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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 0404011F Special Operations Forces					PROJECT 4860	
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
4860	Special Operations Forces	0	2,833	0	0	0	0	0	0	0	2,833
	Quantity of RDT&E Articles	0	2	0	0	0	0	0	0	0	0

(U) **A. Mission Description**

Aircrew require an enhanced capability to precisely locate and identify the modern day threats in order to meet mission requirements. Even without firing, threat systems can disrupt or negate operational missions by requiring aircrew reactions that affect mission objectives. Improved threat information from a modernized radar warning receiver (RWR) will assist the aircrews in determining precise threat ranges/directions and provide option responses short of mission abort or violent aircraft maneuvering. Threat location refinements will help an enroute aircrew respond 'real time' to previously unknown threats by providing sufficiently accurate information to allow the aircrews to reroute around hostile areas. This precision location and identification (PLAID) upgrade has been targeted for the AN/ALR-69 RWR system installed on all Air Force Special Operations Command (AFSOC) aircraft. This upgrade effort will be designed/developed to provide improved situational awareness capability, improved reliability/maintainability, improved emitter ranging capability by a factor of 100, improved angle accuracy, and increased ambiguity resolution by an order of magnitude. The present AN/ALR-69 RWR system is 1970's technology and has become increasingly difficult to maintain with the sustainment and capability issues.

Congressional plus-up in FY-01 to this program element for three AFSOC projects: \$900K for Universal Biological Sensor, \$500K for AFSOC aircrew orientation and screening, and \$350K for developing a methodology for approving medications for aircrews. AFSOC has a requirement for a man-portable capability to provide early warning and force protection from nuclear, biological and chemical contaminants. The object of the universal sensor project is to develop passive inexpensive sensors for agents which can be read remotely or with a hand-held reader on a variety of surfaces without damaging the surfaces or otherwise revealing the sensor's presence. The existing AFSOC aircrew orientation and screening program needs to be analyzed and improved in order to produce a better applicant selection rate, decrease training washout rates, and increase the number of qualified special operations personnel with a limited training budget. In order to retain as many highly trained special operations aviators as possible, AFSOC needs a methodology for evaluating and/or approving the use of new medications for use by aircrew, thus allowing them to keep flying while being treated for waiverable medical conditions.

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

(U) \$0 No Activity

(U) \$0 Total

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<p>(U) <u>A. Mission Description Continued</u></p> <p>(U) <u>FY 2001 (\$ in Thousands)</u></p> <p>(U) \$1,095 Design/development of hardware/software for precision location and identification (PLAID) upgrade to AN/ALR-69 RWR</p> <p>(U) \$890 Develop/test prototype sensor for detecting/identifying biological warfare agents</p> <p>(U) \$498 Analyse and improve methodology for orientation/screening of AFSOC aircrew applicants</p> <p>(U) \$350 Develop methodology for approving new medications for individual aircrew members</p> <p>(U) \$2,833 Total</p> <p>(U) <u>FY 2002 (\$ in Thousands)</u></p> <p>(U) \$0 No Activity</p> <p>(U) \$0 Total</p> <p>(U) <u>B. Budget Activity Justification</u></p> <p>This program is a budget activity 7 - Operational System Development because it provides funding for the modernization of a currently existing and operating system. The AN/ALR-69 PLAID effort is to develop a precision location and threat identification upgrade for the ALR-69. The universal biological sensor project is developing and testing a prototype aerosol spray sensor and a handheld reader to detect and identify biological agents for AFSOC. The current AFSOC aircrew orientation & screening program is being analysed and redesigned to improve applicant selection. A methodology is being developed and validated for individually evaluating aviators on pharmacotherapy.</p> <p>(U) <u>C. Program Change Summary (\$ in Thousands)</u></p> <table style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;"></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>FY 2002</u></th> <th style="text-align: center;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>(U) Previous President's Budget (FY 2001 PBR)</td> <td style="text-align: center;">0</td> <td style="text-align: center;">1,109</td> <td></td> <td style="text-align: center;">1,109</td> </tr> <tr> <td>(U) Appropriated Value</td> <td></td> <td style="text-align: center;">2,859</td> <td></td> <td style="text-align: center;">2,859</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;">-26</td> <td></td> <td style="text-align: center;">-26</td> </tr> <tr> <td>(U) Adjustments to Budget Years Since FY 2001 PBR</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>				<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	1,109		1,109	(U) Appropriated Value		2,859		2,859	(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		-26		-26	(U) Adjustments to Budget Years Since FY 2001 PBR				
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Project 4860	Page 2 of 5 Pages	Exhibit R-2 (PE 0404011F)																																																		

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BUDGET ACTIVITY 07 - Operational System Development					PE NUMBER AND TITLE 0404011F Special Operations Forces					PROJECT 4860						
(U) <u>C. Program Change Summary (\$ in Thousands) Continued</u>																
					<u>FY 2000</u>					<u>FY 2001</u>		<u>FY 2002</u>		<u>Total Cost</u>		
(U)	Current Budget Submit/FY 2002 PBR									2,833				2,833		
(U)	<u>Significant Program Changes:</u> FY-01 Congressional add of \$1750K for three AFSOC projects.															
(U) <u>D. Other Program Funding Summary (\$ in Thousands)</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>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)	PE64270F EW Development	10,947	13,376	1,827												
(U)	Other Procurement (3010) PE27442F, Common ECM Equipment				10,057	10,358	11,002	11,587	11,934		Continuing		TBD			
(U)	Other APPN															
(U) <u>E. Acquisition Strategy</u>																
Acquisition will be accomplished through full and open competitive procedures using source selection processes for award of contract. Program is currently in source selection and award is scheduled for July 01.																
The three Congressional add development projects will be handled by Air Force Research Lab, Brooks AFB, TX.																
(U) <u>F. Schedule Profile</u>																
					<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)	Contract award													X		
(U)	Software Development complete														X	
(U)	Hardware Development complete															X
(U)	Testing Begins															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 0404011F Special Operations Forces			PROJECT 4860			
(U) A. Project Cost Breakdown (\$ in Thousands)											
						<u>FY 2000</u>		<u>FY 2001</u>		<u>FY 2002</u>	
(U)	Software/Hardware Design/Development							1,918			
(U)	Program Office Support							449			
(U)	System Engineering Support							466			
(U)	Total							2,833			
(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>Performing Activity</u>	<u>or Funding Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>						
<u>Product Development Organizations</u>											
	WR-ALC/LNRC	NA	Jul 2001	TBD	TBD	0	0	500		Continuing	TBD
	AFRL/Human Effectiveness Directorate	NA	TBD	TBD	TBD	0	0	1,418		0	1,418
<u>Support and Management Organizations</u>											
	TBD WR-ALC/LNRC	NA	Jun 01	TBD	TBD	0	0	439		0	439
	AFSOC/XPQ, Acq Man Div	NA	TBD	TBD	TBD			210			210
<u>Test and Evaluation Organizations</u>											
	TBD ALR-69 PLAID	NA	TBD	TBD	TBD	0	0	170		0	170
	3 Congressional adds	TBD	TBD	TBD	TBD			96			96
(U) Government Furnished Property:											
	<u>Item Description</u>	<u>Contract Method/Type</u>	<u>Award or Obligation</u>	<u>Delivery Date</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 Property</u>	<u>or Funding Vehicle</u>	<u>Date</u>	<u>Date</u>							
	NONE										

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				June 2001		
BUDGET ACTIVITY		PE NUMBER AND TITLE			PROJECT	
07 - Operational System Development		0404011F Special Operations Forces			4860	
(U) <u>Government Furnished Property Continued:</u>						
<u>Support and Management Property</u>						
NONE						
<u>Test and Evaluation Property</u>						
NONE						
		<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>
		<u>to FY 2000</u>	<u>FY 2000</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>Complete</u>
						<u>Total</u>
	<u>Subtotals</u>					
	Subtotal Product Development	0	0	1,918		TBD
	Subtotal Support and Management	0	0	649		0
	Subtotal Test and Evaluation	0	0	266		0
	Total Project	0	0	2,833		TBD