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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 0207027F Air Space Command & Control Agency
PROJECT 4814	

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
4814 Expenditary Force Experiment (EFX)	28,476	0	0	0	0	0	0	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0

Note:

- JEFX 98, 99,00 were executed within existing command and control space programs.
- FY2001 is the first year of EFX has been included in the BES cycle.
- Starting FY 2002 EFX will be performed under PE 0207028F, Joint Expeditionary Force Experiment, Project #674373.

(U) A. Mission Description

The Joint Expeditionary Force Experiments (JEFX) are large-scale warfighter experiments and are part of the total AF experimentation effort. They combine live-fly forces and simulations into an operationally representative warfighter environment. These experiments provide a vehicle for experimentation with operational concepts and attendant new technologies for enhancing capabilities of the 21st century aerospace force. They are part of a broader effort to implement the Joint Vision 2010, exploit the Revolution in Military Affairs, and demonstrate emerging Air Force capabilities to deploy and employ decisive aerospace power for the Joint Force Commander.

JEFX 2000 emphasized Agile Combat Support, but exploration also occurred in managing intelligence, surveillance, and reconnaissance assets; global mobility; and dynamic battle control. JEFX 2000 was planned and executed with reprogrammed funds and other Air Force funding from existing command and control, global power, global reach, and space Program Elements.

In FY01, the Air Force moves to a biennial schedule for JEFX conducted in the even years. In addition, the Air Force begins the integration of proven initiatives into integrated Air Force/Joint/Coalition Command and Control providing integrated/interoperable fielded capabilities for warfighter use. Transition of selected technologies to the warfighter will be based on a rigorous, defined process which ensures interoperability with fielded programs and maximum return on investment. Specific weapon system development and procurement activities are funded in their own budget lines as applicable. A full-scale experiment, as performed in FY99 and FY00, will be conducted in FY02 in PE 0207028. Integrated Air Force/Joint/Coalition Command and Control integration of new initiatives and legacy systems into an integrated Command and Control, Intelligence, Surveillance, and Reconnaissance (C2ISR) baseline will be an ongoing activity.

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07 - Operational System Development		0207027F Air Space Command & Control Agency		4814
(U) <u>A. Mission Description Continued</u>				
(U) <u>FY 2001 (\$ in Thousands)</u>				
(U)	\$1,200	Initiatives from government and industry, selection and prioritization of new and previously considered initiatives, C2 Center Communications and computer development upgrades		
(U)	\$3,760	Developed systems architecture and integration, including engineering, for the experiment		
(U)	\$6,039	Planned and coordinated experiment		
(U)	\$7,477	Implemented JEFX 2000 architectural configuration, conduct Modeling & Simulation, install infrastructure, install and test LAN configurations and communications, and test operational software		
(U)	\$10,000	Integrated new initiatives and legacy systems into an integrated C2ISR baseline		
(U)	\$28,476	Total		
(U) <u>FY 2002 (\$ in Thousands)</u>				
(U)	\$0	No Activity		
(U)	\$0	Total		
(U) <u>FY 2003 (\$ in Thousands)</u>				
(U)	\$0	No Activity		
(U)	\$0	Total		
(U) <u>B. Budget Activity Justification</u>				
This effort is Budget Activity 7, Operational System Development, because the program will develop and implement software for operational computer applications.				
(U) <u>C. Program Change Summary (\$ in Thousands)</u>				
		<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>
(U)	Previous President's Budget	24,769		
(U)	Appropriated Value	24,769		
(U)	Adjustments to Appropriated Value			
	a. Congressional/General Reductions			
	b. Small Business Innovative Research	-1,000		
	c. Omnibus or Other Above Threshold Reprogram			
	d. Below Threshold Reprogram	4,934		
Project 4814		Page 2 of 5 Pages	Exhibit R-2 (PE 0207027F)	

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(U) C. Program Change Summary (\$ in Thousands) Continued									
				<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>		<u>Total Cost</u>	
	e. Rescissions			-	227				
(U)	Adjustments to Budget Years Since FY 2002 PBR								
(U)	Current Budget Submit/FY 2003 PBR			28,476				TBD	
(U)	<u>Significant Program Changes:</u>								
(U) D. Other Program Funding Summary (\$ in Thousands)									
		<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)	AF RDT&E	0	0	0	0	0		Continuing	TBD
(U)	Other Procurement (OPAF)								
(U)	Other APPN	0	0	0	0	0		Continuing	TBD
	FY 2000 executed with reprogrammed funds and other Air Force funding from existing command and control, global power, global reach, and space Program Elements.								
(U) E. Acquisition Strategy									
	Electronic Systems Center (ESC), Hanscom AFB, MA manages the acquisition and development process for the experimentation, integration, and fielding of selected technologies with legacy systems in an integrated C2ISR baseline. The spiral development system was created to field new and emerging technologies quickly. One of the tenets of the streamlined acquisition philosophy is to provide new capabilities through the integration of existing software components. JEFX periodically provides the opportunity to demonstrate new capabilities that provide decisive air and space power by identifying existing components and other software that can be integrated to further advance effectiveness. Research and development funding is used to develop the integrating code for various systems ranging from communications, C2, computers, weapons, ISR and aerospace delivery vehicles. In addition, funds are used to develop enhancements to existing capabilities necessary to demonstrate how emerging products can improve the warfighters' effectiveness. Spirals within the acquisition cycle allow deficiencies to be identified and considered for future spirals as well as the next experiment or applied to current capabilities. Selected technologies will be identified via a vigorous, defined process for integration with existing systems and transitioned to the field for warfighter use. Integration efforts will capitalize on the synergy between evolving technologies and on-going system program modifications to maximize the return on investment.								
(U) F. Schedule Profile									
				<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>			

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(U) <u>F. Schedule Profile Continued</u>																			
					<u>FY 2001</u>						<u>FY 2002</u>						<u>FY 2003</u>		
					1	2	3	4	1	2	3	4	1	2	3	4			
(U)	Commence movement of selected initiatives to the field				X														
(U)	Call for Initiatives APTX 01				X														
(U)	Initiative Selection, APTX 01					X													
(U)	Architectural Development, APTX 01						X												
(U)	Conduct APTX 01									X									
(U)	Call for Initiatives, JEFX 2002										X								
(U)	* Denotes completed event																		
	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				0207027F Air Space Command & Control Agency				4814		
(U) A. Project Cost Breakdown (\$ in Thousands)										
						<u>FY 2001</u>		<u>FY 2002</u>		<u>FY 2003</u>
(U)	Initiatives from government and industry, selection and prioritization of new and previously considered initiatives, C2 Center Communications and Computer development upgrades					1,200				
(U)	Development of systems architecture and integration, including engineering, for the experiment					3,760				
(U)	Planning and coordination for the experiment					6,039				
(U)	Implement architectural configuration, conduct Modelling & Simulation, install and test communications configurations					7,477				
(U)	Integration of new initiatives and legacy systems into an integrated C2ISR baseline					10,000				
(U)	Total					28,476				
(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>										
ESC, AC2ISRC	various	various	N/A	N/A		28,476			Continuing	TBD
<u>Support and Management Organizations</u>										
<u>Test and Evaluation Organizations</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>Subtotals</u>										
Subtotal Product Development						28,476			TBD	TBD
Subtotal Support and Management										
Subtotal Test and Evaluation										
Total Project						28,476			TBD	TBD