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

DATE
June 2001

BUDGET ACTIVITY 07 - Operational System Development				PE NUMBER AND TITLE 0303401F Communications Security						PROJECT 4861	
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
4861	Cryptologic 2000	0	4,812	4,131	4,965	4,874	3,917	3,983	4,070	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

FY03-FY07 budget numbers do not reflect the DoD strategic review results.

FY99 through FY00 funds are in PE 0303140F. Beginning in FY01, funding for this effort is located in this PE.

(U) A. Mission Description

The Cryptologic project consists of Air Force Electronic Key Management Systems (AFEKMS). AFEKMS, in concert with NSA's EKMS, provides a secure and flexible capability for the electronic generation, distribution, accounting, and management of key material, voice callwords, and communications security (COMSEC) publications for all AF weapon systems. AFEKMS replaces the existing physical distribution and management system providing COMSEC keying material for USAF Information Protection. Information Protection emphasizes access control, multi-level secure databases, trusted computing and information integrity. AFEKMS is a three-tier system structure in a hierarchical arrangement. This tiered structure provides 'wholesale' to 'retail' to 'consumer' capability to distribute, manage and account for COMSEC keying material. Tier 1 installations comprise the 'wholesale' capability. Tier 2 installations comprise the distribution network and Tier 3 comprises the 'retail locations' where keying material leaves the AFEKMS and enters the End Item COMSEC Equipment (EICE) - the consumer.

Acquisition includes Commercial Off-The-Shelf (COTS) computers and software, contractor-developed application software, Government Furnished Equipment (GFE) and software such as NSA's Local COMSEC Management Software (LCMS). The USAF-developed application software (UAS) is necessary to provide specific functions for unique key management systems such as the F-22 and unique key fill requirements of EICE for Air Force applications, to improve the LCMS user interface, to integrate multiple independent UASs into a single commonly supported package and to moderate unique UASs when integration is not possible. Also to insulate unique user application software from NSA-supplied software changes and allow automation of manual operator processes in order to save manpower, reduce required training and improve mission effectiveness.

Overall AFEKMS will improve protection of national Security-related information by enhancing confidentiality, integrity, and non-repudiation substantially over legacy key management systems. AFEKMS will greatly accelerate availability of key through electronic transmission vice shipping of materials, and will enhance mission responsiveness and flexibility. While upgrade features are included to technologically refresh the system using re-host actions, COTS and user-oriented software where possible, the ultimate aim is to provide a migration path to similar functionality planned under NSA's Key Management Infrastructure initiative.

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BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT		
07 - Operational System Development	0303401F Communications Security	4861		
(U) <u>A. Mission Description Continued</u>				
(U) <u>FY 2000 (\$ in Thousands)</u>				
(U) \$0	Activity is Funded in PE 33140F (\$1.233)			
(U) \$0	Total			
(U) <u>FY 2001 (\$ in Thousands)</u>				
(U) \$2,371	Program office contract support on the Key Management Infrastructure (KMI) for the Defense Information Infrastructure Common Operation Environment (DII-COE), the Browser-Based Development effort, and AF Public Key Infrastructure implementation			
(U) \$470	SPO support equipment			
(U) \$1,971	Local Management Device/Data Management Device (LMD/DMD) Browser Interface			
(U) \$4,812	Total			
The following net transactions are not reflected in the FY01 program total: BTR =0 K, ATR = 0 K, and SBIR= -149 K. These transactions are not reflected in other sections of the R-docs where an FY01 total is shown.				
(U) <u>FY 2002 (\$ in Thousands)</u>				
(U) \$2,030	Program office contract support on the Key Management Infrastructure (KMI) for the Defense Information Infrastructure Common Operation Environment (DII-COE), the Browser-Based Development effort, and AF Public Key Infrastructure implementation			
(U) \$411	Low Rate Initial Production (LRIP) KOV-21 cards			
(U) \$1,690	Local Management Device/Data Management Device (LMD/DMD) Browser Interface			
(U) \$4,131	Total			
(U) <u>B. Budget Activity Justification</u>				
This program is in budget activity 7, Operational System Development, because it addresses the development and transition of information security, protection and defensive capabilities and technologies.				
(U) <u>C. Program Change Summary (\$ in Thousands)</u>				
	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Total Cost</u>
(U) Previous President's Budget (FY 2001 PBR)		4,857	4,700	
(U) Appropriated Value		4,857		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions				
b. Small Business Innovative Research				
Project 4861	Page 2 of 5 Pages	Exhibit R-2 (PE 0303401F)		

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BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0303401F Communications Security					PROJECT 4861		
(U) C. Program Change Summary (\$ in Thousands) Continued												
				<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											
								-45				
(U)	Adjustments to Budget Years Since FY 2001 PBR											
										-569		
(U)	Current Budget Submit/FY 2002 PBR											
								4,812		4,131	TBD	
(U)	<u>Significant Program Changes:</u>											
	N/A											
(U) D. 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)	AF RDT&E											
(U)	Other APPN											
(U)	APPN 3600/PE 33140F/PE	1,228	0	0	0	0	0	0	0	0	Continuing	TBD
	Title Information Systems											
	Security Program/BPAC											
	674585/Title Cryptologic											
	2020											
	NOTE: FY99 through FY00 funds are in PE 33140F. Beginning in FY01, funding for this effort is located in this PE.											
(U) E. Acquisition Strategy												
	All major contracts within this Program Element are awarded after full and open competition.											
(U) F. Schedule Profile												
				<u>FY 2000</u>				<u>FY 2001</u>			<u>FY 2002</u>	
				1	2	3	4	1	2	3	4	
(U)	Begin Development of LMD/DMD Browser Interface											
								*				
(U)	Program office contract support of the KMI											
								*				
(U)	SPO Support Equipment											
									X			

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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 0303401F Communications Security			PROJECT 4861			
(U) A. Project Cost Breakdown (\$ in Thousands)											
						<u>FY 2000</u>		<u>FY 2001</u>		<u>FY 2002</u>	
(U)	Software Development					0		4,812		4,131	
(U)	Total					0		4,812		4,131	
(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>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>						
	<u>Product Development Organizations</u>										
	SAIC	BPA	May 98	N/A	N/A	0	0	1,704	1,469	Continuing	TBD
	Mitre	FFRDC	Nov 00	N/A	N/A	0	0	3,108	2,662	Continuing	TBD
	<u>Support and Management Organizations</u>										
	N/A										
	<u>Test and Evaluation Organizations</u>										
	N/A										
(U) Government Furnished Property:											
	<u>Item</u>	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Delivery</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>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>							
	<u>Product Development Property</u>										
	N/A										
	<u>Support and Management Property</u>										
	N/A										
	<u>Test and Evaluation Property</u>										
	N/A										

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BUDGET ACTIVITY			PE NUMBER AND TITLE			PROJECT
07 - Operational System Development			0303401F Communications Security			4861
			<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>
			<u>to FY 2000</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>
					<u>Budget to</u>	<u>Complete</u>
						<u>Program</u>
<u>Subtotals</u>						
Subtotal Product Development			0	0	4,812	4,131
Subtotal Support and Management						TBD
Subtotal Test and Evaluation						
Total Project			0	0	4,812	4,131
						TBD
						TBD