

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

February 2002

**BUDGET ACTIVITY**  
**7 - Operational system development**

**PE NUMBER AND TITLE**  
**0303140A - Information Systems Security Program**

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
Total Program Element (PE) Cost	12109	13253	14844	15143	15642	16741	17641	0	134636
491 INFORMATION ASSURANCE DEVELOPMENT	6547	12129	13574	13758	14192	15197	16052	0	114428
501 ARMY KEY MGT SYSTEM	1236	1124	1270	1385	1450	1544	1589	0	15882
50B ARMY COMMON ACCESS CARD/PUBLIC KEY INFRASTRUCTURE	4326	0	0	0	0	0	0	0	4326

**A. Mission Description and Budget Item Justification:** 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. 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. Communications Security Equipment Technology (COMSEC) ensures 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 - Tactical (WIN-T) program. Additional modifications to the AKMS baseline are required to support the emerging WIN-T 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. 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. This program will also develop, integrate, and demonstrate C2 Protect Common Tools into C4I systems that manage, protect, detect and react to C2 system vulnerabilities, threats, reconfigurations, and reconstitutions. 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.

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<u><b>B. Program Change Summary</b></u>	FY 2001	FY 2002	FY 2003
Previous President's Budget (FY2002 PB)	14503	8261	8658
Appropriated Value	14640	13361	0
Adjustments to Appropriated Value	0	0	0
a. Congressional General Reductions	0	-108	0
b. SBIR / STTR	-396	0	0
c. Omnibus or Other Above Threshold Reductions	-2000	0	0
d. Below Threshold Reprogramming	0	0	0
e. Rescissions	-135	0	0
Adjustments to Budget Years Since FY2002 PB	0	0	6186
Current Budget Submit (FY 2003 PB )	12109	13253	14844

FY01: \$2M Congressional add reprogrammed to properly align for appropriate execution to comply with intent.  
 FY03: \$6M added for Biometrics Anti Terrorism/Force Protection requirement.

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

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BUDGET ACTIVITY <b>7 - Operational system development</b>	PE NUMBER AND TITLE <b>0303140A - Information Systems Security Program</b>						PROJECT <b>491</b>		
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
491    INFORMATION ASSURANCE DEVELOPMENT	6547	12129	13574	13758	14192	15197	16052	0	114428

**A. Mission Description and Budget Item Justification:** 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, and to integrate these mechanisms into specified systems, securing operations in as transparent a manner possible. This entails architecture studies, modeling, system integration and testing, installation kits, and certification 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. This program supports the Legacy to Objective transition path of the Transformation Campaign.

**FY 2001 Accomplishments:**

- 894 Supported development efforts on Secure Gateway program.
- 990 Supported 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.
- 4663 Supported the development and evaluation of C2 Protect Common Tools as follows:
  - Ensured remote monitoring and host agent operation.
  - Extended security management concept for framework that can manage echelons, corps and below.
  - Tied in protect tools at sustaining base.
  - Supported Information Assurance Network Assessment and Red Teaming to verify robustness of network tools.
  - Developed initial Virtual Network Simulator (VNS) capability to enhance training of Information Assurance managers to recognize and respond to information assurance attacks.
  - Accelerated the development and use of Public Key Infrastructure (PKI) services and enable applications to support a broad range of security services.

Total 6547

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PROJECT

**491**

## FY 2002 Planned Program

- 2241 - Support development of Secure Gateway and begin testing of the developing products.
  - Continue the in-house evaluations of new Non Developmental Item (NDI) and NSA infosecurity products and develop installation kits for Network Security Equipment.
  - Support TACLANE/FASTLANE installation and integration thru installation kit development.
- 4788 Support the development of information assurance tools as follows:
  - 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.
- 5100 - Conduct test and evaluation of Biometric Commercial off-the-shelf hardware and software to determine suitability for use within DOD.
  - Conduct modeling and simulation efforts to support operational evaluation.
  - Enhance CECOM prototype Biometric platform delivered to Biometrics Management Office
  - Implement biometric access control on personal digital assistant suitable for military and dual-use application.
  - Support biometrics integration in existing command and control and MIS systems.

Total 12129

## FY 2003 Planned Program

- 2595 - Continue development/testing of Secure Gateway.
  - Conduct in-house evaluation of new NDI and NSA infosecurity products and continue the development of installation kits for Network Security Equipment.
  - Investigate Low Probability of Intercept (LPI)/Low Probability of Detection (LPD) techniques for integration in very short range radios.
- 4979 Develop and evaluate information assurance tools as follows:

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PROJECT

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**FY 2003 Planned Program (Continued)**

- Select and assess advanced COTS/GOTS information assurance tools for use in the First Digitized Corps (FDC) and/or sustaining base.
- Stress and evaluate COTS/GOTS tools during evaluation process.
- Conduct performance modeling of the network effects of information assurance tools.
- Perform information assurance network assessments on FDD architecture in the field.
- 6000 - Conduct test and evaluation of Biometric Commercial-off-the-Shelf hardware and software to determine suitability for use within DOD.
- Enhance CECOM prototype Biometric Platform delivered to Biometrics Management Office,
- Implement biometric access control on personal digital assistant suitable for military and dual-use application
- Support biometrics integration in existing command and control and MIS systems

Total 13574

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<u><b>B. Other Program Funding Summary</b></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>To Compl</u>	<u>Total Cost</u>
OPA TA0600	78425	52339	39055	37030	40289	39752	57176	Continuing	Continuing

**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><b>D. Schedule Profile</b></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>
· Full fielding of AIRTERM (KY-100)	1-4Q						
TISM (Laboratory Testing)							
· Field Testing (Prototype Development Initiation)	1-4Q	1-4Q	1-4Q	1-4Q			
C2 Protect							
· Network Access Control	1-4Q						
· Intrusion Detection Control	1-4Q						
· Host Machine Vulnerabilities	1-4Q						
· Risk Management	1-4Q						
· Anti-Viruses	1-4Q						
· Purge Tools	1-4Q						
· Audit Analysis	1-4Q	1-4Q	1-4Q	1-3Q	1-4Q	1-4Q	1-4Q
Security Management	1-4Q	1-4Q	1-4Q	1-3Q			
TACLANE							
Type Classification (conditional)	2Q						
Acquisition of Installation Kits	1-4Q						
Type Classification Standard (TC Standard)		1-4Q					
INE Upgrades				1-4Q	1-4Q	1-4Q	
LPI Technigques - Investigate Techniques			1-4Q	1-4Q			
LPI - Prototype & Test					1-4Q	1-4Q	1-4Q

## ARMY RDT&E COST ANALYSIS(R-3)

February 2002

**BUDGET ACTIVITY**  
**7 - Operational system development**

**PE NUMBER AND TITLE**  
**0303140A - Information Systems Security Program**

**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	14260	4330	1Q	2225	1Q	2618	1Q	Continue	Continue	Continue
b . TACLANE	MIPR	NSA	2684	0		0		0		0	2684	0
c . SEGAT	CPFF	CSC, Eatontown, NJ	40	500	1Q	0		0		0	540	0
d . EKMS	MIPR	Navy, Washington	2000	0		0		0		0	2000	0
e . C2 Protect Common Tools			0	0		0		0		0	0	0
f . (1)	TBD	Quantum Research, TX	0	43	1-4Q	0		0		0	43	0
g . (2)	C-CPFF	Booz, Allen & Hamilton, Linthicum MD	1603	159	1Q	0		0		0	1762	0
h . (3)	C-CPFF	SYTEX, Inc Tinton Falls, NJ	1182	56	1Q	0		0		0	1238	0
i . (4)	T&M	CSC, Eatontown, NJ	0	140	1-4Q	0		0		0	140	0
j . (5)	C-Reimb.	Mitre, McLean, VA	513	200	1-4Q	0		0		0	713	0
k . (6)	CPAF	Telos, Tinton Falls, NJ	281	219	1-4Q	0		0		0	500	0
l . (7)	C-CPFF	Atlantic Consulting Services, GA	0	900	1-4Q	0		0		0	900	0

# ARMY RDT&E COST ANALYSIS(R-3)

**February 2002**

**BUDGET ACTIVITY**  
**7 - Operational system development**

**PE NUMBER AND TITLE**  
**0303140A - Information Systems Security Program**

**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	4956	1-4Q	Continue	Continue	Continue
n . DHIAP	C-Reimb	SCRA/Adv Tech Inst, SC	11798	0		0		0		0	11798	0
o . DHIAP	PO	Health Tech Strategies, McLean Va	229	0		0		0		0	229	0
p . DoD Biometrics Program		Biometrics Fusion Center	0	0		5100		6000	1-4Q	0	11100	0
<b>Subtotal:</b>			34590	6547		12129		13574		Continue	Continue	Continue

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
<b>Subtotal:</b>			0	0		0		0		0	0	0

Remarks: Not Applicable

# ARMY RDT&E COST ANALYSIS(R-3)

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BUDGET ACTIVITY <b>7 - Operational system development</b>	PE NUMBER AND TITLE <b>0303140A - Information Systems Security Program</b>	PROJECT <b>491</b>
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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
			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:			34590	6547		12129		13574		Continue	Continue	Continue
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February 2002

BUDGET ACTIVITY <b>7 - Operational system development</b>				PE NUMBER AND TITLE <b>0303140A - Information Systems Security Program</b>				PROJECT <b>501</b>	
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
501 ARMY KEY MGT SYSTEM	1236	1124	1270	1385	1450	1544	1589	0	15882

**A. Mission Description and Budget Item Justification:** 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. This system supports the Legacy transition path of the Transformation Campaign Plan (TCP) and the Warfighter Information Network-Tactical (WIN-T).

**FY 2001 Accomplishments:**

- 1099 Developed next set of software tools for the AKMS Workstation development environment.
- 112 Government Engineering
- 25 Testing

Total 1236

**FY 2002 Planned Program**

- 1010 Continue development of next set of software tools for the AKMS Workstation development environment to include TCP and WIN-T.
- 114 Government Engineering

Total 1124

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PE NUMBER AND TITLE  
**0303140A - Information Systems Security Program**

PROJECT  
**501**

**FY 2003 Planned Program**

- 1154 Continue development of next set of software tools for the AKMS Workstation development environment to include TCP and WIN-T.
- 116 Government Engineering

Total 1270

<b><u>B. Other Program Funding Summary</u></b>	<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>To Compl</u>	<u>Total Cost</u>
OPA BA1201	10868	12109	10150	3760	3919	4145	4241	Continuing	Continuing

**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 2Q FY02.

<b><u>D. Schedule Profile</u></b>	<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>
Materiel Release (ACES)		2Q					
ACES IOC		2Q					
AKMS Materiel Release for new Army Acquisition Programs		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q

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**0303140A - Information Systems Security Program**

**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	21009	0
b . Software development	C/T&M	ISS, Bethesda, MD	0	1009	2Q	1010	2Q	1154	2Q	Continue	Continue	0
c . EKMS	MIPR	Navy, Washington	3900	0		0		0		0	3900	0
Subtotal:			24819	1099		1010		1154		Continue	Continue	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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**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	MIPR	SPARWAR, San Diego, CA	0	25	2Q	0		0		0	25	0
Subtotal:			0	25		0		0		0	25	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	154	0
b . Government Engineering	MIPR	CECOM, Fort Monmouth, NJ	324	112	1Q	114	2Q	116	2Q	Continue	Continue	0
Subtotal:			478	112		114		116		Continue	Continue	0

Project Total Cost:			25297	1236		1124		1270		Continue	Continue	0
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