

**UNCLASSIFIED**

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

<b>Exhibit R-2, RDT&amp;E Budget Item Justification</b>	DATE <b>February 2008</b>
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<b>BUDGET ACTIVITY</b> <b>05 System Development and Demonstration (SDD)</b>	<b>PE NUMBER AND TITLE</b> <b>0603840F Global Broadcast Service (GBS)</b>
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Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	23.157	29.098	18.790	9.416	2.421	2.467	2.517	Continuing	TBD
4887 Global Broadcast Service (GBS)	23.157	0.497	0.000	0.000	0.000	0.000	0.000	0.000	154.867
A023 Satellite Broadcast Management Transition	0.000	28.601	18.790	9.416	2.421	2.467	2.517	Continuing	TBD

Beginning in FY08, funds within PE 0603840F have been realigned from BPAC 654887, Global Broadcast Service, to BPAC 65A023, Satellite Broadcast Management Transition.

**(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. GBS broadcast data includes video (especially from Unmanned Aerial Vehicles), imagery, logistics and weather data, maps and operational orders. The GBS space segment includes transponders on operational Navy satellites, currently UFO 8 and UFO 10, augmentation by commercial leased Ku-band transponders, and in the near future will use the Wideband Global SATCOM (WGS) System. Currently, the GBS broadcast segment consists of Satellite Broadcast Managers (SBMs) for the broadcast build and Primary Injection Points (PIPs) for the broadcast uplink. The SBMs and PIPs, together known as Transmit Suites, are located at Navy facilities. During FY08-10, to address commercial-off-the-shelf (COTS) obsolescence issues, the broadcast creation will transition to existing Defense Information Systems Agency (DISA) Defense Enterprise Computing Centers (DECCs) and the broadcast will be uplinked through DISA Teleport sites. This effort is being designated as an ACAT III program and beginning in FY08 funding has been realigned (i.e., a separate BPAC has been created) to delineate between the current ACAT I GBS program and the ACAT III SBM Transition program.

The GBS receipt segment consists of Service-funded terminals, known as Receive Suites, which receive the broadcast and then disseminate information to local users. Service Receive Suites and integration into service networks are funded in other Program Elements.

The FY09 PB continues to fund the development of a robust architecture and implementation of system transmission security, as well as previously budgeted items such as migration to Internet Protocol version 6 (IPv6), to include Information Assurance, and continued analysis of alternatives for ORD III requirements.

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

Exhibit R-2, RDT&E Budget Item Justification

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0603840F Global Broadcast Service (GBS)

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Previous President's Budget	24.749	29.407	19.067
(U) Current PBR/President's Budget	23.157	29.098	18.790
(U) Total Adjustments	-1.592		
(U) Congressional Program Reductions		-0.125	
Congressional Rescissions		-0.184	
Congressional Increases			
Reprogrammings	-1.008		
SBIR/STTR Transfer	-0.584		
(U) <u>Significant Program Changes:</u>			
None.			

**Exhibit R-2a, RDT&E Project Justification**

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BUDGET ACTIVITY <b>05 System Development and Demonstration (SDD)</b>							PE NUMBER AND TITLE <b>0603840F Global Broadcast Service (GBS)</b>		PROJECT NUMBER AND TITLE <b>4887 Global Broadcast Service (GBS)</b>	
Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total	
4887 Global Broadcast Service (GBS)	23.157	0.497	0.000	0.000	0.000	0.000	0.000	0.000	154.867	
Quantity of RDT&E Articles	0	0	0	0	0	0	0			

**(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. GBS broadcast data includes video (especially from Unmanned Aerial Vehicles), imagery, logistics and weather data, maps and operational orders. The GBS space segment includes transponders on operational Navy satellites, currently UFO 8 and UFO 10, augmentation by commercial leased Ku-band transponders, and in the near future will use the Wideband Global SATCOM (WGS) System. Currently, the GBS broadcast segment consists of Satellite Broadcast Managers (SBMs) for the broadcast build and Primary Injection Points (PIPs) for the broadcast uplink. The SBMs and PIPs, together known as Transmit Suites, are located at Navy facilities.

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Continue System Development and Test	10.705	0.000	0.000
(U) Continue Phase 2 Government System Integration	8.042	0.464	0.000
(U) Continue System Test & Evaluation Support	0.834	0.028	0.000
(U) Continue Program Office and other related support activities, including Systems Engineering and Integration	3.576	0.005	0.000
(U) Total Cost	23.157	0.497	0.000

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</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>Complete</u>	
(U) OPAF, PE 0303601F, Receive Suites/TIPs	0.526	3.825	12.058	2.332	0.000	0.000	0.000	0.000	79.674

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 Content Staging; DISA Tactical Service Provider (TSP); Advanced Concept Technology Demonstrations (ACTD); DISA-CENTCOM Digital Video Broadcast Return Channel over Satellite (DVB-RCS) Demonstration; Navy UFO Program; Air Force WGS 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 Family of Advanced Beyond Line-of-Sight Terminals (FAB-T).

**(U) D. Acquisition Strategy**

The acquisition strategy is a spiral development/incremental build, within discreet blocks, using an Integrated Product Development (IPD)/Integrated Product Team (IPT) approach.

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**Exhibit R-3, RDT&E Project Cost Analysis**

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<b>BUDGET ACTIVITY</b>	<b>PE NUMBER AND TITLE</b>	<b>PROJECT NUMBER AND TITLE</b>
<b>05 System Development and Demonstration (SDD)</b>	<b>0603840F Global Broadcast Service (GBS)</b>	<b>4887 Global Broadcast Service (GBS)</b>

(U) <u>Cost Categories</u> (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total Prior to FY 2007 Cost</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 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		79.066	10.704	Dec-06						89.770	
- (FY07: IPv6 Migration/Information Assurance)											0.000	
IPv6 Migration/Information Assurance	Various		5.304	1.112	Nov-06						6.416	
Robust Architecture Development	Various										0.000	
Phase 2 Government System Integration	Various		24.487	6.931	Oct-06	0.464	Jan-08				31.882	
Subtotal Product Development			108.857	18.747		0.464		0.000		0.000	128.068	0.000
Remarks:												
(U) <u>Support</u>												
Program Support - Various			14.543	3.576	Nov-06	0.005	Oct-07				18.124	
Fielding - Various			1.200								1.200	
Sustainment (Vendor TBD)											0.000	
Subtotal Support			15.743	3.576		0.005		0.000		0.000	19.324	0.000
Remarks:												
(U) <u>Test &amp; Evaluation</u>												
Various			6.613	0.834	Nov-06	0.028	Jan-08				7.475	
Subtotal Test & Evaluation			6.613	0.834		0.028		0.000		0.000	7.475	0.000
Remarks:												
(U) <u>Management</u>												
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			131.213	23.157		0.497		0.000		0.000	154.867	0.000

Exhibit R-4, RDT&E Schedule Profile

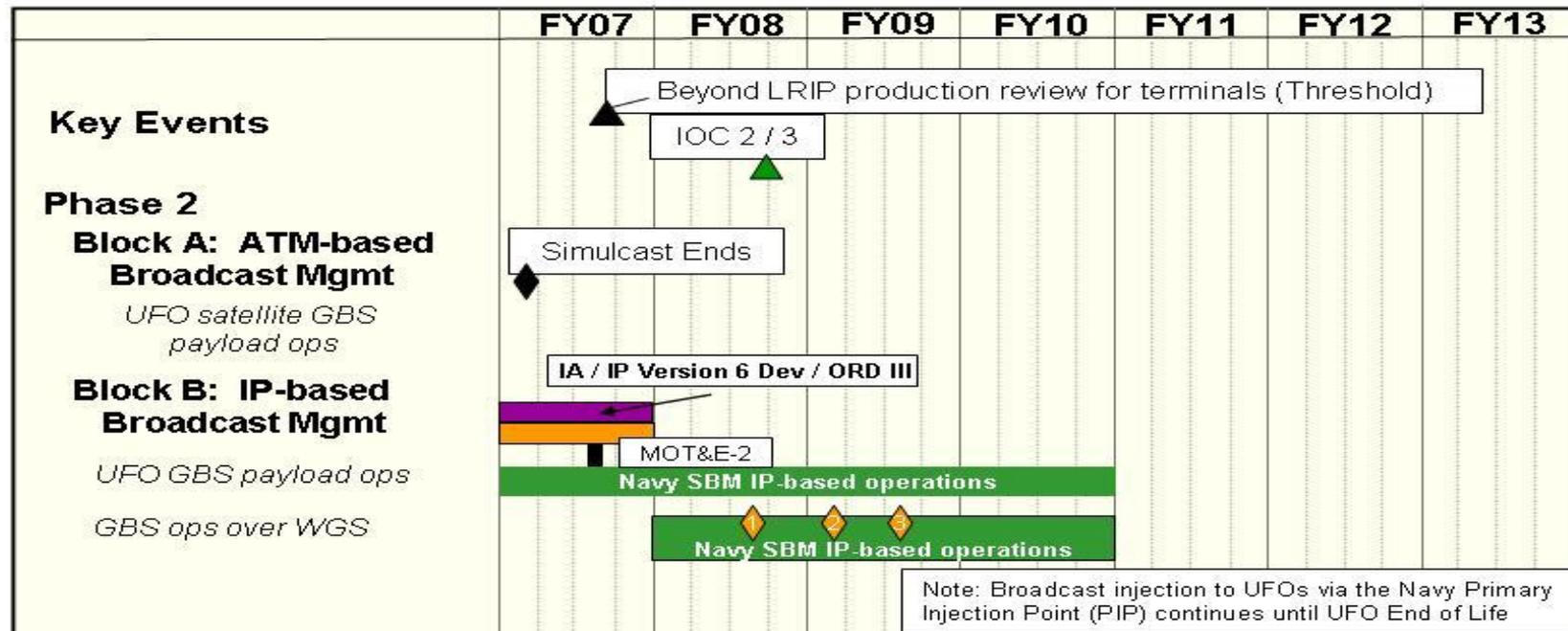
DATE

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BUDGET ACTIVITY  
05 System Development and Demonstration (SDD)

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

PROJECT NUMBER AND TITLE  
4887 Global Broadcast Service (GBS)



• **IOC 2/3:** Demonstrate classified video dissemination; remote receive suite enable/disable; Tactical Transportable Ground Receive Suite (2-person lift)

ATM: Asynchronous Transfer Mode    IOC: Initial Operational Capability    IP: Internet Protocol    WGS: Wideband Global SATCOM  
LRIP: Low Rate Initial Production    IA: Information Assurance    UFO: Ultra High Frequency (UHF) Follow-on

Production / fielding    Design / development    Integration / test  
Operations / sustainment    Key events

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<b>Exhibit R-4a, RDT&amp;E Schedule Detail</b>	DATE <b>February 2008</b>
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<b>BUDGET ACTIVITY</b> <b>05 System Development and Demonstration (SDD)</b>	<b>PE NUMBER AND TITLE</b> <b>0603840F Global Broadcast Service (GBS)</b>	<b>PROJECT NUMBER AND TITLE</b> <b>4887 Global Broadcast Service (GBS)</b>
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	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) <b><u>Schedule Profile</u></b>			
(U) Beyond Low Rate Initial Production (LRIP) Review (threshold)	3Q		
(U) Conducted combined Dev/Ops test event	3Q		
(U) IOC 2 and 3 (threshold)		3Q	
(U) GBS operates on WGS SV1		3Q	
(U) GBS operates on WGS SV2			2Q
(U) GBS operates on WGS SV3			3Q

**Exhibit R-2a, RDT&E Project Justification**

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BUDGET ACTIVITY <b>05 System Development and Demonstration (SDD)</b>							PE NUMBER AND TITLE <b>0603840F Global Broadcast Service (GBS)</b>		PROJECT NUMBER AND TITLE <b>A023 Satellite Broadcast Management Transition</b>	
Cost (\$ in Millions)	FY 2007 Actual	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total	
A023 Satellite Broadcast Management Transition	0.000	28.601	18.790	9.416	2.421	2.467	2.517	Continuing	TBD	
Quantity of RDT&E Articles	0	0	0	0	0	0	0			

**(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. GBS broadcast data includes video (especially from Unmanned Aerial Vehicles), imagery, logistics and weather data, maps and operational orders. The GBS space segment includes transponders on operational Navy satellites, currently UFO 8 and UFO 10, augmentation by commercial leased Ku-band transponders, and in the near future will use the Wideband Global SATCOM (WGS) System. Currently, the GBS broadcast segment consists of Satellite Broadcast Managers (SBMs) for the broadcast build and Primary Injection Points (PIPs) for the broadcast uplink. The SBMs and PIPs, together known as Transmit Suites, are located at Navy facilities. During FY08-10, to address commercial-off-the-shelf (COTS) obsolescence issues, the broadcast creation will transition to existing Defense Information Systems Agency (DISA) Defense Enterprise Computing Centers (DECCs) and the broadcast will be uplinked through DISA Teleport sites.

The FY09 PB continues to fund the development of a robust architecture and implementation of system transmission security.

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) Continue System Development and Test	0.000	17.477	8.099
(U) Continue Phase 2 Government System Integration	0.000	6.610	7.014
(U) Continue System Test & Evaluation Support	0.000	0.750	0.717
(U) Continue Program Office and other related support activities, including Systems Engineering and Integration	0.000	3.764	2.960
(U) Total Cost	0.000	28.601	18.790

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

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>Cost to Complete</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) Other APPN OPAF, PE 0303600F, WGS PIPs	0.000	0.000	0.000	1.701	1.701	0.000	0.000	0.000	30.166
(U) OPAF, PE 0303601F, Receive Suites/TIPs	0.526	3.825	12.058	2.332	0.000	0.000	0.000	0.000	79.674

**(U) D. Acquisition Strategy**

Conduct a full and open competition to award a new contract to transfer Satellite Broadcast Management functionality to two Defense Enterprise Computing Center (DECC) facilities utilizing a new hardware and software architecture to resolve impending Commercial off the Shelf (COTS) obsolescence, Information Assurance

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compliance and sustainment issues. Subsequently, implement, via this new contract, follow-on GBS ORD III Pre-Planned Product Improvement capabilities into the GBS DECC-based system, as additional funding becomes available.

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**Exhibit R-3, RDT&E Project Cost Analysis**

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BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT NUMBER AND TITLE				
<b>05 System Development and Demonstration (SDD)</b>				<b>0603840F Global Broadcast Service (GBS)</b>				<b>A023 Satellite Broadcast Management Transition</b>				
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) (\$ in Millions)	<u>Contract Method &amp; Type</u>	<u>Performing Activity &amp; Location</u>	<u>Total Prior to FY 2007 Cost</u>	<u>FY 2007 Cost</u>	<u>FY 2007 Award Date</u>	<u>FY 2008 Cost</u>	<u>FY 2008 Award Date</u>	<u>FY 2009 Cost</u>	<u>FY 2009 Award Date</u>	<u>Cost to Complete</u>	<u>Total Cost</u>	<u>Target Value of Contract</u>
(U) <u>Product Development</u>												
DECC Transition	CPIF	TBD	0.000	0.000		17.477	Oct-08	8.099	Oct-08	Continuing	TBD	
Phase 2 Government System Integration	Various		0.000	0.000		6.610	Nov-07	7.014	Nov-08	Continuing	TBD	
Subtotal Product Development			0.000	0.000		24.087		15.113		Continuing	TBD	0.000
Remarks:												
(U) <u>Support</u>												
Program Support - Various			0.000	0.000		3.764	Dec-07	2.960	Nov-08	Continuing	TBD	
Subtotal Support			0.000	0.000		3.764		2.960		Continuing	TBD	0.000
Remarks:												
(U) <u>Test &amp; Evaluation</u>												
Various			0.000	0.000		0.750		0.717		Continuing	TBD	
Subtotal Test & Evaluation			0.000	0.000		0.750		0.717		Continuing	TBD	0.000
Remarks:												
(U) <u>Management</u>												
Subtotal Management			0.000	0.000		0.000		0.000		Continuing	TBD	0.000
Remarks:												
(U) Total Cost			0.000	0.000		28.601		18.790		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

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BUDGET ACTIVITY  
05 System Development and Demonstration (SDD)

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

PROJECT NUMBER AND TITLE  
A023 Satellite Broadcast Management Transition

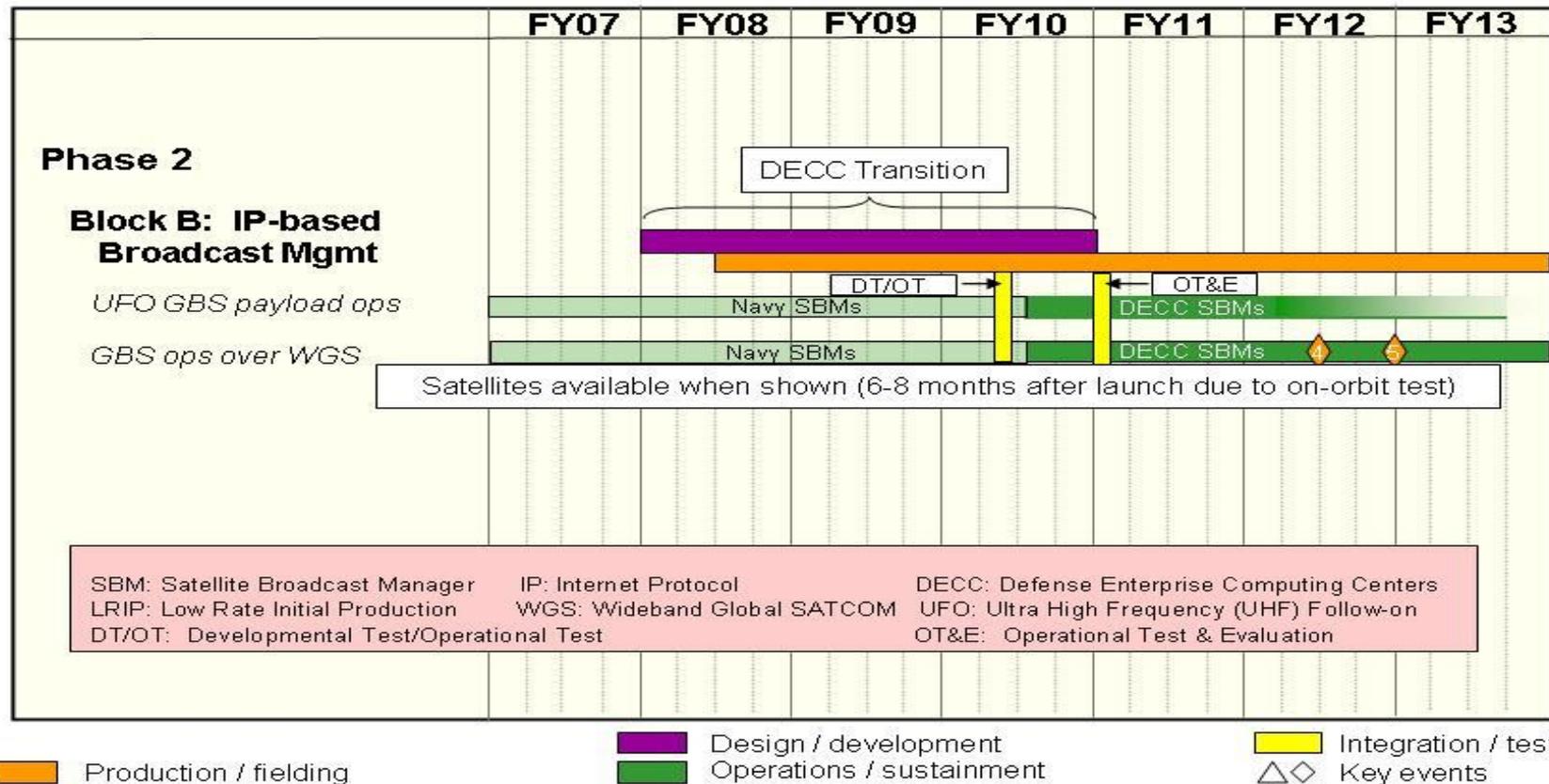


Exhibit R-4a, RDT&E Schedule Detail

DATE

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BUDGET ACTIVITY

05 System Development and Demonstration (SDD)

PE NUMBER AND TITLE

0603840F Global Broadcast Service (GBS)

PROJECT NUMBER AND TITLE

A023 Satellite Broadcast Management Transition

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
(U) <b>Schedule Profile</b>			
(U) DECC Transition Contract Award			1Q
(U) Systems Requirements Review			1Q
(U) Preliminary Design Review			2Q
(U) Critical Design Review			2Q
(U) Systems Integration and Implementation Start			3Q