Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-237

Global Broadcast Service (GBS)

As of FY 2015 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

Common Acronyms and Abbreviations

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

Program Information

Program Name

Global Broadcast Service (GBS)

DoD Component

Air Force

Joint Participants

Army; Navy; Marine Corps

Responsible Office

Responsible Office

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References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated November 14, 1997

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated September 15, 2006

Mission and Description

The Global Broadcast Service (GBS) is an extension of the Global Information Grid that provides worldwide, high capacity, one-way transmission of video (especially from Unmanned Aerial Vehicles), imagery and geospatial intelligence products, and other high-bandwidth information supporting the nation's command centers and joint combat forces in garrison, in transit, and deployed within global combat zones. It employs readily available satellite-based commercial technologies that are relatively inexpensive and easily integrated into existing systems and processes, yet are not so unwieldy as to be unusable by smaller and more mobile units. To this end, GBS currently uses broadcast payloads on two Ultra-High Frequency Follow-On (UFO) satellites and leased commercial satellite transponders. GBS is also broadcasting over the Wideband Global SATCOM (WGS) constellation.

Theater Injection Point terminals provide a deployable Ka-band uplink capability that can operate directly from a Combatant Commander's (CCMD's) area of responsibility. Information sources deliver products for daily broadcast to two Satellite Broadcast Managers (SBMs) based on defined mission profiles approved by CCMD Theater Information Managers (TIMs). At the SBM, the Planning and Management application schedules broadcasts to users as well as keeps users, products, and mission profiles current.

Executive Summary

The GBS program continues to provide critical information to the warfighter with little to no delay. News, weather, classified and unclassified imagery, and other products were delivered from the Satellite Broadcast Managers (SBMs) to users both stationary and on the move. GBS continues to work the Transmission Security (TRANSEC) requirements, which will provide the warfighter improved cyber security. Each activity discussed below incorporates TRANSEC into GBS.

The Firm Fixed Price (FFP) production contract with General Dynamics (GD) for Joint Internet Protocol Modem (JIPM) capable Transportable Ground Receive Suites (TGRS) experienced antenna test failures in 2012, which were resolved in 2013. To mitigate the delays, the Air Force and Army purchased additional legacy antennas to combine with GD's Receive Broadcast Manager (RBM). Performance on the contract improved and GD completed testing in May 2013 as planned. A version of GBS-unique software was incorporated in August 2013, but latent Information Assurance requirements necessitated further changes. GD expects to incorporate these changes in time to support formal Government testing starting in 2014. Deliveries are contingent on the results of operational test events discussed below.

Work continued on the Suitcase Portable Receive Suites (SPRS) contract with AQYR (formerly Windmill International) that began August 2012 and was funded by Air Force Research Laboratory (AFRL) with Rapid Innovation Funds (RIF). A Provisioning and Sparing conference was held in June 2013 and the final provisioning and sparing list with pricing was completed in September 2013. Training course modules were developed, and the final course was conducted in October 2013. Technical Manuals are in final coordination and will be completed July 2014. A Production Readiness Review was held in November 2013. The final documents will be completed July 2014.

A production contract for Portable Receive Suites was awarded in September 2013 to AQYR to procure seven Rucksack Portable Receive Suites (RPRS) and seven SPRSs to support formal Government testing activities. Three SPRSs are for the Marine Corps; the balance is for the Air Force. The scope of work also includes incorporating the same software products that GD will incorporate into the TGRS product baseline and incorporating the Mini-Integrated Receiver/Decoder (MIRD) that will provide TRANSEC capabilities to these products. These units will remain test assets after Government testing concludes. A separate Request for Proposal will be released to AQYR for a FFP production contract covering a period of five years after Government testing in 2014.

In addition to fixed broadcast sites, GBS also has a transportable broadcast capability called Theatre Injection Point (TIP). The five TIPs (Army and Air Force assets) provide a deployable Ka-band uplink capability that can operate directly from a Combatant Commander's (COCOM's) Area of Responsibility (AOR). The TIPs are also being upgraded for TRANSEC and other obsolescence issues in an effort led by the Army. These upgrades will ensure the TIPs are compatible with the new broadcast architecture mentioned below. All contractor design and test activities on the first TIP are expected to be complete in time for the TIP to participate in formal Government testing starting in August 2014.

The new broadcast architecture (established on the Acquisition Category III GBS Defense Enterprise Computing Center Transition program) completed Development Testing (DT) in March 2013 and Operational Testing (OT) in November 2013. Responsibility for the new broadcast will transition to Operations, Maintenance and Sustainment organizations on January 31, 2014. Separate Government testing events are being planned to verify the TRANSEC capabilities utilizing JIPM products in the new TGRS, Portable Receive Suites and TIP configurations. The formal Government testing events will be conducted by the 46th Test Squadron and Air Force Operational Test and Evaluation Center (AFOTEC). These test events are required for GBS to receive operational acceptance in late 2015.

The GBS SBM sites continued to exceed Operational Availability objectives while contending with significant equipment obsolescence challenges. Broadcast Availability for 2013 exceeded the objective of 99%, and Mean Down Time averaged less than 7 hours against an objective of less than or equal to 8 hours.

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

Threshold Breaches

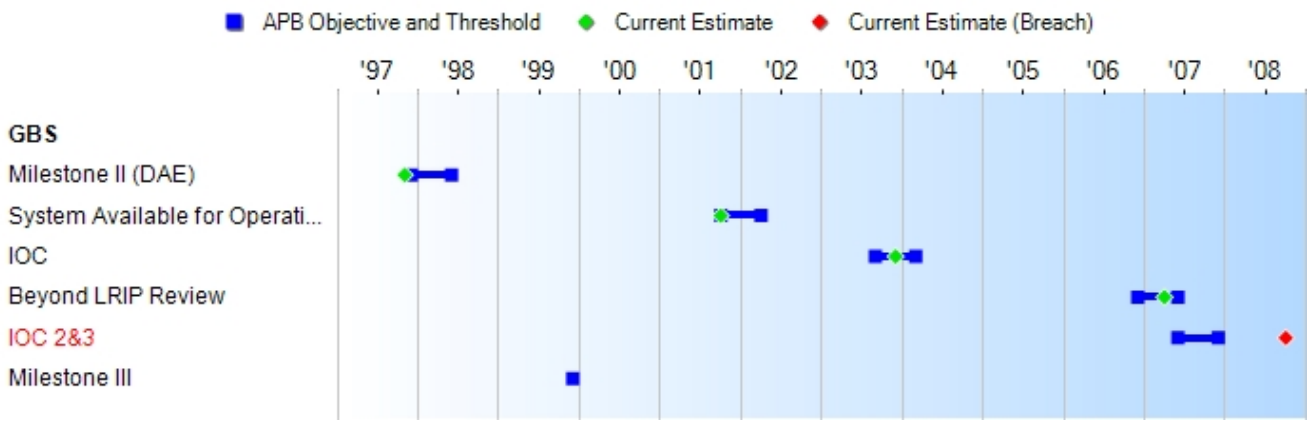
APB Breaches		
Schedule		☑
Performance		☐
Cost	RDT&E	☐
	Procurement	☑
	MILCON	☐
	Acq O&M	☐
O&S Cost		☐
Unit Cost	PAUC	☐
	APUC	☐

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

Explanation of Breach

The schedule and the total procurement cost breaches shown here were reported in the December 2010 SAR.

Schedule



Milestones	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate
Milestone II (DAE)	DEC 1997	DEC 1997	JUN 1998	NOV 1997
System Available for Operational Use	JUN 1999	OCT 2001	APR 2002	OCT 2001
IOC	DEC 1999	SEP 2003	MAR 2004	DEC 2003
Beyond LRIP Review	N/A	DEC 2006	JUN 2007	APR 2007
IOC 2&3	N/A	JUN 2007	DEC 2007	**OCT 2008** [1]
Milestone III	DEC 1999	N/A	N/A	N/A

[1] *APB Breach*

Change Explanations

None

Memo

An incremental IOC approach was approved by the JROC memo 111-00, dated June 27, 2000. GBS Phase II requirements are grouped into IOC 1, 2 and 3. The following summarizes the threshold requirements associated with each IOC:

IOC 1:
- PIPs operational on UFO satellites 8, 9, 10.
- Full Satellite Broadcast Manager capability.
- Field 20% of JPO Receive Suites (19 units).
- Personnel training in operations and maintenance of fielded equipment.
- Logistically support the system to effectively sustain GBS.
- Independently assess system capabilities.
- Augment UFO GBS with leased commercial satellite services to cover gaps over CONUS.
- Demonstrate smart push and user pull capability

(Note: IOC 1 is based on the performance of the currently fielded ATM based system.)

IOC 2:
- Field 90% of JPO Receive Suites (86 units).
- Provide classified video capability.
- Remote Receive Suite enable/disable.

IOC 3:
- Tactically suitable Ground Receive Suite (two-person lift).
- Protect all information from exploitation.

Acronyms and Abbreviations

ATM - Asynchronous Transfer Mode
CONUS - Continental United States
DAE - Defense Acquisition Executive
JPO - Joint Program Office
JROC - Joint Requirements Oversight Council
PIP - Primary Injection Point
UFO - Ultra High Frequency Follow-On

Performance

Characteristics	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate
System Coverage	65 deg South to 65 deg North	65 deg South to 65 deg North	65 deg South to 65 deg North	65 deg South to 65 deg North	65 deg South to 65 deg North
Space Segment Resources	N/A	WGS with UFO GBS	WGS with UFO GBS	WGS with UFO GBS	WGS with UFO GBS
Spot Beams	Two 500nm steerable, one 2000 nm steerable	Two 500nm steerable, one 2000 nm steerable	Two 500nm steerable, One 2000 nm steerable	Two 500nm steerable, One 2000 nm steerable	Two 500nm steerable, One 2000 nm steerable
Simultaneous Uplinks	One PIP and up to 3 TIPs simultan-eously	One PIP and up to 3 TIPs simultan-eously	One PIP and one TIP	One PIP and one TIP	One PIP and one TIP
Security	Pass unclassified to TS/SCI traffic	Pass unclassified toTS/SCI traffic	Pass unclassified toTS/SCI traffic	Pass unclassified to TS/SCI traffic	Pass unclassified to TS/SCI traffic
Receive Frequency Band	20.2-21. 2 GHz UFO GBS, one or more commercial satellite frequency bands	N/A	N/A	N/A	N/A
Support operations with multiple satellite beams and terminal types (i.e., Receive Variable Data Rates)	2000nm: add SSRS and ART 500nm: add ART	2000nm: add SSRS and ART 500nm: Add ART	2000nm: FGRS, TGRS and SRS 500nm: FGRS, TGRS, SRS and SSRS	2000nm: FGRS, TGRS and SRS 500nm: FGRS, TGRS, SRS and SSRS	2000nm: FGRS, TGRS and SRS 500nm: FGRS, TGRS, SRS and SSRS
Pointing of Steerable Spot Beam Antenna	Frequent	Frequent	Frequent	Frequent	Frequent
Steerable Antenna Tasking	SBM Primary means	SBM Primary Means	SBM Primary Means	SBM Primary Means	SBM Primary Means
Interoperability	N/A	100% IERs satisfied	100% critical IERs	100% IERs satisfied	100% IERs satisfied

			satisfied			
Network Ready	N/A	TBD	TBD	TBD	JIPM-enabled TGRS to be fielded beginning FY 2015	(Ch-1)

Requirements Source

Operational Requirements Document (ORD) dated January 12, 2005

Change Explanations

(Ch-1) The current estimate for Network Ready JIPM fielding was updated from FY 2014 to FY 2015 to coincide with the current program schedule.

Acronyms and Abbreviations

ART - Airborne Receive Terminal
deg - Degrees
FGRS - Fixed Ground Receive Suite/Terminal
GHz - Gigahertz
IERs - Information Exchange Requirements
JIPM - Joint Integrated Protocol Modem
nm - Nautical Miles
PIP - Primary Injection Point
SBM - Satellite Broadcast Manager
SRS - Shipboard Receive Suite/Terminal
SSRS - SubSurface (submarine) Receive Suite/Terminal
TGRS - Transportable Ground Receive Suite/Terminal
TIP - Theater Injection Point
TS/SCI - Top Secret/Sensitive Compartmented Information
UFO - UHF Follow-on Satellite
WGS - Wideband Global SATCOM

Track to Budget

RDT&E

Appn		BA	PE		
Air Force	3600	07	0303601F		
	Project		**Name**		
	2487		MILSATCOM Space	(Shared)	(Sunk)
Air Force	3600	05	0603840F		
	Project		**Name**		
	4887		Global Broadcast Service	(Shared)	(Sunk)
Air Force	3600	04	0603854F		
	Project		**Name**		
	2679		Global Broadcast Service 1 & 2		(Sunk)
Air Force	3600	04	0604775F		
	Project		**Name**		
	6004		Defense Rapid Innovation Program	(Shared)	(Sunk)

Procurement

Appn		BA	PE		
Navy	1109	04	0206313M		
	Line Item		**Name**		
	463300		Radio Systems	(Shared)	
Navy	1810	02	0303109N		
	Line Item		**Name**		
	321500		Satellite Communications Systems	(Shared)	
Army	2035	02	0310703A		
	Line Item		**Name**		
	BC4120		GBS	(Shared)	
Air Force	3080	03	0303601F		
	Line Item		**Name**		
	836780		MILSATCOM Space	(Shared)	
Defense-Wide	0350	02	0505001D		
	Line Item		**Name**		
	21005		Misc Equipment - Army National Guard	(Shared)	(Sunk)

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

Appropriation	BY1997 $M			BY1997 $M	TY $M		
	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Dev Est	Current APB Development Objective	Current Estimate
RDT&E	397.5	423.5	465.9	396.6	439.2	450.5	419.4
Procurement	53.9	361.3	397.4	**526.0** [1]	57.9	412.3	648.4
Flyaway	--	--	--	503.4	--	--	621.8
Recurring	--	--	--	349.9	--	--	428.5
Non Recurring	--	--	--	153.5	--	--	193.3
Support	--	--	--	22.6	--	--	26.6
Other Support	--	--	--	5.4	--	--	5.6
Initial Spares	--	--	--	17.2	--	--	21.0
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	451.4	784.8	N/A	922.6	497.1	862.8	1067.8

[1] ***APB Breach***

Quantity	SAR Baseline Dev Est	Current APB Development	Current Estimate
RDT&E	221	136	136
Procurement	125	1085	1779
Total	346	1221	1915

The RDT&E quantity of 136 is comprised of 10 First Generation Increment One (I1E) Air Force Receive Suites (RS), 27 I1E Shipboard RS, 96 Joint Program Office funded Air Force RS, and 3 Primary Injection Points (PIPs).

The Procurement quantity includes 3 Army Theater Injection Points (TIPs) and 2 Air Force TIPs; all others are RS.

Cost and Funding

Funding Summary

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

Appropriation	Prior	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	To Complete	Total
RDT&E	419.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	419.4
Procurement	552.4	22.8	24.7	22.9	11.2	6.4	8.0	0.0	648.4
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2015 Total	971.8	22.8	24.7	22.9	11.2	6.4	8.0	0.0	1067.8
PB 2014 Total	1015.9	32.3	25.8	24.5	6.8	1.8	0.0	0.0	1107.1
Delta	-44.1	-9.5	-1.1	-1.6	4.4	4.6	8.0	0.0	-39.3

Quantity	Undistributed	Prior	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	To Complete	Total
Development	136	0	0	0	0	0	0	0	0	136
Production	0	1646	64	5	28	15	7	14	0	1779
PB 2015 Total	136	1646	64	5	28	15	7	14	0	1915
PB 2014 Total	136	1720	10	21	21	11	7	0	0	1926
Delta	0	-74	54	-16	7	4	0	14	0	-11

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
1996	--	--	--	--	--	--	14.0
1997	--	--	--	--	--	--	37.9
1998	--	--	--	--	--	--	70.2
1999	--	--	--	--	--	--	64.3
2000	--	--	--	--	--	--	41.1
2001	--	--	--	--	--	--	31.6
2002	--	--	--	--	--	--	34.0
2003	--	--	--	--	--	--	20.8
2004	--	--	--	--	--	--	35.8
2005	--	--	--	--	--	--	21.8
2006	--	--	--	--	--	--	17.9
2007	--	--	--	--	--	--	23.1
2008	--	--	--	--	--	--	0.5
2009	--	--	--	--	--	--	--
2010	--	--	--	--	--	--	1.8
2011	--	--	--	--	--	--	4.6
Subtotal	**136**	**--**	**--**	**--**	**--**	**--**	**419.4**

Annual Funding BY$
3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway BY 1997 $M	Non End Item Recurring Flyaway BY 1997 $M	Non Recurring Flyaway BY 1997 $M	Total Flyaway BY 1997 $M	Total Support BY 1997 $M	Total Program BY 1997 $M
1996	--	--	--	--	--	--	14.1
1997	--	--	--	--	--	--	37.7
1998	--	--	--	--	--	--	69.4
1999	--	--	--	--	--	--	62.9
2000	--	--	--	--	--	--	39.6
2001	--	--	--	--	--	--	30.0
2002	--	--	--	--	--	--	32.0
2003	--	--	--	--	--	--	19.3
2004	--	--	--	--	--	--	32.4
2005	--	--	--	--	--	--	19.2
2006	--	--	--	--	--	--	15.3
2007	--	--	--	--	--	--	19.3
2008	--	--	--	--	--	--	0.4
2009	--	--	--	--	--	--	--
2010	--	--	--	--	--	--	1.4
2011	--	--	--	--	--	--	3.6
Subtotal	**136**	**--**	**--**	**--**	**--**	**--**	**396.6**

The RDT&E funds starting in FY 2010 are associated with terminal (receive suite) functionality. Of the $6.7M TY$s, $5.3M is sourced from PE 0303601F and $1.1M is sourced from PE 0604775F. The funds are associated with portable receive suite development.

Annual Funding TY$
1109 | Procurement | Procurement, Marine Corps

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
2004	--	--	--	2.4	2.4	--	2.4
2005	48	5.7	--	--	5.7	--	5.7
2006	20	3.1	--	3.4	6.5	--	6.5
2007	--	--	--	0.1	0.1	--	0.1
2008	--	--	--	2.4	2.4	--	2.4
2009	--	--	--	0.7	0.7	--	0.7
2010	16	2.4	--	--	2.4	--	2.4
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	--
2013	3	0.3	--	--	0.3	--	0.3
2014	5	0.6	--	1.0	1.6	--	1.6
2015	2	0.2	--	0.9	1.1	--	1.1
2016	--	--	--	0.6	0.6	--	0.6
2017	--	--	--	1.7	1.7	--	1.7
2018	--	--	--	1.7	1.7	--	1.7
2019	--	--	--	1.8	1.8	--	1.8
Subtotal	**94**	**12.3**	**--**	**16.7**	**29.0**	**--**	**29.0**

Annual Funding BY$
1109 | Procurement | Procurement, Marine Corps

Fiscal Year	Quantity	End Item Recurring Flyaway BY 1997 $M	Non End Item Recurring Flyaway BY 1997 $M	Non Recurring Flyaway BY 1997 $M	Total Flyaway BY 1997 $M	Total Support BY 1997 $M	Total Program BY 1997 $M
2004	--	--	--	2.1	2.1	--	2.1
2005	48	4.9	--	--	4.9	--	4.9
2006	20	2.6	--	2.8	5.4	--	5.4
2007	--	--	--	0.1	0.1	--	0.1
2008	--	--	--	1.9	1.9	--	1.9
2009	--	--	--	0.6	0.6	--	0.6
2010	16	1.9	--	--	1.9	--	1.9
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	--
2013	3	0.2	--	--	0.2	--	0.2
2014	5	0.4	--	0.8	1.2	--	1.2
2015	2	0.1	--	0.7	0.8	--	0.8
2016	--	--	--	0.4	0.4	--	0.4
2017	--	--	--	1.2	1.2	--	1.2
2018	--	--	--	1.1	1.1	--	1.1
2019	--	--	--	1.2	1.2	--	1.2
Subtotal	**94**	**10.1**	**--**	**12.9**	**23.0**	**--**	**23.0**

Annual Funding TY$
2035 | Procurement | Other Procurement, Army

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
1998	1	3.0	--	2.2	5.2	2.1	7.3
1999	8	4.3	--	--	4.3	1.5	5.8
2000	17	9.4	--	4.0	13.4	1.5	14.9
2001	--	--	--	--	--	0.2	0.2
2002	27	7.6	--	--	7.6	0.8	8.4
2003	13	4.9	--	--	4.9	1.0	5.9
2004	24	13.6	--	0.3	13.9	0.1	14.0
2005	1	12.2	--	--	12.2	1.2	13.4
2006	59	12.1	--	--	12.1	1.0	13.1
2007	62	16.7	--	--	16.7	1.2	17.9
2008	332	46.6	--	--	46.6	3.5	50.1
2009	188	34.4	--	--	34.4	3.3	37.7
2010	4	0.5	--	6.3	6.8	--	6.8
2011	--	--	--	4.6	4.6	--	4.6
2012	177	51.3	--	--	51.3	0.5	51.8
2013	89	21.7	--	--	21.7	3.0	24.7
2014	--	--	--	10.2	10.2	--	10.2
2015	--	--	--	18.9	18.9	--	18.9
2016	--	--	--	3.9	3.9	--	3.9
Subtotal	**1002**	**238.3**	**--**	**50.4**	**288.7**	**20.9**	**309.6**

Annual Funding BY$
2035 | Procurement | Other Procurement, Army

Fiscal Year	Quantity	End Item Recurring Flyaway BY 1997 $M	Non End Item Recurring Flyaway BY 1997 $M	Non Recurring Flyaway BY 1997 $M	Total Flyaway BY 1997 $M	Total Support BY 1997 $M	Total Program BY 1997 $M
1998	1	2.9	--	2.1	5.0	2.1	7.1
1999	8	4.1	--	--	4.1	1.5	5.6
2000	17	9.0	--	3.7	12.7	1.5	14.2
2001	--	--	--	--	--	0.2	0.2
2002	27	7.1	--	--	7.1	0.7	7.8
2003	13	4.5	--	--	4.5	0.9	5.4
2004	24	12.1	--	0.3	12.4	0.1	12.5
2005	1	10.6	--	--	10.6	1.0	11.6
2006	59	10.2	--	--	10.2	0.9	11.1
2007	62	13.8	--	--	13.8	1.0	14.8
2008	332	37.8	--	--	37.8	2.9	40.7
2009	188	27.5	--	--	27.5	2.7	30.2
2010	4	0.4	--	4.9	5.3	--	5.3
2011	--	--	--	3.6	3.6	--	3.6
2012	177	39.0	--	--	39.0	0.4	39.4
2013	89	16.1	--	--	16.1	2.2	18.3
2014	--	--	--	7.4	7.4	--	7.4
2015	--	--	--	13.5	13.5	--	13.5
2016	--	--	--	2.7	2.7	--	2.7
Subtotal	**1002**	**195.1**	**--**	**38.2**	**233.3**	**18.1**	**251.4**

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
2000	5	2.9	--	--	2.9	--	2.9
2001	16	4.5	--	--	4.5	--	4.5
2002	28	6.7	--	--	6.7	--	6.7
2003	6	1.0	--	13.8	14.8	--	14.8
2004	88	19.1	--	--	19.1	0.1	19.2
2005	2	12.1	--	--	12.1	0.1	12.2
2006	65	13.1	--	--	13.1	0.1	13.2
2007	--	--	--	0.7	0.7	--	0.7
2008	--	--	--	1.1	1.1	--	1.1
2009	2	1.7	--	--	1.7	--	1.7
2010	10	1.4	--	4.9	6.3	0.5	6.8
2011	22	10.1	--	9.9	20.0	0.7	20.7
2012	2	0.3	--	10.1	10.4	0.1	10.5
2013	5	0.9	--	8.7	9.6	0.1	9.7
2014	50	5.5	--	2.8	8.3	0.2	8.5
2015	1	0.1	--	3.4	3.5	--	3.5
2016	1	0.1	--	3.3	3.4	--	3.4
2017	1	0.1	--	3.2	3.3	--	3.3
2018	1	0.1	--	3.0	3.1	--	3.1
2019	1	0.1	--	2.7	2.8	--	2.8
Subtotal	**306**	**79.8**	**--**	**67.6**	**147.4**	**1.9**	**149.3**

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 1997 $M	Non End Item Recurring Flyaway BY 1997 $M	Non Recurring Flyaway BY 1997 $M	Total Flyaway BY 1997 $M	Total Support BY 1997 $M	Total Program BY 1997 $M
2000	5	2.7	--	--	2.7	--	2.7
2001	16	4.2	--	--	4.2	--	4.2
2002	28	6.1	--	--	6.1	--	6.1
2003	6	0.9	--	12.8	13.7	--	13.7
2004	88	17.3	--	--	17.3	0.1	17.4
2005	2	10.7	--	--	10.7	0.1	10.8
2006	65	11.2	--	--	11.2	0.1	11.3
2007	--	--	--	0.6	0.6	--	0.6
2008	--	--	--	0.9	0.9	--	0.9
2009	2	1.4	--	--	1.4	--	1.4
2010	10	1.1	--	3.9	5.0	0.4	5.4
2011	22	7.9	--	7.8	15.7	0.5	16.2
2012	2	0.2	--	7.8	8.0	0.1	8.1
2013	5	0.7	--	6.5	7.2	0.1	7.3
2014	50	4.1	--	2.1	6.2	0.1	6.3
2015	1	0.1	--	2.5	2.6	--	2.6
2016	1	0.1	--	2.3	2.4	--	2.4
2017	1	0.1	--	2.2	2.3	--	2.3
2018	1	0.1	--	2.0	2.1	--	2.1
2019	1	0.1	--	1.8	1.9	--	1.9
Subtotal	**306**	**69.0**	**--**	**53.2**	**122.2**	**1.5**	**123.7**

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

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
1997	11	0.6	--	--	0.6	--	0.6
1998	--	--	--	--	--	--	--
1999	20	4.2	--	--	4.2	--	4.2
2000	8	0.8	--	--	0.8	--	0.8
2001	13	1.1	--	--	1.1	--	1.1
2002	16	2.1	--	--	2.1	--	2.1
2003	--	--	--	5.5	5.5	--	5.5
2004	--	--	--	19.3	19.3	--	19.3
2005	--	--	--	7.9	7.9	--	7.9
2006	--	--	--	2.7	2.7	--	2.7
2007	2	0.9	--	--	0.9	--	0.9
2008	1	1.8	--	--	1.8	--	1.8
2009	10	13.9	--	11.8	25.7	0.4	26.1
2010	13	4.3	--	2.7	7.0	--	7.0
2011	20	7.7	--	2.8	10.5	0.3	10.8
2012	10	3.9	--	0.5	4.4	0.1	4.5
2013	10	13.0	--	--	13.0	--	13.0
2014	9	2.1	--	0.3	2.4	0.1	2.5
2015	2	0.7	--	0.5	1.2	--	1.2
2016	27	11.6	--	2.8	14.4	0.6	15.0
2017	14	4.5	--	1.6	6.1	0.1	6.2
2018	6	1.4	--	0.2	1.6	--	1.6
2019	13	3.2	--	--	3.2	0.2	3.4
Subtotal	**205**	**77.8**	**--**	**58.6**	**136.4**	**1.8**	**138.2**

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 1997 $M	Non End Item Recurring Flyaway BY 1997 $M	Non Recurring Flyaway BY 1997 $M	Total Flyaway BY 1997 $M	Total Support BY 1997 $M	Total Program BY 1997 $M
1997	11	0.6	--	--	0.6	--	0.6
1998	--	--	--	--	--	--	--
1999	20	4.1	--	--	4.1	--	4.1
2000	8	0.8	--	--	0.8	--	0.8
2001	13	1.0	--	--	1.0	--	1.0
2002	16	2.0	--	--	2.0	--	2.0
2003	--	--	--	5.0	5.0	--	5.0
2004	--	--	--	17.2	17.2	--	17.2
2005	--	--	--	6.8	6.8	--	6.8
2006	--	--	--	2.3	2.3	--	2.3
2007	2	0.7	--	--	0.7	--	0.7
2008	1	1.5	--	--	1.5	--	1.5
2009	10	11.1	--	9.4	20.5	0.3	20.8
2010	13	3.4	--	2.1	5.5	--	5.5
2011	20	5.9	--	2.2	8.1	0.2	8.3
2012	10	3.0	--	0.3	3.3	0.1	3.4
2013	10	9.7	--	--	9.7	--	9.7
2014	9	1.5	--	0.2	1.7	0.1	1.8
2015	2	0.5	--	0.4	0.9	--	0.9
2016	27	8.2	--	2.0	10.2	0.4	10.6
2017	14	3.1	--	1.1	4.2	0.1	4.3
2018	6	0.9	--	0.2	1.1	--	1.1
2019	13	2.1	--	--	2.1	0.2	2.3
Subtotal	**205**	**60.1**	**--**	**49.2**	**109.3**	**1.4**	**110.7**

Annual Funding TY$
0350 | Procurement | National Guard and Reserve Equipment ,Defense

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
2011	172	20.3	--	--	20.3	2.0	22.3
Subtotal	**172**	**20.3**	**--**	**--**	**20.3**	**2.0**	**22.3**

Annual Funding BY$
0350 | Procurement | National Guard and Reserve Equipment ,Defense

Fiscal Year	Quantity	End Item Recurring Flyaway BY 1997 $M	Non End Item Recurring Flyaway BY 1997 $M	Non Recurring Flyaway BY 1997 $M	Total Flyaway BY 1997 $M	Total Support BY 1997 $M	Total Program BY 1997 $M
2011	172	15.6	--	--	15.6	1.6	17.2
Subtotal	**172**	**15.6**	**--**	**--**	**15.6**	**1.6**	**17.2**

Low Rate Initial Production

	Initial LRIP Decision	Current Total LRIP
Approval Date	11/14/1997	6/21/2006
Approved Quantity	500	628
Reference	Milestone II ADM	ADM
Start Year	1997	1997
End Year	1999	2007

The Current Total LRIP Quantity is more than 10% of the total production quantity due to the following:

MS II Acquisition Decision Memorandum (ADM), dated November 1997, approved the GBS Phase II entry into Engineering and Manufacturing Development and a LRIP of up to 500 Receive Suites (RS) and 140 shipboard antennas.

The Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)) ADM, dated June 2006, authorized an LRIP increase of 128 RS to an approved quantity of 628 RS.

On April 13, 2007, the USD(AT&L) signed an ADM that authorized the Joint Program Office (JPO) to procure Beyond LRIP quantities of RS.

Foreign Military Sales

None

Nuclear Costs

None

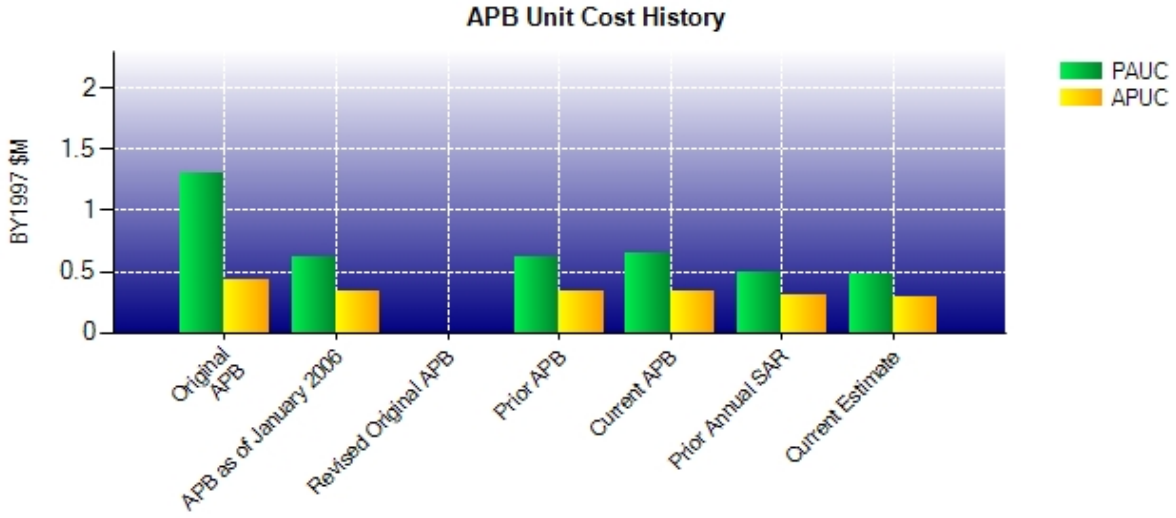
Unit Cost

Unit Cost Report

Unit Cost	BY1997 $M Current UCR Baseline (SEP 2006 APB)	BY1997 $M Current Estimate (DEC 2013 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	784.8	922.6	
Quantity	1221	1915	
Unit Cost	0.643	0.482	-25.04
Average Procurement Unit Cost (APUC)			
Cost	361.3	526.0	
Quantity	1085	1779	
Unit Cost	0.333	0.296	-11.11

Unit Cost	BY1997 $M Original UCR Baseline (NOV 1997 APB)	BY1997 $M Current Estimate (DEC 2013 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	451.4	922.6	
Quantity	346	1915	
Unit Cost	1.305	0.482	-63.07
Average Procurement Unit Cost (APUC)			
Cost	53.9	526.0	
Quantity	125	1779	
Unit Cost	0.431	0.296	-31.32

Unit Cost History



		BY1997 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	NOV 1997	1.305	0.431	1.437	0.463
APB as of January 2006	FEB 2003	0.614	0.333	0.673	0.380
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	FEB 2003	0.614	0.333	0.673	0.380
Current APB	SEP 2006	0.643	0.333	0.707	0.380
Prior Annual SAR	DEC 2012	0.494	0.309	0.575	0.384
Current Estimate	DEC 2013	0.482	0.296	0.558	0.364

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	
1.437	-0.004	-0.951	0.040	0.074	-0.049	0.000	0.011	-0.879	0.558

Current SAR Baseline to Current Estimate (TY $M)

Initial APUC Dev Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.463	0.004	-0.187	0.043	0.043	-0.014	0.000	0.012	-0.099	0.364

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	DEC 1997	N/A	NOV 1997
Milestone III	N/A	DEC 1999	N/A	N/A
IOC	N/A	DEC 1999	N/A	DEC 2003
Total Cost (TY $M)	N/A	497.1	N/A	1067.8
Total Quantity	N/A	346	N/A	1915
Prog. Acq. Unit Cost (PAUC)	N/A	1.437	N/A	0.558

Cost Variance

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	439.2	57.9	--	497.1
Previous Changes				
Economic	-14.5	+9.4	--	-5.1
Quantity	-2.7	+435.4	--	+432.7
Schedule	--	+76.9	--	+76.9
Engineering	+65.6	+77.9	--	+143.5
Estimating	-67.9	+5.2	--	-62.7
Other	--	--	--	--
Support	--	+24.7	--	+24.7
Subtotal	-19.5	+629.5	--	+610.0
Current Changes				
Economic	--	-2.0	--	-2.0
Quantity	--	-1.8	--	-1.8
Schedule	--	--	--	--
Engineering	--	-1.2	--	-1.2
Estimating	-0.3	-30.2	--	-30.5
Other	--	--	--	--
Support	--	-3.8	--	-3.8
Subtotal	-0.3	-39.0	--	-39.3
Total Changes	-19.8	+590.5	--	+570.7
CE - Cost Variance	419.4	648.4	--	1067.8
CE - Cost & Funding	419.4	648.4	--	1067.8

Summary Base Year 1997 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	397.5	53.9	--	451.4
Previous Changes				
Economic	--	--	--	--
Quantity	-2.6	+361.6	--	+359.0
Schedule	--	+60.7	--	+60.7
Engineering	+57.0	+62.2	--	+119.2
Estimating	-55.1	-4.3	--	-59.4
Other	--	--	--	--
Support	--	+19.9	--	+19.9
Subtotal	-0.7	+500.1	--	+499.4
Current Changes				
Economic	--	--	--	--
Quantity	--	-1.2	--	-1.2
Schedule	--	-0.9	--	-0.9
Engineering	--	-0.9	--	-0.9
Estimating	-0.2	-22.3	--	-22.5
Other	--	--	--	--
Support	--	-2.7	--	-2.7
Subtotal	-0.2	-28.0	--	-28.2
Total Changes	-0.9	+472.1	--	+471.2
CE - Cost Variance	396.6	526.0	--	922.6
CE - Cost & Funding	396.6	526.0	--	922.6

Previous Estimate: December 2012

RDT&E	$M	
Current Change Explanations	Base Year	Then Year
Reduction in contract scope In FY 2011. (Estimating)	-0.2	-0.3
RDT&E Subtotal	-0.2	-0.3

Procurement	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-2.0
Stretch-out of procurement buy profile (Marine Corps). (Schedule)	0.0	+0.2
Stretch-out of procurement buy profile (Air Force). (Schedule)	0.0	+0.3
Stretch-out of procurement buy profile (Navy). (Schedule)	0.0	+0.7
Total Quantity variance resulting from a decrease of 6 receive suites from 211 to 205 (Navy). (Subtotal)	-1.3	-1.9
Quantity variance resulting from a decrease of 6 receive suites from 211 to 205 (Navy). (Quantity)	(-0.6)	(-0.9)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-0.3)	(-0.4)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(-0.3)	(-0.4)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-0.1)	(-0.2)
Total Quantity variance resulting from an increase of 16 receive suites from 290 to 306 (Air Force). (Subtotal)	+3.3	+4.6
Quantity variance resulting from an increase of 16 receive suites from 290 to 306 (Air Force). (Quantity)	(+1.6)	(+2.0)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+0.6)	(+0.8)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(+0.6)	(+0.8)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+0.5)	(+1.0)
Total Quantity variance resulting from a decrease of 21 receive suites from 115 to 94 (Marine Corps). (Subtotal)	-4.6	-6.1
Quantity variance resulting from a decrease of 21 receive suites from 115 to 94 (Marine Corps). (Quantity)	(-2.2)	(-2.9)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-1.2)	(-1.6)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(-1.2)	(-1.6)
Adjustment for current and prior escalation. (Estimating)	+1.3	+1.5
Additional funding received for program support costs from FY 2014 to FY 2019 (Air Force). (Estimating)	+10.2	+14.6
Additional funding allocated for operational testing (Air Force). (Estimating)	+2.4	+2.9
Funds allocated to address Information Assurance and incorporate hardware and software changes into production baselines (Air Force). (Estimating)	+3.0	+4.0
Funding decrease because of late execution. (Funding is required to upgrade fielded equipment and will be addressed in future budgets) (Army). (Estimating)	-41.4	-56.4
Net adjustments in appropriation funding (FY 2013 to FY 2019) to reflect FY 2015 PB (Navy). (Estimating)	+1.1	+1.2
Funding received for program support costs from FY 2017 to FY 2019 (Marine Corps). (Estimating)	+3.5	+5.2

Net adjustments in appropriation funding (FY 2011 to FY 2016) to reflect FY 2015 PB (Marine Corps). (Estimating)	-2.8	-4.0
Adjustment for current and prior escalation. (Support)	0.0	+0.1
Decrease in Initial Spares (Marine Corps). (Support)	-0.5	-0.6
Decrease in Other Support (Navy). (Support)	-0.7	-1.0
Decrease in Initial Spares (Navy). (Support)	-1.5	-2.3
Procurement Subtotal	-28.0	-39.0

(QR) Quantity Related

Contracts

General Contract Memo

There are currently no active contracts over $40 million. The Transportable Ground Receive Suite Production contract, awarded to General Dynamics on August 22, 2011, has a current value of $23.1M and has a $900M ceiling. The contract includes pre-negotiated pricing tables that extend through FY 2015.

Deliveries and Expenditures

Delivered to Date	Plan to Date	Actual to Date	Total Quantity	Percent Delivered
Development	136	136	136	100.00%
Production	1361	1341	1779	75.38%
Total Program Quantity Delivered	1497	1477	1915	77.13%

Expended and Appropriated (TY $M)			
Total Acquisition Cost	1067.8	Years Appropriated	19
Expended to Date	916.8	Percent Years Appropriated	79.17%
Percent Expended	85.86%	Appropriated to Date	994.6
Total Funding Years	24	Percent Appropriated	93.14%

The above data is current as of 2/24/2014.

Operating and Support Cost

GBS

Assumptions and Ground Rules

Cost Estimate Reference:
The O&S current estimate was prepared by the program office in March 2010 and includes all costs for operating, maintaining, and supporting the GBS assets for an assumed life of 10 years (2010-2019).

In May 2009, efforts began to transfer broadcast capabilities from the current Satellite Broadcast Manager (SBM) locations to the Defense Enterprise Computing Centers (DECC). This change in architecture was considered in this 2010 estimate which assumed simultaneous support of facilities for a full year, after which the legacy SBM will be decommissioned.

Sustainment Strategy:
Assets include: Transmit Suites (TS), Receive Suites (RS), and Theater Injection Points (TIP). The costs include all Depot Level Repairables (DLR) costs for GBS assets as well as the operating, logistics and personnel support costs associated with operating the transmit sites.

The O&S cost estimate assumed quantities of two Satellite Broadcast Managers (SBM), two Primary Injection Points (PIP), five Theater Injection Points (TIP) (Army and Air Force Assets), and a total of 2,186 Receive Suites (RS) for all configurations, and for all services. Of these, 96 were procured and fielded using RDT&E funds, and 2,090 are being purchased with procurement funds. The O&S cost estimate also assumed the SBMs would be replaced by the new Defense Information Systems Agency (DISA) DECC based architecture. We assumed a period of overlap in the broadcast capabilities, then the old SBMs would be decommissioned.

Antecedent Information:
There is no antecedent system.

Unitized O&S Costs BY1997 $M		
Cost Element	**GBS Avg Annual Cost Total System**	**Antecedent (Antecedent) N/A**
Unit-Level Manpower	0.000	0.000
Unit Operations	16.400	0.000
Maintenance	4.800	0.000
Sustaining Support	0.600	0.000
Continuing System Improvements	1.700	0.000
Indirect Support	3.200	0.000
Other	1.720	0.000
Total	28.420	--

Unitized Cost Comments:

Unit Operations encompasses all Petroleum, Oil and Lubricant costs for the Theater Injection Points (TIPs), transportation costs for sending defective items back to the depot, Organic DLR for the RSs, operations of the broadcast facilities, and license renewals.

Maintenance includes organic software maintenance, Primary Injection Point (PIP) hardware, and technical orders.

Sustaining Support encompasses sustaining engineering support costs for all GBS assets.

Continuing System Improvements includes engineering and other support required to address obsolence issues and other changes driven by technology.

Indirect Support includes other maintenance support.

Other includes the cost for CONUS Kurtz-under band (Ku) satellite lease and Cable News Network (CNN) Broadcast.

Total O&S Costs = average annual cost x assumed life in years = $28.42M x 10 = $284.2M (BY$)

	Total O&S Cost $M			
	Current Development APB Objective/Threshold		**Current Estimate**	
	GBS		**GBS**	**Antecedent (Antecedent)**
Base Year	308.1	338.9	284.2	N/A
Then Year	382.5	N/A	386.8	N/A

Total O&S Costs Comments:

The current APB dates from February 2003. The APB O&S estimate assumed O&S through FY 2015. The latest OSD inflation indices used for the current estimate indicate a higher rate of inflation that those used for the APB. The current estimate assumes O&S through FY 2019 but also assumes a lower annual cost than the APB. These factors explain the seemingly discongruence between BY$ and TY$ for the O&S costs.

Disposal Costs:

Disposal costs are excluded from the O&S Cost, because the end of life has not been determined for GBS. A

portion of the legacy system will become obsolete in FY 2014; disposal costs of $538K (TY$) are projected for this effort.