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RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 2002
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BUDGET ACTIVITY 07 - Operational System Development	PE NUMBER AND TITLE 0303112F AIR FORCE COMMUNICATIONS	PROJECT 4884
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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
4884 Public Key Infrastructure Implementation	10,871	31,274	0	0	0	0	0	0	42,145
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0

(U) A. Mission Description

PUBLIC KEY INFRASTRUCTURE (PKI):

PKI encompasses the techniques and standards used to manage certificates and public and private keys in order to authenticate the validity of each party involved in an electronic transaction. Department of Defense (DoD) PKI was mandated by the Deputy Secretary of Defense on 8 Aug 97 and the Services were further directed to use the capabilities in a 6 May 99 memo. PKI supports the overall Defense-in-Depth strategy for information assurance capabilities -- user identification, non-repudiation, digital signatures and encryption for government electronic business and network transactions -- protecting/securing all network information.

Funds will be used to support initial implementation and integration of PKI user smart card , public key directory storage of the PKI certificates, PKI registration for both users and servers, and initial training on NIPRNET and SIPRNET. In particular, the RDT&E funds will be applied to the Smart Card/Common Access Card (CAC) to integrate and test with the current Defense Enrollment Reporting System (DEERS)/Real-Time Automated Personnel Identification Systems (RAPIDS) ID and registration system. Additionally, the funds will be used to prototype and test replicating the DoD Public Key directory to each Air Force base-level directory structure. Furthermore, the funds will be used to perform technology integration and testing of new hardware CAC token into the user desktop environment. Finally, a small amount of funds were allotted to the AF SPO for program support activities.

(U) FY 2001 (\$ in Thousands)

- (U) \$6,754** Provided prototyping support for Interface/Integration of registration Common Access Card tokens, peripheral readers with Air Force-wide computer and communication architectures
- (U) \$3,559** Provided testing support of Public Key Infrastructure Certificate Directories and other infrastructure components
- (U) \$558** Provided program and management control (SPO activities)
- (U) \$10,871** Total

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07 - Operational System Development	0303112F AIR FORCE COMMUNICATIONS	4884		
(U) <u>A. Mission Description Continued</u>				
(U) <u>FY 2002 (\$ in Thousands)</u>				
(U) \$29,397	Initial implementation of Class 3 Public Key Infrastructure which includes the initial implementation of registration activities (estimated target of 700,000 certificates to users) and the initial rollout of Common Access Cards to AF users; support of initial reader and middleware implementation at bases that will be issued the Common Access Card; initial support of Public Key Infrastructure use of AF Directory Services for certificate status checking; evaluation of new technologies that will support increased use of PKI Class 3 and Target Class 4 on the NIPRNET and SIPRNET			
(U) \$864	Testing support of Public Key Infrastructure Certificate Directories and other infrastructure components			
(U) \$1,013	Program and management control (SPO activities)			
(U) \$31,274	Total			
(U) <u>FY 2003 (\$ in Thousands)</u>				
(U) \$0	No Activity			
(U) \$0	Total			
(U) <u>B. Budget Activity Justification</u>				
This is a budget activity 7, Operational System Development because it supports Air Force requirements to prototype, integrate, and test Public Key Infrastructure components including registration and usage hardware/software/middle-ware, Common Access Cards, and directories on Air Force computer systems and networks.				
(U) <u>C. Program Change Summary (\$ in Thousands)</u>				
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>
(U) Previous President's Budget	11,478	31,828	0	
(U) Appropriated Value	11,478	31,828		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions		-554		
b. Small Business Innovative Research	-500			
c. Omnibus or Other Above Threshold Reprogram				
d. Below Threshold Reprogram	-2			
e. Rescissions	-105			
(U) Adjustments to Budget Years Since FY 2002 PBR				
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BUDGET ACTIVITY				PE NUMBER AND TITLE			PROJECT			
07 - Operational System Development				0303112F AIR FORCE COMMUNICATIONS			4884			
(U) <u>C. Program Change Summary (\$ in Thousands) Continued</u>										
				<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>			
(U) Current Budget Submit/FY 2003 PBR				10,871	31,274	0	42,145			
(U) <u>Significant Program Changes:</u>										
(U) <u>D. Other Program Funding Summary (\$ in Thousands)</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>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>Complete</u>	
(U) AF RDT&E										
(U) Other APPN										
(U) <u>E. Acquisition Strategy</u>										
Electronic Systems Center (ESC) Information Assurance Product Area Directorate (PAD) manages the AF PKI Program. All major contractors within this program element have been awarded contracts after full and open competition or through existing government contracting vehicles. Contracts are executed via GSA, Standard AF contract (through the Standard Systems Group, AL), and Information Technology Services Program (ITSP) to support engineering effort and equipment for the integration of Common Access Card tokens and prototyping of AF base level directories; and initial PKI Class 3 and Target Class 4 certificate issuance, registration, and infrastructure.										
(U) <u>F. Schedule Profile</u>										
		<u>FY 2001</u>			<u>FY 2002</u>			<u>FY 2003</u>		
	1	2	3	4	1	2	3	4	1	
(U) Prototyping support for PKI Interface/Integration of Tokens			*					X		
(U) Testing support of Public Key Infrastructure Certificate Directories	*				*					
(U) Initial Registration Infrastructure				*				X		
X denotes planned event										
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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)								DATE February 2002		
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT		
07 - Operational System Development				0303112F AIR FORCE COMMUNICATIONS				4884		
(U) A. Project Cost Breakdown (\$ in Thousands)										
						<u>FY 2001</u>		<u>FY 2002</u>		<u>FY 2003</u>
(U)	Prototyping support for Interface/Integration of registration Common Access Card tokens, peripheral readers with Air Force-wide computer and communication architectures					6,754		29,397		0
(U)	Testing support of PKI Certificate Directories and other infrastructure components					3,559		864		0
(U)	Program and management control (SPO activities)					558		1,013		0
(U)	Total					10,871		31,274		0
(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 2001</u>	<u>Budget FY 2001</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>						
<u>Product Development Organizations</u>										
	Prototyping Support	PR	Dec 00	TBD	TBD	6,754	29,397			36,151
<u>Support and Management Organizations</u>										
	ESC/DIW SPO Activities	PR	Dec 00	TBD	TBD	558	864			1,422
<u>Test and Evaluation Organizations</u>										
	Test Support	PR	Dec 00	TBD	TBD	0	3,559	1,013		4,572
<u>Subtotals</u>					<u>Total Prior to FY 2001</u>	<u>Budget FY 2001</u>	<u>Budget FY 2002</u>	<u>Budget FY 2003</u>	<u>Budget to Complete</u>	<u>Total Program</u>
	Subtotal Product Development					6,754	29,397			36,151
	Subtotal Support and Management					558	864			1,422
	Subtotal Test and Evaluation					0	3,559	1,013		4,572
	Total Project					0	10,871	31,274		42,145