

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

June 2001

BUDGET ACTIVITY

7 - OPERATIONAL SYSTEMS DEV

PE NUMBER AND TITLE

0303140A - Communications Security (COMSEC) Equipment

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	14861	14503	8261	0	0	0	0	0	0	0
491 INFORMATION ASSURANCE DEVELOPMENT	13603	13229	7127	0	0	0	0	0	0	0
501 ARMY KEY MGT SYSTEM	1258	1274	1134	0	0	0	0	0	0	0

A. Mission Description and Budget Item Justification:

PLEASE NOTE: This administration has not addressed FY2003-2007 requirements. All FY 2003-2007 budget estimates included in this book are notional only and subject to change.

The Communications Security Equipment Program develops Information Systems Security (ISS) equipment and techniques required to combat threat Signal Intelligence capabilities and to insure the integrity of data networks. This program will also develop, integrate, and demonstrate C2 Protect Common Tools into C4I systems that consist of hardware, software, and applications that can manage, protect, detect and react to C2 system vulnerabilities, threats, reconfigurations, and reconstitution. The Army's Research Development Test and Evaluation (RDTE) ISS program objective is to implement National Security Agency (NSA) developed security technology in Army information systems. The Communications Security Equipment Technology (COMSEC) insures total signal and data security for all Army information systems, to include any operational enhancement and specialized Army configurations. The Army Key Management System (AKMS) automates key generation and distribution while supporting joint interoperability. It provides communications and network planning with key management. AKMS is a part of the management/support infrastructure for the Warfighter Information Network (WIN) program. Additional modifications to the AKMS baseline are required to support the emerging WIN architecture. System security engineering, integration of available Information Security (INFOSEC) products, development, and testing are provided to ensure that C4I systems are protected against malicious or accidental attacks. Modeling, simulation, and risk management tools will be used to develop C2 Protect capabilities, enabling the warfighter to distribute complete and unaltered information and maintain a dynamic, continuous synchronous operational force. Several joint service/NSA working groups exist in the area of key management in order to avoid duplication and assure interoperability between all systems, including the establishment of standards and testing. The Defense Information Systems Agency (DISA) Multi-Level Security (MLS) working group coordinates all the different ongoing technology efforts.

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<u>B. Program Change Summary</u>	FY 2000	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY2001 PB)	9426	8140	8234	0
Appropriated Value	15426	14640	0	
Adjustments to Appropriated Value	0	0	0	
a. Congressional General Reductions	0	0	0	
b. SBIR / STTR	-386	0	0	
c. Omnibus or Other Above Threshold Reductions	-59	0	0	
d. Below Threshold Reprogramming	0	0	0	
e. Rescissions	-120	-135	0	
Adjustments to Budget Years Since FY2001 PB	0	0	27	
Current Budget Submit (FY 2002/2003 PB)	14861	14505	8261	0

FY01 funds increased \$6.5M due to Congressional adds to the President's Budget. \$4.5M for PKI Finishing Application and \$2.0M for National Ground Intelligence/National Collaborative Environment.

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BUDGET ACTIVITY 7 - OPERATIONAL SYSTEMS DEV				PE NUMBER AND TITLE 0303140A - Communications Security (COMSEC) Equipment				PROJECT 491		
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
491 INFORMATION ASSURANCE DEVELOPMENT	13603	13229	7127	0	0	0	0	0	0	0
<p>A. Mission Description and Budget Item Justification:Project D491 - Command and Control (C2) Protect Development: Project implements National Security Agency (NSA) developed security technology in Army information systems. Project objectives are to provide systems security mechanisms through encryption, trusted software or standard operating procedures, to protect the information, and to integrate these mechanisms into specified systems, securing operations in as transparent a manner possible. This entails architecture studies and modeling, development models, system integration and testing, installation kits, and certifications and accreditation of Automation Information Systems. Project will also assess, develop, integrate and demonstrate C2 Protect Common tools (hardware and software) providing protection for fixed infrastructure post, camp and station networks as well as efforts on tactical networks. Efforts are also leveraged into and complement the Tactical C2 Protect program in PEs 0602782A and 0603006A. This program supports the Legacy to Objective transition path of the Transformation Campaign.</p> <p>FY 2000 Accomplishments</p> <ul style="list-style-type: none"> 1570 Performed in-house evaluations and integration of INFOSEC Non-Developmental Item (NDI) equipment into both trusted and untrusted computer platforms and secure applications. 470 Provided support for TACLANE/FASTLANE thru development of installation kits and providing engineering support during system fielding. 250 Performed in-house study/evaluation for Secure Gateway (SEGAT) providing seamless, secure connectivity between major Army tactical communication networks at different security levels. 3581 Developed and evaluated C2 Protect Common Tools as follows: <ul style="list-style-type: none"> - Selected and adapted Commercial off the shelf (COTS)/Government off the shelf (GOTS) Security Management tools, developing for use in First Digitized Division (FDD) and beyond. - Investigated and evaluated COTS/GOTS C2 protect tools for tactical and/or sustaining base security requirements to include updates to currently selected tools in the areas of vulnerability assessment, host and network based intrusion detection, and firewalls. - Stressed and evaluated commercial or developmental protect tools being considered for use in Army tactical networks. - Conducted code analysis of C2 protect tools for weaknesses, Trojan Horses, and vulnerabilities that can render systems and networks at high risk for attack. 										

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BUDGET ACTIVITY 7 - OPERATIONAL SYSTEMS DEV	PE NUMBER AND TITLE 0303140A - Communications Security (COMSEC) Equipment	PROJECT 491
<p><u>FY 2000 Accomplishments (Continued)</u></p> <ul style="list-style-type: none"> • 1732 Supported Army Electronics Key Management System (EKMS) Tier One • 6000 Started deployment of Defense Health Care Information Assurance Program. <p>Total 13603</p> <p><u>FY 2001 Planned Program</u></p> <ul style="list-style-type: none"> • 903 Support development efforts on Secure Gateway program. • 1000 Support in-house evaluations of NDI and NSA INFOSEC devices and chips, provide engineering/fielding support to TACLANE and Asynchronous Transfer Mode (ATM) encryption program with development of necessary installation kits. • 4713 Support the development and evaluation of C2 Protect Common Tools as follows: <ul style="list-style-type: none"> - Ensure remote monitoring and host agent operation. - Extend security management concept for framework that can manage echelons, corps and below. - Tie in protect tools at sustaining base. - Support Information Assurance Network Assessment to verify robustness of network tools. • 4455 <ul style="list-style-type: none"> - Support for Information Assurance Program, PKI (Public Key Infrastructure). - Accelerate the development and use of Public Key Infrastructure (PKI) services and enable applications to support a broad range of security services. • 1932 - National Ground Intelligence Center/National Collaborative Environment • 226 -Funds reprogrammed for SBIR/STTR Programs <p>Total 13229</p>		

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<u>FY 2002 Planned Program</u> <ul style="list-style-type: none"> 2241 - Support development of Secure Gateway and begin testing of the developing products. <ul style="list-style-type: none"> - Continue the in-house evaluations of new Non Developmental Item (NDI) and NSA infosecurity products and development of installation kits for Network Security Equipments. - Support TACLANE/FASTLANE installation and integration thru installation kit development. 4886 Support the development of information assurance tools as follows: <ul style="list-style-type: none"> - Perform post FDD information assurance network assessment to improve security posture. - Select and assess advanced COTS/GOTS information assurance tools. - Conduct field test "red teaming". - Tailor tool enhancement for unique tactical applications. <p>Total 7127</p>		

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Equipment

PROJECT

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<u>B. Other Program Funding Summary</u>	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
OPA TA0600	48600	79234	42244	0	0	0	0	0	0	0

C. Acquisition Strategy: The object of the C2 Protect Program is to develop, integrate, and validate hardware and software tools that will secure the Tactical Internet (TI) in the FDD. FY 2000 and beyond focuses on completing development and evaluation of C2 Protect tools for the FDD and beyond that will support the procurement of C2 Protect tools and will secure the TI for the lower and upper levels of the Tactical Internet.

<u>D. Schedule Profile</u>	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
AIRTERM (KY-100)				0	0	0	0	0
· OEC Test				0	0	0	0	0
· Type Classification (conditional)				0	0	0	0	0
· Installation Kit Development				0	0	0	0	0
· Installation Kit Test & Evaluation				0	0	0	0	0
· Acquisition of Installation Kits	1-4Q			0	0	0	0	0
· OEC Test of Wideband Mode of KY-100	1-4Q			0	0	0	0	0
· Type Classification Standard (TC Standard)	1-4Q			0	0	0	0	0
· Full fielding of AIRTERM		1-4Q		0	0	0	0	0
TISM				0	0	0	0	0
· Prototype Development				0	0	0	0	0
· Laboratory Testing	1-4Q	1-4Q		0	0	0	0	0
Environmental				0	0	0	0	0
Secure Gateway				0	0	0	0	0
Field Testing				0	0	0	0	0
· Study	1-4Q			0	0	0	0	0
· Prototype Development Initiation		1-4Q	1-4Q	0	0	0	0	0
C2 Protect				0	0	0	0	0
· Network Access Control	1-4Q	1-4Q	1-4Q	0	0	0	0	0
· Intrusion Detection Control	1-4Q	1-4Q	1-4Q	0	0	0	0	0

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D. Schedule Profile (continued)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
· Host Machine Vulnerabilities	1-4Q	1-4Q	1-4Q	0	0	0	0	0
· Risk Management	1-4Q	1-4Q	1-4Q	0	0	0	0	0
· Anti-Viruses	1-4Q	1-4Q	1-4Q	0	0	0	0	0
· Purge Tools	1-4Q	1-4Q	1-4Q	0	0	0	0	0
· Audit Analysis	1-4Q	1-4Q	1-4Q	0	0	0	0	0
Security Management	1-4Q	1-4Q	1-4Q	0	0	0	0	0
TACLANE				0	0	0	0	0
Type Classification (conditional)		2Q		0	0	0	0	0
Installation Kit Development	1-4Q			0	0	0	0	0
Installation Kit Test & Evaluation	1-4Q			0	0	0	0	0
Acquisition of Installation Kits		1-4Q		0	0	0	0	0
Type Classification Standard (TC Standard)			1-4Q	0	0	0	0	0
INE Upgrades				0	0	0	0	0
LPI Technigques - Investigate Techniques				0	0	0	0	0
LPI - Prototype & Test				0	0	0	0	0

ARMY RDT&E COST ANALYSIS(R-3)									June 2001			
BUDGET ACTIVITY 7 - OPERATIONAL SYSTEMS DEV					PE NUMBER AND TITLE 0303140A - Communications Security (COMSEC) Equipment					PROJECT 491		
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 . System Engineering		CECOM, RDEC	14508	4399	1Q	2323	1Q	0	0	0	0	0
b . TACLANE	MIPR	NSA	2684	0		0		0	0	0	0	0
c . SEGAT	CPFF	CSC, Eatontown, NJ	40	500		0		0	0	0	0	0
d . EKMS	MIPR	Navy, Washington	2000	0		0		0	0	0	0	0
e . Contracted Services			0	0		0		0	0	0	0	0
f . (1)	TBD	Quantum Research, TX	0	43	1-4Q	0		0	0	0	0	0
g . (2)	C-CPFF	Booz, Allen & Hamilton, Linthicum MD	1603	159		0		0	0	0	0	0
h . (3)	C-CPFF	SYTEX, Inc Tinton Falls, NJ	1182	56		0		0	0	0	0	0
i . (4)	T&M	CSC, Eatontown, NJ	0	140	1-4Q	0		0	0	0	0	0
j . (5)	C-Reimb.	Mitre, McLean, VA	513	200	1-4Q	0		0	0	0	0	0
k . (6)	CPAF	Telos, Tinton Falls, NJ	281	219	1-4Q	0		0	0	0	0	0
l . (7)	C-CPFF	Atlantic Consulting Services, GA	0	900	1-4Q	0	1-4Q	0	0	0	0	0

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BUDGET ACTIVITY 7 - OPERATIONAL SYSTEMS DEV					PE NUMBER AND TITLE 0303140A - Communications Security (COMSEC) Equipment					PROJECT 491		
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
m . C2 Protect	C-CPFF	TBD	0	0		4804	1-4Q	0	0	0	0	0
n . DHIAP	C-Reimb	SCRA/Adv Tech Inst, SC	6271	0		0		0	0	0	0	0
o . DHIAP	PO	Health Tech Strategies, McLean Va	229	0		0		0	0	0	0	0
p . Information Assurance Program		TBD	0	4455	1-4Q	0		0	0	0	0	0
q . NGI Ctr/Natl Collaborative Environment		TBD	0	1932	1-4Q	0		0	0	0	0	0
r . Def Health Care Info Assurance Prgrm			5527	0		0		0	0	0	0	0
s . SBIR/STTR			0	226		0		0	0	0	0	0
Subtotal:			34838	13229		7127		0		0	0	0
Remarks: FY01 Includes Congressional Plus-up of \$4.5M for Information Assurance PKI (Public Key Infrastructure) and \$2.0M for the National Ground Intelligence Center/National Collaborative Environment.												

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BUDGET ACTIVITY 7 - OPERATIONAL SYSTEMS DEV					PE NUMBER AND TITLE 0303140A - Communications Security (COMSEC) Equipment					PROJECT 491		
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
			0	0		0		0		0	0	0
Subtotal:												
Remarks: Not Applicable												
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
			0	0		0		0		0	0	0
Subtotal:												
Remarks: Not Applicable												
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:												
Remarks: Not Applicable												
Project Total Cost:			34838	13229		7127		0		0	0	0

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BUDGET ACTIVITY 7 - OPERATIONAL SYSTEMS DEV				PE NUMBER AND TITLE 0303140A - Communications Security (COMSEC) Equipment				PROJECT 501		
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
501 ARMY KEY MGT SYSTEM	1258	1274	1134	0	0	0	0	0	0	0
<p><u>A. Mission Description and Budget Item Justification:</u>Project D501 - Army Key Management System (AKMS): This program provides decentralized and automated key generation, distribution and management while enhancing joint interoperability. It eliminates paper encryption and provides communications network planning with key management.</p> <p>This system supports the Legacy transition path of the Transformation Campaign Plan (TCP).</p> <p><u>FY 2000 Accomplishments</u></p> <ul style="list-style-type: none"> • 1258 Continued software development upgrades to the AKMS Workstation development environment that allows support of emerging and future weapons systems. <p>Total 1258</p> <p><u>FY 2001 Planned Program</u></p> <ul style="list-style-type: none"> • 1099 Develop next set of software tools for the AKMS Workstation development environment. • 112 Government Engineering • 25 Testing • 38 Small Business Innovation Research (36)/Small Business Technology Transfer Program (2) <p>Total 1274</p>										

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Equipment

PROJECT

501

FY 2002 Planned Program

- 1020 Continue development of next set of software tools for the AKMS Workstation development environment.
 - 114 Government Engineering
- Total 1134

B. Other Program Funding Summary

	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	To Compl	Total Cost
OPA BA1201	10990	10868	12203	0	0	0	0	0	0	0

C. Acquisition Strategy: AKMS Initial Operational Test and Evaluation (IOTE) occurred in August - September FY97. Direction was provided to separate the Local COMSEC Management Software (LCMS) from the Automated Communication Engineering System (ACES). Milestone III was conducted in June 1999 and the acquisition strategy and type classification for LCMS was approved. The IOC for LCMS was completed in 4Q FY00 and the IOC for ACES is scheduled for 4Q FY01.

D. Schedule Profile

	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
Materiel Release (LCMS)	4Q			0	0	0	0	0
LCMS IOC	4Q			0	0	0	0	0
ACES Software Functional Testing	3Q			0	0	0	0	0
ACES LUT	4Q			0	0	0	0	0
Materiel Release (ACES)		3Q		0	0	0	0	0
ACES IOC		4Q		0	0	0	0	0
AKMS Materiel Release for new Army Acquisition Programs			1-4Q	0	0	0	0	0

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BUDGET ACTIVITY 7 - OPERATIONAL SYSTEMS DEV					PE NUMBER AND TITLE 0303140A - Communications Security (COMSEC) Equipment					PROJECT 501		
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 . Software development	C/T&M	GTC, Tampa, FL	20919	90	1Q	0		0	0	0	0	0
b . Software development	TBD	TBD	0	1047	3Q	1020	2Q	0	0	0	0	0
c . EKMS	MIPR	Navy, Washington	3900	0		0		0	0	0	0	0
Subtotal:			24819	1137		1020		0		0	0	0
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
Subtotal:			0	0		0		0		0	0	0
Remarks: Not Applicable												

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BUDGET ACTIVITY 7 - OPERATIONAL SYSTEMS DEV					PE NUMBER AND TITLE 0303140A - Communications Security (COMSEC) Equipment					PROJECT 501			
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 . Testing	N/A	SPARWAR, San Diego, CA	0	25	2Q	0		0	0	0	0	0	
Subtotal:			0	25		0		0		0	0	0	
Remarks: Not Applicable													
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	
a . Contractor Engineering	C/T&M	TELOS System Integration, Ashburn, VA	154	0		0		0	0	0	0	0	
b . Government Engineering	N/A		324	112	1-2Q	114	1-2Q	0	0	0	0	0	
Subtotal:			478	112		114		0		0	0	0	
Remarks: Not Applicable													
Project Total Cost:				25297	1274		1134		0		0	0	