

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

February 2002

BUDGET ACTIVITY 7 - Operational system development		PE NUMBER AND TITLE 0305208A - Distributed Common Ground Systems (JMIP)						PROJECT 956		
COST (In Thousands)		FY 2001 Actual	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	FY 2006 Estimate	FY 2007 Estimate	Cost to Complete	Total Cost
956	DISTRIBUTED COMMON GROUND SYSTEM (DCGS) (JMIP)	7839	72095	15683	15911	15625	45089	12933	Continuing	Continuing

A. Mission Description and Budget Item Justification: This project supports the system development and demonstration of the Distributed Common Ground Station, Army (DCGS-A). DCGS-A supports network centric warfare through sharing and distribution of timely, multi-INT battle management and targeting collection sensors information to Land Commanders at all echelons as well as to other services. Advanced networking, sensor connectivity, cross-cueing, data sharing and processing will provide commanders, a common view and understanding of the battlefield and access to Intelligence Reconnaissance and Surveillance (ISR) data and products currently only available within echelons, from a specific ISR ground station, or not time relevant. Modular and scalable components will provide flexibility for tailoring and deploying assets and capabilities in support of all types of units of employment/action and across a broad spectrum of conflicts. This project integrates and networks capabilities existent in multiple intelligence ground stations to include Tactical Exploitation System (TES), Guardrail Information Node (GR/IFN), ASAS Block II, Tactical UAV Ground Control Station (GCS), Counterintelligence/Human Intelligence Information Management Systems (CHIMS) and Common Ground Station (CGS). These efforts are now networked in this project and will provide common unified software and hardware infrastructure, which will enable Commanders' and Staffs' access to ISR ground stations information from any one ground station and data exchange amongst Army ISR ground stations for improved intelligence sharing and understanding in support of Commanders, ensure increased interoperability with other Services and reduce forward footprint and logistics burden for the Army, all critical transformation objectives. The Interim DCGS-A system will be demonstrated at the XVIII Airborne Corps in FY03 and fielded to III Corps in FY04. During this timeframe, legacy systems (TES, GR/IFN, ASAS, TUAV GCS, CHIMS and CGS) will remain operational worldwide. Therefore, the PE/SSNs for these legacy systems will remain in place to support these efforts until Objective DCGS-A is fielded. This project also supports the engineering development and acquisition of Army Common Imagery Ground/Surface Systems (CIG/SS). The objective of CIG/SS is to enable all systems to receive, process, exploit, and report any imagery source regardless of platform or sensor type to meet the intelligence and targeting needs of tactical commanders. The CIG/SS project provides the warfighter with an integrated and interoperable airborne reconnaissance imagery processing and exploitation capability that can be tailored for all levels of conflict. This project also incorporates Army funds originally divested from Defense Airborne Reconnaissance Program (DARP) for the imagery portion of the TES. TES provides the commander with maximum flexibility to satisfy intelligence needs under a wide range of operational scenarios. TES operators can perform multiple imagery Intelligence (IMINT), Signal Intelligence (SIGINT), cross-intelligence, or dissemination functions from any workstation.

DCGS was provided a supplemental fund called Defense Emergency Response Fund (DERF), as a non-add, for FY02 in the amount of \$34.9M to accelerate I-DCGS-A capability to XVIII Airborne and III Corps.

DCGS was also provided DERF funds, as a non-add, for the following fiscal years with amounts: FY03 \$21.7M, FY04 \$19.2M, FY05 \$28.2M, FY06 \$31.7M and FY07 \$17.0M.

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DCGS-A supports the Objective transition path of the Army Transformation Campaign Path (TCP).

FY 2001 Accomplishments:

- 1000 Continued CIG/SS element engineering to implement software upgrades, and enhancements to maintain compatibility with changing the national and tactical interfaces (MIES) Modernized Imagery Exploitation System.
- 540 Advanced Synthetic Aperture Radar (ASAR) Improvement Program (AIP) upgrades into TES.
- 6299 Continued CIG/SS element engineering to implement software upgrades, and enhancements to maintain compatibility with changing the national and tactical interfaces (TES).

Total 7839

FY 2002 Planned Program

- 7492 Continue CIG/SS element engineering to implement software upgrades, and enhancements to maintain compatibility with changing the national and tactical interfaces (TES)
- 750 AIP Upgrades into TES
- 12500 Tactical Exploitation System - Main (TES-M) to III Corps - key element of Interim DCGS-A Architecture
- 15000 Fabrication, integration, test and fielding of a Guardrail Information Node (GRIFN) to replace the GR/CS Integrated Processing Facility (IPF) as a part of Interim DCGS-A architecture to be fielded to III Corps.
- 5000 Development of TES/GRIFN/CGS/CHIMS interfaces and exchange requirements for Interim DCGS-A.
- 7000 Studies and analysis for Objective DCGS-A with an emphasis on the necessary communications/dissemination infrastructure, trade off analysis, database structure, and data element synchronization
- 10600 Conduct non-recurring engineering (NRE) to segment the Tactical Control Station / Moving Target Indicator (TCS/MTI) code.
- 5300 Develop and integrate the appropriate motion imagery capabilities into application subsets.
- 5453 Conduct NRE for common processing, exploitation and visualization application segments in an effort to derive a uniform application/toolset across the Army and among Other Services.

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FY 2002 Planned Program (Continued)

- 3000 Development of Tactics, Techniques and Procedures (TTPs) and associated developmental, operational and interoperability (Joint Interoperability Test Center - JITC) testing.

Total 72095

FY 2003 Planned Program

- 8319 Continue CIG/SS element engineering to implement software upgrades, and enhancements to maintain compatibility with changing the national and tactical interfaces (TES).
- 2000 Implement TES-MAIN/GRIFN/CGS/CHIMS interfaces and data access and/or exchange capabilities at III Corps and XVIII Airborne.
- 2732 Initiate design & co-site interference analysis for integration of next generation high speed data link components
- 1455 Analyze data dissemination & collaboration alternatives for operations
- 1177 Expand interoperability and data base leveling with other service DCGS components

Total 15683

B. Program Change Summary

	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY2002 PB)	7821	85242	8313
Appropriated Value	7894	72742	0
Adjustments to Appropriated Value	0	0	0
a. Congressional General Reductions	0	-647	0
b. SBIR / STTR	0	0	0
c. Omnibus or Other Above Threshold Reductions	0	0	0
d. Below Threshold Reprogramming	17	0	0
e. Rescissions	-72	0	0
Adjustments to Budget Years Since FY2002 PB	0	0	7370
Current Budget Submit (FY 2003 PB)	7839	72095	15683

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<u>C. Other Program Funding Summary</u>	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
PE 0603766A Tactical Surveillance Systems Project 907 (TIARA)	0	16605	16392	17396	16369	15248	16888	Continue	Continue
PE 0604766A TES/DCGS-A Project D909 (TIARA)	43087	0	239	219	217	210	204	0	116055
BZ7315 TENCAP (TIARA)	12735	0	0	0	0	5933	0	0	23019
BZ7316 CIG/SS (JMIP)	2807	2591	2617	2656	2713	999	64753	Continue	Continue
BZ7317 Tactical Exploitation System (TIARA) *1	0	33410	17576	43675	18880	6008	7039	Continue	Continue
APA AZ2000 Guardrail Mods (TIARA) (DCGS-A GRIFN MDEP FPDP Only) *2	0	0	0	4966	4953	1098	0	0	11017
PE 0604766A Tactical Exploitation System (TES) / DCGS-A 957	14780	59693	56423	59851	48636	42250	42080	Continue	Continue
PE 0604770 Army Common Ground Station (CGS) (202)	28133	8026	4740	4939	6267	6184	5817	0	64106
BA1080, Army Common Ground Station (CGS)	65806	21141	8620	8438	0	0	0	Continue	Continue
PE 0604321 CI/HUMINT Software Products (B41) (TIARA)	1815	2336	2361	3225	2431	2989	5192	0	20349
BK5275 CI HUMINT Info Management System	3000	2472	9735	9980	4953	5094	9826	0	45060

C. Other Program Funding Summary: *1 Congress reprogrammed \$7.5 M from PE 305208, Project 956 into OPA BZ7317 for DCGS-A capability.

*2 Congress reprogrammed \$5.0 M from PE 305208, Project 956 into APA AZ2000 for DCGS-A capability.

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D. Acquisition Strategy: The Interim DCGS-A program will be awarded primarily to Prime Contractors of the legacy systems collaborating together to establish the necessary interfaces and data sharing capabilities. As the program moves into the Objective phase, we will pursue competitive developments to enable maximum industry participation to acquire robust processing, exploitation, analysis and visualization applications and supporting hardware capable of consequentially reducing ground stations footprint with increased processing capabilities.

<u>E. Schedule Profile</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>
Development of TES Main to III Corps		3-4Q	1-2Q				
Guardrail Information Node (GRIFN) component of DCGS-A		3-4Q	1-2Q				
Integration of Common Ground Station (CGS) /CHIMS capability into Interim DCGS-A		3-4Q	1-2Q				
TES and GRIFN integration		3-4Q	1-2Q				
Milestone B for Objective DCGS-A			3Q				
Objective DCGS-A (O-DCGS-A) requirements development		2-4Q	1-2Q				
Award development contracts for O-DCGS-A			3Q				
Interim DCGS-A demonstration at XVIII Airborne			4Q				
Interim DCGS-A fielding to III Corps				4Q			
Field Imagery portion of TES #2 - #6 *	4Q						

* The majority of TES system funding is under PE 0604766A (TES/DCGS-A)

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I. Product Development	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . ETRAC CIG/SS	C/CPAF	Northrop Grumman, Linthicum, MD	5537	0		0		0		0	5537	5537
b . MIES CIG/SS	SS/CPFF	DBA, Melbourne FL	3187	1000	1Q	0		0		0	4187	4187
c . TES CIG/SS *	C/CPFF	Northrop Grumman, Linthicum, MD	7855	6839	2Q	8242	2Q	8319	3Q	Continue	Continue	Continue
d . III Corps TES MAIN	C/CPFF	Northrop Grumman, Linthicum, MD	0	0		12500	2Q	0		0	12500	12500
e . GR/IFN component of DCGS-A	SS/CPFF	TRW, Sunnyvale, CA	0	0		15000	2Q	0		0	15000	15000
f . TES/GRIFN/CGS/CHIMS interface	C/CPFF	Northrop Grumman, Linthicum, MD, TRW, Sunnyvale,CA, General Dynamics, Scottsdale, AZ	0	0		5000	2Q	0		0	5000	5000
g . Software Segmentation	SS/CPFF	General Dynamics, Scottsdale, AZ	0	0		11700	2Q	0		0	11700	11700
h . Software Integration	CP	Northrup Grumman, Baltimore, MD	0	0		1300	2Q	0		0	1300	1300
i . Software Integration	T&M	TRW, Sunnyvale, CA	0	0		1100	2Q	0		0	1100	1100

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I. Product Development (continued)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
j . Software Integration	T&M	Lockheed Martin, Denver, CO	0	0		1100	2Q	0		0	1100	1100
k . Software Development	T&M	Northrup Grumman, Baltimore, MD	0	0		1800	2Q	0		0	1800	1800
l . Exploitation	TBD	TBD	0	0		1600	2Q	0		0	1600	1600
m . Visualization	TBD	TBD	0	0		1853	2Q	0		0	1853	1853
n . III Corps TES/GRIFN Interface	TBD	TBD	0	0		0		2000	1Q	0	2000	2000
o . Data link components	TBD	TBD	0	0		0		2768	1Q	0	2768	2768
p . Data dissemination & collaboration alternatives	TBD	TBD	0	0		0		1419	1Q	0	1419	1419
q . Expand interoperability & data base leveling	TBD	TBD	0	0		0		1177	1Q	0	1177	1177
Subtotal:			16579	7839		61195		15683		Continue	Continue	Continue

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II. Support Cost	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . DCGS Imagery IPT	MIPR	Various	0	0		700	2Q	0		0	700	700
b . Objective Doctrine/TTP Development To Support a Milestone B for ODCGS-A	MIPR	Ft. Huachuca, AZ	0	0		1000	2Q	0		0	1000	1000
c . Objective Architecture Development To Support a Milestone B for ODCGS-A	MIPR	Ft. Huachuca, AZ	0	0		2400	3Q	0		0	2400	2400
d . CONOPS & TTP Refinement	MIPR	Ft. Huachuca, AZ	0	0		1500	3Q	0		0	1500	1500
e . Communications/Dissemination Trade Study	MIPR	DCSINT, VA	0	0		2000	2Q	0		0	2000	2000
Subtotal:			0	0		7600		0		0	7600	7600

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III. Test and Evaluation	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
a . Operational Testing	MIPR	USAIC&FH Battlelab, AZ	0	0		200	2Q	0		0	200	200
b . Integrated Developmental Testing	TBD	TBD	0	0		700	2Q	0		0	700	700
c . Operational Testing	MIPR	ATEC, MD	0	0		800	3Q	0		0	800	800
d . Interoperability Certification Update	MIPR	JTIC, Ft. Huachuca, AZ	0	0		500	3Q	0		0	500	500
e . Participation in O-DCGS- A Planning and Documentation for Milestone B	MIPR	Various	0	0		1100	2Q	0		0	1100	1100
Subtotal:			0	0		3300		0		0	3300	3300

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IV. Management Services	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY 2001 Cost	FY 2001 Award Date	FY 2002 Cost	FY 2002 Award Date	FY 2003 Cost	FY 2003 Award Date	Cost To Complete	Total Cost	Target Value of Contract
			0	0		0		0		0	0	0
Subtotal:												

Project Total Cost:			16579	7839		72095		15683		Continue	Continue	Continue
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