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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2005
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems

	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	26.741	21.977	40.402	103.516	97.264	109.843	114.748	38.032	Continuing	TBD
4826	Common Imagery Ground / Surface Systems	26.741	21.977	40.402	103.516	97.264	109.843	114.748	38.032	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 Unified Command warfighters. The Air Force has been charged with developing a DCGS Integration Backbone (DIB) for all the Services to provide interoperability at the data services level.

AF DCGS provides 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 streams between intelligence collectors, exploiters, producers, disseminators, and users. AF DCGS has five core locations: two CONUS based and three OCONUS. Several other DCGS systems are distributed among Air Force operational units at numbered 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 reachback operations via data link relay and satellite.

AF DCGS provides significant support to time critical targeting (TCT) operations. This support will be enhanced with the planned integration of software tools and system integration to the AOC and its decision tools. 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.

AF DCGS modernization will transform AF DCGS from its existing architecture based on proprietary and legacy systems to an open, web-based, net centric architecture integrated into the Network Centric Warfare environment.

The Common Imagery Processor (CIP) is a major interoperability initiative to develop a 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.

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Baseline capability includes Global Hawk, F/A-18, and U-2 sensors. Efforts are underway to augment 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 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 will participate 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 2004	FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	27.772	21.232	47.290	169.423
(U)	Current PBR/President's Budget	26.741	21.977	40.402	103.516
(U)	Total Adjustments	-1.031	0.745		
(U)	Congressional Program Reductions	0.000	0.000		
	Congressional Rescissions	0.000	-0.255		
	Congressional Increases	0.000	1.000		
	Reprogrammings	-1.031			
	SBIR/STTR Transfer	0.000			

(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 $1M for Battle Damage Assessment Process Analysis.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2005
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 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
4826	Common Imagery Ground / Surface Systems	26.741	21.977	40.402	103.516	97.264	109.843	114.748	38.032	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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Also included in this project is a mobile DCGS-I testbed which is used by Service and Agency program offices to test 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 will participate 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 2004	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)	1.330	1.602	1.726	1.700
(U)	Continue DCGS-I testbed development.	1.257	1.375	1.500	1.550
(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.	7.843	7.199	9.603	10.172
(U)	Continue the Adaptive Link Formatter (ALF) development and related sensor modifications to the ground station.	2.000	2.100		
(U)	Continue commercial imagery integration.	1.054	0.745	2.600	2.700
(U)	Continue DCGS block upgrades. Continue development of the DCGS Integrated Backbone (DIB) and Block 10.2 to enhance DCGS support to the commander, improve integration with the AOC, and to increase time critical targeting effectiveness.	9.429	5.056	9.973	42.033
(U)	Begin development efforts for Block 20, the next AF DCGS increment upgrade.	0.000	0.000	0.000	9.361
(U)	Continue integration of MASINT and Multiple Intelligence (Multi-INT) exploitation technology capabilities into DCGS.	2.840	2.900	5.000	5.000
(U)	Initiate communications architecture upgrade effort.			10.000	31.000
(U)	Incorporate C2 Integration for Joint Dynamic Targeting capability	0.988			
(U)	Conduct Battle Damage Assessment Process Analysis study.		1.000		
(U)	Total Cost	26.741	21.977	40.402	103.516

(U) C. Other Program Funding Summary ($ 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 Cost
(U) OPAF (PE 0305208F)	99.147	119.477	147.952	197.550	172.152	219.052	146.807	163.705		TBD

(U) D. Acquisition Strategy

The Air Force uses an evolutionary acquisition approach with blocks (increments) and spirals to develop, field, and upgrade the DCGS weapon system and contracts for the

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improved capabilities through full and open competition to the maximum extent possible.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2005**

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 2004 Cost	FY 2004 Cost	FY 2004 Award Date	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/Spirals	Multiple	Raytheon, Garland, TX	3.318	5.541	Dec-03	3.076	Dec-04	8.870	Dec-05	42.033	Dec-06	Continuing	TBD	TBD
Block 20 Upgrade	TBD	TBD								9.361	Feb-07	Continuing	TBD	TBD
NCCT/Platform Interface Module for DGIF	Multiple	Raytheon, Falls Church, VA		2.000	Apr-04	3.000	Jan-05						5.000	
Communications Capability Upgrade	TBD	TBD						10.000	Jan-06	31.000	Jan-07	Continuing	TBD	TBD
Common Imagery Processor Software Development	C/CPFF	Northrup Grumman, Baltimore, MD	17.279	6.147	Dec-03	6.709	Dec-04	9.603	Dec-05	10.172	Dec-06	Continuing	TBD	TBD
NCCT GCP development	Multiple	Lockheed Martin, San Jose, CA	1.550	1.049	Dec-03								2.599	
NCCT GCP Integration	C/CPAF	General Dynamics, Concord, MA	0.210	1.508	Dec-03								1.718	
MASINT capabilities into DCGS	Multiple	Riverside Research Institute, Fairfax, VA		2.840	Feb-04	2.900	Feb-05	5.000	Jan-06	5.000	Jan-07	Continuing	TBD	TBD
Commercial Imagery Integration	Multiple	Par Gov't Systems, Rome NY		1.054	Mar-04	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		0.988	Feb-04								0.988	
Subtotal Product Development			22.357	21.127		16.430		36.073		100.266		Continuing	TBD	TBD
Remarks:														
(U) Support														
Other Non-Prime Gov't Contracts				0.604	Nov-03	0.375	Feb-05	0.229	Feb-06	0.300	Feb-07	Continuing	TBD	TBD
SAIC	SS/ IDIQ	McLean, VA	2.400	1.944	Oct-03	2.028	Jan-05	2.100	Mar-06	1.300	Mar-07	Continuing	TBD	TBD
Various			12.352	3.066	Mar-04	3.144	Oct-04	2.000	Oct-05	1.650	Oct-06	Continuing	TBD	TBD
Subtotal Support			14.752	5.614		5.547		4.329		3.250		Continuing	TBD	TBD
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2005**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305208F Distributed Common Ground Systems**	**4826 Common Imagery Ground / Surface Systems**

(U) Total Cost	37.109	26.741	21.977	40.402	103.516	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2005
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

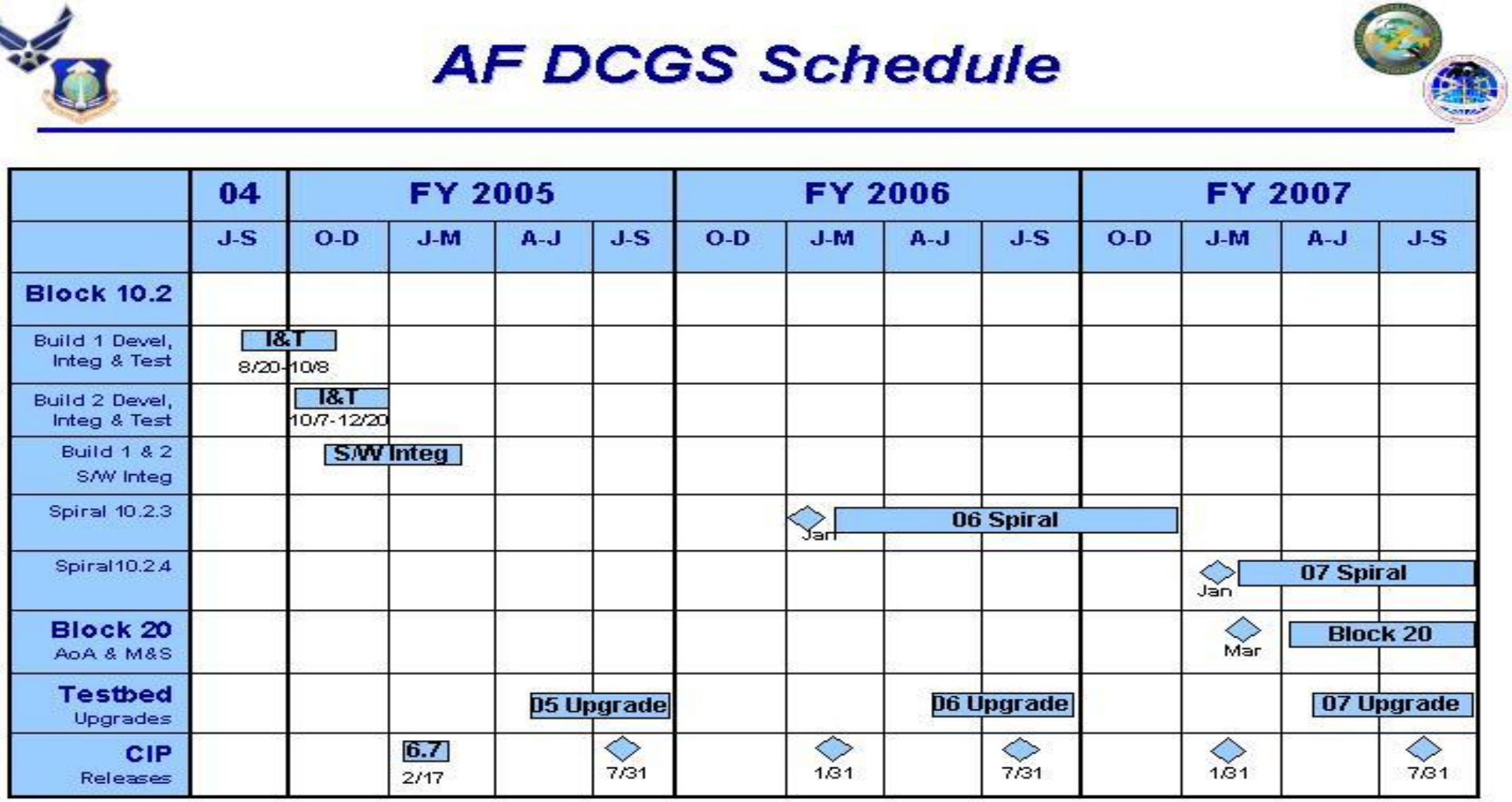

Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2005
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305208F Distributed Common Ground Systems	PROJECT NUMBER AND TITLE: 4826 Common Imagery Ground / Surface Systems	

(U) Schedule Profile	FY 2004	FY 2005	FY 2006	FY 2007
(U) Block 10.2 Builds 1 & 2	4Q	1-2Q		
(U) Block 10.2 Spiral 10.2.3			2-4Q	1Q
(U) Block 10.2 Spiral 10.2.4				2-4Q
(U) Begin Development Efforts for Block 20				2-4Q
(U) DCGS-I Testbed Upgrades	4Q	3-4Q	3-4Q	3-4Q
(U) CIP Version 6.7 Release		2Q		