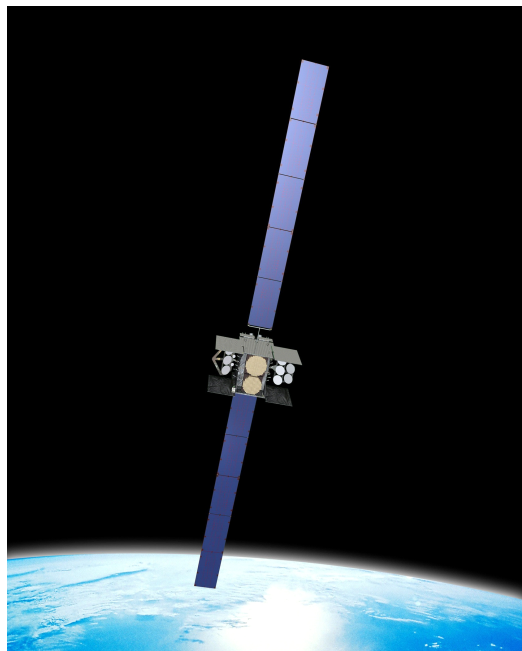




Selected Acquisition Report (SAR)

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



WGS

As of December 31, 2010

Defense Acquisition Management
Information Retrieval
(DAMIR)

UNCLASSIFIED

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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 (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated December 15, 2000

Approved APB

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-1 was launched October 10, 2007 and was accepted by the government on January 18, 2008 followed by handover to the Combatant Commander (COCOM) on April 14, 2008. WGS-1 is currently in operations over the Pacific Command (PACOM) Area of Responsibility (AOR). On January 26, 2009, Air Force Space Command signed the WGS Initial Operational Capability (IOC) Declaration Memorandum.

WGS-2 was launched April 3, 2009 and was accepted by the government on June 15, 2009 followed by handover to the COCOM on August 2009. It is now in operations over the Central Command (CENTCOM) AOR.

WGS-3 launched on December 5, 2009 and was accepted by the government on March 1, 2010 followed by handover to the COCOM on June 24, 2010. It is now in operations over the Africa Command (AFRICOM) and European Command (EUCOM) AORs.

Two Wideband Satellite Operations Centers (WSOC), Camp Roberts, California and Fort Buckner, Japan, were accepted for operations in March 2008. The final three WSOCs, Fort Detrick, Maryland; Fort Meade, Maryland; and Landstuhl, Germany, were accepted in July 2009.

Production on the Block II contract (WGS 4-6) continues. WGS-4 completed Electro-Magnetic Interference/Electro-Magnetic Compatibility (EMI/EMC) testing August 29, 2010 and has begun environmental testing. WGS-4 started Spacecraft Thermal Vacuum (SCTV) on December 8, 2010. WGS-5 completed Payload Module Test August 30, 2010 and has started Assembly, Integration, and Test (AI&T) with the mate of the bus and payload modules on September 20, 2010. WGS-5 integration of the phased array antennas occurred in October 2010 and has completed System Integrated Functional Test (SIFT) in early January 2011. WGS-6 continued with high-quality unit deliveries and is progressing with unit builds and integration. 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 has held seven Project Status Reviews (PSRs) and three general officer-level Steering Committee meetings since the Memorandum of Understanding (MOU) was signed in 2007. The most recent PSR meeting was held in February 2011.

The Office of the Secretary of Defense (OSD) completed a Nunn-McCurdy review and the Under Secretary of Defense for Acquisition, Technology and Logistics (USD(AT&L)) certified the program to Congress on June 1, 2010. The program cost growth was due to the artificially low cost of the Block I satellites and the two program production breaks caused by the Government. The program was certified as essential to national security with no change to the program requirements. A new Acquisition Program Baseline (APB) was approved on August 11, 2010 with a new Base Year of 2010. The Milestone C/Full Rate Production Acquisition Decision Memorandum was also approved August 11, 2010 with authorization to execute contract options for WGS 7-8.

The WGS Block II Follow-on acquisition strategy for WGS 7-12 was approved by the SECAF and USD(AT&L). The initial Block II Follow-on contract was awarded August 20, 2010 and consists of advanced procurement of satellite 7, non-recurring engineering and factory restart efforts. The contract award for the remainder of the Block II Follow-On program is in process and estimated contract award date is April 30, 2011.

The program is currently funded through WGS-8. The Australian funds for satellite 6 are not included in this SAR. Negotiations are ongoing with five partner countries for the procurement of satellite 9 in exchange for access to the WGS constellation. If successful, a MOU would be signed in 2011 to enable this new partnership.

On April 13, 2011, the 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 issues with this program at this time.

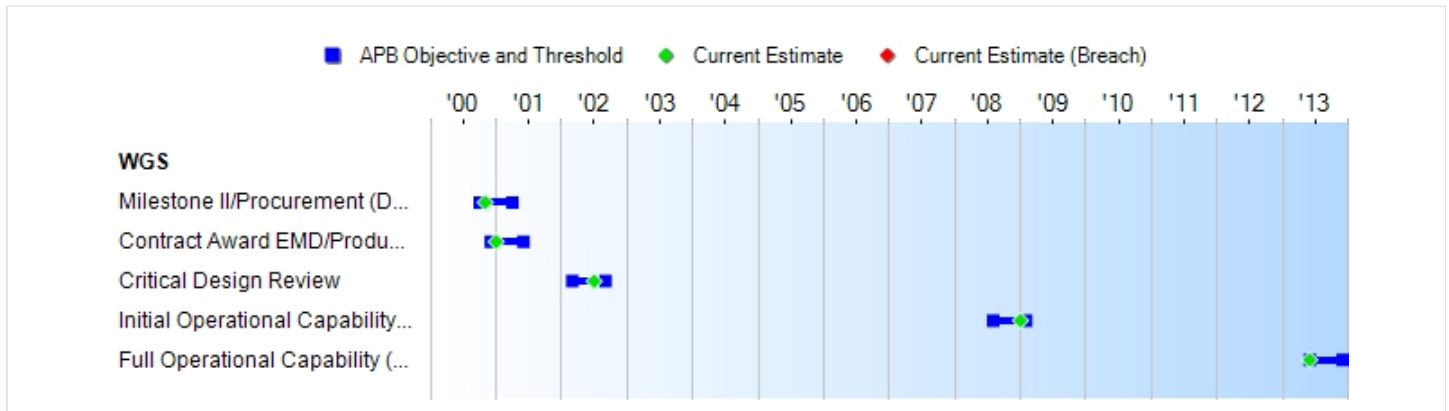
Threshold Breaches**APB Breaches**

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"/>
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 Dev 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
Initial Operational Capability (IOC)	DEC 2004	AUG 2008	FEB 2009	JAN 2009
Full Operational Capability (FOC)	DEC 2005	JUN 2013	DEC 2013	JUN 2013

Acronyms And Abbreviations

DAB - Defense Acquisition Board
 EMD - Engineering and Manufacturing Development

Change Explanations

None

Performance

Characteristics	SAR Baseline Dev Est	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
Coverage	Capable of providing communications connectivity 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 communications connectivity 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 communications 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	Confirmed by STK. Operationally verified at 64 deg N latitude.	Capable of providing communications 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 Repositioning, 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 Repositioning, 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 Repositioning, 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 Repositioning, Platform & Payload Maintenance, & Anomaly ID & resolution
Interoperability	Satellites	Satellites	Satellites	Confirmed	Satellites

	must be fully interoperable 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), 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
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

Appropriation	BY2010 \$M			BY2010 \$M	TY \$M		
	SAR Baseline Dev Est	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Dev Est	Current APB Production Objective	Current Estimate
RDT&E	208.4	417.2	458.9	407.0	178.8	380.7	370.8
Procurement	953.8	3193.4	3512.6	3169.9	863.7	3159.0	3139.9
Flyaway	899.2	--	--	3136.9	813.8	--	3110.6
Recurring	899.2	--	--	3136.9	813.8	--	3110.6
Non Recurring	0.0	--	--	0.0	0.0	--	0.0
Support	54.6	--	--	33.0	49.9	--	29.3
Other Support	54.6	--	--	33.0	49.9	--	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	1162.2	3610.6	N/A	3576.9	1042.5	3539.7	3510.7

The base year of the program has changed from BY 2001 to BY 2010 as a result of the base change at the Milestone C Decision. Office of the Secretary of Defense (OSD) Cost Assessment and Program Evaluation (CAPE) does not use a modeling approach with a quantified confidence level; however, they offer that their estimate is a high confidence level estimate. As stated in the Nunn-McCurdy Certification Acquisition Decision Memorandum (ADM) signed by the Under Secretary of Defense, "Like all point cost estimates performed by Director, CAPE (D, CAPE) this estimate is not consistent with the 80% confidence level specified in Weapon Systems Acquisition Reform Act (WSARA) of 2009 (Public Law 111-23). WSARA requires a justification for selecting a confidence level less than 80%. The CAPE estimate was built upon a product-oriented Work Breakdown Structure (WBS) based on historical actual cost information to the maximum extent possible and based on assumptions that are consistent with demonstrated contractor and government performance for a series of previous acquisition programs."

Quantity	SAR Baseline Dev Est	Current APB Production	Current Estimate
RDT&E	0	0	0
Procurement	3	7	7
Total	3	7	7

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	352.9	17.9	0.0	0.0	0.0	0.0	0.0	0.0	370.8
Procurement	1710.4	577.4	468.7	50.7	62.4	97.2	98.4	74.7	3139.9
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	2063.3	595.3	468.7	50.7	62.4	97.2	98.4	74.7	3510.7
PB 2011 Total	2080.1	595.3	473.4	23.1	34.9	100.3	97.9	36.7	3441.7
Delta	-16.8	0.0	-4.7	27.6	27.5	-3.1	0.5	38.0	69.0

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	5	1	1	0	0	0	0	0	7
PB 2012 Total	0	5	1	1	0	0	0	0	0	7
PB 2011 Total	0	5	1	1	0	0	0	0	0	7
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
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	--	--	--	--	--	--	17.9
Subtotal	--	--	--	--	--	--	370.8

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	--	--	--	--	--	--	42.2
2011	--	--	--	--	--	--	17.5
Subtotal	--	--	--	--	--	--	407.0

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	--	51.6	--	--	51.6	--	51.6
2010	--	212.4	--	--	212.4	--	212.4
2011	1	575.7	--	--	575.7	--	575.7
2012	1	468.7	--	--	468.7	--	468.7
2013	--	50.7	--	--	50.7	--	50.7
2014	--	62.4	--	--	62.4	--	62.4
2015	--	97.2	--	--	97.2	--	97.2
2016	--	98.4	--	--	98.4	--	98.4
2017	--	36.7	--	--	36.7	--	36.7
2018	--	38.0	--	--	38.0	--	38.0
Subtotal	7	3110.6	--	--	3110.6	--	3110.6

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	--	80.1	--	--	80.1	--	80.1
2007	1	409.7	--	--	409.7	--	409.7
2008	1	307.5	--	--	307.5	--	307.5
2009	--	51.4	--	--	51.4	--	51.4
2010	--	208.6	--	--	208.6	--	208.6
2011	1	557.3	--	--	557.3	--	557.3
2012	1	446.7	--	--	446.7	--	446.7
2013	--	47.5	--	--	47.5	--	47.5
2014	--	57.5	--	--	57.5	--	57.5
2015	--	88.1	--	--	88.1	--	88.1
2016	--	87.7	--	--	87.7	--	87.7
2017	--	32.2	--	--	32.2	--	32.2
2018	--	32.7	--	--	32.7	--	32.7
Subtotal	7	3136.9	--	--	3136.9	--	3136.9

The 3020 Procurement funding for FY 2013 through FY 2018 is associated with the last vehicle in FY 2012.

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	463.0
2008	1	432.2
2009	--	--
2010	--	--
2011	1	666.0
2012	1	632.9
2013	--	--
2014	--	--
2015	--	--
2016	--	--
2017	--	--
2018	--	--
Subtotal	7	3136.9

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	--	--	--	--	--	1.7	1.7
Subtotal	--	--	--	--	--	33.0	33.0

Low Rate Initial Production

There is no LRIP for this program.

Foreign Military Sales

There are no Foreign Military Sales.

International Partnership -- Memorandum of Understanding (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. Negotiations are ongoing with five partner countries for the procurement of WGS-9 in exchange for access to the WGS constellation. If successful, a MOU would be signed in 2011 to enable this new partnership.

Nuclear Cost

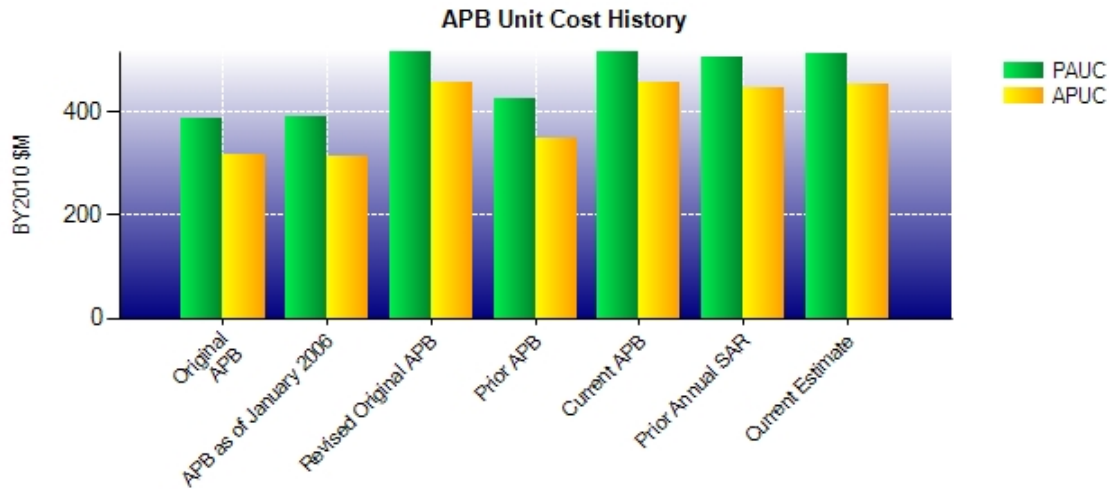
None.

Unit Cost**Unit Cost Report**

	BY2010 \$M	BY2010 \$M	
Unit Cost	Current UCR Baseline (AUG 2010 APB)	Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	3610.6	3576.9	
Quantity	7	7	
Unit Cost	515.800	510.986	-0.93
Average Procurement Unit Cost (APUC)			
Cost	3193.4	3169.9	
Quantity	7	7	
Unit Cost	456.200	452.843	-0.74

	BY2010 \$M	BY2010 \$M	
Unit Cost	Revised Original UCR Baseline (AUG 2010 APB)	Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	3610.6	3576.9	
Quantity	7	7	
Unit Cost	515.800	510.986	-0.93
Average Procurement Unit Cost (APUC)			
Cost	3193.4	3169.9	
Quantity	7	7	
Unit Cost	456.200	452.843	-0.74

Unit Cost History



	Date	BY2010 \$M		TY \$M	
		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 2009	503.143	443.557	491.671	437.286
Current Estimate	DEC 2010	510.986	452.843	501.529	448.557

SAR Unit Cost History

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

Initial PAUC Dev Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
347.500	4.014	74.201	0.000	19.057	59.643	0.000	-2.886	154.029	501.529

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

Initial APUC Dev Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
287.900	3.529	108.257	0.000	0.000	51.757	0.000	-2.886	160.657	448.557

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	DEC 2004	JAN 2009
Total Cost (TY \$M)	N/A	1042.5	1042.5	3510.7
Total Quantity	N/A	3	3	7
Prog. Acq. Unit Cost (PAUC)	N/A	347.500	347.500	501.529

Cost Variance**Cost Variance Summary**

Summary Then Year \$M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	178.8	863.7	--	1042.5
Previous Changes				
Economic	+3.1	+19.6	--	+22.7
Quantity	--	+1909.4	--	+1909.4
Schedule	--	--	--	--
Engineering	+133.4	--	--	+133.4
Estimating	+65.4	+288.5	--	+353.9
Other	--	--	--	--
Support	--	-20.2	--	-20.2
Subtotal	+201.9	+2197.3	--	+2399.2
Current Changes				
Economic	+0.3	+5.1	--	+5.4
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-10.2	+73.8	--	+63.6
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-9.9	+78.9	--	+69.0
Total Changes	+192.0	+2276.2	--	+2468.2
CE - Cost Variance	370.8	3139.9	--	3510.7
CE - Cost & Funding	370.8	3139.9	--	3510.7

Summary Base Year 2010 \$M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	208.4	953.8	--	1162.2
Previous Changes				
Economic	--	--	--	--
Quantity	--	+1898.0	--	+1898.0
Schedule	--	--	--	--
Engineering	+142.3	--	--	+142.3
Estimating	+66.4	+279.7	--	+346.1
Other	--	--	--	--
Support	--	-26.6	--	-26.6
Subtotal	+208.7	+2151.1	--	+2359.8
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-10.1	+65.0	--	+54.9
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-10.1	+65.0	--	+54.9
Total Changes	+198.6	+2216.1	--	+2414.7
CE - Cost Variance	407.0	3169.9	--	3576.9
CE - Cost & Funding	407.0	3169.9	--	3576.9

Previous Estimate: December 2009

RDT&E	\$M	
	Base Year	Then Year
Current Change Explanations		
Revised escalation indices. (Economic)	N/A	+0.3
Adjustment for current and prior escalation. (Estimating)	-0.3	-0.3
Congressional General Reductions. (Estimating)	-0.1	-0.1
Reprogramming for higher headquarters Air Force requirements. (Estimating)	-9.7	-9.8
RDT&E Subtotal	-10.1	-9.9

Procurement	\$M	
	Base Year	Then Year
Current Change Explanations		
Revised escalation indices. (Economic)	N/A	+5.1
Adjustment for current and prior escalation. (Estimating)	-3.6	-3.6
Reprogramming for higher headquarters Air Force requirements. (Estimating)	-6.0	-5.9
Directed Reduction for Contracted Program Support. (Estimating)	-8.1	-8.8
Congressional General Reductions. (Estimating)	-1.0	-1.0
Projected Program Efficiency for Reduced Program Management. (Estimating)	-5.7	-6.2
Revised estimate for incorporating effort to support on-orbit check-out required for satellite turn-over to operations. (Estimating)	+33.8	+39.3
Increased funding based on Department of Defense Cost Assessment and Program Evaluation Independent Cost Estimate to provide additional risk mitigation. (Estimating)	+55.6	+60.0
Procurement Subtotal	+65.0	+78.9

Contracts

Appropriation: Procurement

Contract Name	WGS-Block II (SV 4-6)
Contractor	Boeing
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	744.8	867.3	2	768.2	763.5

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/27/2011)	-29.1	-6.4
Previous Cumulative Variances	-18.0	-5.3
Net Change	-11.1	-1.1

Cost And Schedule Variance Explanations

The net unfavorable Cost Variance (CV) is primarily due to subcontractor and/or vendor issues resulting in late deliveries, work around and required added resources. The main issues are:

- 1) Power Amplifier Module/Beam Forming Module (PAM/BFM) - Integrated Array panel anomalies, sunshield structure, vendor difficulties to understand and implement Boeing design; startup and parts issues.
- 2) Telemetry Tracking and Control - Resolution of Transponder Channel 12/16 spurious signal anomalies, rework and repair, and Spur anomaly rework and retest.
- 3) Platform - Propellant Tank failure causing redesign.
- 4) Converters - Monolithic Microwave Integrated Circuit (MMIC) failure investigation and rework plus increased Component Engineering Support.
- 5) Flight Software - Increased technical support to sell-off change in requirements between Block I and Block II.
- 6) Storage/Batteries - Accelerated Battery Cell build.
- 7) Microwave Power Amplifier (MPA) - Increased technical support to resolve Traveling Wave Tube (TWT), Traveling Wave Tube Amplifier (TWTA), Channel Control Linearizer Unit (CCLU) and Set-point Control Attenuator (SCA) issues.
- 8) Solar Array panels disbonds and delamination anomalies.

The net unfavorable Schedule Variance (SV) is primarily due to delays in Xenon Ion Propulsion System (XIPS) spares, Launch Vehicle Adapter (LVA) and the impact of Solar Array Substrate Anomaly on Assembly, Intergation and Test (AI&T).

Contract Comments

This data is as of month end January 2011. Due to contract modifications, the target price increased to \$744.8M and the ceiling price increased to \$867.3M. 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, and the production contract for SV-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 and the SV-5 Astrotech Launch Site Processing Facilities contract option was exercised on May 21, 2009. 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
 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 (1/27/2011)	+0.3	+2.1
Previous Cumulative Variances	--	--
Net Change	+0.3	+2.1

Cost And Schedule Variance Explanations

The cumulative favorable cost and schedule variances are due to the Contractor achieving early schedule dates ahead of baseline plan and efficiencies during Factory Restart.

Contract Comments

This is the first time this contract is being reported. This data is as of month end January 2011.

Appropriation: Procurement

Contract Name **WGS-Block II Follow-On (SV 7)**
 Contractor Boeing
 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	125.1	134.5	0	125.1	125.1

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/27/2011)	+4.0	+4.9
Previous Cumulative Variances	--	--
Net Change	+4.0	+4.9

Cost And Schedule Variance Explanations

The cumulative favorable cost and schedule variances are due to cost and schedule savings in parts procurement from other programs.

Contract Comments

This is the first time this contract is being reported. This data is as of month end January 2011.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	3	3	7	42.86%
Total Program Quantities Delivered	3	3	7	42.86%

Expenditures and Appropriations (TY \$M)			
Total Acquisition Cost	3510.7	Years Appropriated	13
Expenditures To Date	1781.2	Percent Years Appropriated	65.00%
Percent Expended	50.74%	Appropriated to Date	2658.6
Total Funding Years	20	Percent Appropriated	75.73%

As of February 28, 2011

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