

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 1999
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BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems
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COST (\$ In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	0	20,906	12,820	14,018	13,775	13,197	13,439	13,601	Continuing	Continuing
4826 Common Imagery Ground / Surface Systems	0	18,752	11,121	12,411	12,152	11,524	11,727	11,850	Continuing	Continuing
4821 DCGS Interoperability	0	2,154	1,699	1,607	1,623	1,673	1,712	1,751	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

Note: FY 1998 funds are in PE 0305208D, Distributed Common Ground Systems
 Funding for FY99-05 transferred to PE 0305208F from PE 0305208D as part of DARO divestiture.

(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 with reconnaissance platforms and sensors, and integrated into the Joint C4I environment. The 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.

(U) B. Budget Item Justification

Program is in Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development.

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BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems
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(U) C. Program Change Summary (\$ in Thousands)

	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Total Cost</u>
(U) Previous President's Budget (FY1999 PB)	0	0	0	0	TBD
(U) Appropriated Value		21,159			
(U) Adjustments to Appropriated Value					
a. Cong Reductions		-253			
b. SBIR					
c. Omnibus or Other Above Threshold Reprogram					
d. Below Threshold Reprogramming					
(U) Adjustments to Budget Years Since FY 1999 PB			+12,820	+14,018	
(U) Current Budget Submit/ FY 2000 President's Budget		20,906	12,820	14,018	Continuing

(U) Change Summary Explanation:

Funding: In FY 1998, DCGS funding was included in DARP PE0305208D. Funding for FY99-05 transferred to PE 0305208F from PE 0305208D as part of DARO divestiture.

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)	DATE February 1999
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BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems	PROJECT 4826
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COST (\$ In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
4826 Common Imagery Ground / Surface Systems	0	18,752	11,121	12,411	12,152	11,524	11,727	11,850	Continuing	Continuing

(U) A. Mission Description

The 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 Air Force component consists of two CONUS based DCGS systems, and a fixed PACAF system. The AF DCGS systems are distributed among Air Force operational units, numbered air force level, to support the Joint Task Force commander and the Air Operations Center. The CONUS based systems are deployable and are capable of reachback operations via satellite. The EAGLE VISION Foreign Comparative Test program is being integrated into DCGS for the near real time receipt and processing of commercial satellite imagery. In addition, the Air National Guard has processing and exploitation systems in support of the Theater Airborne Reconnaissance System (TARS) based on the DCGS architecture.

A mobile DCGS testbed is used by 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. The Marine Corps component is a national IMINT exploitation system common to the Air Force national exploitation system.

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 will include F/A-18 and U-2 sensors, as well as EO and SAR data from DarkStar. Efforts are underway to augment the CIP baseline to process data from upgraded/new sensors and to investigate CIP as a multi-intelligence processor.

(U) FY 1998 (\$ in Thousands):

- (U) 0 FY 98 funds are in PE 0305206D, Distributed Common Ground Systems
- (U) 0 Total

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)		DATE February 1999
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational System Development	0305208F Distributed Common Ground Systems	4826
<p>(U) <u>FY 1999 (\$ in Thousands):</u></p> <ul style="list-style-type: none"> - (U) \$ 7,774 Continue CIGSS/DCGS sustaining engineering to implement software upgrades and enhancements to maintain compatibility with changing national and tactical interfaces. Completes JSIPS Block III upgrade. - (U) \$ 2,000 Continue CIGSS/DCGS testbed development. - (U) \$ 2,160 Continue system engineering and technical support. - (U) \$ 1,450 Continue USMC Tactical Exploitation Group (TEG) development efforts. - (U) \$ 2,000 Continue sustaining engineering for commercial satellite imagery. Integrate 1 meter and Landsat 7 capability. - (U) \$ 3,368 Continue evolving CIP to keep pace with new sensors and projected sensor modification programs. - (U) \$18,752 Total <p>(U) <u>FY 2000 (\$ in Thousands):</u></p> <ul style="list-style-type: none"> - (U) \$ 2,350 Continue CIGSS/DCGS sustaining engineering to implement software upgrades and enhancements to maintain compatibility with changing national and tactical interfaces. - (U) \$ 1,500 Continue CIGSS/DCGS testbed development. - (U) \$ 450 Continue system engineering and technical support. - (U) \$ 1,950 Continue to provide sustaining engineering for commercial satellite imagery to ensure operational usability. - (U) \$ 4,871 Continue evolving CIP to keep pace with new sensors and projected sensor modification programs. Investigate multi-int processing. - (U) \$11,121 Total <p>(U) <u>FY 2001 (\$ in Thousands):</u></p> <ul style="list-style-type: none"> - (U) \$ 2,350 Continue CIGSS/DCGS sustaining engineering to implement software upgrades and enhancements to maintain compatibility with changing national and tactical interfaces. - (U) \$ 1,500 Continue CIGSS/DCGS testbed development. - (U) \$ 450 Continue system engineering and technical support. - (U) \$ 1,950 Continue to provide sustaining engineering for commercial satellite imagery to ensure operational usability. - (U) \$ 6,161 Continue evolving CIP to keep pace with growing sensor baseline: new and upgraded sensors. Implement initial multi-int processing upgrades. - (U) \$12,411 Total 		
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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)		DATE
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational System Development	0305208F Distributed Common Ground Systems	4826
<p>(U) B. <u>Project Change Summary - Description of Significant Changes:</u></p> <p>Funding for Distributed Common Ground Systems for FY99-05 transferred to the Air Force (PE 0305208F) from Defense (PE 0305208D).</p> <p>(U) C. <u>Other Program Funding Summary (\$ in Thousands)</u></p> <p>(U) D. <u>Acquisition Strategy:</u></p> <p>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.</p>		
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BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems	PROJECT 4826
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(U) E. Schedule Profile

	<u>FY 1998</u>				<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
(U) Assess/integrate national and tactical interface changes to DCGS						X										
(U) Integrate new sensors and sensor modifications into CIP						X										
(U) Integrate/Test changes in testbed						X										
(U) Update commercial imagery interface						X										
(U) Complete JSIPS Block III Upgrade								X								
(U) Assess/integrate national and tactical interface changes to DCGS												X				
(U) Integrate new sensors and sensor modifications into CIP												X				
(U) Integrate/Test changes in testbed											X					
(U) Update commercial imagery interface											X					
(U) Assess/integrate national and tactical interface changes to DCGS															X	
(U) Integrate new sensors and sensor modifications into CIP															X	
(U) Integrate/Test changes in testbed															X	
(U) Update commercial imagery interface											X					
(U) Release DCGS Spiral 1 RFP										X						
(U) Award DCGS Spiral 1 contracts											X					
(U) Field DCGS Spiral 1 upgrades															X	
(U) Release DCGS Spiral 2 RFP														X		
(U) Award DCGS Spiral 2 contracts														X		

*- Denotes Completed Event / X-Denotes planned event

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)						DATE February 1999				
BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems			PROJECT 4826			
(U) A. <u>Project Cost Breakdown (\$ in Thousands)</u>										
				<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>			
(U)	Hardware/Software Development				4,211	1,187	1,189			
(U)	System Engineering				8,591	6,334	7,622			
(U)	System Integration				2,450	1,000	1,000			
(U)	Ancillary Hardware Development				2,000	1,500	1,500			
(U)	Program Management				1,500	1,100	1,100			
(U)	Total				18,752	11,121	12,411			
(U) B. <u>Budget Acquisition History and Planning Information (\$ in Thousands)</u>										
Performing Organizations:										
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 1998	Budget FY 1998	Budget FY 1999	Budget FY 2000	Budget FY 2001	Total Program
<u>Product Development Organizations</u>										
Raytheon, Garland, TX	Multiple	2Q99	N/A	N/A		2,450	500	500		continuing
Northrop Grumman, Baltimore, MD	C, CPFF	2Q99	N/A	N/A		3,368	4,870	6,161		continuing
Lockheed Martin, San Jose, CA	Multiple	2Q99	N/A	N/A		1,000	500	500		continuing
TBD for DCGS Upgrades and Migration	TBD	TBD	N/A	N/A		7,784	2,826	2,800		continuing
Other Non-Prime Gov't Contracts	TBD	TBD	N/A	N/A		700	475	500		continuing
MITRE	SS, FFP	2Q99	N/A	N/A		1,950	450	450		continuing
SAIC	SS, IDIQ	2Q99	N/A	N/A		1,500	1,500	1,500		continuing
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE February 1999
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BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems	PROJECT 4826
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Support and Management Organizations

N/A

Test and Evaluation Organizations

N/A

(U) B. Budget Acquisition History and Planning Information Continued (\$ in Thousands)

Government Furnished Property:

Item	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date	Total Prior to FY 1998	Budget FY 1998	Budget FY 1999	Budget FY 2000	Budget FY 2001	Total Program
<u>Product Development Property</u>									
N/A									
<u>Support and Management Property</u>									
N/A									
<u>Test and Evaluation Property</u>									
N/A									
Subtotal Product Development						18,752	11,121	12,411	continuing
Subtotal Support and Management						0	0	0	
Subtotal Test and Evaluation						0	0	0	
Total Project						18,752	11,121	12,411	continuing

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BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems	PROJECT 4821
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COST (\$ In Thousands)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
4821 DCGS Interoperability	0	2,154	1,699	1,607	1,623	1,673	1,712	1,751	Continuing	Continuing

(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 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.

(U) FY 1998 (\$ in Thousands):

Note: In FY 1998, DCGS funding was included in DARP PE0305208D. Funding for FY99-05 transferred to PE 0305208F from PE 0305208D as part of DARO divestiture.

– (U) 0 Total

(U) FY 1999 (\$ in Thousands):

- (U) \$ 1,654 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 Integrated Product Team (IPT) for ASD/C3I.
- (U) \$ 2,154 Total

(U) FY 2000 (\$ in Thousands):

- (U) \$ 1,199 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 Integrated Product Team (IPT) for ASD/C3I.
- (U) \$ 1,699 Total

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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2A Exhibit)		DATE
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational System Development	0305208F Distributed Common Ground Systems	4821
<p>(U) <u>FY 2001 (\$ in Thousands):</u></p> <ul style="list-style-type: none">- (U) \$ 1,107 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) \$ 1,607 Total <p>(U) B. <u>Project Change Summary - Description of Significant Changes:</u></p> <p>Funding for Distributed Common Ground Systems for FY99-05 transferred to the Air Force (PE 0305208F) from Defense (PE 0305208D).</p> <p>(U) C. <u>Other Program Funding Summary (\$ in Thousands)</u></p> <p>n/a</p> <p>(U) D. <u>Acquisition Strategy</u></p> <p>DCGS interoperability program will use FFRDC, GSA contracts, and competitive processes where possible.</p>		
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BUDGET ACTIVITY 7 - Operational System Development						PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems						PROJECT 4821							
(U) E. <u>Schedule Profile</u>																			
		<u>FY 1998</u>					<u>FY 1999</u>					<u>FY 2000</u>					<u>FY 2001</u>		
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
(U) DCGS commonality and Interoperability standards						X													
(U) NATO Interoperability Standards						X													
(U) DCGS Infrastructure IPT						X													
(U) DCGS commonality and Interoperability standards										X									
(U) NATO Interoperability Standards										X									
(U) DCGS Infrastructure IPT										X									
(U) DCGS commonality and Interoperability standards														X					
(U) NATO Interoperability Standards														X					
(U) DCGS Infrastructure IPT														X					
*- Denotes Completed Event X-Denotes planned event																			
Project 4821				Page 11 of 13 Pages				Exhibit R-2A (PE 0305208F)											

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)	DATE February 1999
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BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems	PROJECT 4821
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(U) A. Project Cost Breakdown (\$ in Thousands)

	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>
(U) Program Management		200	200	200
(U) System Engineering - Architectures and Interoperability		1,954	1,499	1,407
(U) Total		2,154	1,699	1,607

(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)

Performing Organizations:

Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 1998	Budget FY 1998	Budget FY 1999	Budget FY 2000	Budget FY 2001	Budget to Complete	Total Program
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Product Development Organizations

Other Non-Prime Gov't Contracts	TBD	TBD	N/A	N/A		2,154	1,699	1,607	continuing	continuing
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Support and Management Organizations

N/A

Test and Evaluation Organizations

N/A

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 1999				
BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems				PROJECT			
(U) B. <u>Budget Acquisition History and Planning Information Continued (\$ in Thousands)</u>											
Government Furnished Property:											
<u>Item Description</u>	<u>Contract Method/Type or Funding Vehicle</u>	<u>Award or Obligation Date</u>	<u>Delivery Date</u>	<u>Total Prior to FY 1998</u>	<u>Budget FY 1998</u>	<u>Budget FY 1999</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget to Complete</u>	<u>Total Program</u>	
<u>Product Development Property</u>											
N/A											
<u>Support and Management Property</u>											
N/A											
<u>Test and Evaluation Property</u>											
N/A											
Subtotal Product Development						2,154	1,699	1,607	continuing	continuing	
Subtotal Support and Management						0	0	0			
Subtotal Test and Evaluation						0	0	0			
Total Project						2,154	1,699	1,607	continuing	continuing	

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