

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)									DATE June 2001	
BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0207027F Air Space Command & Control Agency					
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
Total Program Element (PE) Cost	0	24,542	0	0	0	0	0	0	Continuing	TBD
4372 Time Critical Targeting	0	0	0	0	0	0	0	0	Continuing	TBD
4814 Expeditionary Force Experiment (EFX)	0	24,542	0	0	0	0	0	0	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0	0

- Funding for JEFX transitions from PE 0207027 #674814 to PE 0202028 #674373 beginning in FY02
 - Funding for TCT in FY00 and FY01 exists in PE 0208060 and begins in PE 0207027 #674372 beginning in FY02
 - Funding for TCT transferred from PE 0207027 #674372 to PE 0207410 #674372 in FY02
 -FY03-FY07 budget numbers do not reflect the DoD strategic review results

(U) **A. Mission Description**
 This program provides fund for the Joint Expeditionary Force Experiments (JEFX) until FY 02 when it transitions to PE 0207028 and Time Critical Targeting (TCT) beginning in FY02.

JEFX are large-scale warfighter experiments and are part of the total Air Force 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 2020, exploit the Revolution in Military Affairs, and demonstrate emerging Air Force capabilities to deploy and employ decisive aerospace power for the Joint Force Commander (JFC).

TCT cells will be fielded in Air Operations Centers (AOCs) to augment the dynamic aerospace command and control (C2) of Air Force and other theater assets in support of JFC prosecution of the highest priority time sensitive targets. The TCT cell supports the AOCs' ability to find, fix, track, engage and assess TCTs. Automated decision aids/tools will allow operators to quickly retrieve, process and fuse Intelligence Preparation of the Battlespace (IPB) data into actionable intelligence products to support successful prosecution of TCTs; model terrain effects within an Area of Interest (AOI); model both fixed and mobile threat behavior; track, develop, and nominate TCTs; and provide optimized near-real-time weapon-to-target pairing recommendations. An interface to an Intelligence, Surveillance, and Reconnaissance (ISR) battle manager application will also allow Theater Air Control System (TACS) elements to dynamically re-task ISR assets to support real-time

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(U) **A. Mission Description Continued**

target development, tracking, nomination of TCTs as well as strike assessment. TCT cells will reduce the targeting timelines to acceptable parameters defined in the Operational R requirements Document for the TCT cell.

(U) **B. Budget Activity Justification**

This is a Budget Activity 7, Operational System Development, program providing a vehicle for experimentation with operational concepts and upgrades to existing operational systems.

(U) **C. Program Change Summary (\$ in Thousands)**

	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Total Cost</u>
(U) Previous President's Budget (FY 2001 PBR)	0	24,769	13,900	TBD
(U) Appropriated Value	0	24,769		
(U) Adjustments to Appropriated Value				
a. Congressional/General Reductions		-173		
b. Small Business Innovative Research				
c. Omnibus or Other Above Threshold Reprogram				
d. Below Threshold Reprogram				
e. Rescissions	0	-54		TBD
(U) Adjustments to Budget Years Since FY 2001 PBR			-13,900	
(U) Current Budget Submit/FY 2002 PBR	0	24,542	0	TBD

(U) **Significant Program Changes:**

- JEFX funding moved from from PE 0207027F to PE 0207028F in FY02.
- Time-Critical-Targeting (TCT) transitions from PE 0208060F (Pre EMD) into PE 0207027F (EMD) during the FY02.
- TCT RDT&E funding transitioned from PE 020027F to PE 0207410F during the FY02 PB cycle to align under new Air Operations Center Program Element

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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 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
4814	Expeditionary Force Experiment (EFX)		0	24,542	0	0	0	0	0	0	Continuing	TBD
<p>Note:</p> <ul style="list-style-type: none"> - JEFX 98, 99,00 were executed within existing command and control space programs. - FY2001 is the first year EFX has been included in the BES cycle. - Starting FY 2002 EFX will be performed under PE 0207028F, Joint Expeditionary Force Experiment, Project #674373. - FY03 - FY07 budget numbers do not reflect the DoD strategic review results. <p>(U) <u>A. Mission Description</u></p> <p>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.</p> <p>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.</p> <p>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.</p> <p>(U) <u>FY 2000 (\$ in Thousands)</u></p> <p>(U) \$0 No Activity</p> <p>(U) \$0 Total</p>												
Project 4814			Page 3 of 6 Pages					Exhibit R-2A (PE 0207027F)				

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(U) **A. Mission Description Continued**

(U) **FY 2001 (\$ in Thousands)**

(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	Development of systems architecture and integration, including engineering, for the experiment
(U) \$6,039	Planning and coordination for the experiment
(U) \$3,543	Implement JEFX 2000 architectural configuration, conduct M&S, install infrastructure, install and test LAN configurations and communications, and test operational software
(U) \$10,000	Integration of new initiatives and legacy systems into an integrated C2ISR baseline
(U) \$24,542	Total

The following net transactions are not reflected in the FY01 program total: BTR=+\$4,999K, and SBIR = -\$1,000K. These transactions are not reflected in other sections of the R-docs where an FY01 total is shown.

(U) **FY 2002 (\$ in Thousands)**

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

(U) **B. Project Change Summary**

(U) **C. 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>Complete</u>							
(U) AF RDT&E	22,296	0	0	0	0	0	0	0	Continuing	TBD
(U) Other Procurement (OPAF)	2,186									
(U) Other APPN	35,900	0	0	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) **D. 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

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(U) **D. Acquisition Strategy Continued**
 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) **E. Schedule Profile**

	<u>FY 2000</u>				<u>FY 2001</u>				<u>FY 2002</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 June 2001			
BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0207027F Air Space Command & Control Agency			PROJECT 4814		
(U) A. Project Cost Breakdown (\$ in Thousands)										
					<u>FY 2000</u>		<u>FY 2001</u>		<u>FY 2002</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 M&S, , install and test communications configurations						3,543			
(U)	Integration of new initiatives and legacy systems into an integrated C2ISR baseline						10,000			
(U)	Total						24,542			
(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)										
(U) Performing Organizations:										
<u>Contractor or Government Performing Activity</u>	<u>Contract Method/Type or Funding Vehicle</u>	<u>Award or Obligation Date</u>	<u>Performing Activity EAC</u>	<u>Project Office EAC</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>Product Development Organizations</u>										
ESC, AC2ISRC	various	various	N/A	N/A			24,542		Continuing	TBD
<u>Support and Management Organizations</u>										
<u>Test and Evaluation Organizations</u>										
<u>Subtotals</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>
Subtotal Product Development							24,542		TBD	TBD
Subtotal Support and Management										
Subtotal Test and Evaluation										
Total Project							24,542		TBD	TBD