

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)									DATE June 2001	
BUDGET ACTIVITY 07 - Operational System Development				PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems						
COST (\$ in Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	24,576	25,593	11,429	16,829	12,626	10,981	11,279	11,599	Continuing	TBD
4821 Distributed Common Ground System Interoperability	1,679	1,579	0	0	0	0	0	0	Continuing	TBD
4826 Common Imagery Ground / Surface Systems	22,897	24,014	11,429	16,829	12,626	10,981	11,279	11,599	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0
FY 03-FY 07 budget numbers do not reflect the DoD strategic review results.										
(U) A. Mission Description										
The Distributed Common Ground System (DCGS) Program is a cooperative effort between the services and agencies to provide systems capable of receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance 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 Common Imagery Ground/Surface Systems (CIGSS) for Imagery Intelligence (IMINT); Joint Interoperable Operator Network (JION) for Signal Intelligence (SIGINT); and Joint Airborne Measurement and Signature Intelligence (MASINT) Architecture (JAMA) for MASINT.										
(U) B. Budget Activity Justification										
Program is in Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development.										
(U) C. Program Change Summary (\$ in Thousands)										
				<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>				<u>Total Cost</u>
(U)	Previous President's Budget (FY 2001 PBR)			24,205	21,330	15,146				TBD
(U)	Appropriated Value			24,820	25,830					
(U)	Adjustments to Appropriated Value									
	a. Congressional/General Reductions			-147	-53					
	b. Small Business Innovative Research									

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				June 2001
BUDGET ACTIVITY	PE NUMBER AND TITLE			
07 - Operational System Development	0305208F Distributed Common Ground Systems			
(U) <u>C. Program Change Summary (\$ in Thousands) Continued</u>				
	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Total Cost</u>
c. Omnibus or Other Above Threshold Reprogram				
d. Below Threshold Reprogram				
e. Rescissions	-97	-184		
(U) Adjustments to Budget Years Since FY 2001 PBR			-3,717	
(U) Current Budget Submit/FY 2002 PBR	24,576	25,593	11,429	TBD
(U) <u>Significant Program Changes:</u>				
- Congress added \$12M in FY00 and \$4.5M in FY01 for Eagle Vision				
- USAF added \$21.5M in the FY01-05 budget for Common Imagery Processor				
- Adjustments in FY02: Eagle Vision funding transfers to PE 27277F (\$1.95M), Time Critical Targeting funding added (\$1.25M), and Joint Services Imagery Processing System funding removed (\$3.0M).				

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)

DATE
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BUDGET ACTIVITY		PE NUMBER AND TITLE								PROJECT
07 - Operational System Development		0305208F Distributed Common Ground Systems								4821
COST (\$ in Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
4821 Distributed Common Ground System Interoperability	1,679	1,579	0	0	0	0	0	0	Continuing	TBD

FY 03-FY 07 budget numbers do not reflect the DoD strategic review results.

(U) A. Mission Description

The Distributed Common Ground System (DCGS) Program is a cooperative effort between the services and agencies to provide systems capable of receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance 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 C4I environment. The interoperability program integrates architectures and standards from Common Imagery Ground/Surface Systems (CIGSS) for IMINT; Joint Interoperable Operator Network (JION) for SIGINT; and Joint Airborne MASINT Architecture (JAMA) for MASINT. In FY02 funds will move to DCGS/CIGSS BPAC 674826.

(U) FY 2000 (\$ in Thousands)

- (U) \$1,085 Continue evolving DCGS architectures and standards for commonality and interoperability across intelligence disciplines.
- (U) \$344 Continue engineering development of NATO interoperability standards.
- (U) \$250 Manage DCGS Infrastructure Integrated Product Team (IPT) for ASD/C3I.
- (U) \$1,679 Total

(U) FY 2001 (\$ in Thousands)

- (U) \$1,079 Continue evolving DCGS architectures and standards for commonality and interoperability across intelligence disciplines.
- (U) \$250 Continue engineering development of NATO interoperability standards.
- (U) \$250 Manage DCGS Infrastructure IPT for ASD/C3I.
- (U) \$1,579 Total

(U) FY 2002 (\$ in Thousands)

- (U) \$0 Funding moved to DCGS/CIGSS BPAC 674826
- (U) \$0 Total

(U) B. Project Change Summary

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)							DATE June 2001				
BUDGET ACTIVITY 07 - Operational System Development				PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems				PROJECT 4821			
(U) C. Other Program Funding Summary (\$ in Thousands)											
	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</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>Estimate</u>	<u>Complete</u>		
(U) Other APPN Procurement line is classified. See PEM for details.											
(U) D. Acquisition Strategy DCGS interoperability program will use FFRDC, GSA contracts, and competitive processes where possible.											
(U) E. Schedule Profile											
				<u>FY 2000</u>			<u>FY 2001</u>		<u>FY 2002</u>		
				1	2	3	4	1	2	3	4
(U) DCGS commonality and Interoperability standards				*							
(U) NATO Interoperability Standards				*							
(U) DCGS Infrastructure IPT				*							
(U) DCGS commonality and Interoperability standards								*			
(U) NATO Interoperability Standards								*			
(U) DCGS Infrastructure IPT								*	*	*	X
*- Denotes Completed Event											
X-Denotes planned event											

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE June 2001				
BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems			PROJECT 4821			
(U) A. Project Cost Breakdown (\$ in Thousands)											
						<u>FY 2000</u>		<u>FY 2001</u>		<u>FY 2002</u>	
(U)	Program Management					200		200			
(U)	System Engineering - Architectures and Interoperability					1,479		1,379			
(U)	Total					1,679		1,579			
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)											
(U) Performing Organizations:											
	<u>Contractor or Government</u>	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Performing Activity</u>	<u>Project Office</u>	<u>Total Prior to FY 2000</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget FY 2002</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	<u>Performing Activity</u>	<u>or Funding Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>						
<u>Product Development Organizations</u>											
	MITRE	SS,FFP	2Q99	N/A	N/A	550	250	250		Continuing	TBD
	SAIC	SS,IDIQ	2Q99	N/A	N/A	700	700	647		Continuing	TBD
	Veridian (formerly MRJ)	SS,FFP	2Q99	N/A	N/A	300	394	400		Continuing	TBD
	Other Non-Prime Gov't	Multiple	2Q99	N/A	N/A	0	135	82		Continuing	TBD
<u>Contracts</u>											
<u>Support and Management Organizations</u>											
	SAIC	SS,IDIQ	2Q99	N/A	N/A	200	200	200		Continuing	TBD
<u>Test and Evaluation Organizations</u>											
	<u>Subtotals</u>					<u>Total Prior to FY 2000</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget FY 2002</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	Subtotal Product Development					1,550	1,479	1,379		TBD	TBD
	Subtotal Support and Management					200	200	200		TBD	TBD
	Subtotal Test and Evaluation										
	Total Project					1,750	1,679	1,579		TBD	TBD

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)									DATE June 2001		
BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems					PROJECT 4826	
COST (\$ in Thousands)	FY 2000 Actual	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost	
4826 Common Imagery Ground / Surface Systems	22,897	24,014	11,429	16,829	12,626	10,981	11,279	11,599	Continuing	TBD	
<p>FY 03-FY 07 budget numbers do not reflect the DoD strategic review results.</p> <p>(U) <u>A. Mission Description</u></p> <p>DCGS provides systems capable of tasking intelligence sensors, and receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance platforms, as well as commercial sources. DCGS is a system of systems that does not need to be collocated but must be interconnected by a robust communications structure to provide data streams between intelligence collector, exploiters, producers, disseminators, and users. DCGS has four core locations: two CONUS based and two OCONUS. Other DCGS systems are distributed among Air Force operational units at numbered Air Force level, to support the Joint Task Force commander and the Air Operations Center (AOC). The CONUS based systems are deployable and capable of reachback operations via satellite.</p> <p>DCGS provides significant support to Time Critical Targeting (TCT). This support will be enhanced with integration of software tools and closer integration to AOC tools. Coupled with updated operational procedures, TCT functionality supports tighter integration of C2, ISR, and attack systems. ISR management requirements previously identified as a FY00 reprogramming request are included within the AOC (PE 27410F) and DCGS weapons systems.</p> <p>Eagle Vision is a deployable ground station for programming and collecting panchromatic, multispectral, and synthetic aperture radar broad-area imagery from commercial earth remote sensing satellites and processing/merging it with national imagery for mission planning, topographic analysis, and intelligence-gathering purposes. The AF has an operational Eagle Vision system at Ramstein AFB, GE. The Reno ANGB, NV National Eagle (commercial imagery post processing capability) is being upgraded with direct downlink capability along with direct downlink being procured for South Carolina ANG. Reno ANGB, NV also has a processing and exploitation system (networked with other DCGS sites) that supports the Theater Airborne Reconnaissance System (TARS) in addition to other DCGS missions. Eagle Vision will transfer from PE 35208F to PE 27277F in FY02. DCGS Interoperability funding will transfer to DCGS/CIGSS in FY02.</p> <p>A mobile CIGSS/DCGS testbed is used by multiple service and agency program offices to test interfaces with new sensors, applications, and other modifications, and to support the integration and test of DCGS components prior to introduction into the operational environment.</p> <p>The Common Imagery Processor (CIP) is a major interoperability initiative to develop a common sensor processing element within CIGSS 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 CIGSS. 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 and to migrate CIP to a multi-intelligence processor.</p>											
Project 4826			Page 6 of 11 Pages				Exhibit R-2A (PE 0305208F)				

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)		DATE June 2001
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
07 - Operational System Development	0305208F Distributed Common Ground Systems	4826
(U) <u>A. Mission Description Continued</u>		
(U) <u>FY 2000 (\$ in Thousands)</u>		
(U) \$2,849	Continue CIGSS/DCGS sustaining engineering to implement software upgrades and enhancements to maintain compatibility with changing national and tactical interfaces.	
(U) \$900	Continue CIGSS/DCGS testbed development.	
(U) \$720	Continue system engineering and technical support.	
(U) \$1,778	Continue to provide sustaining engineering for commercial satellite imagery to ensure operational usability. Continue integration of 5 m and architecture preparation for 1 meter commercial satellites.	
(U) \$4,650	Continue evolving CIP to keep pace with new sensors and projected sensor modification programs. Investigate multi-int processing.	
(U) \$12,000	Upgrade and procure Eagle Vision commercial imagery direct downlink capabilities. Integrate with National Eagle. (Congressional add to FY00)	
(U) \$22,897	Total	
(U) <u>FY 2001 (\$ in Thousands)</u>		
(U) \$2,400	Continue CIGSS/DCGS sustaining engineering to implement software upgrades and enhancements to maintain compatibility with changing national/tactical interfaces and to increase interoperability with expanding ISR platform/sensor baseline.	
(U) \$1,500	Continue CIGSS/DCGS testbed development.	
(U) \$360	Continue ISR system engineering and technical support.	
(U) \$4,500	1 Meter Satellite Upgrade for EV III & IV	
(U) \$1,900	Continue to provide sustaining engineering for commercial satellite imagery to ensure operational usability. Continue integration of new/upgraded commercial imaging satellites.	
(U) \$13,354	Continue evolving CIP to keep pace with growing sensor baseline: new and upgraded sensors. Implement initial multi-int processing upgrades and continue to investigate additional multi-int capabilities.	
(U) \$24,014	Total	
(U) <u>FY 2002 (\$ in Thousands)</u>		
(U) \$1,609	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 ASD/C3I	
(U) \$250	Continue CIGSS/DCGS sustaining engineering to implement software upgrades and enhancements to maintain compatibility with changing national/tactical interfaces and to increase interoperability with expanding ISR platform/sensor baseline.	
(U) \$1,350	Continue CIGSS/DCGS testbed development.	
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BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems					PROJECT 4826			
(U) A. Mission Description Continued													
(U) <u>FY 2002 (\$ in Thousands) Continued</u>													
(U)	\$1,317	Develop 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.											
(U)	\$6,903	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 and multi-INT processing upgrades.											
(U)	\$11,429	Total											
(U) B. Project Change Summary													
(U) C. Other Program Funding Summary (\$ in Thousands)													
		<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>FY 2006</u>	<u>FY 2007</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>Estimate</u>	<u>Complete</u>			
(U)	Other APPN										TBD		
	Procurement line is classified. See PEM for details.												
(U) D. Acquisition Strategy													
	DCGS will use 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.												
(U) E. Schedule Profile													
		<u>FY 2000</u>				<u>FY 2001</u>				<u>FY 2002</u>			
		1	2	3	4	1	2	3	4	1	2	3	4
(U)	Complete JSIPS Block III Upgrade			*									
(U)	Integrate national and tactical interface changes to DCGS			*									
(U)	Integrate new sensors and sensor modifications into CIP	*											
(U)	Integrate/Test changes in testbed						*						
(U)	Update commercial imagery interface	*											
(U)	Assess/integrate national and tactical interface changes to DCGS						*						
(U)	Integrate new sensors and sensor modifications into CIP						*						
(U)	Integrate/Test changes in testbed							*					
(U)	Update commercial imagery interface						*						
Project 4826		Page 8 of 11 Pages					Exhibit R-2A (PE 0305208F)						

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BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems					PROJECT 4826				
(U) E. Schedule Profile Continued														
		<u>FY 2000</u>					<u>FY 2001</u>					<u>FY 2002</u>		
	1	2	3	4	1	2	3	4	1	2	3	4		
(U) DCGS technology/software upgrade			*											
(U) DCGS technology/software upgrade						*								
(U) Eagle Vision Direct Downlink Award (NV & SC ANG)			*											
(U) Eagle Vision Direct Downlink Delivery (NV & SC ANG)								X						
(U) EV III & IV 1 Meter Upgrade						*								
(U) DCGS commonality and Interoperability standards									X					
(U) NATO Interoperability Standards									X					
(U) DCGS Infrastructure IPT									X	X	X	X		
(U) Assess/integrate national and tactical interface changes to DCGS									X					
(U) DCGS technology/software upgrade										X				
(U) Integrate new sensors and sensor modifications into CIP									X					
(U) Integrate/Test changes in testbed											X			
*- Denotes Completed Event / X-Denotes planned event														

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE June 2001			
BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems			PROJECT 4826		
(U) A. Project Cost Breakdown (\$ in Thousands)										
						<u>FY 2000</u>		<u>FY 2001</u>		<u>FY 2002</u>
(U)	Hardware/Software Development					3,898		8,515		4,803
(U)	System Engineering					6,239		7,652		3,767
(U)	System Integration					10,825		5,800		1,609
(U)	Ancillary Hardware Development					935		1,047		250
(U)	Program Management					1,000		1,000		1,000
(U)	Total					22,897		24,014		11,429
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)										
(U) Performing Organizations:										
<u>Contractor or Government</u>	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Performing Activity</u>	<u>Project Office</u>	<u>Total Prior to FY 2000</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget FY 2002</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>						
<u>Product Development Organizations</u>										
Raytheon, Garland, TX	Multiple	2Q99	N/A	N/A	0	300	300	0	Continuing	TBD
Northrop Grumman, Baltimore, MD	C, CPFF	2Q99	N/A	N/A	0	4,896	13,294	6,903	Continuing	TBD
Lockheed Martin, San Jose, CA	Multiple	2Q99	N/A	N/A	0	300	300	476	Continuing	TBD
TBD for DCGS Upgrades and Migration		TBD	N/A	N/A	0	1,018	1,600	1,150	Continuing	TBD
Matra, Velizy, FR	Multiple	1Q00	N/A	N/A	0	1,384	1,384	0	Continuing	TBD
Matra	SS, TBD	3Q00	N/A	N/A	0	11,886	4,470	0	Continuing	TBD
Other Non-Prime Gov't Contracts	TBD	TBD	N/A	N/A	0	1,122	0	0	Continuing	TBD
MITRE	SS, IDIQ	2Q99	N/A	N/A	0	456	566	500	Continuing	TBD
SAIC	SS, IDIQ	2Q99	N/A	N/A	0	535	1,100	1,150	Continuing	TBD
Veridian (formerly MRJ)	SS, FFP	2Q99	N/A	N/A	0	0	0	250	Continuing	TBD

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BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT	
07 - Operational System Development					0305208F Distributed Common Ground Systems					4826	
(U) <u>Performing Organizations Continued:</u>											
<u>Support and Management Organizations</u>											
Other Non-Prime Gov't	TBD	TBD	N/A	N/A	0	1,000	1,000	1,000	Continuing	TBD	
Contracts											
<u>Test and Evaluation Organizations</u>											
					<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>	
					to FY 2000	FY 2000	FY 2001	FY 2002	Complete	Program	
<u>Subtotals</u>											
Subtotal Product Development					0	21,897	23,014	10,429	TBD	TBD	
Subtotal Support and Management					0	1,000	1,000	1,000	TBD	TBD	
Subtotal Test and Evaluation											
Total Project					0	22,897	24,014	11,429	TBD	TBD	