

**UNCLASSIFIED**

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

DATE  
**February 2000**

<b>BUDGET ACTIVITY</b> <b>07 - Operational System Development</b>				<b>PE NUMBER AND TITLE</b> <b>0207027F Air Space Command &amp; Control Agency</b>				<b>PROJECT</b> <b>674814</b>	
COST (\$ in Thousands)	FY 1999 Actual	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
674814 Expenditinary Force Experiment (EFX)	0	0	24,769	88,053	25,375	65,168	25,922	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0

Note: JEFX 98, 99,00 have been planned and executed within existing command and control space programs.

**(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 will emphasize Agile Combat Support, but exploration will also occur in managing intelligence, surveillance, and reconnaissance assets; global mobility; and dynamic battle control. JEFX 2000 is planned and will be 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. 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.

**(U) FY 1999 (\$ in Thousands)**

**(U)** \$0 No Activity

**(U)** \$0 Total

**(U) FY 2000 (\$ in Thousands)**

**(U)** \$0 No Activity

**(U)** \$0 Total

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<p>(U) <b><u>A. Mission Description Continued</u></b></p> <p>(U) <b><u>FY 2001 (\$ in Thousands)</u></b></p> <p>(U) \$2,559 Initiatives from government and industry, selection and prioritization of new and previously considered initiatives, C2 Center Communications and computer development upgrades</p> <p>(U) \$2,360 Development of systems architecture and integration, including engineering, for the experiment</p> <p>(U) \$1,850 Planning and coordination for the experiment</p> <p>(U) \$8,000 Implement JEFX 2000 architectural configuration, conduct M&amp;S, install infrastructure, install and test LAN configurations and communications, and test operational software</p> <p>(U) \$10,000 Integration of new initiatives and legacy systems into an integrated C2ISR baseline</p> <p>(U) \$24,769 Total</p> <p>(U) <b><u>B. Budget Activity Justification</u></b> This effort is Budget Activity 7, Operational System Development, because the program will develop and implement software for operational computer applications.</p> <p>(U) <b><u>C. Program Change Summary (\$ in Thousands)</u></b></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></th> <th style="text-align: center;"><u>FY 1999</u></th> <th style="text-align: center;"><u>FY 2000</u></th> <th style="text-align: center;"><u>FY 2001</u></th> <th style="text-align: center;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>(U) Previous President's Budget (FY 2000 PBR)</td> <td></td> <td style="text-align: center;">2,946</td> <td style="text-align: center;">20,000</td> <td style="text-align: center;">TBD</td> </tr> <tr> <td>(U) Appropriated Value</td> <td></td> <td style="text-align: center;">2,946</td> <td></td> <td></td> </tr> <tr> <td>(U) Adjustments to Appropriated Value</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    a. Congressional/General Reductions</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    b. Small Business Innovative Research</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    c. Omnibus or Other Above Threshold Reprogram</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    d. Below Threshold Reprogram</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>    e. Rescissions</td> <td></td> <td style="text-align: center;">-2,946</td> <td></td> <td style="text-align: center;">TBD</td> </tr> <tr> <td>    f. Other</td> <td></td> <td style="text-align: center;">0</td> <td></td> <td style="text-align: center;">TBD</td> </tr> <tr> <td>(U) Adjustments to Budget Years Since FY 2000 PBR</td> <td></td> <td></td> <td style="text-align: center;">4,769</td> <td></td> </tr> <tr> <td>(U) Current Budget Submit/FY 2001 PBR</td> <td></td> <td style="text-align: center;">0</td> <td style="text-align: center;">24,769</td> <td style="text-align: center;">TBD</td> </tr> </tbody> </table> <p>(U) <b><u>Significant Program Changes:</u></b></p>					<u>FY 1999</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>Total Cost</u>	(U) Previous President's Budget (FY 2000 PBR)		2,946	20,000	TBD	(U) Appropriated Value		2,946			(U) Adjustments to Appropriated Value					a. Congressional/General Reductions					b. Small Business Innovative Research					c. Omnibus or Other Above Threshold Reprogram					d. Below Threshold Reprogram					e. Rescissions		-2,946		TBD	f. Other		0		TBD	(U) Adjustments to Budget Years Since FY 2000 PBR			4,769		(U) Current Budget Submit/FY 2001 PBR		0	24,769	TBD
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Project 674814	Page 2 of 5 Pages	Exhibit R-2 (PE 0207027F)																																																													

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BUDGET ACTIVITY <b>07 - Operational System Development</b>				PE NUMBER AND TITLE <b>0207027F Air Space Command &amp; Control Agency</b>				PROJECT <b>674814</b>		
<b>(U) <u>D. Other Program Funding Summary (\$ in Thousands)</u></b>										
		<u>FY 1999</u>	<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>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>Complete</u>	
(U)	AF RDT&E	6,000	2,186	0	0	0	0	0	Continuing	TBD
(U)	Other APPN	29,500	35,900	0	0	0	0	0	Continuing	TBD
<b>(U) <u>E. Acquisition Strategy</u></b>										
<p>Electronic Systems Center (ESC), Hanscom AFB, MA will manage 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 which provide decisive air and space power by identifying existing DII components and other software that can be integrated to further advance effectiveness. Research and development funding will be used to develop the integrating code for various systems ranging from communications, C2, computers, weapons, ISR and aerospace delivery vehicles. In addition, funds will be 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.</p>										
<b>(U) <u>F. Schedule Profile</u></b>										
			<u>FY 1999</u>				<u>FY 2000</u>		<u>FY 2001</u>	
			1	2	3	4	1	2	3	4
(U)	Call for Initiatives, JEFX 2000			*						
(U)	Initiative Selection, JEFX 2000				*					
(U)	Conduct Spiral I						X			
(U)	Conduct Spiral II							X		
(U)	Conduct Spiral III							X		
(U)	Conduct JEFX 2000 Experiment								X	
(U)	Perform Assessment, JEFX 2000 Experiments								X	
(U)	Commence movement of selected initiatives to the field									X
(U)	Call for Initiatives, FY02 Focused Experiments									X
(U)	Initiative Selection, FY02 Focused Experiments									X
(U)	JEFX 2002 Architectural Development									X
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(U) **F. Schedule Profile Continued**

	<u>FY 1999</u>				<u>FY 2000</u>				<u>FY 2001</u>			
	1	2	3	4	1	2	3	4	1	2	3	4
(U) Small scale experiment (4QFY01)												
(U) Conduct Spiral I (1QFY02)												
(U) Conduct Spiral II (2QFY02)												
(U) Conduct Spiral III (2QFY02)												
(U) Conduct JEFX 2002 Experiments (4QFY02)												
(U) Perform Assessment, JEFX 2002 Experiments (1QFY03)												
(U) Commence integration of selected initiatives (1QFY03)												
(U) Call for Initiatives, JEFX 2004 (1QFY03)												
(U) Initiative Selection, JEFX 2004 (2QFY03)												

\* Denotes completed event  
X Denotes planned event

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RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2000			
BUDGET ACTIVITY					PE NUMBER AND TITLE			PROJECT		
<b>07 - Operational System Development</b>					<b>0207027F Air Space Command &amp; Control Agency</b>			<b>674814</b>		
<b>(U) A. Project Cost Breakdown (\$ in Thousands)</b>										
					<u>FY 1999</u>			<u>FY 2000</u>		<u>FY 2001</u>
(U)	Initiatives from government and industry, selection and prioritization of new and previously considered initiatives, C2 Center Communications and Computer development upgrades									2,559
(U)	Development of systems architecture and integration, including engineering, for the experiment									2,360
(U)	Planning and coordination for the experiment									1,850
(U)	Implement JEFX 2000 architectural configuration, conduct M&S, install infrastructure, install an test LAN configurations and communications, test operational software, conduct small -scale experimentation , and evaluate experiment results									8,000
(U)	Integration of new initiatives and legacy systems into an integrated C2ISR baseline									10,000
(U)	Total									24,769
<b>(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)</b>										
<b>(U) Performing Organizations:</b>										
<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 1999</u>	<u>Budget FY 1999</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</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	various	various	N/A	N/A				24,769	Continuing	TBD
<u>Support and Management Organizations</u>										
<u>Test and Evaluation Organizations</u>										
None										
					<u>Total Prior to FY 1999</u>	<u>Budget FY 1999</u>	<u>Budget FY 2000</u>	<u>Budget FY 2001</u>	<u>Budget to Complete</u>	<u>Total Program</u>
<u>Subtotals</u>										
Subtotal Product Development								24,769	TBD	TBD
Subtotal Support and Management										
Subtotal Test and Evaluation										
Total Project								24,769	TBD	TBD