

UNCLASSIFIED

PE NUMBER: 0603840F
 PE TITLE: Global Broadcast Service (GBS)

Exhibit R-2, RDT&E Budget Item Justification									DATE February 2005	
BUDGET ACTIVITY 05 System Development and Demonstration (SDD)					PE NUMBER AND TITLE 0603840F Global Broadcast Service (GBS)					
Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	35.823	25.527	18.283	25.234	19.306	5.443	5.447	5.525	Continuing	TBD
4887 Global Broadcast Service (GBS)	35.823	25.527	18.283	25.234	19.306	5.443	5.447	5.525	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Global Broadcast Service provides DoD with an efficient, high data rate broadcast provided by distributed information sources to dispersed warfighters who receive the broadcast directly on small, inexpensive user terminals in accordance with the GBS Operational Requirements Document (ORD), validated by the Joint Requirements Oversight Council in Apr 1997 and updated (with limits) in May 01 and Jan 05. GBS Broadcast data includes imagery, logistics and weather data, maps, operational orders, and video. GBS space segment includes packages on Navy operational satellites UFO 8, 9, and 10 providing near-worldwide service, augmentation by commercial leased Ku-band packages, and throughput on future wideband satellites. GBS Satellite Broadcast Management (SBM) and Terminal segments include uplink sites and receive equipment which integrate with Service fixed- and tactical-network equipment through standard commercial interfaces. Service production Receive Suite and integration into service networks are funded in other PEs.

The program was rebaselined to incorporate a commercial-of-the-shelf (COTS)-based Internet Protocol (IP) architecture that will facilitate satisfaction of IOC2 and 3 requirements. The IP architecture will provide enhanced throughput (capacity), and greatly reduce operational and maintainability liabilities that would have resulted from continuation of the previous architecture that required significant use of obsolete and proprietary software and computer hardware.

Beginning FY06, the GBS program element funds analysis of alternatives and development of IPv6 Transition Plans required to support net-centric operations and warfare, satisfying OSD/NII Jun 03 policy mandate to complete transition from IP version 4 (IPv4) to IPv6 by FY08. This includes the development of a SBM design supporting both IPv4 and IPv6 network protocols, and provides for required equipment at the three operational GBS Transmit Suites. This also includes the development of an IPv6 technology refresh design for existing & planned Receive Broadcast Managers.

Funding is in Budget Activity 5, System Development and Demonstration, since program is fielding pre-production equipment.

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(U) **B. Program Change Summary (\$ in Millions)**

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Previous President's Budget	37.823	33.447	9.685	2.441
(U) Current PBR/President's Budget	35.823	25.527	18.283	25.234
(U) Total Adjustments	-2.000	-7.920		
(U) Congressional Program Reductions		-7.920		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-2.000			
SBIR/STTR Transfer				

(U) **Significant Program Changes:**

The FY06 and FY07 adjustments fund development effort required to transition from IPv4 to IPv6 by FY08.

FY05: Congress reduced GBS FY05 funding by \$7M.

Exhibit R-2a, RDT&E Project Justification

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Cost (\$ in Millions)	FY 2004 Actual	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4887 Global Broadcast Service (GBS)	35.823	25.527	18.283	25.234	19.306	5.443	5.447	5.525	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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Funding is in Budget Activity 5, System Development and Demonstration, since program is fielding pre-production equipment.

(U) B. Accomplishments/Planned Program (\$ in Millions)

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) Continue System Development and Test	21.213	14.502	10.729	14.951
(U) Continue Phase 2 Government System Integration	10.241	6.465	4.183	5.828
(U) Continue System Test & Evaluation Support	1.617	1.292	0.909	1.267
(U) Continue Program Office and other related support activities	2.752	3.268	2.462	3.188
(U) Total Cost	35.823	25.527	18.283	25.234

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(U) C. Other Program Funding Summary (\$ in Millions)

	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>Cost to</u>	<u>Total Cost</u>
	<u>Actual</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Estimate</u>	<u>Complete</u>	
(U) Other APPN OPAF, PE 0303600F, WGS PIPs	11.622	0.000	0.000	0.000	21.515	7.169	0.000	0.000		55.448
(U) OPAF, PE 0303601F, Receive Suites/TIPs	19.334	8.178	14.874	0.529	2.600	1.570	1.600	1.600	Continuing	TBD

Note: All the Services and several DoD agencies have many programs which interface with or support GBS. Examples include: Defense Information System Network (DISN); DISA Information Dissemination Management Program; ARPA Battlefield Awareness and Data Dissemination (BADD) Advanced Concept Technology Demonstration (ACTD); Navy UFO Program; Army Ground Terminal Programs; Navy SATCOM Ship Terminal Program; and Air Force MILSATCOM Terminals (PE 0303601F): AF GBS Receive Terminals (WSC 836780, line P-66, PE 0303601F, Milstar Satellite Comm Sys, Other Procurement; AF Ground Multiband Terminal (GMT) Development; and AF Wideband Terminal (AWT) Development).

(U) D. Acquisition Strategy

The acquisition strategy has been revised to a spiral development/incremental build approach using Integrated Product Development (IPD)/Integrated Product Team (IPT) approach. Program will maintain a single integration contractor for the GBS Phase 2 system while incorporating cross program/system IPTs for total system performance.

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Exhibit R-3, RDT&E Project Cost Analysis

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(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total Prior to FY 2004 Cost</u>	<u>FY 2004 Cost</u>	<u>FY 2004 Award Date</u>	<u>FY 2005 Cost</u>	<u>FY 2005 Award Date</u>	<u>FY 2006 Cost</u>	<u>FY 2006 Award Date</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u>														
Raytheon System Corp	CPAF		39.460	21.213	Oct-03	14.502	Nov-04	2.229	Oct-05				77.404	
IPv6 Migration	CPAF							8.500	Jan-06	14.951	Jan-07	Continuing	TBD	
Phase 2 Government System Integration	Various		6.039	10.241	Nov-03	6.465	Nov-04	4.183	Jan-06	5.828	Jan-07	Continuing	TBD	
Subtotal Product Development			45.499	31.454		20.967		14.912		20.779		Continuing	TBD	0.000
Remarks:														
(U) <u>Support</u>														
Program Support - Various			5.386	2.752	Oct-03	3.268	Dec-04	2.462	Nov-05	3.188	Nov-06	Continuing	TBD	
Fielding - Various			1.200										1.200	
Sustainment (Vendor TBD)			0.000										0.000	
Subtotal Support			6.586	2.752		3.268		2.462		3.188		Continuing	TBD	0.000
Remarks:														
(U) <u>Test & Evaluation</u>														
Various			2.860	1.617	Dec-03	1.292	Dec-04	0.909	Oct-05	1.267	Oct-06	Continuing	TBD	
Subtotal Test & Evaluation			2.860	1.617		1.292		0.909		1.267		Continuing	TBD	0.000
Remarks:														
(U) <u>Management</u>														
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			54.945	35.823		25.527		18.283		25.234		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

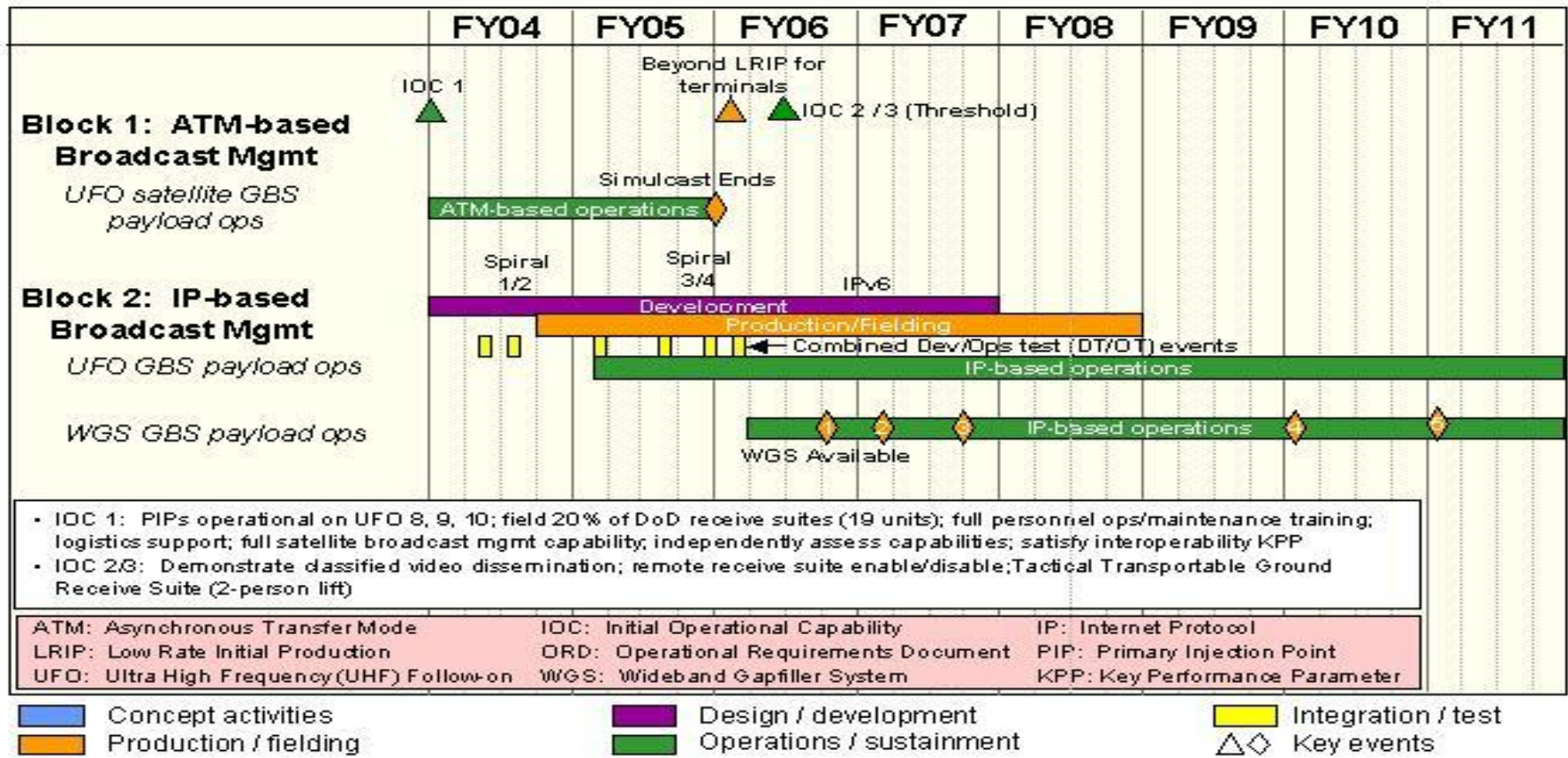
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Exhibit R-4a, RDT&E Schedule Detail	DATE February 2005
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(U) <u>Schedule Profile</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</u>
(U) IOC 1	1Q			
(U) Beyond Low Rate Initial Production (LRIP) decision		3Q		
(U) IOC 2 and 3			2Q	
(U) Begin development of Internet Protocol Version 6 (IPv6) capability			2Q	
(U) IPv6 capability demonstrated on orbit				3Q