a result of the approval of the Milestone C APB on January 31, 2011.

Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E		2	2
Procurement		6	6
Total		8	8

Cost and Funding

Funding Summary

Appropriation and Quantity Summary FY2014 President's Budget / December 2012 SAR (TY\$ M)

Appropriation	Prior	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	To Complete	Total
RDT&E	2095.6	276.9	163.6	62.8	12.0	7.0	5.8	18.9	2642.6
Procurement	590.1	492.9	402.5	5.8	18.4	16.0	16.3	66.2	1608.2
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 2014 Total	2685.7	769.8	566.1	68.6	30.4	23.0	22.1	85.1	4250.8
PB 2013 Total	2742.4	761.2	517.9	36.9	35.9	34.6	22.3	18.1	4169.3
Delta	-56.7	8.6	48.2	31.7	-5.5	-11.6	-0.2	67.0	81.5

Program funding and production quantities listed in this SAR are consistent with the FY 2014 President's Budget (PB). The FY 2014 PB did not reflect the enacted DoD appropriation for FY 2013, nor sequestration; it reflected the President's requested amounts for FY 2013.

Quantity	Undistributed	Prior	FY2013	FY2014	FY2015	FY2016	FY2017	FY2018	To Complete	Total
Development	2	0	0	0	0	0	0	0	0	2
Production	0	2	2	2	0	0	0	0	0	6
PB 2014 Total	2	2	2	2	0	0	0	0	0	8
PB 2013 Total	2	2	2	2	0	0	0	0	0	8
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
2002	--	--	--	--	--	--	51.5
2003	--	--	--	--	--	--	39.7
2004	--	--	--	--	--	--	--
2005	--	--	--	--	--	--	21.2
2006	--	--	--	--	--	--	51.4
2007	--	--	--	--	--	--	195.2
2008	--	--	--	--	--	--	189.6
2009	--	--	--	--	--	--	354.0
2010	--	--	--	--	--	--	386.2
2011	--	--	--	--	--	--	399.5
2012	--	--	--	--	--	--	407.3
2013	--	--	--	--	--	--	276.9
2014	--	--	--	--	--	--	163.6
2015	--	--	--	--	--	--	62.8
2016	--	--	--	--	--	--	12.0
2017	--	--	--	--	--	--	7.0
2018	--	--	--	--	--	--	5.8
2019	--	--	--	--	--	--	3.0
2020	--	--	--	--	--	--	2.8
2021	--	--	--	--	--	--	2.7
2022	--	--	--	--	--	--	2.8
2023	--	--	--	--	--	--	3.1
2024	--	--	--	--	--	--	3.4
2025	--	--	--	--	--	--	1.1
Subtotal	2	--	--	--	--	--	2642.6

Annual Funding BY\$

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 \$M	Non End Item Recurring Flyaway BY 2010 \$M	Non Recurring Flyaway BY 2010 \$M	Total Flyaway BY 2010 \$M	Total Support BY 2010 \$M	Total Program BY 2010 \$M
2002	--	--	--	--	--	--	60.1
2003	--	--	--	--	--	--	45.7
2004	--	--	--	--	--	--	--
2005	--	--	--	--	--	--	23.2
2006	--	--	--	--	--	--	54.6
2007	--	--	--	--	--	--	202.0
2008	--	--	--	--	--	--	192.4
2009	--	--	--	--	--	--	354.4
2010	--	--	--	--	--	--	381.7
2011	--	--	--	--	--	--	387.2
2012	--	--	--	--	--	--	386.9
2013	--	--	--	--	--	--	257.3
2014	--	--	--	--	--	--	149.2
2015	--	--	--	--	--	--	56.2
2016	--	--	--	--	--	--	10.5
2017	--	--	--	--	--	--	6.0
2018	--	--	--	--	--	--	4.9
2019	--	--	--	--	--	--	2.5
2020	--	--	--	--	--	--	2.3
2021	--	--	--	--	--	--	2.2
2022	--	--	--	--	--	--	2.2
2023	--	--	--	--	--	--	2.4
2024	--	--	--	--	--	--	2.6
2025	--	--	--	--	--	--	0.8
Subtotal	2	--	--	--	--	--	2587.3

The RDT&E Air Force funding profile above represents funding for satellites 1 and 2 as displayed in the associated R-2A exhibit in the FY 2014 President's Budget (R-1 Line #222).

Annual Funding TY\$
3020 | Procurement | Missile 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
2010	--	96.0	--	--	96.0	--	96.0
2011	--	--	--	--	--	--	--
2012	2	478.0	--	--	478.0	16.1	494.1
2013	2	463.9	5.0	1.7	470.6	22.3	492.9
2014	2	365.6	5.7	2.2	373.5	29.0	402.5
2015	--	--	3.8	--	3.8	2.0	5.8
2016	--	--	9.1	--	9.1	9.3	18.4
2017	--	--	5.7	--	5.7	10.3	16.0
2018	--	--	5.3	--	5.3	11.0	16.3
2019	--	--	--	--	--	12.9	12.9
2020	--	--	--	--	--	11.5	11.5
2021	--	--	--	--	--	10.2	10.2
2022	--	--	--	--	--	10.1	10.1
2023	--	--	--	--	--	10.5	10.5
2024	--	--	--	--	--	11.0	11.0
Subtotal	6	1403.5	34.6	3.9	1442.0	166.2	1608.2

Annual Funding BY\$
3020 | Procurement | Missile Procurement, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 \$M	Non End Item Recurring Flyaway BY 2010 \$M	Non Recurring Flyaway BY 2010 \$M	Total Flyaway BY 2010 \$M	Total Support BY 2010 \$M	Total Program BY 2010 \$M
2010	--	93.9	--	--	93.9	--	93.9
2011	--	--	--	--	--	--	--
2012	2	448.2	--	--	448.2	15.1	463.3
2013	2	421.9	4.5	1.5	427.9	20.3	448.2
2014	2	326.3	5.1	2.0	333.4	25.8	359.2
2015	--	--	3.3	--	3.3	1.8	5.1
2016	--	--	7.8	--	7.8	8.0	15.8
2017	--	--	4.8	--	4.8	8.7	13.5
2018	--	--	4.4	--	4.4	9.1	13.5
2019	--	--	--	--	--	10.5	10.5
2020	--	--	--	--	--	9.2	9.2
2021	--	--	--	--	--	8.0	8.0
2022	--	--	--	--	--	7.8	7.8
2023	--	--	--	--	--	7.9	7.9
2024	--	--	--	--	--	8.1	8.1
Subtotal	6	1290.3	29.9	3.5	1323.7	140.3	1464.0

The Missile Procurement Air Force (MPAF) funding profile above represents funding for Space Vehicles (SVs) 03 through 08 as displayed in the associated P-5 exhibit in the FY 2014 President's Budget. MPAF funds for SVs09+ are excluded above, but are reflected in the associated P-5 exhibit in the FY 2014 President's Budget (P-1 Lines #17 and #18).

Cost Quantity Information**3020 | Procurement | Missile Procurement, Air Force**

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2010 \$M
2010	--	--
2011	--	--
2012	2	430.1
2013	2	430.1
2014	2	430.1
2015	--	--
2016	--	--
2017	--	--
2018	--	--
2019	--	--
2020	--	--
2021	--	--
2022	--	--
2023	--	--
2024	--	--
Subtotal	6	1290.3

Low Rate Initial Production

There is no LRIP for this program.

Foreign Military Sales

None

Nuclear Cost

None

Unit Cost**Unit Cost Report**

	BY2010 \$M	BY2010 \$M	
Unit Cost	Current UCR Baseline (JAN 2011 APB)	Current Estimate (DEC 2012 SAR)	BY % Change

Program Acquisition Unit Cost (PAUC)

Cost	4142.9	4051.3	
Quantity	8	8	
Unit Cost	517.862	506.412	-2.21

Average Procurement Unit Cost (APUC)

Cost	1519.0	1464.0	
Quantity	6	6	
Unit Cost	253.167	244.000	-3.62

	BY2010 \$M	BY2010 \$M	
Unit Cost	Original UCR Baseline (MAY 2008 APB)	Current Estimate (DEC 2012 SAR)	BY % Change

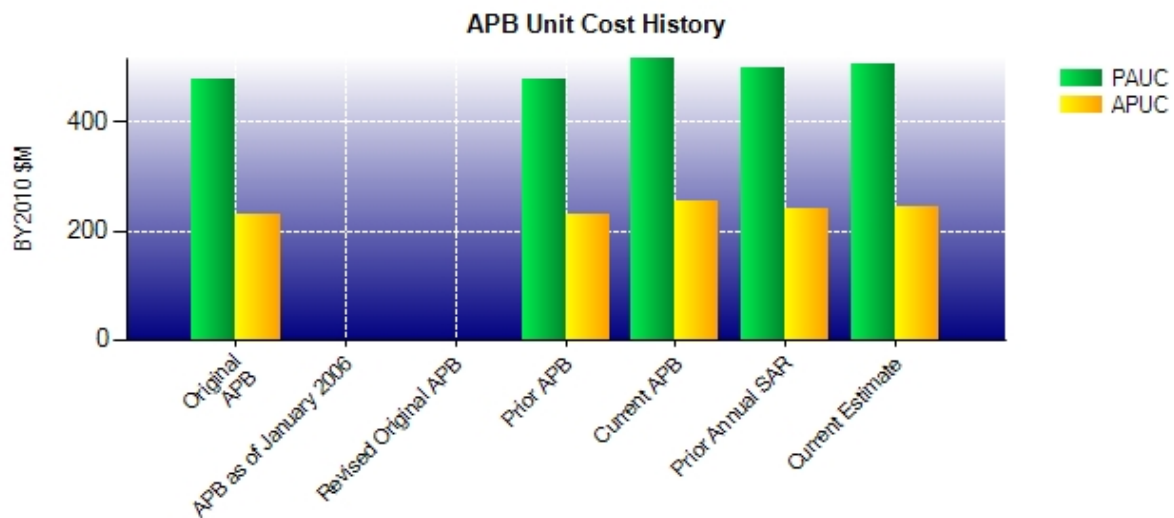
Program Acquisition Unit Cost (PAUC)

Cost	3840.8	4051.3	
Quantity	8	8	
Unit Cost	480.100	506.412	+5.48

Average Procurement Unit Cost (APUC)

Cost	1381.0	1464.0	
Quantity	6	6	
Unit Cost	230.167	244.000	+6.01

Unit Cost History



	Date	BY2010 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	MAY 2008	480.100	230.167	500.288	248.383
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	MAY 2008	480.100	230.167	500.288	248.383
Current APB	JAN 2011	517.862	253.167	533.725	269.333
Prior Annual SAR	DEC 2011	501.225	241.317	521.162	260.333
Current Estimate	DEC 2012	506.412	244.000	531.350	268.033

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	
500.288	-9.013	0.000	0.775	0.000	63.063	-9.513	-11.875	33.437	533.725

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

PAUC Prod Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
533.725	8.612	0.000	0.000	0.000	-31.762	0.000	20.775	-2.375	531.350

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	
248.383	-6.450	0.000	1.033	0.000	54.933	-12.733	-15.833	20.950	269.333

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

APUC Prod Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
269.333	7.450	0.000	0.000	0.000	-36.450	0.000	27.700	-1.300	268.033

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	FEB 2008	FEB 2008	MAY 2008
Milestone C	N/A	SEP 2009	OCT 2010	JAN 2011
IOC	N/A	N/A	N/A	N/A
Total Cost (TY \$M)	N/A	4002.3	4269.8	4250.8
Total Quantity	N/A	8	8	8
Prog. Acq. Unit Cost (PAUC)	N/A	500.288	533.725	531.350

Cost Variance

Summary Then Year \$M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	2653.8	1616.0	--	4269.8
Previous Changes				
Economic	+19.1	+23.9	--	+43.0
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-65.6	-77.9	--	-143.5
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-46.5	-54.0	--	-100.5
Current Changes				
Economic	+5.1	+20.8	--	+25.9
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+30.2	-140.8	--	-110.6
Other	--	--	--	--
Support	--	+166.2	--	+166.2
Subtotal	+35.3	+46.2	--	+81.5
Adjustments	--	--	--	--
Total Changes	-11.2	-7.8	--	-19.0
CE - Cost Variance	2642.6	1608.2	--	4250.8
CE - Cost & Funding	2642.6	1608.2	--	4250.8

Summary Base Year 2010 \$M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	2623.9	1519.0	--	4142.9
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-62.0	-71.1	--	-133.1
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-62.0	-71.1	--	-133.1
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+25.4	-124.2	--	-98.8
Other	--	--	--	--
Support	--	+140.3	--	+140.3
Subtotal	+25.4	+16.1	--	+41.5
Adjustments	--	--	--	--
Total Changes	-36.6	-55.0	--	-91.6
CE - Cost Variance	2587.3	1464.0	--	4051.3
CE - Cost & Funding	2587.3	1464.0	--	4051.3

Previous Estimate: December 2011

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+5.1
Increase costs for Space Vehicles (SV) 01-02 development. (Estimating)	+29.8	+35.7
Reduction based on better knowledge of on-orbit support costs. (Estimating)	-1.8	-2.8
Adjustment for current and prior escalation. (Estimating)	-2.6	-2.7
RDT&E Subtotal	+25.4	+35.3

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+20.8
Below Threshold Reprogramming from Navstar (Block IIF) to cover technical challenges. (Estimating)	+15.5	+16.0
Reductions for Omnibus Reprogramming. (Estimating)	-18.6	-19.9
Budget reductions for Critical Time Dissemination. (Estimating)	-0.7	-0.8
Reallocation of funding between SV01-08 and SV09+. (Estimating)	-21.5	-25.1
Adjustment for current and prior escalation. (Estimating)	-10.1	-11.0
Reclassification of funds from Flyaway to Support. (Estimating)	-88.8	-100.0
Increase due to additional Launch and On-Orbit Support (LOOS) requirements on the Lockheed Martin contract which are based on the new cost estimate and reclassification of funds from Flyaway to Support. (Subtotal)	+140.3	+166.2
Increase due to additional Launch and On-Orbit Support (LOOS) requirements on the Lockheed Martin contract which are based on the new cost estimate. (Support)	(+51.4)	(+66.2)
Reclassification of funds from Flyaway to Support. (Support)	(+88.9)	(+100.0)
Procurement Subtotal	+16.1	+46.2

Contracts

Appropriation: RDT&E

Contract Name	Global Positioning System (GPS) III (Development)
Contractor	Lockheed Martin Corporation
Contractor Location	Newton, PA 18940
Contract Number, Type	FA8807-08-C-0010, CPIF/CPAF
Award Date	May 15, 2008
Definitization Date	May 15, 2008

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
1249.1	N/A	2	1425.4	N/A	2	1850.8	1978.5

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (3/31/2013)	-280.1	-29.1
Previous Cumulative Variances	-189.3	-35.5
Net Change	-90.8	+6.4

Cost And Schedule Variance Explanations

The unfavorable net change in the cost variance is due to the continued rework on the Scaleable Power Reg Unit (SPRU) circuit card assemblies in the Space Vehicle (SV) BUS Power IPT, and continued labor support required to work the existing Mission Data Unit (MDU) scripts and Discrepancy Reports (DRs), and MDU Flight Software (FSW) testing issues in the Navigation Payload Element (NPE) IPT.

The favorable net change in the schedule variance is due to the resolution of technical issues in the SV BUS Telemetry Tracking and Control Subsystem (TT&C) area and the closure of late Integrated Software Interface Test Environment (InSITE) tasks.

Contract Comments

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to additional scope associated with the award of the GPS III Launch and Checkout Capability.

The current Program Management Estimated Price includes potential developmental risks.

The previously posted Initial Contract Price Target of \$1386.9M was inaccurate. This SAR shows the corrected Initial Contract Price Target of \$1249.1M and reconciles with the basic contract (May 15, 2008) & Initial Cost Performance Report (September 2008).

Appropriation: Procurement

Contract Name **Global Positioning System (GPS) III (Production)**
 Contractor Lockheed Martin Corporation
 Contractor Location Newton, PA 18940
 Contract Number, Type FA8807-08-C-0010/2, CPIF
 Award Date May 15, 2008
 Definitization Date May 15, 2008

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
74.7	N/A	2	313.2	N/A	2	380.9	406.6

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (3/31/2013)	-9.6	+16.1
Previous Cumulative Variances	0.0	+4.4
Net Change	-9.6	+11.7

Cost And Schedule Variance Explanations

The unfavorable net change in the cost variance is due to Contract Line Item Number (CLIN) 16 Space Vehicles (SVs) 03 and 04 being negotiated as part of the baseline contract that was awarded on May 15, 2008 and exercised within the time frame of the contract (these SVs were not part of the SVs 05-08 renegotiation). Therefore, there was no update to the requirements in the CLIN to account for Technical Operating Report (TOR) impacts. As a result, Lockheed Martin submitted a TOR Request for Equitable Adjustment (REA) which drives the increase to the negative cost variance.

The favorable net change in the schedule variance is due to early material procurement in the SV Solar Array and Earth Coverage Antenna areas.

Contract Comments

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the exercising of SVs 03 & 04 production options (CLIN 16).

The previously posted Initial Contract Price of \$79.5M was inaccurate. This SAR shows the corrected Initial Contract Price Target of \$74.7M and reconciles with the initial Production Cost Performance Report (May 2011).

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	0	0	2	0.00%
Production	0	0	6	0.00%
Total Program Quantities Delivered	0	0	8	0.00%

Expenditures and Appropriations (TY \$M)			
Total Acquisition Cost	4250.8	Years Appropriated	12
Expenditures To Date	2196.3	Percent Years Appropriated	50.00%
Percent Expended	51.67%	Appropriated to Date	3455.5
Total Funding Years	24	Percent Appropriated	81.29%

The above data is current as of 2/20/2013.

Operating and Support Cost

GPS III

Assumptions and Ground Rules

Cost Estimate Reference:

None

Sustainment Strategy:

None

Antecedent Information:

None

Unitized O&S Costs BY2010 \$K		
Cost Element	GPS III Avg Annual Cost for 24 Satellite Constellation	No Antecedant (Antecedent)
Unit-Level Manpower	0	0
Unit Operations	0	0
Maintenance	0	0
Sustaining Support	0	0
Continuing System Improvements	0	0
Indirect Support	0	0
Other	0	0
Total	--	--

Unitized Cost Comments:

None

	Total O&S Cost \$M				
	Current Production APB Objective/Threshold		Current Estimate		
	GPS III		GPS III	No Antecedant (Antecedent)	
Base Year	0.0	0.0	N/A	N/A	
Then Year	0.0	N/A	N/A	N/A	

Total O&S Costs Comments:

There are currently no GPS III Operating and Support (O&S) costs. The O&S responsibility for GPS III will be accomplished by the GPS Logistics Directorate within the Next Generation Operational Control System (OCX). Once the satellite is launched, there will be no unique sustainment being accomplished within the GPS III program.

Disposal Costs

None