PE NUMBER: 0603854F
PE TITLE: Wideband MILSATCOM (Space)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 04 Advanced Component Development and Prototypes (ACD&P)

PE NUMBER AND TITLE: 0603854F Wideband MILSATCOM (Space)

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	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	97.718	37.530	19.213	12.606	13.402	10.024	9.168	6.629	Continuing	TBD
4811	Wideband Gapfiller	78.502	30.896	0.000	0.000	0.000	0.000	0.000	0.000	0.000	314.976
4870	Command & Control System Consolidated (CCSC)	19.216	6.634	19.213	12.606	13.402	10.024	9.168	6.629	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Wideband Global SATCOM (WGS) System, previously known as Wideband Gapfiller Satellites, will provide the DoD with high data rate military satellite communication (MILSATCOM) services in accordance with the Joint Space Management Board-approved MILSATCOM architecture (Aug 96), the Joint Requirements Oversight Council (JROC)-approved MILSATCOM Capstone Requirements Document (Oct 97), and the JROC-approved WGS Operational Requirements Document (May 00). This program was originally conceived to augment the near term 'bandwidth gap' in warfighter communications needs. These dual-frequency WGS satellites will augment the DoD's Defense Satellite Communications Systems (DSCS) X-band service and one-way Global Broadcast Service Ka-band capabilities. In addition, WGS will provide a new high capacity two-way Ka-band service.

The first WGS launch is scheduled for Jun 07, the second satellite launch is scheduled for Dec 07, and the third satellite launch is scheduled for May 08.

Satellites 4 and 5 will have slight modifications to better support the Airborne Intelligence, Surveillance and Reconnaissance mission. Launches for satellites 4-5 are scheduled for FY11 and FY12, respectively.

The MILSATCOM Command and Control System-Consolidated (CCS-C) system is being acquired to provide integrated launch and on-orbit command and control (C-2) functionality for MILSATCOM satellites as the current capability provided by the Air Force Satellite Control Network (PE0305110F) for MILSATCOM satellites phases out according to plan. CCS-C will use modified commercial off the shelf hardware/software to control all emerging and legacy MILSATCOM systems to include Milstar, DSCS, WGS, and Advanced Extremely High Frequency (AEHF), at reduced operating and maintenance costs.

(U) Funding is in Budget Activity 4, Advanced Component Development and Prototypes, because it supports component development and prototyping for Wideband MILSATCOM

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0603854F Wideband MILSATCOM (Space)

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

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	92.287	37.672	5.186	5.728
(U)	Current PBR/President's Budget	97.718	37.530	19.213	12.606
(U)	Total Adjustments	5.431	-0.142		
(U)	Congressional Program Reductions				
	Congressional Rescissions	-0.003	-0.142		
	Congressional Increases				
	Reprogrammings	5.434			
	SBIR/STTR Transfer				

(U) Significant Program Changes:

FY06: Funds reprogrammed to CCS-C to provide critical capability to launch WGS 1-2

FY08-09 funds CCS-C satellite launch support that provides critical capability to launch WGS 3-5 and AEHF satellites.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE: 0603854F Wideband MILSATCOM (Space)	PROJECT NUMBER AND TITLE: 4811 Wideband Gapfiller

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4811 Wideband Gapfiller	78.502	30.896	0.000	0.000	0.000	0.000	0.000	0.000	0.000	314.976
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Wideband Global SATCOM (WGS) System, previously known as Wideband Gapfiller Satellites, will provide the DoD with high data rate military satellite communication (MILSATCOM) services in accordance with the Joint Space Management Board-approved MILSATCOM architecture (Aug 96), the Joint Requirements Oversight Council (JROC)-approved MILSATCOM Capstone Requirements Document (Oct 97), and the JROC-approved WGS Operational Requirements Document (May 00). This program was originally conceived to augment the near term 'bandwidth gap' in warfighter communications needs. These dual-frequency WGS satellites will augment the DoD's Defense Satellite Communications Systems X-band service and one-way Global Broadcast Service Ka-band capabilities. In addition, WGS will provide a new high capacity two-way Ka-band service.

The first WGS launch is scheduled for Jun 07, the second satellite launch is scheduled for Dec 07, and the third satellite launch is scheduled for May 08.

Satellites 4 and 5 will have slight modifications to better support the Airborne Intelligence, Surveillance and Reconnaissance mission. Launches for satellites 4-5 are scheduled for FY11 and FY12, respectively.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Perform efforts such as payload/production studies (e.g., related to parts obsolescence), integration, tests, and support development of WGS control system	11.300	2.442		
(U) Provide Program Office Support	0.860	0.629		
(U) Perform parts obsolescence redesign for satellites 4 and 5, non-recurring engineering and other related activities	66.342	27.825		
(U) Total Cost	78.502	30.896	0.000	0.000

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

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) MPAF, PE 0303600F, WGS, P-19,20	71.349	412.520	325.183	22.796	36.702	42.117	30.005	24.265	Continuing	TBD
(U) OPAF, PE 0303600F, WGS PIPs	0.000	0.000	0.000	0.000	1.724	1.724	0.000	0.000	0.000	30.212
(U) OPAF, PE 0303600F, CCS-C	0.285	0.000	0.535	0.000	0.000	0.000	0.000	0.000	0.000	17.671

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **04 Advanced Component Development and Prototypes (ACD&P)**	PE NUMBER AND TITLE **0603854F Wideband MILSATCOM (Space)**	PROJECT NUMBER AND TITLE **4811 Wideband Gapfiller**

(U) D. Acquisition Strategy

The WGS program has made maximum use of commercial practices and technology in its FAR Part 12, Firm Fixed Price (FFP) acquisition for satellites 1-3. The WGS received MS II/III approval in Nov 00 and awarded a FFP contract in Jan 01 (three satellites and options for an additional three). Options for satellites 4-6 were not exercised prior to the 31 Dec 03 expiration date.

Since WGS-type capabilities are no longer being offered commercially, it is no longer appropriate to use a Firm Fixed Price contract. A Fixed Price Incentive Fee contract, which balances uncertainty of parts obsolescence/production gap with experience gained from WGS 1-3 production, has been approved. Not to exceed letter contract was awarded for satellites 4 and 5 (with unfunded priced option for 6th satellite) in 2nd Qtr FY06. The contract definitized on 17 Oct 2006.

All five satellites are purchased with procurement funds, and the Non-Recurring Engineering (NRE) is funded with RDT&E.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **04 Advanced Component Development and Prototypes (ACD&P)**

PE NUMBER AND TITLE: **0603854F Wideband MILSATCOM (Space)**

PROJECT NUMBER AND TITLE: **4811 Wideband Gapfiller**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Parts Obsolescence Redesign	FPIF			66.342	Feb-06	27.825	Dec-06						94.167	
WGS Satellite EMD (satellites 1-3)	FFP		143.013										143.013	
UAV Bypass NRE	FFP		14.000										14.000	
Payload/Production Studies	Various		17.195	11.300	Dec-05	2.442	Dec-06						30.937	
Subtotal Product Development			174.208	77.642		30.267		0.000		0.000		0.000	282.117	0.000
Remarks:														
(U) Support														
Joint Terminals Engineering Office	PR		6.618										6.618	
Pre-EMD	Form 277		5.579										5.579	
Program Support	Various		8.903	0.860	Jan-06	0.629	Jan-07						10.392	
Subtotal Support			21.100	0.860		0.629		0.000		0.000		0.000	22.589	0.000
Remarks:														
(U) Test & Evaluation														
													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			195.308	78.502		30.896		0.000		0.000		0.000	304.706	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0603854F Wideband MILSATCOM (Space)	PROJECT NUMBER AND TITLE 4811 Wideband Gapfiller

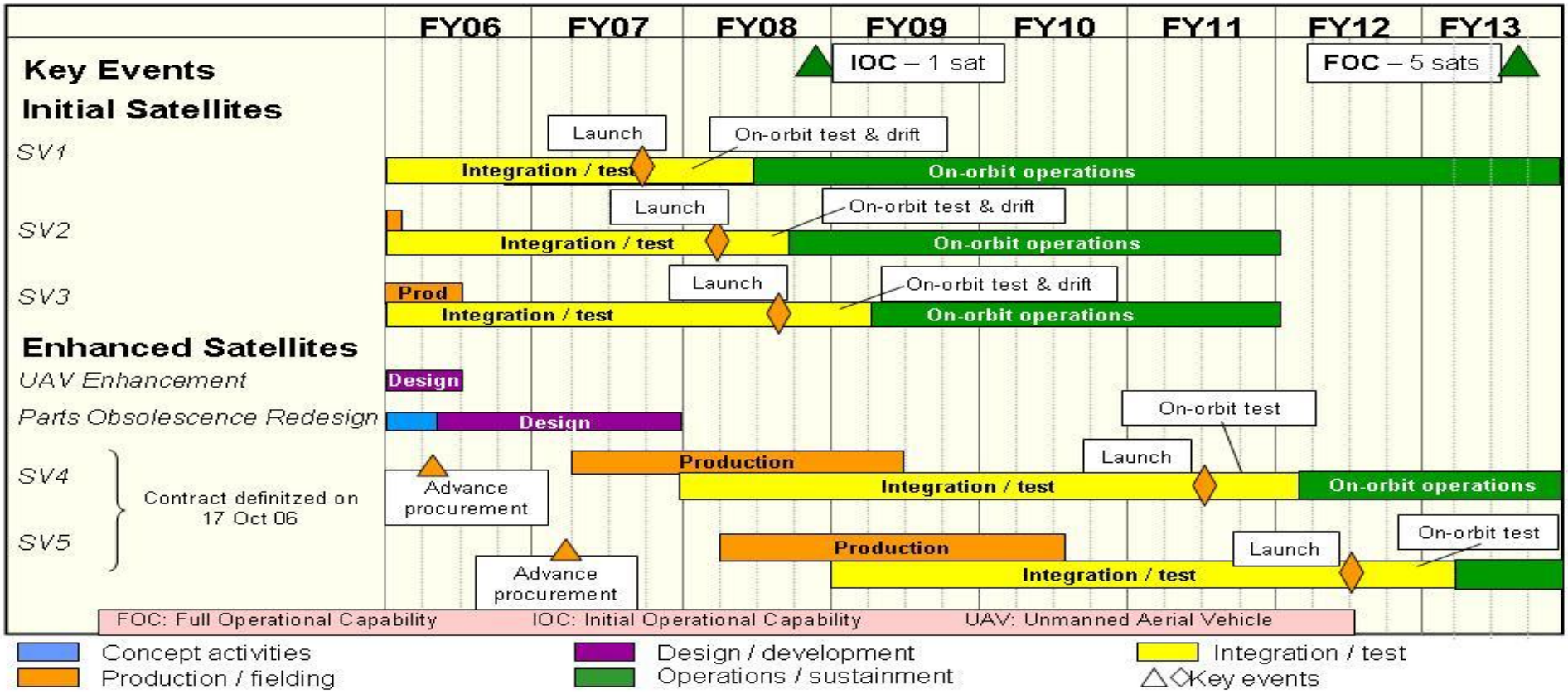

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **04 Advanced Component Development and Prototypes (ACD&P)**	PE NUMBER AND TITLE **0603854F Wideband MILSATCOM (Space)**	PROJECT NUMBER AND TITLE **4811 Wideband Gapfiller**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Initiate parts obsolescence redesign	2Q			
(U) Complete parts obsolescence redesign		4Q		

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE: 0603854F Wideband MILSATCOM (Space)	PROJECT NUMBER AND TITLE: 4870 Command & Control System Consolidated (CCSC)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4870	Command & Control System Consolidated (CCSC)	19.216	6.634	19.213	12.606	13.402	10.024	9.168	6.629	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Military Satellite Communications (MILSATCOM) Command and Control System-Consolidated (CCS-C) system is being acquired to provide integrated launch and on-orbit command and control (C2) functionality, and backup operations at Vandenberg AFB, for MILSATCOM satellites as the current capability provided by the Air Force Satellite Control Network (PE 0305110F) phases out according to plan. CCS-C will use modified commercial off the shelf hardware/software to control all emerging and legacy MILSATCOM systems including Milstar, Defense Satellite Communications System (DSCS), Wideband Global SATCOM (WGS), and Advanced Extremely High Frequency (AEHF), at reduced operating and maintenance costs.

Funding is in Budget Activity 4, ACD&P, to support software development and activation of the CCS-C installation and test facility.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Continue development of command and control functionality for WGS and AEHF satellites. Completed command and control functionality Milstar (1QFY06)	18.137	4.415	16.902	10.135
(U)	Continue Program Office and other related support activities, to include Systems Engineering and Integration	1.079	2.219	2.311	2.471
(U)	Total Cost	19.216	6.634	19.213	12.606

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

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Other APPN										
(U)	OPAF, PE 0303600F, CCS-C	0.285	0.000	0.535	0.000	0.000	0.000	0.000	0.000	0.000	17.671

(U) D. Acquisition Strategy

Competitive contracts with cost plus award fee options, were awarded in Feb 01 to two teams to demonstrate capabilities for the concept demonstration phase. A downselect to a single team was awarded in Mar 02 to develop the system for the development phase.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **04 Advanced Component Development and Prototypes (ACD&P)**

PE NUMBER AND TITLE: **0603854F Wideband MILSATCOM (Space)**

PROJECT NUMBER AND TITLE: **4870 Command & Control System Consolidated (CCSC)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Demonstration Contractors	FFP		6.800									0.000	6.800	
Development Contractor: Integral Systems, Inc.	CPAF	Lanham, MD	69.282	18.137	Oct-05	4.415	Oct-06	16.902	Oct-07	10.135	Oct-08	Continuing	TBD	
Subtotal Product Development			76.082	18.137		4.415		16.902		10.135		Continuing	TBD	0.000
Remarks:														
(U) Support														
CCSC Program Support Cost			16.980	1.079	Oct-05	2.219	Oct-06	2.311	Oct-07	2.471	Oct-08	Continuing	TBD	
Subtotal Support			16.980	1.079		2.219		2.311		2.471		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
None													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
None													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			93.062	19.216		6.634		19.213		12.606		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 04 Advanced Component Development and Prototypes (ACD&P)	PE NUMBER AND TITLE 0603854F Wideband MILSATCOM (Space)	PROJECT NUMBER AND TITLE 4870 Command & Control System Consolidated (CCSC)

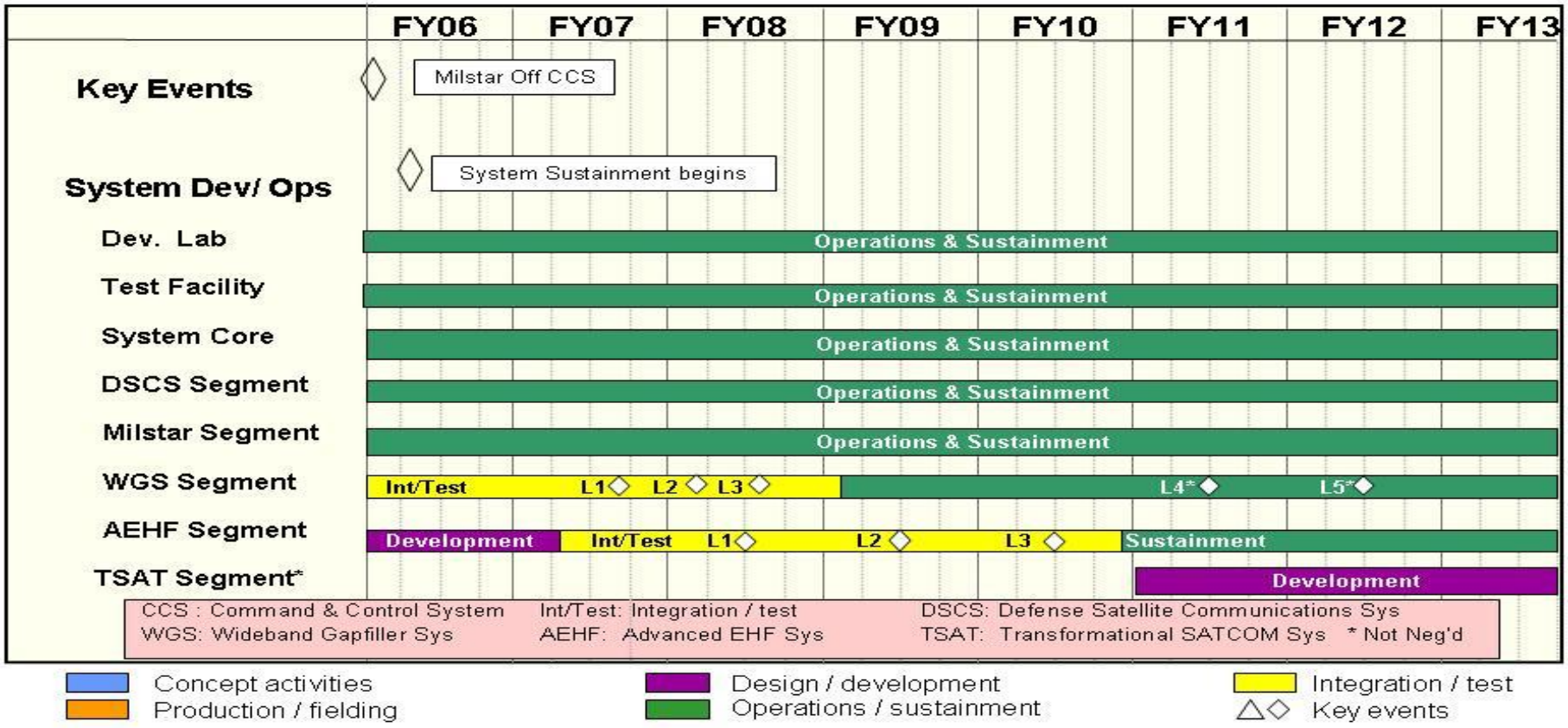

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **04 Advanced Component Development and Prototypes (ACD&P)**	PE NUMBER AND TITLE **0603854F Wideband MILSATCOM (Space)**	PROJECT NUMBER AND TITLE **4870 Command & Control System Consolidated (CCSC)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Completed Milstar command and control functionality	1Q			
(U) Transitioned MILSATCOM legacy systems (DSCS and Milstar) to CCS-C	1Q			
(U) Began System Sustainment	1Q			
(U) Continue WGS Integration & Test		1-4Q		
(U) Begin AEHF Integration & Test		2Q		
(U) Continue WGS Integration & Test			1-4Q	
(U) Continue AEHF Integration & Test			1-4Q	
(U) Transition WGS into Sustainment				1Q
(U) Continue AEHF Integration & Test				1Q