

**UNCLASSIFIED**

<b>RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)</b>	DATE <b>February 2002</b>
--	------------------------------

<b>BUDGET ACTIVITY</b> <b>07 - Operational System Development</b>	<b>PE NUMBER AND TITLE</b> <b>0404011F Special Operations Forces</b>	<b>PROJECT</b> <b>4860</b>
--	---	-------------------------------

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
4860 Special Operations Forces	2,776	0	0	0	0	0	0	0	2,776
Quantity of RDT&E Articles	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. 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 2001 (\$ in Thousands)**

- (U) \$1,073            Design/development of hardware/software for precision location and identification (PLAID) upgrade to AN/ALR-69 RWR
- (U) \$873            Develop/test prototype sensor for detecting/identifying biological warfare agents
- (U) \$487            Analyse and improve methodology for orientation/screening of AFSOC aircrew applicants
- (U) \$343            Develop methodology for approving new medications for individual aircrew members

UNCLASSIFIED

<b>RDT&amp;E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)</b>		DATE <b>February 2002</b>																																													
BUDGET ACTIVITY <b>07 - Operational System Development</b>	PE NUMBER AND TITLE <b>0404011F Special Operations Forces</b>	PROJECT <b>4860</b>																																													
<p>(U) <b><u>A. Mission Description Continued</u></b></p> <p>(U) <u>FY 2001 (\$ in Thousands) Continued</u></p> <p>(U) \$2,776                      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>FY 2003 (\$ in Thousands)</u></p> <p>(U) \$0                              No Activity</p> <p>(U) \$0                              No Activity</p> <p>(U) \$0                              Total</p> <p>(U) <b><u>B. Budget Activity Justification</u></b></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 &amp; 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) <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="width: 10%; text-align: center;"><u>FY 2001</u></th> <th style="width: 10%; text-align: center;"><u>FY 2002</u></th> <th style="width: 10%; text-align: center;"><u>FY 2003</u></th> <th style="width: 10%; text-align: center;"><u>Total Cost</u></th> </tr> </thead> <tbody> <tr> <td>(U) Previous President's Budget</td> <td style="text-align: center;">1,109</td> <td></td> <td></td> <td style="text-align: center;">2,776</td> </tr> <tr> <td>(U) Appropriated Value</td> <td style="text-align: center;">2,833</td> <td></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;">-57</td> <td></td> <td></td> </tr> </tbody> </table>				<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>	(U) Previous President's Budget	1,109			2,776	(U) Appropriated Value	2,833				(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		-57		
	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Total Cost</u>																																											
(U) Previous President's Budget	1,109			2,776																																											
(U) Appropriated Value	2,833																																														
(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		-57																																													
Project 4860	Page 2 of 5 Pages	Exhibit R-2 (PE 0404011F)																																													

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)							DATE February 2002				
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT			
<b>07 - Operational System Development</b>				<b>0404011F Special Operations Forces</b>				<b>4860</b>			
<b>(U) C. Program Change Summary (\$ in Thousands) Continued</b>											
				<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>				<u>Total Cost</u>	
(U) Adjustments to Budget Years Since FY 2002 PBR											
(U) Current Budget Submit/FY 2003 PBR											
				2,776						2,776	
(U) <u>Significant Program Changes:</u> In FY01, Congress added \$1.75M for three AFSOC projects.											
<b>(U) D. Other Program Funding Summary (\$ in Thousands)</b>											
		<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>Complete</u>		
(U) AF RDT&E											
(U) PE64270F EW Development											
		13,376	1,827	10,574							
(U) Other Procurement (3010)											
				92	10,358	11,002	11,587	11,934	Continuing		TBD
(U) PE27442F, Common ECM Equipment											
(U) Other APPN											
<b>(U) E. Acquisition Strategy</b>											
Contract for PLAID EMD was awarded Aug 01 using full and open competitive procedures for source selection.											
The three Congressional add development projects will be handled by Air Force Research Lab, Brooks AFB, TX.											
<b>(U) F. Schedule Profile</b>											
				<u>FY 2001</u>		<u>FY 2002</u>		<u>FY 2003</u>			
				1	2	3	4	1	2	3	4
(U) Contract award											
(U) Design review											
(U) Integrated Defensive Avionics Lab											
(U) C-130 Development/Operational Test Start											
* - Denotes completed event, X - Denotes a planned event											

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2002			
BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT		
<b>07 - Operational System Development</b>				<b>0404011F Special Operations Forces</b>				<b>4860</b>		
<b>(U) A. Project Cost Breakdown (\$ in Thousands)</b>										
						<u>FY 2001</u>		<u>FY 2002</u>		<u>FY 2003</u>
(U)	Software/Hardware Design/Development					1,880		0		0
(U)	Program Office Support					440		0		0
(U)	System Engineering Support					456		0		0
(U)	Test							0		0
(U)	Total					2,776		0		0
<b>(U) B. Budget Acquisition History and Planning Information (\$ in Thousands)</b>										
<b>(U) Performing Organizations:</b>										
<u>Contractor or</u>	<u>Contract</u>									
<u>Government</u>	<u>Method/Type</u>	<u>Award or</u>	<u>Performing</u>	<u>Project</u>						
<u>Performing</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Activity</u>	<u>Office</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Activity</u>	<u>Vehicle</u>	<u>Date</u>	<u>EAC</u>	<u>EAC</u>	<u>to FY 2001</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Organizations</u>										
ALR-69 Prime (Raytheon)	CPAF	Aug 01	TBD	TBD						
AFRL/Human Effec Direc	NA	TBD	TBD	TBD	0	1,389			0	1,389
<u>Support and Management Organizations</u>										
WR-ALC/LNRC	NA	Jun 01	TBD	TBD	0	920			0	920
Illinois Inst of Tech	MIPR	Sep 01	330	330					0	0
WR-ALC/LU	In-house	TBD	370	370					0	0
AFSOC/XPQ	NA	TBD	TBD	TBD		205			0	205
<u>Test and Evaluation Organizations</u>										
ALR-69 PLAID RTO/PTO	MIPR	TBD	1,245	1,245	0	166			0	166
AF Research Lab	MIPR		750	750					0	0
3 Congressional adds	NA	TBD	TBD	TBD		96			0	96

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 2002		
BUDGET ACTIVITY 07 - Operational System Development				PE NUMBER AND TITLE 0404011F Special Operations Forces			PROJECT 4860		
<b>(U) Government Furnished Property:</b>									
	<u>Contract</u>								
	<u>Method/Type</u>	<u>Award or</u>							
<u>Item</u>	<u>or Funding</u>	<u>Obligation</u>	<u>Delivery</u>	<u>Total Prior</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget</u>	<u>Budget to</u>	<u>Total</u>
<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>	<u>to FY 2001</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Complete</u>	<u>Program</u>
<u>Product Development Property</u>									
NONE									
<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>Total</u>
<u>Subtotals</u>				<u>to FY 2001</u>	<u>FY 2001</u>	<u>FY 2002</u>	<u>FY 2003</u>	<u>Complete</u>	<u>Program</u>
Subtotal Product Development				0	1,389			0	1,389
Subtotal Support and Management				0	1,125			0	1,125
Subtotal Test and Evaluation				0	262			0	262
Total Project				0	2,776			0	2,776