

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)						DATE FEBRUARY 2006																																												
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7			R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160425BB Special Operations Aircraft Defensive Systems / Project 3284																																															
COST (Dollars in Millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11		Cost to Complete	Total Cost																																								
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3284, Special Operations Aircraft Defensive Systems	56.897	26.934	7.850	6.836	4.235	8.757	6.822		Cont.	Cont.																																								
<p>A. Mission Description and Budget Item Justification: This program element provides for the definition, development, prototyping and testing of aircraft defensive avionics systems. It includes the identification and development of hardware and software enhancements for each Special Operations Forces (SOF) aircraft to reduce detection, vulnerability, and threat engagement from threat radars and Infrared (IR) missiles, thereby increasing the overall survivability of SOF assets. This program element funds dispenser upgrade and improvement programs, threat and missile warning receiver enhancements, radio frequency jammer improvements, and enhanced IR jamming systems. It also provides systems for SOF-unique portions of the Electronic Warfare Avionics Integrated Systems Facility.</p> <p>B. Program Change Summary:</p> <table style="width: 100%; margin-top: 20px;"> <thead> <tr> <th></th> <th style="text-align: right;"><u>FY2005</u></th> <th style="text-align: right;"><u>FY2006</u></th> <th style="text-align: right;"><u>FY2007</u></th> </tr> </thead> <tbody> <tr> <td>Previous President's Budget</td> <td style="text-align: right;">55.622</td> <td style="text-align: right;">38.824</td> <td style="text-align: right;">14.372</td> </tr> <tr> <td>Current President's Budget</td> <td style="text-align: right;">56.897</td> <td style="text-align: right;">26.934</td> <td style="text-align: right;">7.850</td> </tr> <tr> <td>Total Adjustments</td> <td style="text-align: right;">1.275</td> <td style="text-align: right;">-11.890</td> <td style="text-align: right;">-6.522</td> </tr> <tr> <td>    Congressional Program Reductions</td> <td></td> <td style="text-align: right;">-11.890</td> <td></td> </tr> <tr> <td>    Congressional Rescissions</td> <td></td> <td></td> <td></td> </tr> <tr> <td>    Congressional Increases</td> <td></td> <td></td> <td style="text-align: right;">0.110</td> </tr> <tr> <td>    Congressional Transfer</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Reprogrammings</td> <td style="text-align: right;">1.275</td> <td></td> <td style="text-align: right;">-6.522</td> </tr> <tr> <td>SBIR Transfer</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>												<u>FY2005</u>	<u>FY2006</u>	<u>FY2007</u>	Previous President's Budget	55.622	38.824	14.372	Current President's Budget	56.897	26.934	7.850	Total Adjustments	1.275	-11.890	-6.522	Congressional Program Reductions		-11.890		Congressional Rescissions				Congressional Increases			0.110	Congressional Transfer				Reprogrammings	1.275		-6.522	SBIR Transfer			
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APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160425BB Special Operations Aircraft Defensive Systems / Project 3284	
<p>Funding:</p> <p>FY05</p> <ul style="list-style-type: none"> <li>- Increase of (+\$1.275M) is a result of a reprogramming from PE 1160404BB, Special Operations Tactical Systems Development for the DIRCM Advanced processor development.</li> </ul> <p>FY06</p> <ul style="list-style-type: none"> <li>- Congressional reductions include (-\$0.272M) for global 1% reduction, (-\$0.118M) for Section 8125 reduction and (-\$11.500) mark against the Towed Decoy program.</li> </ul> <p>FY07</p> <ul style="list-style-type: none"> <li>- Increased funds (+\$0.110M) for inflation rate changes.</li> <li>- Towed Decoy requirement terminated to support higher command priorities.</li> </ul> <p>Schedule: None.</p> <p>Technical: None.</p>		

Exhibit R-2a, RDT&E Project Justification		Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 7	SOF Aircraft Defensive System/Project 3284	

Cost (\$ in million)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
SOF Aircraft Defense System	56.897	26.934	7.850	6.836	4.235	8.757	6.822
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: This project provides definition, development, prototyping and testing of aircraft defensive avionics systems. Project identifies hardware and software enhancements for each Special Operations Forces (SOF) aircraft that will reduce detection, vulnerability, and threat engagement from threat radars and Infrared (IR) missiles, thereby increasing the overall survivability of SOF assets. This project identifies and develops enhancements to each platform to meet the projected threat. Recommendations for equipment modification or replacement will be developed by each system program manager based upon the results of ongoing engineering assessments and user operational requirements. This project funds dispenser upgrade and improvement programs, threat and missile warning receiver enhancements, radio frequency jammer improvements, and enhanced IR jamming systems. Project also provides systems for SOF-unique portions of the Warner Robins-Air Logistics Center, Electronic Warfare Avionics Integrated Systems Facility (EWAISF). Sub-projects include:

- Directional Infrared Countermeasures (DIRCM). The baseline program is a joint international cooperative United Kingdom/United States (UK/US) project to develop and procure an IR jammer for MC-130E/H and AC-130H/U aircraft capable of countering missile threats in the band one, two and four IR frequency spectrum.
- Next Generation Missile Warning System (NexGen MWS). Increment 3 in the spiral development of the AAQ-24 DIRCM System. Cooperative development program with Air Force to significantly extend DIRCM threat engagement range. Funds support two contracts through completion of System Design and Development (SDD) phase.
- EWAISF. The EWAISF directly supports software development and testing for EW systems. The EWAISF effort is a type of systems integration laboratory designed to support the incorporation of SOF aircraft defensive systems modifications into specific SOF platforms.
- High Power Fiber Optic Towed Decoy (HPFOTD) for MC-130 E/H Talon aircraft. Program funds the testing of the HPFOTD ALE-55 that uses the ALQ-172 as a techniques generator. The HPFOTD will be installed on all MC-130 E/H aircraft to provide protection against monopulse and other radar guided, surface to air, and air to air missile systems. AC-130U/H for the HPFOTD requirement was rescinded in FY04. The Command decided to terminate this effort in FY06 due to higher command priorities.

Exhibit R-2a, RDT&E Project Justification		Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 7	SOF Aircraft Defensive System/Project 3284	

- Low Band Jammer (LBJ). Program funds the integration of the ALQ-196 LBJ modification. The LBJ will improve the capability of the ALQ-172 radio frequency jammer by adding low band jamming coverage for MC-130H Combat Talon II aircraft and AC-130U Gunships. The Command decided to terminate this effort for MC-130H and AC-130U in FY06 due to higher Command priorities.

#### B. Accomplishments/Planned Program

Cost (\$ in million)	FY05	FY06	FY07	
DIRCM	7.620	5.136	1.853	
DIRCM NexGen MWS	17.000	8.950		
RDT&E Articles Quantity				
FY05 Continued to support a cooperative UK/US development/production program for 57 SOF C-130 aircraft, contractor engineering support, and nonrecurring engineering costs. Continued development of a NexGen MWS as P3I for DIRCM. Exploited Tier II missiles for jam code development.				
FY06 Continue to support a cooperative UK/US development/production program for 57 SOF C-130 aircraft, contractor engineering support, and nonrecurring engineering costs. Completes development of a NexGen MWS as P3I for DIRCM.				
FY07 Continues to support a cooperative UK/US development/production program for 57 SOF C-130 aircraft, contractor engineering support, and nonrecurring engineering costs for SOCOM unique lamp based hardware.				
Cost (\$ in million)	FY05	FY06	FY07	
EWASIF	1.804	1.900	1.966	
RDT&E Articles Quantity				
FY05 Continued to support laboratory efforts to maintain SOF aircraft defensive systems.				
FY06 Continue to support laboratory efforts to maintain SOF aircraft defensive systems.				
FY07 Continues to support laboratory efforts to maintain SOF aircraft defensive systems.				
Cost (\$ in million)	FY05	FY06	FY07	
HPFOTD	15.378			
RDT&E Articles Quantity				
FY05 Conducted nonrecurring engineering and development, and began Developmental Test/Operational Test and Evaluation (DT/OT&E) efforts for MC-130E aircraft.				
Cost (\$ in million)	FY05	FY06	FY07	

Exhibit R-2a, RDT&E Project Justification		Date: FEBRUARY 2006
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LBJ	15.095	10.948	4.031	
RDT&E Articles Quantity				

FY05 Continued nonrecurring engineering and initiated testing for aircraft integration for MC-130H aircraft.

FY06 Completes nonrecurring engineering for MC-130E and starts termination activities.

FY07 Completes termination activities.

C. Other Program Funding Summary:

	<u>FY05</u>	<u>FY06</u>	<u>FY07</u>	<u>FY08</u>	<u>FY09</u>	<u>FY10</u>	<u>FY11</u>	<u>To Complete</u>	<u>Total Cost</u>
C-130 Mods (Procurement)									
DIRCM	14.390	6.810							220.923
LBJ	6.947								15.958

D. Acquisition Strategy:

- DIRCM. The memorandum of agreement between the UK/US established the cooperative international baseline DIRCM program. The UK Ministry of Defense is the lead for the program. UK law applies to all baseline acquisition actions. USSOCOM program manager is the US Deputy to the UK DIRCM program manager.
  - NexGenMWS. Competitively award a contract to two contractors for the SDD phase of the program. A separate contract will be competitively awarded for the production phase.
  - EWAISF. Award sole source contracts to the manufacturer of the prime mission equipment required for hardware and software integration into the EWAISF. Capability improvements are on-going system changes.
  - LBJ. Program will capitalize on previous SOF aircraft modifications using the ALQ-196 system currently installed on MC-130E aircraft. The ALQ-196 system was selected as the best value decision. Program management will be provided through an Air Force System Program Office and a pre-competed contract will be used for integration, production, and installation.
- HPFOTD. Performed a market survey of the existing Towed Decoy currently available in the U.S. market place. Conducted an assessment to determine which non-developmental item met operational requirements. The ALE-55 System was selected as the best value decision.

Exhibit R-3 COST ANALYSIS					DATE: FEBRUARY 2006						
APPROPRIATION / BUDGET ACTIVITY				Special Operations Tactical Systems Development/PE1160425BB							
RDT&E DEFENSE-WIDE / 7				Special Operations Forces Aircraft Defensive System/3284							
Actual or Budget Value (\$ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY06	Award Date FY06	Budget Cost FY07	Award Date FY07			To Complete	Total Program
Primary Hardware Dev											
Directional Infrared Countermeasures (DIRCM)	SS/FFP	Northrop, Chicago, IL	101.684								101.684
Tech Integration DIRCM	SS/CPFF	Northrop, Chicago, IL	11.217	3.636	Various	0.353	Various			Cont	Cont.
		Northrop, Chicago, IL/Lockheed Martin, Orlando, FL									
NexGen MWS	CPIF		35.382	8.950	Dec-05						44.332
Electronics Warfare Avionics											
Integrated Systems Facility	SS/CPFF	Various	18.778	1.900	Various	1.966	Various			Cont.	Cont.
HPFOTD	CPAF	Boeing, Ft. Walton Beach, FL	109.931								109.931
Low Band Jammer	CPAF	Boeing, Ft. Walton Beach, FL	50.995	10.948	Jan-06	4.031	Jan-07			1.536	67.510
Subtotal Product Dev			327.987	25.434		6.350				Cont.	Cont.
Remarks:											
Development Spt											
Subtotal Spt											
Remarks:											
Developmental Test & Eval											
Subtotal T&E											
Remarks:											
Contractor Engineering Spt											
DIRCM	FP	Sverdrup, Tampa, FL	4.598	1.500	Dec-05	1.500	Dec-06			Cont.	Cont.
Subtotal Contract Engineering Spt			4.598	1.500		1.500				Cont.	Cont.
Remarks:											
Total Cost			332.585	26.934		7.850				Cont	Cont
Remarks:											

Exhibit R-4, Schedule Profile										Date: FEBRUARY 2006																		
Appropriation/Budget Activity					Program Element Number and Name												Project Number and Name											
RDT&E/7					PE1160425BB/Special Operations Aircraft Defensive Systems												Project 3284/SOF Aircraft Defensive Systems											
Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
DIRCM																												
Tech Integration																												
Missile Warning System Development (NexGen)																												
EWASIF Laboratory Testing and Evaluation																												
HPFOTD Development																												
LBJ Development																												
MC-130E																												

