

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2004
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BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems
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Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	30.885	27.772	21.232	47.290	169.423	138.666	162.462	Continuing	TBD
4826 Common Imagery Ground / Surface Systems	30.885	27.772	21.232	47.290	169.423	138.666	162.462	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 Agencies to provide world-wide ground/service 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 (using the Common Data Link) 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 RF-INT, 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 data services level interoperability.

AF DCGS provides ground/surface systems capable of tasking intelligence sensors, and receiving, processing, exploiting, and disseminating (TPED) 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 four core locations: two CONUS based and two 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 deployable and capable of reachback operations via 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 closer integration to AOC tools. 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.

AF DCGS received significant funding increases in FY 06-FY 09 to support AF DCGS modernization. These funds will transform AF DCGS from its existing architecture based on proprietary and legacy systems to an open 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-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. Baseline capability includes F/A-18 and U-2 sensors. Efforts are underway to augment the CIP baseline to process data from upgraded/new sensors.

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Also included in this project is a mobile DCGS-I testbed. The testbed is being 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.

Program is in 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)**

	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Previous President's Budget	30.674	27.107	26.198
(U) Current PBR/President's Budget	30.885	27.772	21.232
(U) Total Adjustments	0.211	0.665	
(U) Congressional Program Reductions		-0.097	
Congressional Rescissions	-0.730	-0.238	
Congressional Increases	0.941	1.000	
Reprogrammings			
SBIR/STTR Transfer			

(U) **Significant Program Changes:**

- AF DCGS received significant funding increases in FY 06 - FY 09 to support AF DCGS modernization. These funds will transform AF DCGS from its existing architecture based on proprietary and legacy systems to an open architecture integrated into the Network Centric Warfare environment.
- In FY04, AF DCGS received a Congressional increase of \$1.0M to continue efforts to improve the prosecution of Time Critical Targets (TCT).
- In FY03, AF DCGS received \$10.4M from the Cost of War Transfer Account for the development of increased/improved dissemination capabilities (\$8M) and commercial imagery integration (\$2.4M).

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Cost (\$ in Millions)	FY 2003 Actual	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	Cost to Complete	Total
4826 Common Imagery Ground / Surface Systems	30.885	27.772	21.232	47.290	169.423	138.666	162.462	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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Also included in this project is a mobile DCGS-I testbed. The testbed is being used by Service and Agency program offices to test interfaces with new sensors,

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(U) <u>B. Accomplishments/Planned Program (\$ in Millions)</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(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)	1.512	1.544	1.602
(U) Continue DCGS-I testbed development.	1.304	1.251	1.375
(U) Continue evolving CIP and its associated architecture to keep pace with growing sensor baseline: new and upgraded sensors. Continue investigation of and implementation of advanced processing tools.	12.383	7.786	7.454
(U) Continue the Adaptive Link Formatter (ALF) development.	8.000		
(U) Continue Commercial Imagery integration started under COW effort.	2.400	1.054	0.745
(U) Continue ISR management capability development efforts further integrating this functionality into DCGS. Continue development of improved command and control of ISR platforms/sensors to enhance DCGS support to the commander, improve integration with the AOC, and to increase Time Critical Targeting (TCT) effectiveness. Continue development of NCCT and DCGS integration.	5.286	9.637	5.056
(U) Continue integration of MASINT exploitation capabilities into DCGS as an extension of the Cost of War (COW) effort.		5.000	5.000
(U) Develop the geospatial effort in support of AF transition to digital mapping technology and products as an extension of the COW effort.			
(U) Develop C2 Integration for Joint Dynamic Targeting		1.000	
(U) Continue development of DGS-X		0.500	
(U) Total Cost	30.885	27.772	21.232

(U) <u>C. Other Program Funding Summary (\$ in Millions)</u>	<u>FY 2003</u>	<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>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) Other APPN									TBD
Procurement line is classified.									

(U) **D. Acquisition Strategy**
DCGS uses a spiral development program to field and upgrade the common ground station architecture. Systems and technology will be contracted for under a competitive Request for Proposal (RFP) process where possible.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis

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BUDGET ACTIVITY			PE NUMBER AND TITLE					PROJECT NUMBER AND TITLE				
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<u>(U) Cost Categories</u>	<u>Contract Method & Type</u>	<u>Performing Activity & Location</u>	<u>Total</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>FY</u>	<u>Cost to</u>	<u>Total</u>	<u>Target</u>
(Tailor to WBS, or System/Item Requirements) (\$ in Millions)			<u>Prior to FY</u>	<u>2003</u>	<u>2003</u>	<u>2004</u>	<u>2004</u>	<u>2005</u>	<u>2005</u>	<u>Complete</u>	<u>Cost</u>	<u>Value of</u>
			<u>2003</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>	<u>Cost</u>	<u>Award</u>			<u>Contract</u>
			<u>Cost</u>		<u>Date</u>		<u>Date</u>		<u>Date</u>			
<u>(U) Product Development</u>												
Raytheon	Multiple	Garland, TX	1.318	2.000		5.701		4.347		Continuing	TBD	
Northrop Grumman	C/CPFF	Baltimore, MD	4.896	12.383		6.347		7.454		Continuing	TBD	
Lockheed Martin	Multiple	San Jose, CA	0.300	1.250		2.199				Continuing	TBD	
General Dynamics (formerly Veridian)	C/CPAF	Hanscom AFB, MA	0.000	0.210		1.508				Continuing	TBD	
Masint Contractor TBD						5.000		5.000			10.000	
Par Government Systems Corp						1.054					1.054	
Adroit						1.000					1.000	
Subtotal Product Development			6.514	15.843		22.809		16.801		Continuing	TBD	0.000
Remarks:												
<u>(U) Support</u>												
Other Non-Prime Gov't Contracts			0.000							Continuing	TBD	
MITRE	SS/CPAF	Burlington, MA & Hanscom AFB		0.290		0.300				Continuing	TBD	
SAIC	SS/ IDIQ	Hanscom AFB, MA		2.400		2.700		2.375		Continuing	TBD	
Various				12.352		1.963		2.056			16.371	
Subtotal Support			0.000	15.042		4.963		4.431		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
Remarks:												
<u>(U) Total Cost</u>			6.514	30.885		27.772		21.232		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

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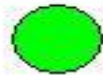
BUDGET ACTIVITY
07 Operational System Development

PE NUMBER AND TITLE
0305208F Distributed Common
Ground Systems

PROJECT NUMBER AND TITLE
4826 Common Imagery Ground /
Surface Systems



AF DCGS



AF DCGS Schedule

	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10
Block 10.2		■						
Block 20.1								
CAN/WAN Installs	■							
Network Upgrades								
ETP Expansion								
Combat Support	■							

Exhibit R-4a, RDT&E Schedule Detail

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(U) <u>Schedule Profile</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>
(U) Integrate/Test changes in testbed	2Q	2Q	2Q
(U) Assess/integrate national and tactical interface changes to DCGS	1Q	1Q	1Q
(U) Integrate new sensors and sensor modifications into CIP	2Q	2Q	2Q
(U) DCGS technology/software upgrade	2Q	2Q	2Q
(U) DCGS commonality and Interoperability standards	2Q	2Q	2Q
(U) NATO Interoperability Standards	1Q	2Q	1Q
(U) DCGS Infrastructure IPT	1-4Q	1-4Q	1-4Q
(U) Develop improved C2 of ISR platforms/sensors	1Q	2Q	2Q