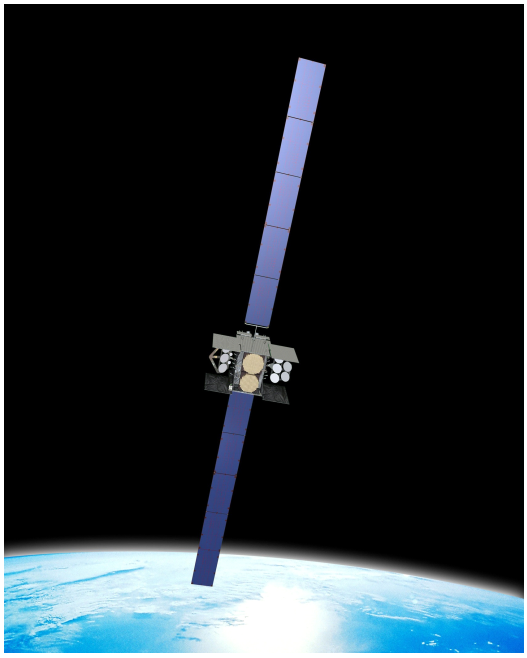
Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-326



WGS

As of December 31, 2011

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

Program Information

Designation And Nomenclature (Popular Name)

Wideband Global SATCOM (WGS)

DoD Component

Air Force

Responsible Office

Responsible Office

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Date Assigned July 19, 2010

References

SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated August 11, 2011.

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated August 11, 2010

Mission and Description

Wideband Global SATCOM (WGS), previously reported as Wideband Gapfiller Satellites, will augment the Defense Satellite Communications System III (DSCS III), and the Global Broadcast Service Phase II. WGS is a fully duplexed communications platform offering warfighters a significant increase in capacity, connectivity, and interoperability. It will provide high capacity and digitally channelized service at both X and Ka frequency bands, opening up a new 2-way Ka communication capability. This highly flexible communications satellite design leverages commercial processes, practices and technology to provide a wideband payload compatible with existing and future terminals.

Executive Summary

WGS Block 1 satellites (WGS 1-3) continue to successfully perform operations over the Pacific Command (PACOM), Central Command (CENTCOM), Africa Command (AFRICOM) and European Command (EUCOM) Areas of Responsibility.

Production on the Block II contract (WGS 4-6) continues. WGS-4 successfully launched on January 19, 2012 from Cape Canaveral Air Force Station; all operations are nominal and orbit raising is progressing on schedule. WGS-5 completed Spacecraft Thermal Vacuum (SCTV) post-vacuum ambient testing on December 7, 2011 and has been undergoing final spacecraft alignments. WGS-6 completed Spacecraft Initial Functional Test (SIFT) on October 30, 2011 and has entered SCTV January 14, 2012. WGS-6 financial data is not reported in this SAR because funding is provided by Australia in exchange for access to a portion of the WGS constellation bandwidth. The program conducts two Project Status Reviews (PSR) and one general officer-level Steering Committee meeting annually since the Memorandum of Understanding (MOU) was signed in 2007. The most recent PSR meeting was held February 27 - March 2, 2012.

The WGS Block II Follow-On contract for WGS 7-9 advanced procurement, non-recurring engineering and factory restart was awarded August 20, 2010. The contract award for the remainder of the Block II Follow-On program was awarded on August 31, 2011 and consists of satellite 8 advanced procurement and satellites 7-9 production, processing, launch and on-orbit activation.

An Acquisition Decision Memorandum for WGS-9 was signed November 1, 2011 and the MOU with Canada, Denmark, Luxembourg, The Netherlands and New Zealand was signed January 12, 2012 for the procurement of WGS-9 in exchange for access to the WGS constellation. The WGS-9 production contract was awarded on January 13, 2012. WGS-9 financial data is not reported in this SAR because funding for the satellite is provided under a cooperative agreement through international partnership.

Funding for WGS-10 has been appropriated in FY 2012 and contract award activities are underway.

On April 13, 2011, the Under Secretary of Defense for Acquisition, Technology and Logistics USD(AT&L) certified that the WGS program now satisfies all of the provisions of section 2366b of title 10, United States Code. There are no remaining 2366b waivers associated with this program.

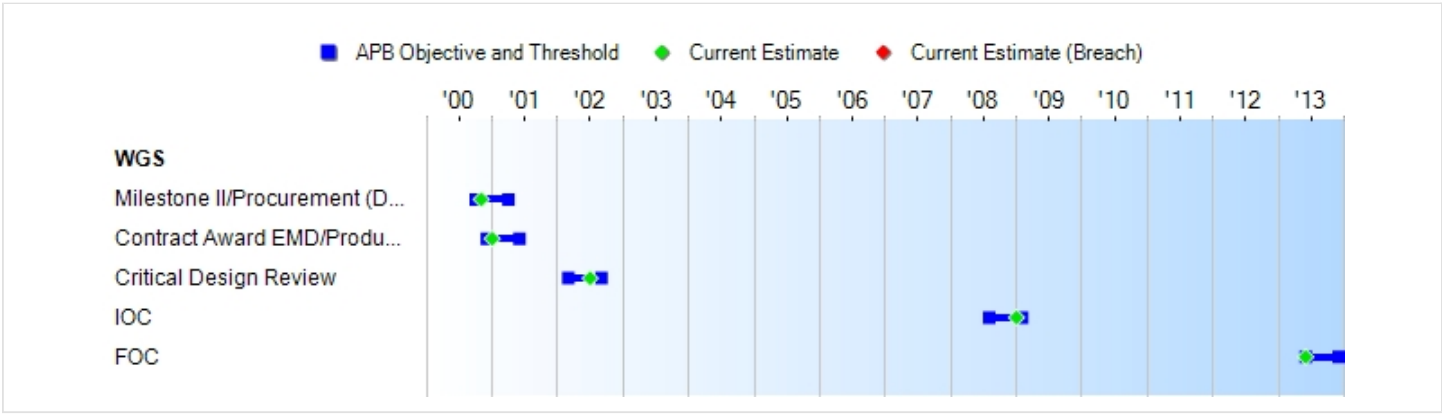
There are no significant software-related issues with this program at this time.

Threshold Breaches

APB Breaches		
Schedule		☐
Performance		☐
Cost	RDT&E	☐
	Procurement	☐
	MILCON	☐
	Acq O&M	☐
Unit Cost	PAUC	☐
	APUC	☐

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

Schedule



Milestones	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate
Milestone II/Procurement (DAB)	OCT 2000	OCT 2000	APR 2001	NOV 2000
Contract Award EMD/Production	DEC 2000	DEC 2000	JUN 2001	JAN 2001
Critical Design Review	MAR 2002	MAR 2002	SEP 2002	JUL 2002
IOC	AUG 2008	AUG 2008	FEB 2009	JAN 2009
FOC	JUN 2013	JUN 2013	DEC 2013	JUN 2013

Acronyms And Abbreviations

CDR - Critical Design Review
DAB - Defense Acquisition Board
EMD - Engineering and Manufacturing Development
FOC - Full Operational Capability
IOC - Initial Operational Capability

Change Explanations

None

Performance

Characteristics	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
Coverage	Capable of providing communicat-ions connec-tivity anywhere between 70 deg N and 65 deg S latitude and at all longitudes within each satellites field of view, 24 hrs a day	Capable of providing communicat-ions connec-tivity anywhere between 70 deg N and 65 deg S latitude and at all longitudes within each satellites field of view, 24 hrs a day	Capable of providing communicat-ions connec-tivity anywhere between 65 deg N and 65 deg S latitude and at all longitudes within each satellites field of view, 24 hrs a day	Confirmed by STK. Operationally verified at 64 deg N latitude	Capable of providing communi-cations connectivity anywhere between 65 deg N and 65 deg S latitude and at all longitudes within each satellites field of view, 24 hrs a day
Capacity	Each satellite should provide a min throughput of 3.6 Gbps	Each satellite should provide a min throughput of 3.6 Gbps	Each satellite should provide a min throughput of 1.2 Gbps	Calculated simplex throughput of 4.186 Gbps* Current average throughput is 2.1 Gbps	Each satellite should provide a min throughput of ~2.14 Gbps
Access and Control	Provide platform and payload controlled capabilities to perform Launch and Early Orbit, On-Orbit Operations, Station-keeping, Satellite Reposition-ing, Platform and Payload Maintenance, and Anomaly Identification and Resolution	Provide platform and payload controlled capabilities to perform Launch and Early Orbit, On-Orbit Operations, Station-keeping, Satellite Reposition-ing, Platform and Payload Maintenance, and Anomaly Identification and Resolution	Provide platform and payload controlled capabilities to perform Launch and Early Orbit, On-Orbit Operations, Station-keeping, Satellite Reposition-ing, Platform and Payload Maintenance, and Anomaly Identification and Resolution	Positive platform and payload operator ratings	Provide platform & payload controlled capabilities to perform Launch & Early Orbit, On-Orbit Ops, Station-keeping, Sat Reposition-ing, Platform & Payload Maintenance, & Anomaly ID & resolution
Interoperability	Satellites	Satellites	Satellites	Confirmed	Satellites

	must be fully inter-operable with existing and programmed DSCS and GBS terminals	must be fully inter-operable with existing and programmed DSCS and GBS terminals	must be fully inter-operable with existing and programmed DSCS and GBS terminals	inter-operability with 40 terminal types, including DSCS and GBS	must be fully inter-operable with existing and programmed DSCS and GBS terminals

Requirements Source:
Final Operational Requirements Document (ORD), Air Force Space Command (AFSPC) ORD 004-99, Wideband Gapfiller Satellite Communications System, dated May 3, 2000

Acronyms And Abbreviations

deg N - degrees North
deg S - degrees South
DSCS - Defense Satellite Communications System
Gbps - Gigabits per second
GBS - Global Broadcast Service
hrs - hours
ID - identification
min - minimum
Ops - Operations
Sat - Satellite
STK - Satellite Tool Kit

Change Explanations

None

Memo

*4.186 Gbps is based on a scenario of optimized ground terminal power/antenna aperture function. Interoperability demonstrated performance is based on recent testing with 40 terminals, an increase from 15 terminals as previously reported.

Track To Budget

RDT&E				
APPN 3600	BA 04	PE 0603854F	(Air Force)	
	Project 4811	Wideband Gapfiller Satellites	(Shared)	(Sunk)
Procurement				
APPN 3020	BA 05	PE 0303600F	(Air Force)	
	ICN GAP000	Wideband Gapfiller Satellites		
APPN 3080	BA 03	PE 0303600F	(Air Force)	
	ICN 836780	Wideband Gapfiller Satellites	(Shared)	(Sunk)

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

	BY2010 $M			BY2010 $M	TY $M		
Appropriation	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Prod Est	Current APB Production Objective	Current Estimate
RDT&E	417.2	417.2	458.9	444.2	380.7	380.7	409.6
Procurement	3193.4	3193.4	3512.6	3449.5	3159.0	3159.0	3458.8
Flyaway	3160.4	--	--	3416.6	3129.7	--	3429.5
Recurring	3160.4	--	--	3416.6	3129.7	--	3429.5
Non Recurring	0.0	--	--	0.0	0.0	--	0.0
Support	33.0	--	--	32.9	29.3	--	29.3
Other Support	33.0	--	--	32.9	29.3	--	29.3
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	3610.6	3610.6	N/A	3893.7	3539.7	3539.7	3868.4

Confidence level is 50%

The Independent Cost Estimate (ICE) to support WGS Milestone C decision, like all life-cycle cost estimates previously performed by the Cost Assessment and Program Evaluation (CAPE) office, 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 Department has been successful.

It is difficult to calculate mathematically the precise confidence levels associated with life-cycle cost estimates prepared for Major Defense Acquisition Programs (MDAPs). Based on the rigor in methods used in building estimates, the strong adherence to the collection and use of historical cost information, and the review of applied assumptions, we project that it is about equally likely that the estimate will prove too low or too high for execution of the program described.

Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E	0	0	0
Procurement	7	7	8
Total	7	7	8

Cost and Funding

Funding Summary

Appropriation and Quantity Summary
FY2013 President's Budget / December 2011 SAR (TY$ M)

Appropriation	Prior	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	To Complete	Total
RDT&E	409.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	409.6
Procurement	2269.7	792.9	36.8	61.0	88.2	86.4	85.8	38.0	3458.8
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 2013 Total	2679.3	792.9	36.8	61.0	88.2	86.4	85.8	38.0	3868.4
PB 2012 Total	2658.6	468.7	50.7	62.4	97.2	98.4	36.7	38.0	3510.7
Delta	20.7	324.2	-13.9	-1.4	-9.0	-12.0	49.1	0.0	357.7

Quantity	Undistributed	Prior	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	6	2	0	0	0	0	0	0	8
PB 2013 Total	0	6	2	0	0	0	0	0	0	8
PB 2012 Total	0	6	1	0	0	0	0	0	0	7
Delta	0	0	1	0	0	0	0	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
1999	--	--	--	--	--	--	0.7
2000	--	--	--	--	--	--	4.5
2001	--	--	--	--	--	--	77.7
2002	--	--	--	--	--	--	79.0
2003	--	--	--	--	--	--	--
2004	--	--	--	--	--	--	--
2005	--	--	--	--	--	--	31.7
2006	--	--	--	--	--	--	78.5
2007	--	--	--	--	--	--	28.5
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	9.8
2010	--	--	--	--	--	--	42.5
2011	--	--	--	--	--	--	56.7
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**409.6**

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
1999	--	--	--	--	--	--	0.8
2000	--	--	--	--	--	--	5.4
2001	--	--	--	--	--	--	91.6
2002	--	--	--	--	--	--	92.1
2003	--	--	--	--	--	--	--
2004	--	--	--	--	--	--	--
2005	--	--	--	--	--	--	34.7
2006	--	--	--	--	--	--	83.4
2007	--	--	--	--	--	--	29.5
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	9.8
2010	--	--	--	--	--	--	42.0
2011	--	--	--	--	--	--	54.9
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**444.2**

$38.7M Congressional Add increased in 2011 for Block II Follow-On Space Modernization Initiative

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
2001	--	24.6	--	--	24.6	--	24.6
2002	2	372.9	--	--	372.9	--	372.9
2003	1	184.1	--	--	184.1	--	184.1
2004	--	21.8	--	--	21.8	--	21.8
2005	--	35.4	--	--	35.4	--	35.4
2006	--	76.1	--	--	76.1	--	76.1
2007	1	399.1	--	--	399.1	--	399.1
2008	1	304.8	--	--	304.8	--	304.8
2009	--	50.4	--	--	50.4	--	50.4
2010	--	212.4	--	--	212.4	--	212.4
2011	1	558.8	--	--	558.8	--	558.8
2012	2	792.9	--	--	792.9	--	792.9
2013	--	36.8	--	--	36.8	--	36.8
2014	--	61.0	--	--	61.0	--	61.0
2015	--	88.2	--	--	88.2	--	88.2
2016	--	86.4	--	--	86.4	--	86.4
2017	--	85.8	--	--	85.8	--	85.8
2018	--	38.0	--	--	38.0	--	38.0
Subtotal	**8**	**3429.5**	**--**	**--**	**3429.5**	**--**	**3429.5**

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
2001	--	28.8	--	--	28.8	--	28.8
2002	2	429.1	--	--	429.1	--	429.1
2003	1	209.4	--	--	209.4	--	209.4
2004	--	24.3	--	--	24.3	--	24.3
2005	--	38.3	--	--	38.3	--	38.3
2006	--	80.0	--	--	80.0	--	80.0
2007	1	409.5	--	--	409.5	--	409.5
2008	1	307.1	--	--	307.1	--	307.1
2009	--	50.1	--	--	50.1	--	50.1
2010	--	207.2	--	--	207.2	--	207.2
2011	1	535.5	--	--	535.5	--	535.5
2012	2	746.7	--	--	746.7	--	746.7
2013	--	34.1	--	--	34.1	--	34.1
2014	--	55.5	--	--	55.5	--	55.5
2015	--	78.9	--	--	78.9	--	78.9
2016	--	75.9	--	--	75.9	--	75.9
2017	--	74.0	--	--	74.0	--	74.0
2018	--	32.2	--	--	32.2	--	32.2
Subtotal	**8**	**3416.6**	**--**	**--**	**3416.6**	**--**	**3416.6**

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

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2010 $M
2001	--	--
2002	2	643.0
2003	1	299.8
2004	--	--
2005	--	--
2006	--	--
2007	1	459.0
2008	1	431.7
2009	--	--
2010	--	--
2011	1	595.4
2012	2	987.7
2013	--	--
2014	--	--
2015	--	--
2016	--	--
2017	--	--
2018	--	--
Subtotal	**8**	**3416.6**

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
2003	--	--	--	--	--	15.1	15.1
2004	--	--	--	--	--	10.8	10.8
2005	--	--	--	--	--	--	--
2006	--	--	--	--	--	--	--
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	--
2010	--	--	--	--	--	1.7	1.7
2011	--	--	--	--	--	1.7	1.7
Subtotal	**--**	**--**	**--**	**--**	**--**	**29.3**	**29.3**

Annual Funding BY$
3080 | Procurement | Other 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
2003	--	--	--	--	--	17.4	17.4
2004	--	--	--	--	--	12.2	12.2
2005	--	--	--	--	--	--	--
2006	--	--	--	--	--	--	--
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	--
2010	--	--	--	--	--	1.7	1.7
2011	--	--	--	--	--	1.6	1.6
Subtotal	**--**	**--**	**--**	**--**	**--**	**32.9**	**32.9**

Low Rate Initial Production

There is no LRIP for this program.

Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost $M	Memo
Multilateral	1/12/2012	1	376.5	A Memorandum of Understanding (MOU) with Canada, Denmark, Luxembourg, The Netherlands and New Zealand was signed on January 12, 2012 for the procurement of WGS-9 in exchange for access to the WGS constellation.
Australia	11/14/2007	1	320.4	MOU between the Department of Defense of the United States of America and the Department of Defence of Australia concerning production, operations, and support of Wideband Global Satellite Communications was signed on November 14, 2007. Australia is providing funds for WGS-6 in exchange for access to the WGS constellation.

The WGS program has no Foreign Military Sales; all sales in the table are International Cooperations.

Nuclear Cost

None.

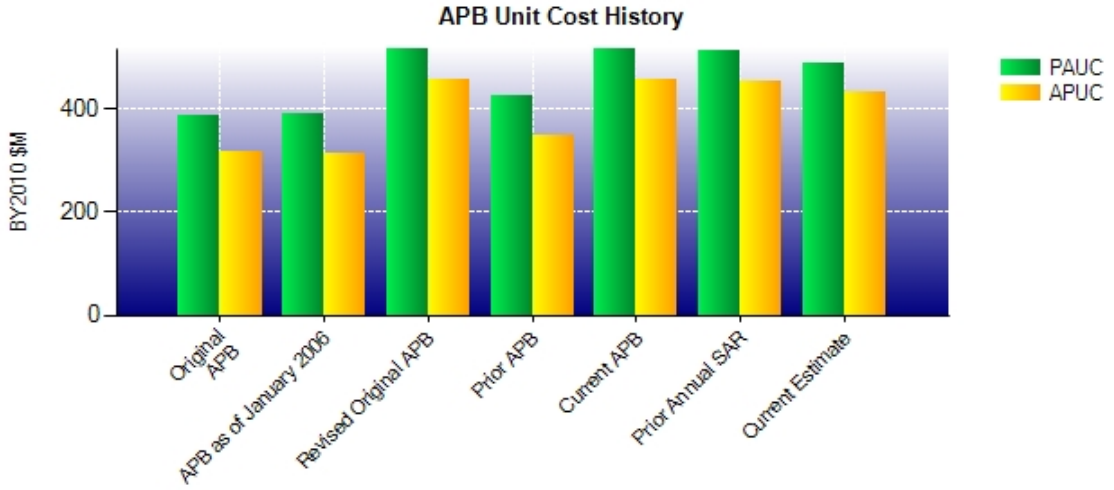
Unit Cost

Unit Cost Report

Unit Cost	BY2010 $M Current UCR Baseline (AUG 2010 APB)	BY2010 $M Current Estimate (DEC 2011 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	3610.6	3893.7	
Quantity	7	8	
Unit Cost	515.800	486.712	-5.64
Average Procurement Unit Cost (APUC)			
Cost	3193.4	3449.5	
Quantity	7	8	
Unit Cost	456.200	431.188	-5.48

Unit Cost	BY2010 $M Revised Original UCR Baseline (AUG 2010 APB)	BY2010 $M Current Estimate (DEC 2011 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	3610.6	3893.7	
Quantity	7	8	
Unit Cost	515.800	486.712	-5.64
Average Procurement Unit Cost (APUC)			
Cost	3193.4	3449.5	
Quantity	7	8	
Unit Cost	456.200	431.188	-5.48

Unit Cost History



		BY2010 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	DEC 2000	387.400	317.933	347.500	287.900
APB as of January 2006	FEB 2004	390.600	314.300	353.420	286.480
Revised Original APB	AUG 2010	515.800	456.200	505.671	451.286
Prior APB	APR 2007	425.000	348.700	395.100	328.160
Current APB	AUG 2010	515.800	456.200	505.671	451.286
Prior Annual SAR	DEC 2010	510.986	452.843	501.529	448.557
Current Estimate	DEC 2011	486.712	431.188	483.550	432.350

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	
347.500	3.214	74.201	0.000	19.057	64.585	0.000	-2.886	158.171	505.671

Current SAR Baseline to Current Estimate (TY $M)

PAUC Prod Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
505.671	3.175	-12.372	0.000	0.000	-12.912	0.000	-0.012	-22.121	483.550

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	
287.900	2.786	108.257	0.000	0.000	55.229	0.000	-2.886	163.386	451.286

Current SAR Baseline to Current Estimate (TY $M)

APUC Prod Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
451.286	3.075	-5.574	0.000	0.000	-16.425	0.000	-0.012	-18.936	432.350

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone I	N/A	N/A	N/A	N/A
Milestone II	N/A	OCT 2000	OCT 2000	NOV 2000
Milestone III	N/A	N/A	N/A	N/A
IOC	N/A	DEC 2004	AUG 2008	JAN 2009
Total Cost (TY $M)	N/A	1042.5	3539.7	3868.4
Total Quantity	N/A	3	7	8
Prog. Acq. Unit Cost (PAUC)	N/A	347.500	505.671	483.550

Cost Variance

Cost Variance Summary

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	380.7	3159.0	--	3539.7
Previous Changes				
Economic	+0.4	+5.2	--	+5.6
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-10.3	-24.3	--	-34.6
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-9.9	-19.1	--	-29.0
Current Changes				
Economic	+0.4	+19.4	--	+19.8
Quantity	--	+406.7	--	+406.7
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+38.4	-107.1	--	-68.7
Other	--	--	--	--
Support	--	-0.1	--	-0.1
Subtotal	+38.8	+318.9	--	+357.7
Total Changes	+28.9	+299.8	--	+328.7
CE - Cost Variance	409.6	3458.8	--	3868.4
CE - Cost & Funding	409.6	3458.8	--	3868.4

Summary Base Year 2010 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	417.2	3193.4	--	3610.6
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-10.2	-23.5	--	-33.7
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-10.2	-23.5	--	-33.7
Current Changes				
Economic	--	--	--	--
Quantity	--	+383.0	--	+383.0
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+37.2	-103.3	--	-66.1
Other	--	--	--	--
Support	--	-0.1	--	-0.1
Subtotal	+37.2	+279.6	--	+316.8
Total Changes	+27.0	+256.1	--	+283.1
CE - Cost Variance	444.2	3449.5	--	3893.7
CE - Cost & Funding	444.2	3449.5	--	3893.7

Previous Estimate: December 2010

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+0.4
Adjustment for current and prior escalation. (Estimating)	-0.4	-0.4
FY 2011 Congressional add for Space Modernization Initiative. (Estimating)	+41.7	+43.0
FY 2011 Congressional reduction for Small Business Innovative Research. (Estimating)	-3.4	-3.5
FY 2011 Congressional General Reductions. (Estimating)	-0.7	-0.7
RDT&E Subtotal	+37.2	+38.8

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	+19.4
Adjustment for current and prior escalation. (Estimating)	-13.3	-13.8
Adjustment for current and prior escalation. (Support)	-0.1	-0.1
Total Quantity variance resulting from an increase of 1 satellite from 7 to 8. (Subtotal)	+315.5	+335.0
Quantity variance resulting from an increase of 1 satellite from 7 to 8. (Quantity)	(+383.0)	(+406.7)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-67.5)	(-71.7)
Reprogramming for higher headquarters Air Force requirements. (Estimating)	-25.3	-27.0
FY 2011 Reallocated funding for higher Department priorities. (Estimating)	-24.5	-27.6
Congressional General Reductions. (Estimating)	-5.5	-5.8
FY 2012 Appropriation Reduction. (Estimating)	-8.5	-9.0
Revised estimate for incorporating effort to support on-orbit check-out required for satellite turn-over to operations. (Estimating)	+41.3	+47.8
Procurement Subtotal	+279.6	+318.9

(QR) Quantity Related

Contracts

Appropriation: Procurement

Contract Name	**WGS-Block II (SVs 4-6)**
Contractor	Boeing Satellite Systems, Inc.
Contractor Location	Los Angeles, CA 90245
Contract Number, Type	FA8808-06-C-0001/4, FPIF
Award Date	February 17, 2006
Definitization Date	October 17, 2006

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
49.6	56.5	1	769.3	895.7	2	799.4	801.0

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/25/2012)	-27.4	-7.5
Previous Cumulative Variances	-29.1	-6.4
Net Change	+1.7	-1.1

Cost And Schedule Variance Explanations

The favorable net change in the cost variance is due to efficient performance on WGS-5.

The unfavorable net change in the schedule variance is due to WGS-4 critical path anomalies that prevented the completion of scheduled Assembly, Integration and Test tasks. The main driver was the Spacecraft Control Processor unit shutdown anomaly during Spacecraft Thermal Vacuum Test (SCTV) test which drove negative schedule variance for investigation of anomaly and test team costs while supporting anomaly resolution, associated rework and penalty tests. WGS-5 successfully completed SCTV in December 2011 without any cost or schedule impacts.

Contract Comments

This contract is more than 90% complete; therefore, this is the final report for this contract.

The difference between the initial contract price target and the current contract price target is due to contract modifications. This is not a definitization-change. The initial target price is for advanced procurement for Space Vehicle 4 (SV-4). The increase, since the initial target price, is for the production contract option for SV-4, the advanced procurement for SV-5, the Launch Services and Astrotech Launch Site Processing Facilities for SV-4, the production contract for SV-5, launch services for SV-5, and storage for SV-4 & 5. The SV-4 production contract option was exercised November 1, 2006. The SV-4 Launch Services and Astrotech Launch Site Processing Facilities contract options were exercised April 25, 2007. The SV-5 advanced procurement contract option was exercised December 19, 2006. The SV-5 production contract option was exercised on December 21, 2007. The SV-5 Astrotech Launch Site Processing Facilities contract option was exercised on May 21, 2009. The SV-5 launch services option was exercised on December 29, 2009. The SV-4 storage option was exercised on March 16, 2011 and the SV-5 storage option was exercised on October 24, 2011. SV-6 funding is not included because funding is being provided by Australia as part of an International Partnership.

Appropriation: RDT&E

Contract Name	**WGS-Block II Follow-On (SV 7)**
Contractor	Boeing Satellite Systems, Inc.
Contractor Location	Los Angeles, CA 90245
Contract Number, Type	FA8808-10-C-0001/1, FPIF
Award Date	August 20, 2010
Definitization Date	August 20, 2010

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
57.1	64.4	0	57.1	64.4	0	57.1	57.1

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/25/2012)	-0.2	+7.1
Previous Cumulative Variances	+0.3	+2.1
Net Change	-0.5	+5.0

Cost And Schedule Variance Explanations

The unfavorable net change in the cost variance is due to Application Specific Integrated Circuit design verification effort which required additional resources to complete designs.

The favorable net change in the schedule variance is due to accelerating schedule performance to mitigate risk and to take advantage of early resource availability.

Appropriation: Procurement

Contract Name	**WGS-Block II Follow-On (SV 7)**
Contractor	Boeing Satellite Systems, Inc.
Contractor Location	Los Angeles, CA 90245
Contract Number, Type	FA8808-10-C-0001/2, FPIF
Award Date	August 20, 2010
Definitization Date	August 20, 2010

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
125.1	134.5	0	125.8	135.2	0	122.5	119.7

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/25/2012)	+6.6	-1.7
Previous Cumulative Variances	+4.0	+4.9
Net Change	+2.6	-6.6

Cost And Schedule Variance Explanations

The favorable net change in the cost variance is due to performance efficiencies as a result of lessons learned from prior flights.

The unfavorable net change in the schedule variance is due to previous ahead of schedule position. Schedule is veering back towards baseline schedule.

Contract Comments

The difference between the initial contract price target and the current contract price target is due to the addition of scope to execute Bus Payload Distribution Unit and Payload Power Distribution Unit design updates.

Appropriation: Procurement

Contract Name	**WGS-Block II Follow-On (SVs 7-8)**
Contractor	Boeing Satellite Systems, Inc.
Contractor Location	Los Angeles, CA 90245
Contract Number, Type	FA8808-10-C-0001/3, FFP
Award Date	August 31, 2011
Definitization Date	August 31, 2011

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
442.6	N/A	1	738.7	N/A	2	738.7	738.7

Cost And Schedule Variance Explanations

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

Contract Comments

The difference between the initial contract price target and the current contract price target is due to contract modifications. This is not a definitization change. The initial target price is for Space Vehicle (SV)-7 production and SV-8 advanced procurement. The increase, since the initial target price, is for the production contract option for SV-8 which was exercised on December 22, 2011.

This is the first time this contract is being reported.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	8	3	8	37.50%
Total Program Quantities Delivered	8	3	8	37.50%

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	3868.4	Years Appropriated	14
Expenditures To Date	1980.2	Percent Years Appropriated	70.00%
Percent Expended	51.19%	Appropriated to Date	3472.2
Total Funding Years	20	Percent Appropriated	89.76%

As of January 31, 2012

Seven satellites are planned in the Acquisition Program Baseline (APB), with three satellites (WGS 1-3) delivered to date on the Block I contract. There are two United States funded satellites (WGS 4-5) on the Block II contract. The third satellite (WGS-6) on the Block II contract is funded by Australia and is not included in the SAR costs, budgets or quantities. An additional two satellites (WGS 7-8) were included in the APB bringing the APB total quantities to seven satellites.

Similar to WGS-6, WGS-9 has been funded by international partners and is not included in the SAR costs, budgets or quantities.

Funding for WGS-10 has been appropriated in FY 2012, increasing the quantity in the SAR costs, budgets, and quantities to a total of eight satellites.

Operating and Support Cost

Assumptions And Ground Rules

The Wideband Global SATCOM (WGS) costs reflect the current Service Cost Position completed in July 2010 and are in Base Year 2010 (BY 2010). Operating and Support costs include all costs for operating, maintaining and supporting the WGS assets (7 satellites and ground segment) for a life cycle of 22 years (2009-2030). The costs include program software maintenance, unit level consumption, depot maintenance, contractor logistics support and sustaining engineering support for both space and ground segments. WGS was developed to maximize use of existing Army and Air Force infrastructures; the Operating and Support costs are based on current and future infrastructure cost projections.

The antecedent system is Defense Satellite Communication System (DSCS) III. The first DSCS III satellite was launched in October 1982 and the last DSCS III satellite was launched in August 2003. Operating and Support efforts for DSCS transitioned to Air Force Operations and Maintenance funding in fiscal year 2005. Prior to this transition, on-going operations and support for on-orbit DSCS satellites were part of missile procurement costs. Operating and Support costs include all costs for operating, maintaining and supporting the DSCS assets (14 satellites and ground segment) for an assumed design life of ten years. The BY has been updated to 2010.

Operating and Support costs for both systems are based on validated requirements from the Air Force Space Command (AFSPC) Logistics Support Requirements Brochures. Both WGS and DSCS include the updated Work Breakdown Structure (WBS) categories from the Office of the Secretary of Defense (OSD).

Costs BY2010 $M		
Cost Element	WGS Annual Average for System	DSCS Annual Average for System
Unit-Level Manpower	3.813	0.000
Unit Operations	0.697	0.830
Maintenance	0.000	0.000
Sustaining Support	10.940	12.802
Continuing System Improvements	0.000	0.000
Indirect Support	0.000	1.304
Other	0.000	2.371
Total Unitized Cost (Base Year 2010 $)	15.450	17.307

Total O&S Costs $M	WGS	DSCS
Base Year	339.9	173.1
Then Year	412.0	156.1