PE NUMBER: 0305208F
PE TITLE: Distributed Common Ground Systems

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems

	Cost ($ in Millions)	FY 2005 Actual	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	31.470	34.883	120.777	110.970	122.065	128.806	50.985	Continuing	TBD
4826	Common Imagery Ground / Surface Systems	31.470	34.883	120.777	110.970	122.065	128.806	50.985	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The DoD Distributed Common Ground/Surface System (DCGS) Program is a cooperative effort between the Services and National Agencies to provide world-wide ground/surface systems capable of receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance sensors/platforms and commercial sources. The DCGS program is developing a family of systems capable of supporting all levels of conflict, interoperable with reconnaissance platforms and sensors, and integrated into the Joint Command, Control, Communication, Computer, and Intelligence (C4I) environment. The program integrates architectures and standards from DCGS Imagery (DCGS-I) architecture for Imagery Intelligence (IMINT), Joint Interoperable Operator Network (JION) for Signals Intelligence (SIGINT), and Joint Airborne Measurement and Signature Intelligence (MASINT) Architecture (JAMA) for MASINT, and all-source analyses to Combat Air Forces and Combatant Commanders. The Air Force has been charged with developing and managing the DCGS Integration Backbone (DIB) for all the Services to provide interoperability at the data services level.

AF DCGS provides the Air Force ground/surface systems capable of tasking intelligence sensors, and receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance platforms and commercial sources. AF DCGS is a 'system of systems' interconnected by a robust communications structure to provide data sharing capabilities between intelligence collectors, exploiters, producers, disseminators, and users. AF DCGS has five core locations: two CONUS based and three OCONUS. Several other AF DCGS systems are distributed among Air Force operational units at numbered and Air National Guard/ Air Force locations, to support the Joint Task Force commander and the Air and Space Operations Center (AOC). The CONUS-based systems are capable of reach back operations via data link relay and satellite.

AF DCGS provides critical data and significant support for Time Critical Targeting (TCT) operations. This support will be enhanced with the planned integration of software tools and system integration to the AOC and transformation of AF DCGS to a net-centric, service based architecture. By converting from a stovepipe system of systems to the integrated AF DCGS Intelligence, Surveillance, and Reconnaissance (ISR) management capability will provide the Joint Forces Air Component Commander (JFACC) the capability to:
1) Dynamically visualize and command ISR assets and the information in the AOC
2) Quickly and effectively synchronize AF DCGS ISR operations, collection capabilities, and information with the AOC's combat objectives to improve the TCT process and reduce timelines.
AF DCGS is also being integrated into the Network Centric Collaborative Targeting (NCCT) network.

Using the DIB, AF DCGS modernization will transform AF DCGS from its existing proprietary based architecture to a net centric service based system to be as part of the Network Centric Warfare environment and upgrades AF DCGS SIGINT Digital Special Signals Processor (DSSP) for new signals processing. This modernization

effort implemented in Block 10.2 will deliver a netcentric DCGS capability for the Air Force. Block 10.2 will spiral by technologies and tools into its archecture to provide increased cababilities and meet user operational needs. These spirals will integrate COTS and GOTS fact-of-life version upgrades to provide current technologies and achieve necessary application and services. Increment 2, the next phase in AF DCGS, transformation will begin DIB/technology integration evaluations and develop the required acquision plans and studies/analysis to begin development.

The DIB is fielded with the Block 10.2 upgrade and will be managed to meet emerging DCGS architecture and standards for Joint and Coalition interoperability.

The Common Imagery Processor (CIP) is the common sensor processing element within DCGS-Imagery (DCGS-I) architecture. The function of the CIP is to accept airborne imagery data, process it into an exploitable image, and output the image to other elements within DCGS-I. Efforts continue to upgrade the CIP baseline to process data from upgraded/new sensors.

Also included in this project is a mobile DCGS-I testbed which is used by Service and Agency program offices to test interoperability interfaces with new sensors, applications, and other modifications. This testbed also supports the integration and testing of DoD DCGS components prior to introduction into the operational environment. This program's operations support and upgrades the Testbed to ensure it will maintain currency with existing interface standards.

This program participates in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, Allied, and coalition interoperability.

This program is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	21.232	40.402	169.423
(U)	Current PBR/President's Budget	31.470	34.883	120.777
(U)	Total Adjustments	10.238	-5.519	
(U)	Congressional Program Reductions	-0.307	-5.015	
	Congressional Rescissions	-0.255	-0.504	
	Congressional Increases	8.500		
	Reprogrammings	2.300		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

- Funding decreases between PB and current PBR in FY 06 and FY 07 are for higher Air Force needs.
- AF DCGS has a funding ramp from FY 05 to FY 06 and from FY 06 to FY 07 to support AF DCGS modernization. These funds will transform AF DCGS and related technologies from an existing architecture based on proprietary and legacy systems to an open, web-based, net-centric architecture integrated into the Network Centric Warfare environment.
- In FY 05, AF DCGS received a Congressional increase of $8.5M for Battle Damage Assessment Process Analysis, Systems Engineering Activities and Improved Coalition

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305208F Distributed Common Ground Systems**

Interoperability.

- At AF request, Congress reduced RDT&E funding by $5M and increased O&M funding by $5M in FY 06.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305208F Distributed Common Ground Systems	PROJECT NUMBER AND TITLE: 4826 Common Imagery Ground / Surface Systems	

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4826	Common Imagery Ground / Surface Systems	31.470	34.883	120.777	110.970	122.065	128.806	50.985	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305208F Distributed Common Ground Systems**	PROJECT NUMBER AND TITLE **4826 Common Imagery Ground / Surface Systems**

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This program participates in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, Allied, and coalition interoperability.

This program is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2005	FY 2006	FY 2007
(U)	Continue evolving DCGS architectures and standards for commonality and interoperability across intelligence disciplines to include NATO interoperability and management of DCGS Infrastructure Integrated Process Team (IPT) for USD(I)	1.562	2.138	2.320
(U)	Continue DCGS-I testbed development and upgrades.	1.375	1.478	6.550
(U)	Continue evolving CIP and its associated architecture to keep pace with growing sensor baseline of new and upgraded sensors. Continue investigation and implementation of advanced processing tools.	7.246	9.247	10.528
(U)	Continue the Adaptive Link Formatter (ALF) development and related sensor modifications to the ground station.	2.100		
(U)	Continue commercial imagery integration.	0.745	2.600	2.700
(U)	Continue DCGS Block 10.2 upgrades. Upgrade DCGS Integrated Backbone (DIB) and Block 10.2 to provide required tools required for DCGS support to the commander, improve integration with the AOC.	6.952	12.018	44.355
(U)	Continue development efforts for Increment 2, integrate advance technologies with the DIB to accelerate integration of advanced Mulit-Int exploitaton and fussion tools.	0.000	3.617	14.000
(U)	Improve DIB Interoperability			1.000
(U)	DIB Management and Migration			7.500
(U)	Continue integration of MASINT and Multiple Intelligence (Multi-INT) exploitation technology capabilities into	3.000		5.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems	PROJECT NUMBER AND TITLE 4826 Common Imagery Ground / Surface Systems

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

		FY 2005	FY 2006	FY 2007
	DCGS.			
(U)	Communications architecture upgrade effort.		3.785	26.824
(U)	Enterprise Engineering Support and Improved Coalition Interoperability	7.500		
(U)	Conduct Battle Damage Assessment Process Analysis study.	0.990		
(U)	Total Cost	31.470	34.883	120.777

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) OPAF (PE 0305208F)	115.985	151.493	195.723	178.806	222.600	150.086	169.402		TBD

(U) D. Acquisition Strategy

The Air Force uses an evolutionary acquisition approach with blocks (increments) and spirals to develop, field, and upgrade the AF DCGS weapon system and contracts for the improved capabilities through full and open competition to the maximum extent possible.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305208F Distributed Common Ground Systems**

PROJECT NUMBER AND TITLE: **4826 Common Imagery Ground / Surface Systems**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Block 10.2 Spiral Upgrades	Multiple	Raytheon, Garland, TX	7.532	4.872	Dec-04	5.865	Dec-05	36.549	Dec-06	Continuing	TBD	TBD
DIB Management and Migration	TBD							7.500	Dec-06	Continuing	TBD	TBD
DIB Interoperability	TBD							1.000	Feb-07	Continuing	TBD	TBD
NCCT/Platform Interface Module for DGIF	Multiple	Raytheon, Falls Church, VA		3.000	Jan-05					0.000	3.000	TBD
Communications Capability Upgrade	TBD	TBD				3.785	Jan-06	26.824	Jan-07	Continuing	TBD	TBD
Common Imagery Processor Software Development	C/CPFF	Northrup Grumman, Baltimore, MD	23.426	8.546	Dec-04	9.383	Dec-05	10.528	Dec-06	Continuing	TBD	TBD
NCCT GCP development	Multiple	Lockheed Martin, San Jose, CA& Littleton, CO	2.599	1.952	Mar-05					0.000	4.551	TBD
NCCT GCP Integration	C/CPAF	General Dynamics, Concord, MA	1.718	0.125	Aug-05					0.000	1.843	TBD
MASINT capabilities into DCGS	Multiple	Riverside Research Institute, Fairfax, VA		3.000	Feb-05		Jan-06	5.000	Jan-07	Continuing	TBD	TBD
Commercial Imagery Integration	Multiple	Par Gov't Systems, Rome NY		0.745	Jan-05	2.600	Jan-06	2.700	Jan-07	Continuing	TBD	TBD
Congress Plus Up C2 Integration for Joint Dynamic Targeting	Multiple	ASI, Alexandria, VA		0.990	Mar-05					0.000	0.990	TBD
Subtotal Product Development			35.275	23.230		21.633		90.101		Continuing	TBD	TBD
Remarks:												
(U) Support												
Other Non-Prime Gov't Contracts			0.604	1.512	Feb-05	10.153	Feb-06	25.548	Feb-07	Continuing	TBD	TBD
SAIC	SS/ IDIQ	McLean, VA	4.344	2.424	Jan-05	2.100	Mar-06	2.750	Mar-07	Continuing	TBD	TBD
Various			15.418	4.304	Oct-04	0.997	Jan-06	2.378	Oct-06	Continuing	TBD	TBD
Subtotal Support			20.366	8.240		13.250		30.676		Continuing	TBD	TBD
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305208F Distributed Common Ground Systems	PROJECT NUMBER AND TITLE: 4826 Common Imagery Ground / Surface Systems	

Remarks:

(U) Total Cost	55.641	31.470	34.883	120.777	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305208F Distributed Common Ground Systems	PROJECT NUMBER AND TITLE: 4826 Common Imagery Ground / Surface Systems

AF DCGS Schedule

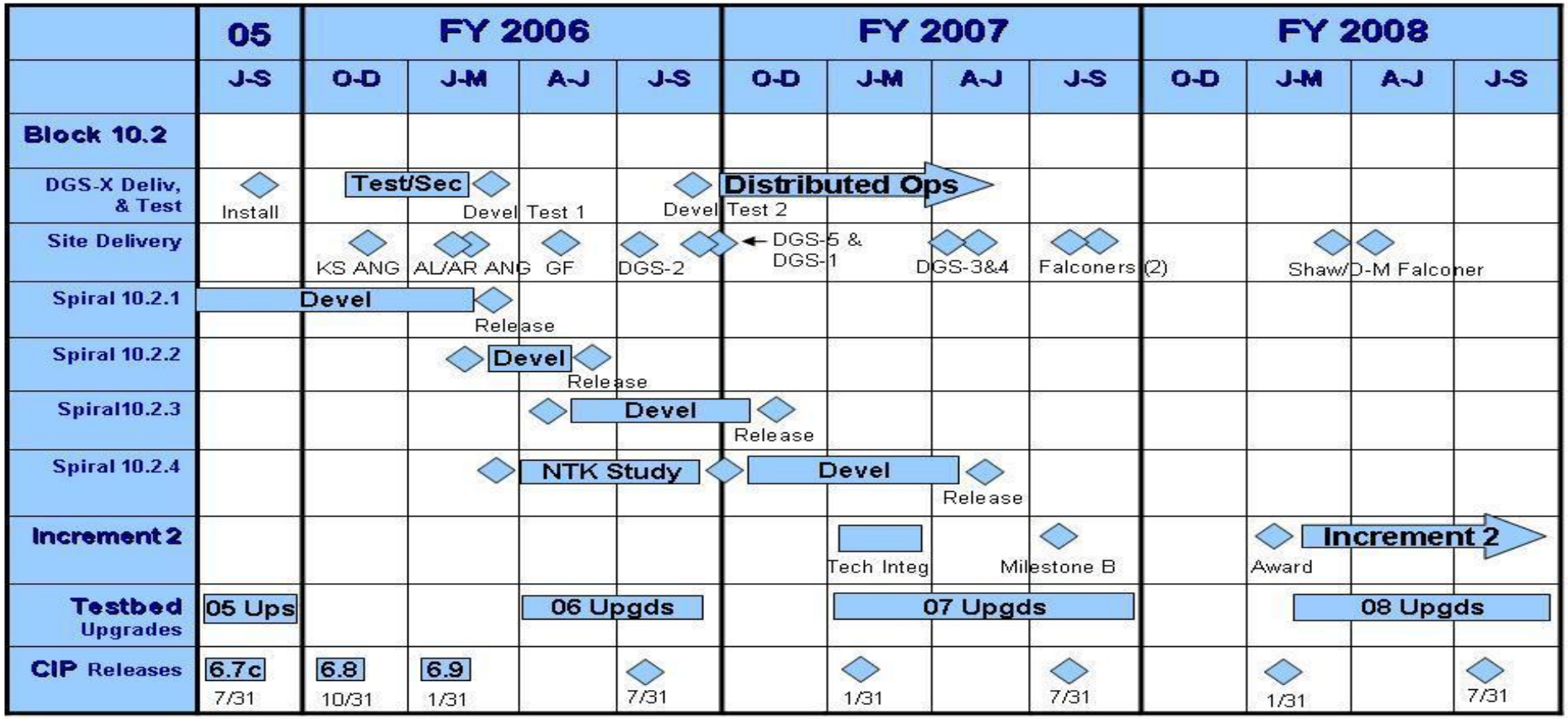

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: **07 Operational System Development**	PE NUMBER AND TITLE: **0305208F Distributed Common Ground Systems**	PROJECT NUMBER AND TITLE: **4826 Common Imagery Ground / Surface Systems**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) Block 10.2 Spiral Development	1-4Q	1-4Q	1-3Q
(U) Increment 2 Technology Integration			2Q
(U) Increment 2 Milestone B			4Q
(U) DCGS-I Testbed Upgrades	3-4Q	3-4Q	2-3Q
(U) CIP Version 6.7 Release	4Q		
(U) CIP Version 6.8 Release		1Q	
(U) CIP Version 6.9 Release		2Q	