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 1160404BB Special Operations (SO) Tactical Systems Development

COST (Dollars in Millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11		Cost to Complete	Total Cost
PE1160404BB	59.917	105.238	45.241	20.325	14.862	9.384	20.144		Cont.	Cont
3129 MC-130H COMBAT TALON	7.555	4.222							0.0	28.120
3326 AC-130U GUNSHIP	.139	18.636	1.604	2.788	1.663	1.716	1.770		Cont.	Cont.
D476 PSYOPS ADV DEV	.331	4.983	7.598	1.402	2.460	.688	.703		Cont.	Cont
D615 SOF AVIATION	22.503	8.886	3.037	2.390	2.808		10.431		Cont.	Cont
S0417 UNDERWATER SYSTEMS ADV DEV	.749	3.353	.630		1.147				Cont.	Cont
S1684 SOF SURFACE CRAFT ADV SYSTEMS	.960								Cont.	Cont
S350 SO MISSION PLANNING ENVIRONMENT	6.400	4.839	6.621	4.018	4.125	4.233	4.348		Cont.	Cont
S375 WEAPONS SYSTEMS ADV DEV	5.322	18.460	11.547	2.835	2.547	2.320	2.357		Cont.	Cont
S625 SOF TRAINING SYSTEMS	5.073								Cont.	Cont.
S700 SO COMMUNICATIONS ADV DEV	4.415	24.795	14.204	4.363	.112	.427	.535		Cont.	Cont
S800 SO MUNITIONS ADV DEV	3.470	4.683		.500					Cont.	Cont
S900 SO MISCELLANEOUS EQUIPMENT ADV DEV	3.000	12.381		2.029					Cont.	Cont

A. Mission Description and Budget Item Justification:

This program element provides for development, testing, and integration of specialized equipment to meet the unique requirements of Special Operations Forces (SOF). Specialized equipment will permit small, highly trained forces to conduct required operations across the entire

spectrum of conflict. These operations are generally conducted in harsh environments, for unspecified periods and in locations requiring small unit autonomy. SOF must infiltrate by land, sea, and air to conduct unconventional warfare, direct action, or deep reconnaissance operations in denied areas against insurgent units, terrorists, or highly sophisticated threat forces. The requirement to operate in denied areas controlled by a sophisticated threat mandates that SOF systems remain technologically superior to threat forces to ensure mission success.

B. Program Change Summary:

	FY05	FY06	FY07
Previous President's Budget	70.719	63.513	47.660
Current Program Budget Review	59.917	105.238	45.241
Total Adjustments	-10.802	41.725	-2.419
Congressional Program Reductions			
Congressional Rescissions		-1.525	
Congressional Increases		43.250	
Reprogrammings	-10.802		-2.419
SBIR			

Funding:

FY05:
Net Decrease (-$10.802M) resulting from the following reprogrammings:
- Project S900: Increase of $3.000M due to a 1415 reprogramming action moving Procurement to RDTE for efforts on the SOF All Terrain Vehicle program
- Project 3129: Decrease of $15.403 is a net result of reprogrammings to PE1160403BB, Aviation Systems Advanced Development, Project SF100 (-$5.145M), for Gunship Multi-Spectral System-2; PE1160425BB, SO Aircraft Defensive Systems, Project 3284 (-$1.058M), for Directional Infrared Countermeasures; and to PE1160402BB, Special Operations Advanced Technology Development, Project S200 (-$9.200M), for Gunship Viperstrike.

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 1160404BB Special Operations (SO) Tactical Systems Development

- Project 3326: Decrease of $1.098M is a result of reprogrammings to PE1160425BB, SO Aircraft Defensive System, Project 3284 (-$.717M) for Directional Infrared Countermeasures, and to PE1160403BB Project SF100 for MC-130H Air Refueling System.
- Project D615: Increase of $2.199M is a result of a reprogramming from PE1160403BB, Aviation Systems Advanced Development, Project SF100, for Sensor Modification Upgrades.
- Project S625: Increase of $.500M is a result of a reprogramming from PE1160425BB, SO Aircraft Defensive System, Project 3284 for SOF Training Air-Ground Interactive Simulator.

FY06:
- Congressional adds of $43.250M:
- Project S350: (+$1.000M) Command and Control Mission Manager Spiral 3.
- Project SO417: (+$1.800M) Advanced MK V Craft Prototype Development and (+$1.000M) Integrated Bridge System.
- Project S375: (+$1.000M) Dual band Universal Nightscope; (+ $2.550M) M72 Lightweight Attack Weapon System; (+1.000M) Mountain/Arctic Boot, and (+$4.000M) SOF Unmanned Vehicle Targeting.
- Project D615: (+$1.000M) NEXGEN Navigation, and (+$1.000M) Dominant Vision.
- Project S700: (+$1.400M) Covert Wavelet Packet Modulation; (+$2.400M) Covert Waveform III; (+$2.100M) High Value Target Tracking Devices; (+$2.000M) SOCOM Imagery Dissemination System; (+$1.000M) Modular Computing Technology; (+$1.700M) Tactical System Testbed; and (+$1.500M) Warrior Reach.
- Project S800: (+$4.250M) Magneto Remote Activated Munitions Systems and (+$0.500M) Multi-Target Warhead.
- Project S900: (+$2.450M) Alternative Mobility Vehicle; (+$7.000M) SOCOM Rotary UAV, and (+$2.600M) STAR-TEC Partnership.

- Congressional reductions of $1.525M include (-$1.063M) for global 1% reduction and (-$0.462M) for Section 8125 reduction.

FY07:
Net decrease $2.419M:
- Establishment of PE1160427BB, Mission Training and Preparation Systems, which resulted in a decrease of ($-1.782M) from Project S625, SOF Training Systems.

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 1160404BB Special Operations (SO) Tactical Systems Development

- Inflation rate change (+$0.635).
- Reprogrammings to support Command higher priorities (-$1.272).

Schedule: N/A.

Technical: N/A.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 7	MC-130 Combat Talon II/Project 3129	

Cost ($ in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
	7.555	4.222					
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: In an effort to mitigate Low Density/High Demand assets, the Department provided funding, starting in FY05, to increase USSOCOM's MC-130H inventory by ten aircraft. This program modifies seven C-130H2 and three Combat Loss Replacement (CLR) 3 modified aircraft (that were funded with FY03 Supplemental) to an MC-130H Combat Talon II configuration. These aircraft provide low level infiltration, exfiltration, and re-supply of special operations forces and equipment in hostile/denied territories. Aircraft will also refuel SOF helicopters.

B. Accomplishments/Planned Program

	FY05	FY06	FY07	
System Development and Engineering	7.555	4.222		
RDT&E Articles Quantity				

FY05 Conducted a preliminary analysis for an Electro-Optical/Infrared Common Sensor and Nonrecurring Engineering for the seven C-130H2 and three CLR modified aircraft to an MC-130H Combat Talon II configuration.
FY06 Program restructured due to slip in USAF C-130 Avionics Modernization Program that is to provide modernized core avionics. Funds are being reprogrammed to SOF Aircraft Defensive Systems (PE 1160425BB) to pay termination costs for the Low Band Jammer.

C. Other Program Funding Summary:

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	To Complete	Total Cost
Procurement	141.814	65.398	158.824	166.926	77.541	4.177	3.679	Cont.	Cont.

D. Acquisition Strategy. The Plus 10 Program procures 10 Talon II aircraft by modifying 3 previously procured CLR C130 aircraft and 7 C130H2 aircraft. The CLR aircraft were previously modified by installing an in-flight refueling capability, a high speed ramp, improved electrical generators, advanced communication and electronic counter-measures systems, and adding an APN-241 ground mapping/weather radar. In the Plus 10 Program, these 3 aircraft will be further modified to add a terrain following/terrain avoidance capability to the APN-241, and the C-130 Avionics Modernization Program/Common Avionics Architecture for Penetration (AMP/CAAP) modification. These modifications will bring the CLR aircraft up to a complete Combat Talon II configuration. For the conversion of the 7 C130H2s into the Combat Talon II configuration, the Plus 10 Program will conduct all the modifications described previously in two steps.

E. The prime contractor, Boeing Ft Walton Beach, FL. This contract is being terminated due to the slip in AMP/CAAP. The acquisition strategy is being revised to deliver an interim capability configured aircraft until the aircraft can be retrofitted with AMP/CAAP.

Exhibit R-3 COST ANALYSIS			DATE: FEBRUARY 2006								
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB MC-130H Combat Talon II /3129								
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
System Design Development	CPAF/FFP	Boeing, Ft Walton Beach, FL	6.747								6.747
Other (EO/IR Study)	CPAF	Lincoln Labs, Lexington, MA	0.808								0.808
Low Band Jammer Termination	CP	Boeing, Ft Walton Beach, FL		4.222	Mar-06						4.222
Subtotal Product Dev			7.555	4.222							11.777
Remarks:											
Development Spt Subtotal Spt											
Remarks:											
Developmental Test & Eval Subtotal T&E											
Remarks:											
Contractor Engineering Spt Subtotal Management											
Remarks:											
Total Cost			7.555	4.222							11.777
Remarks:											

Exhibit R-4, Schedule Profile																	Date: FEBRUARY 2006											
Appropriation/Budget Activity RDT&E/7					Program Element Number and Name PE1160404BB/Special Operations Tactical System Development												Project Number and Name Project 3129/MC-130H Combat Talon II											
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
System Design Development Contract Award		▲																										
System Design Development Non-Recurring Engineering		▲	—	▲																								

Exhibit R-4a, Schedule Profile		Date: FEBRUARY 2006					
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development	Project Number and Name Project 3129/MC-130H Combat Talon II					
Schedule Profile	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
System Design Development Contract Award	2Q						
System Design Development Non-Recurring Engineering	2-4Q						

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 7	AC-130U Gunship/Project 3326	

Cost ($ in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
AC-130U Gunship	.139	18.636	1.604	2.788	1.663	1.716	1.770
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: This project provides development of aircraft subsystems including precision navigation, target acquisition and strike radar, fire control computers integrated on redundant MIL-STD-1553B data buses, electronic countermeasures, infrared countermeasures, aerial refueling, covert lighting, trainable weapons, all light level television, infrared sensor, and secure communications systems. These subsystems enable the gunship to loiter safely in the target area, accurately strike targets, and to perform these tasks at night and in adverse weather conditions. Every effort has been made to adapt off-the-shelf equipment. To the maximum extent possible, the subsystems in the AC-130U are common with systems on other Air Force Special Operations Command aircraft.

B. Accomplishments/Planned Program

	FY 2005	FY 2006	FY 2007	
AC-130U Sensor Upgrades		16.088		
RDT&E Articles Quantity				

FY06 Program develops a replacement Electro-Optical/Infra Red (EO/IR) sensor to satisfy the remaining Operational Requirement Document deficiency on the AC-130U Gunship. FY 2004-2005 resources were formerly executed in PE1160403BB.

	FY 2005	FY 2006	FY 2007	
AC-130U Post Production Support	.139	2.548	1.604	
RDT&E Articles Quantity				

FY05 Continued the radio frequency spectrum management support and EO/IR technical analyses.
FY06 Continue with support flight test and engineering analyses.
FY07 Continues weight and drag reduction design, obsolescence engineering drawings, survivability studies, and ground/flight test support.

C. Other Program Funding Summary:

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	To Complete	Total Cost
AC-130U Gunship (Procurement)	8.157		1.131						372.484

D. Acquisition Strategy.

- The AC-130U Plus Four primarily uses competitively selected prime contractors under the Integrated Weapons System Support Program. Individual acquisition strategies are developed for each project.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB							AC-130U Gunship /3326	
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
Post Production Support	Various	Various	3.596	2.548	Various	1.604	Various			Cont.	Cont.
AC-130U Plus Four	SS/CPFF & FFP	Boeing, Ft. Walton Beach, FL	35.943								35.943
AC-130U Sensor Upgrades	CPFF	TBD		16.088	Mar-06						16.088
Subtotal Product Dev			39.539	18.636		1.604				Cont.	Cont.
Dev Spt											
Subtotal Spt											
Subtotal T&E											
Management											
Subtotal Management											
Remarks:											
Total Cost			39.539	18.636		1.604				Cont.	Cont.
Remarks:											

Exhibit R-4, Schedule Profile			Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical System Development		Project Number and Name Project 3326/AC-130U Gunship

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
Production Delivery Plus Four Aircraft							△	▬	△																			
Post Production Support																												
Sensor Upgrade Development						△	▬	△																				

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2006				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project 3326/AC-130U Gunship				
Schedule Profile		FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
Production Delivery Plus Four Aircraft			3-4Q	1Q				
Post Production Support		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Sensor Upgrade Development			2-4Q					

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 7	PSYOP Advanced Development/Project D476

Cost ($ in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
	0.331	4.983	7.598	1.402	2.460	.688	.703
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification:

This project provides for the development and acquisition of Psychological Operations (PSYOP) equipment. PSYOP is planned operations to convey selected information and indicators to foreign audiences to influence their emotions, motives, objective reasoning, and ultimately, the behavior of foreign governments, organizations, groups, and individuals. This project funds transformational systems and equipment to conduct PSYOP in support of combatant commanders. The PSYOP sub-projects funded are grouped by the level of organization they support. Sub-projects include:

- PSYOP Broadcast System (POBS), formerly Special Operations Media System A (SOMS A). POBS consists of fixed and deployable multi-media production facilities for radio and television programming, distribution systems, and dissemination systems to provide PSYOP support to theater commanders. POBS is comprised of several interfacing systems that can stand alone or interoperate with other PSYOP systems as determined by mission requirements. POBS includes: the fixed site Media Production Center (MPC), a deployable Theater MPC (TMPC); the PSYOP Distribution System (PDS) that provides a communications link to POBS systems worldwide; the transit case Fly-Away Broadcast Systems (FABS) consisting of any combination of AM, FM, SW, and TV transmitters and radio/TV production systems; and Long Range Broadcast System (LRBS). LRBS subsystems will include unmanned aerial vehicle (UAV) payloads, scatterable media, telephone/cell, and Internet broadcast.

- Commando Solo supports combat operations by flying PSYOP broadcast missions for the purpose of broadcasting radio and/or television signals deep into denied territory. These broadcasts are made from EC-130J aircraft that are equipped with high powered transmitters and large antenna arrays that operate in the 0.45-1,000 MHz frequency range.

B. Accomplishments/Planned Program

	FY 2005	FY 2006	FY 2007	
POBS	0.331	1.464	7.598	
RDT&E Articles Quantity				

FY05 Completed test and evaluation on the AM and Short Wave (SW) frequency FABS and the Special Operations Media System B (SOMS-B) (V)1 procured in FY03.
FY06 Commence primary hardware development, systems engineering, and Developmental Test and Evaluation (DT&E) on the LRBS and POBS modernization. Completes test and evaluation on the FM and TV FABS.
FY07 Continues primary hardware development, system engineering, and DT&E on the LRBS, POBS modernization efforts, and PSYOP planning and analysis system.

	FY 2005	FY 2006	FY 2007	
Commando Solo		3.519		
RDT&E Articles Quantity				

FY06 Develop and test a replacement narrowband transmitter for the hard-wired Commando Solos.

C. Other Program Funding Summary:

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	To Complete	Total Cost
Proc, PSYOP Equipment	15.603	36.158	93.881	178.833	153.741	161.935	48.566	Cont.	Cont.

D. Acquisition Strategy.

- POBS consists of wide-area systems providing radio, television programming and multi-media production, distribution and dissemination support to the theater commander. POBS is comprised of several interfacing systems that can stand alone or interoperate with other PSYOP systems as determined by mission requirements. The program acquires and modifies as necessary commercial and governmental-off-the-shelf (GOTS) systems and equipment to replace or enhance current system capabilities. The program also acquires performance enhancements to meet emergent requirements.

- Commando Solo funds required upgrades to the Commando Solo Special Mission Equipment that broadcasts PSYOP television and radio messages to target audiences in denied areas. The program acquires and integrates into the EC-130J commercial and GOTS systems to replace or enhance current system capabilities and address equipment shortfalls due to obsolescence.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB							PSYOP Advanced Development /D476	
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	MIPR	Natick Lab, Natick, MA	1.582								1.582
	MIPR	NAVAIR, St Inigoes, MD	0.132								0.132
	MIPR	NAVAIR, St Inigoes, MD	0.168								0.168
	ALLOT	Army-CECOM, Ft Monmouth, NJ	3.655								3.655
	MIPR	DOE, Nat'l Engr Lab, Idaho Falls, ID	3.240								3.240
	MIPR	SPAWAR, Charleston, SC		0.897	Mar-06					Cont.	Cont.
	TBD	Various				6.092	Various			Cont.	Cont.
Systems Engineering	ALLOT	Army-CECOM, Ft Monmouth, NJ	1.336								1.336
	REQN	Various	2.141								2.141
	MIPR	SPAWAR, Charleston, SC	0.060			0.306	Dec-06				0.366
	MIPR	NAVAIR, St. Inigoes, MD		3.500	Mar-06						3.500
Subtotal Product Dev			12.314	4.397		6.398				Cont.	Cont.
Remarks:											
Development Spt Subtotal Spt											
Remarks:											
Developmental Test & Eval	Various	Various	0.113			1.200	Jan-07			Cont.	Cont.
	MIPR	Army ATC, Aberdeen Prov Gd, MD	0.758							Cont.	Cont.
	MIPR	Soldier Biological Cmd, Natick, MA	0.546								0.546
	MIPR	JITC, Ft Huachuca, AZ	1.844							Cont.	Cont.
	MIPR	USASOC, Ft Bragg, NC	0.296								0.296
	MIPR	NAVAIR, St. Inigoes, MD		0.140	Sep-06						0.140
	MIPR	SPAWAR, Charleston, SC		0.446	Mar-06					Cont.	Cont.
Subtotal T&E			3.557	0.586		1.200				Cont.	Cont.
Remarks:											
Contractor Engineering Spt Subtotal Management											
Remarks:											
Total Cost			15.871	4.983		7.598				Cont	Cont
Remarks:											

Exhibit R-4, Schedule Profile																	Date: FEBRUARY 2006											
Appropriation/Budget Activity RDT&E/7									Program Element Number and Name PE1160404BB/Special Operations Tactical System Development												Project Number and Name Project D476/PSYOP Advanced Development							
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
POBS FABS Testing (SW & AM)																												
POBS LRBS AOA Study																												
POBS SOMS B (V)2 Testing																												
POBS MPC Testing																												
POBS LRBS UAV-P HW Dev &Testing																												
POBS LRBS Scatterable Media Testing																												
POBS Modernization																												
POBS FABS Testing (FM & TV)																												
Psychological Planning Operations Analysis System (POPAS) Testing																												
Commando Solo Narrowband Transmitter Dev & Testing																												

Exhibit R-4a, Schedule Profile			Date: FEBRUARY 2006				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development		Project Number and Name Project D476/PSYOP Advanced Development				
Schedule Profile	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
POBS FABS Testing (SW & AM)	1-2Q						
POBS LRBS AOA Study	1-4Q						
POBS SOMS B (V)2 Testing	2Q						
POBS MPC Testing	1-2Q						
POBS LRBS UAV-P HW Dev & Testing		3-4Q	1-2Q	3-4Q			
POBS LRBS Scatterable Media Testing		3Q	2Q	2Q			
POBS Modernization			1-4Q		1-4Q	1-4Q	1-4Q
POBS FABS Testing (FM & TV)		4Q	1-2Q				
POPAS Testing			2Q	2Q			
Commando Solo Narrowband Transmitter Dev & Testing		2-4Q					

Cost ($ in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
SOF Aviation	22.503	8.886	3.037	2.390	2.808		10.431
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: This project provides aviation support to Special Operations Forces (SOF) in worldwide contingency operations and low-intensity conflicts. The specialized aircraft for these missions must be capable of rapid deployment and undetected penetration of hostile areas. These aircraft must be capable of operating at extended ranges under adverse weather conditions to infiltrate, provide logistics for, reinforce, and extract SOF. The threat is characterized by an extensive and sophisticated ground based air defense system and an upgraded air-to-air capability targeted against helicopters. This project will develop/upgrade SOF rotary wing aircraft systems that will be capable of successful operations in increasingly hostile environments. Rotary wing systems supported by this project include: MH-60L/K/M, MH-47D/E/G, and AMH-6M. Efforts include:

- MH-47/MH-60/A/MH-6M Aircraft. (1) Develops a follow-on weapon system to the currently fielded M-134 Mini Gun. Replacement will be lighter and more reliable/maintainable with improved suppressive fire capability. (2) Continues development of the A/MH-6M aircraft by improving the tail rotor drive train, adding YAW stability augmentation system, and redesigning the vertical fin to improve tail rotor control and pilot workload.

- MH-47/MH-60 Avionics/Sensors. (1) Completes the development and qualification of a "next generation" Forward Looking Infrared Radar (FLIR). New FLIRs will provide significantly increased performance, weight savings, and improved reliability/maintainability. (2) Completes the development and qualification of an infrared exhaust suppressor for MH-47 aircraft. (3) Begins development of night vision devices to effectively and safely conduct the fight at night. (4) Start technology demonstration for the development of the SOF common K-band Terrain Following/Terrain Avoidance (TF/TA) Radar to defeat advanced passive detection threat while maintaining ability to fly safe TF. (5) Continues the development of Dominant Vision through the exploration of advanced situational awareness and fusion technologies for enhancement of various platforms ability to navigate and identify targets through adverse weather and obscured visual situations. The funding represented for Dominant Vision is in the process of being moved to the correct Program Element (1160402BB). (6) Funding for NEXGEN Navigation received as a Congressional add continues development of SOF Common Radar.

B. Accomplishments/Planned Program

	FY05	FY06	FY07	
MH-47/MH-60/A/MH-6M - Aircraft	3.060	6.914	3.037	
RDT&E Articles Quantity				

FY05 Continued development of tail rotor drive train for the A/MH-6M aircraft.
FY06 Begin development of replacement for the M-134 Mini Gun. Complete development of A/MH-6M tail rotor drive train improvement.

FY07 Continues development of replacement for the M-134 Mini Gun.

	FY05	FY06	FY07	
MH-47/MH-60 – Avionics/Sensors		1.972		
RDT&E Articles Quantity				

FY05 Completed development and testing of assault and attack FLIR systems and the MH-47 Infrared Exhaust Suppressor. Conducted technology demonstrations and studies to reduce technical risk of System Design and Development acquisition phase of the SOF K-band TF/TA Radar.
FY06 Continue the development of Dominant Vision through the exploration of advanced situational awareness and fusion technologies for enhancement of various platforms' ability to navigate and identify targets through adverse weather and obscured visual situations. NEXGEN Navigation explores the development of a SOF Common Radar.

C. Other Program Funding Summary:

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	To Complete	Total Cost
Rotary Wing Upgrades & Sustainment	63.107	88.588	29.216	21.991	9.213	30.150	9.059	Cont.	Cont.

D. Acquisition Strategy: Acquisition Strategy.

- A/MH-6M - This effort provides necessary drive train analyses, component development and testing, and test support/data analysis efforts required to improve operational safety margins of the A/MH-6M aircraft.

- MH-47/MH-60 Aircraft - This effort provides for the development and qualification of the replacements for the M-134 machine gun, potential light weight battery and components of the weapons system. A competitive source selection process will be conducted for the weapons system replacement to the extent possible. Proprietary considerations may direct some efforts to the original equipment manufacturer.

- MH-47/MH-60 Avionics/Sensors - Determination and development of next-generation improvements, enhancements, and upgrades to sensors and passive survivability systems will be conducted using competitive processes to the maximum extent practicable. Proprietary considerations may direct some efforts to the original equipment manufacturer.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Special Operations Forces Aviation/D615								
			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											
MH-47/60 Aircraft	Various	PM TAPO/Ft Eustis, VA	15.955	0.963	Various	3.037	Various			Cont.	Cont.
MH-47/60 Avionics/Sensors	Various	PM TAPO/Ft Eustis, VA	60.200							Cont.	Cont.
Joint K-Band TF/TA Radar	Various	USSOCOM, MacDill AFB, FL	17.782							Cont.	Cont.
A/MH-6M	Various	PM MELB, Ft. Eustis, VA	6.560	5.051	Various						11.611
MH-53	Cost Plus	PM DIRCM, MacDill AFB, FL	6.911								6.911
Subtotal Product Dev			107.408	6.014		3.037				Cont.	Cont.
Remarks:											
Management											0.000
Subtotal Spt											0.000
Remarks:											
Developmental Test & Eval											
MH-47/60 Aircraft	Various	PM TAPO/Ft Eustis, VA	4.000							Cont.	Cont.
MH-47/60 Avionics/Sensors	Various	PM TAPO/Ft Eustis, VA	8.294							Cont.	Cont.
A/MH-6M	Various	PM-MELB/Ft Eustis, VA	15.576	1.000	Various					Cont.	Cont.
Subtotal T&E			27.870	1.000						Cont.	Cont.
Remarks:											
Subtotal Management											
Remarks:											
Total Cost			135.278	7.014		3.037				Cont.	Cont.
Remarks:											

Exhibit R-4, Schedule Profile	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E/7	Project Number and Name Project D615/SOF Aviation

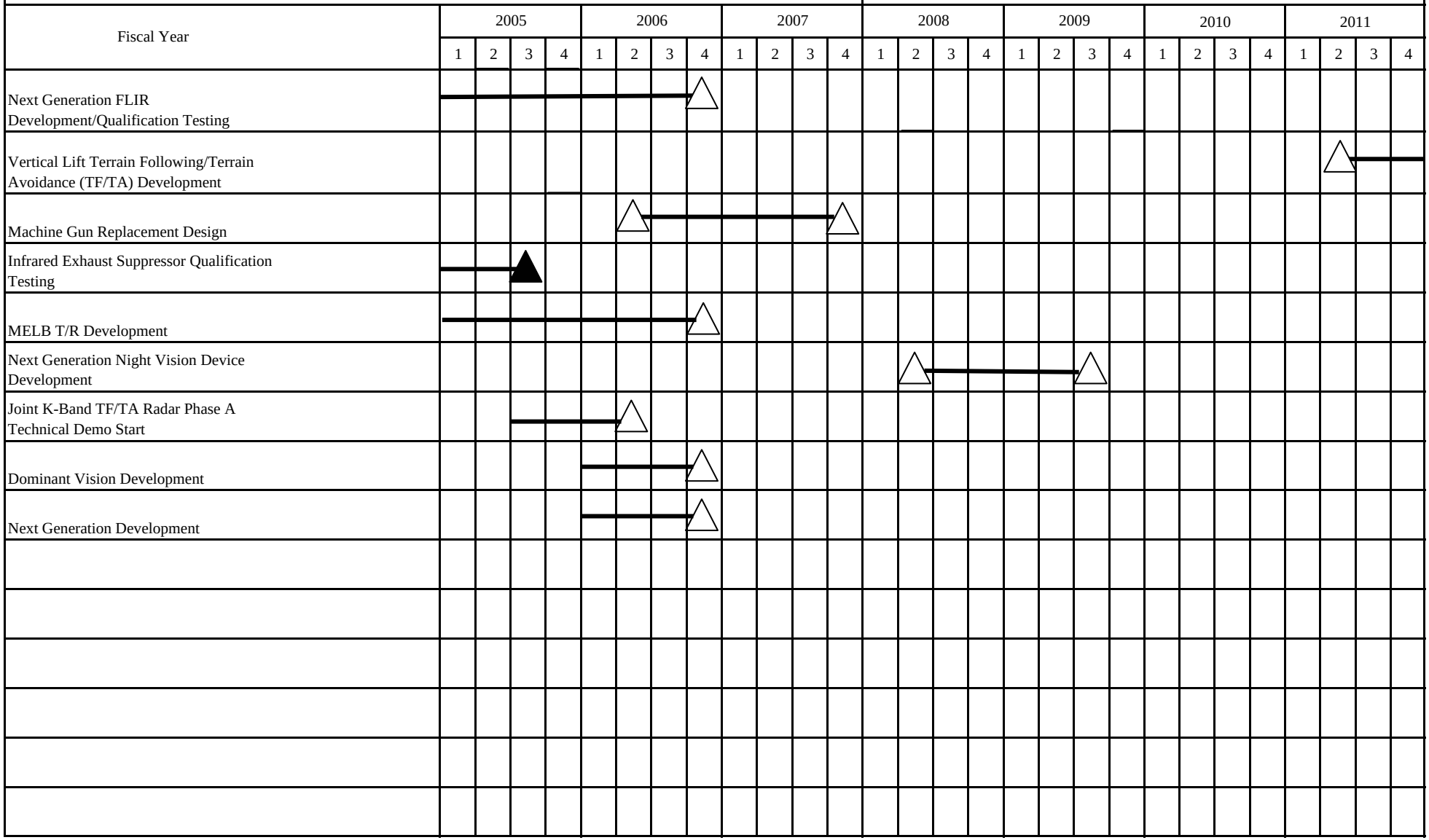


Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2006				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project D615/SOF Aviation				
Schedule Profile		FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
Next Generation FLIR Development/Qualification Testing			4Q					
Vertical Lift Terrain Following/Terrain Avoidance (TF/TA) Development								2-4Q
Machine Gun Replacement Design			2-4Q	1-4Q				
Infrared Exhaust Suppressor Qualification Testing		1-3Q						
MELB T/R Development		1-4Q	1-4Q					
Next Generation Night Vision Device Development					2-4Q	1-3Q		
Joint K-Band TF/TA Radar Phase A Technical Demo Start		3-4Q	1-2Q					
Dominant Vision Development			1-4Q					
Next Generation Development			1-4Q					

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Mission Planning Environment/Project S350	

Cost ($ in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
SOMPE	6.400	4.839	6.621	4.018	4.125	4.233	4.348
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: Special Operations Mission Planning Environment (SOMPE) provides automated integrated mission planning and execution tools required for time critical command and control of globally deployed SOF and, if required, coalition forces. SOMPE automates time-intensive planning activities and provides enhanced situational awareness, as well as interoperable automated adaptive war planning and collaborative environments for horizontal, vertical and parallel development of component parts of mission plans. SOMPE spans all echelons of SOF command, to include Theater Special Operations Commands (TSOCs), Joint Special Operations Task Forces, and Joint Special Operations Aviation Components, with automated interfaces to warfighters and warfighting platforms. SOMPE develops and integrates software applications.

B. Accomplishments/Planned Program:

	FY05	FY06	FY07	
SOF Core Mission Planning Software	1.748	2.775	4.305	
RDT&E Articles Quantity				

FY05 Continued SOF-wide software development and integration. Continued migration evaluation and transition planning to Joint Mission Planning System (JMPS).
FY06 Continue SOF-wide software development and integration. Begin development of SOF-specific functionality in JMPS modules. FY06 includes a Congressional add for development of a Command and Control Mission Manager, Spiral 3.
FY07 Continues SOF-wide software development and integration, such as upgrades to Softools (to include the Enhanced Decision Point Editor) and to Bird Dog Tool Version 2.1. Continues development of SOF-specific functionality in JMPS modules.

	FY05	FY06	FY07	
Deferred/Future Requirements for Air	0.549	0.650	1.004	
RDT&E Articles Quantity				

FY05 Continued to develop Aircraft/Weapons/Electronics (AWE) enhancements and interfaces with joint systems. Evaluated migration to JMPS.
FY06 Continue to develop AWE enhancements and interfaces with joint systems. Continue to evaluate migration to JMPS.
FY07 Test and evaluate SOF-wide automation tools and Command and Control (C2) nodes.

	FY05	FY06	FY07	
Development and Modification of TSOC Automation Tools	3.771	1.064	0.912	

RDT&E Articles Quantity					

FY05 Continued the development and integration of TSOC automation tools to meet planning requirements. Began the development of TSOC C2 nodes to meet situational awareness requirements.
FY06 Continue the development and integration of TSOC automation tools and C2 .
FY07 Continues the development and integration of TSOC automation tools and C2 nodes.

	FY05	FY06	FY07	
Test and Evaluation of Core Software	0.332	0.350	0.400	
RDT&E Articles Quantity				

FY05 Continued test and evaluation on core software, installable software modules, AWE and flight performance models. Commenced test and evaluation on SOF-wide mission planning automation tools and TSOC C2 nodes.
FY06 Continue the test and evaluation of SOF-wide automation tools and C2 nodes.
FY07 Continues the test and evaluation of SOF-wide automation tools and C2 nodes.

C. Other Program Funding Summary:

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	To Complete	Total Cost
PROC, SOMPE	0.187							Cont.	Cont

D. Acquisition Strategy. Develop mission planning software to support SOF operations by leveraging ongoing personal computer-based efforts including service C2 efforts for situational awareness and mission planning efforts such as Portable Flight Planning System (PFPS) under the Air Force Mission Support System program and migration to the JMPS. Integration of SOF-specific requirements into PFPS, along with maximum use of commercial off-the-shelf software technology and components, reduces overall costs and schedule. Contract strategy combines various contracts and types to include competitively awarded cost plus time & materials and sole source cost-no-fee (educational institution) contracts. Maximizes use of state-of-the-art commercial hardware technology procured via firm fixed price contract to take advantage of software portability and open system architecture. Focuses on platform specific software interface modules required to initialize and upload platform mission computers avionics systems through the use of electronic data transfer devices.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Special Operations Mission Planning Environment (SOMPE) /S350								
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
Subtotal Product Dev											
Remarks:											
Development Support	C/CPFF	CAS, Huntsville, AL	3.743	1.228	Dec-05	1.004	Dec-06			Cont.	Cont.
	C/CPFF	LMFS, Owego, NY	7.629								7.629
	Various	Various	0.847								0.847
Software Dev/Integ	SS/CPFF	GTRI, Atlanta, GA	5.219							Cont.	Cont.
	T&M	Tybrin, Ft Walton Beach, FL	5.346								5.346
	Various	Various	3.847	1.360	Various	4.305	Various			Cont.	Cont.
	Various	Various	3.771	0.915	Various	0.912	Various			Cont.	Cont.
	CPFF	SAIC, Morgantown, WV		0.986	Feb-06						
Subtotal Spt			30.402	4.489		6.221				Cont.	Cont.
Remarks:											
Developmental Test & Eval	MIPR	46th FTS, Hurlburt Field, FL	1.450								1.450
	SS/CPFF	ARINC, Annapolis, MD	1.009								1.009
	SS/CPFF	Salinas Tech, FL	0.017								0.017
	C/CPFF	CAS, Huntsville AL	0.332	0.350	Dec-05	0.400	Dec-06			Cont.	Cont.
Operational Test & Eval	MIPR	18th FTS, Hurlburt Field, FL	0.663								0.663
GFE	MIPR	Integrated Aviation Systems 21 Working Group Ft Campbell, KY	0.279								0.279
Subtotal T&E			3.750	0.350		0.400				Cont.	Cont.
Remarks:											

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Special Operations Mission Planning Environment (SOMPE) /S350								
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
Contractor Engineering Spt	PO	CAS Inc, Huntsville, AL	4.206								4.206
Government Engineering Spt	ALLOT	AATD, Ft Eustis, VA	7.881								7.881
Travel	ALLOT	SOF PMO Ft Eustis, VA	0.070								0.070
Overhead	ALLOT	SOF PMO Ft Eustis, VA	0.092								0.092
Subtotal Management			12.249	0.000		0.000					12.249
Remarks:											
Total Cost			46.401	4.839		6.621				Cont.	Cont.
Remarks:											

Exhibit R-4, Schedule Profile																													
																	Date: FEBRUARY 2006												
Appropriation/Budget Activity RDT&E/7									Program Element Number and Name PE1160404BB/Special Operations Tactical System Development												Project Number and Name Project S350/SOMPE							
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
Portable Flight Planning System										△																		
Joint Mission Planning System (JMPS) Migration												△																△
Mission Planning Module		▲					△					△						△						△				△
Aircraft/Weapons Enhancements (AWE)		▲					△					△						△						△				△
AWE to UPC (JMPS Conversion)												△																△
Flight Performance Model Enhancements		▲					△					△						△						△				△
SOF-Wide Automation Tools		▲					△					△						△						△				△
System Interfaces for Interoperability																												△
TSOC C2 Planning Tools		▲					△					△						△						△				△
TSOC C2 Nodes	▲						△					△						△						△				△
Software Development Testing																												△
C2 Mission Manager Spiral 3 Development						△		△																				

Exhibit R-4a, Schedule Profile								Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project S350/SOMPE				
Schedule Profile	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	
Portable Flight Planning System Releases	1-4Q	1-4Q	1-2Q					
Joint Mission Planning System (JMPS) Mitgration			4Q	1-4Q	1-4Q	1-4Q	1-4Q	
Mission Planning Modules	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	
Aircraft/Weapons Enhancements (AWE)	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	
AWE to UPC (JMPS Conversion)			4Q	1-4Q	1-4Q	1-4Q	1-4Q	
Flight Performance Model Enhancements	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	
SOF-Wide Automation Tools	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	
System Interfaces for Interoperability	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	
TSOC C2 Planning Tools	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	
TSOC C2 Nodes	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	
Software Development Testing	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	
C2 Mission Manager Spiral 3 Development		2-4Q						

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E.A BA # 7	Weapons and Support Systems Advanced Development /Project S375

Cost ($ in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Weapons and Support Sys Adv Dev	5.322	18.460	11.547	2.835	2.547	2.320	2.357
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: This project provides for development and testing of specialized, lightweight individual weapons, fire control/surveillance devices, and combat equipment to meet the unique requirements of Special Operations Forces (SOF). SOF often deploy as small, independent, quick reaction, foot-mobile teams independent of primary logistics support. Existing weapons and combat equipment are frequently unsuited to these conditions. Sub-projects include:

- Family of Sniper Detection Systems (FSDS). Provides the capability for SOF units to rapidly locate the position of a sniper's origin of fire in near-real-time. Detects and locates small arms gunfire from 5.56mm, 7.62mm and .50 caliber weapons for the conduct of counter-sniper operations.

- Integrated Night/Day Observation/Fire Control (INOD). The INOD provides the SOF sniper with a lightweight, low signature/fire control and observation device that allows the sniper to detect, acquire, and engage targets out to the weapon's maximum effective range under day/night conditions. The INOD allows the sniper to go from day to night operations without re-zeroing. This system will include sensor fusion of both image intensification and thermal infrared sensors.

- Light Anti-armor Weapon (LAW). The M72 66mm Light Anti-armor Weapon is a shoulder-fired, man-portable, self-contained, single use, disposable, light, anti-armor rocket. The LAW has several warhead variants, making it a versatile weapon system for the SOF operator to tailor to the mission.

- Lightweight Counter Mortar Radar (LCMR). The LCMR provides a man-portable, lightweight, 360˚ counter-mortar radar system designed to acquire hostile mortar and other indirect fire out to a range of 5,000 meters. The LCMR is compatible with current Command and Control communications and provides an all weather capability to the SOF operator on the ground, providing the operator with a precise target location used for counter-fire. This program increased by a FY 2004 congressional add and supplemental funds.

- M4A1 SOF Carbine Accessory Kit (M4MOD). The M4MOD Kit enhances the standard Army M4 Carbine by using the latest technological advances in optional accessories (up to 30 different functions/capabilities) such as day scopes, night scopes, active aiming laser module, visible lights, grenade launchers, suppressors, hand grips, and close quarters battle sights. These accessories greatly enhance the lethality of the weapon system and the survivability of the SOF operator. The SOF Combat Assault Rifle (SCAR) was a subproject of the M4MOD program to further enhance the performance of SOF equipment. The SCAR was broken out as a separate program and will be listed separately on this exhibit. The SCAR will provide an enhanced family of weapons. This program was increased by FY 2004 and FY 2005 congressional adds.

- Night Vision Devices (NVD). The SOF NVD system includes advanced field of view goggles, improved sensors, multi-spectral imaging, sensor fusion, Precision Targeting Location Designator (PTLD), and micro-laser integration and improved displays. The PTLD will be a combined laser range finder, geological locator, and laser designator for directing precision guided munitions.

- Precision Laser Targeting Device (PLTD). The PLTD will be a hand-held binocular device with an embedded global positioning system (GPS) to provide the SOF operator with the ability to direct close air support missions by determining the geo-location of a target to support the delivery of GPS-guided munitions.

- SOF Combat Assault Rifle (SCAR). SCAR is an evolutionary acquisition, incremental approach that will provide the SOF operator with a 5.56 mm (SCAR-L) and a 7.62mm (SCAR-H) family of rifles that are modular in barrel length. SCAR variants will replace a suite of weapons currently in the SOF inventory of weapons.

- SOF Personal Equipment Advanced Requirements (SPEAR). SPEAR develops and acquires items that provide increased or enhanced capabilities in individual protection survivability, load bearing and dismounted mobility for the SOF operator. The Body Armor/Load Carrying System (BALCS) provides a tactical, deployable body armor and load carriage system capable of improving survivability, while optimizing the load carrying capabilities of the SOF operator. BALCS consists of modular body armor, load carriage and backpacks. This program was made a sub-project under the SPEAR program in FY 2006.

- Combat Casualty Care Equipment – Kit (CCCEKIT). The CCCEKIT is a technology transfer initiative to identify a variety of medical items and equipment approved by the Food and Drug Administration (FDA) to include intraosseous infusion devices, patient

monitoring and assessment devices, emergency airway Kits, and devices that support patient management and enroute care capabilities for the far-forward treatment of SOF casualties in remote and austere environments.

- Unmanned Vehicle Targeting (UVT). SOF UVT will explore, develop and demonstrate application of integrated unmanned vehicle technologies to identify, geo-locate and track targets, and to support engagement of those targets by other weaponized platforms. These technologies include: network command and control of, and communication with, the unmanned platforms; enhanced onboard sensors and processing equipment for both navigation and targeting; and enhanced software analysis and visualization tools to rapidly identify and geo-locate targets from sensor data at the ground control station.

B. Accomplishments/Planned Program

	FY05	FY06	FY07	
FSDS		.503	.584	
RDT&E Articles Quantity				

FY06 Conduct test and evaluate on-going Gunfire Detection System (GDS) performance improvements to enhance ShotGuard software accuracy and configuration improvements to provide wireless connectivity with integrated GPS and compass.
FY07 Test and evaluate enhanced data interface acquisition module (DIAM) for three array configuration.

	FY05	FY06	FY07	
INOD		.503		
DUNS		.986		
RDT&E Articles Quantity		10		

FY06 Develops a dual band INOD system that will allow the sensor fusion of both image intensification and thermal infra-red. A congressional add for the trademarked system DUNS was provided in FY06. The DUNS is a prototype dual-band universal night sight that addresses the INOD requirement for Block III.

	FY05	FY06	FY07	
LAW		2.514	4.900	
RDT&E Articles Quantity				

FY06 This effort is a Congressional add. Funds will be used to develop and test block upgrades of the M72A7 LAW. The upgrades include, but are not limited to, providing a confined space firing capability, a dual safe fuse, and a redesigned launcher with improved trigger. Additionally, this effort will significantly improve insensitive munitions performance.
FY07 Continue and complete the third and final phase of LAW-Confined Space (CS) product development, which began with funds added by Congress. The LAW-CS will have higher reliability and compatible sights that will enable SOF Warfighters to use SOF unique sights.

LCMR	FY05	FY06	FY07	
RDT&E Articles Quantity		3.450		

FY06 Improve the functionality and capability of the pre-production LCMRs through spiral development.

	FY05	FY06	FY07	
M4MOD	.250	.069	.243	
RDT&E Articles Quantity				

FY05 Continued research, development and test of advances to weapon accessories.
FY06 Continues the testing of advances to weapon accessories.
FY07 Test and evaluate Mini Day/Night Sight (MDNS) project improvements.

	FY05	FY06	FY07	
NVD	.928			
RDT&E Articles Quantity	2			

FY05 Completed the design and began the user testing of the PTLD.

	FY05	FY06	FY07	
PLTD	2.737			
RDT&E Articles Quantity	3			

FY05 Developed a laser targeting device capable of providing the geo-location of a target to support the delivery of global positioning system guided munitions.

	FY05	FY06	FY07	
SCAR	1.407			
RDT&E Articles Quantity				

FY05 Awarded enhanced SCAR engineering test units and conducted development and operational testing.

	FY05	FY06	FY07	
SPEAR		6.190	5.309	
RDT&E Articles Quantity				

FY06 Conduct market surveys for commercial off the shelf (COTS) products to conduct combat evaluations and/or conduct competitive source selections to initiate development of the next generation body armor, environmental protection, ballistic eyewear, identify friend or foe, maritime equipment, modular integrated communications helmet, and survival equipment.
FY07 Continue development of the next generation body armor, environmental protection, ballistic eyewear, identify friend or foe, maritime equipment, modular integrated communications helmet, and survival equipment, and initial market surveys for assault equipment.

CCCEKIT	FY05	FY06	FY07	
RDT&E Articles Quantity		.302	.511	

FY06 Enter concept development for modernization of SOF medical capabilities for operating in austere environments. Initiate prototype demonstrations of lighter, more efficient medical Sets, Kits and Outfits (SKOs) and far-forward surgical capabilities.
FY07 Conduct operational assessment of SKOs in preparation for procurement and fielding.

	FY05	FY06	FY07	
UVT		3.943		
RDT&E Articles Quantity				

FY06 This funding was a FY06 Congressional add. Enter concept development and demonstrate application of integrated unmanned vehicle technologies to identify and track targets.

C. Other Program Funding Summary:

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	To Complete	Total Cost
Small Arms and Weapons	142.244	128.384	105.788	143.657	63.687	59.733	122.018	Cont.	Cont.

D. Acquisition Strategy.

- FSDS. The Gunfire Detection System uses proven/existing technology validated under a Foreign Comparative Test program. Sole source contract to the vendor, Metravib, was awarded using streamlined procedures. Operational and environmental tests were conducted to support limited Fielding and Deployment Release.

- INOD. The INOD system is an evolutionary acquisition program that integrates emerging technology into the latest SOF sniper sights. This strategy supports the development of a new, dual band sensor system that will combine both image intensification and thermal infra-red on one display. This will improve the SOF operator's ability to identify targets in periods of smoke, fog, and other battlefield obscurants.

- LAW. Maximizes the use of COTS and Non-Development Item technology to research and develop the Trajectory Mount for the LAW system

- LCMR. Transitioned this program from a Science and Technology effort, with two working prototypes. Conduct additional research and engineering development to enhance performance and reliability of pre-production prototypes.

M4MOD. The initial intent of the M4MOD program was to provide SOF with the ability to adapt the M4A1 carbine to optimize its operational effectiveness and has evolved as the program to adapt all SOF weapons in order to increase their operational effectiveness through improved target recognition, acquisition, and hit capability during day and night from close quarters to maximum effective range of each weapon. The program spiral develops new capabilities in block upgrades that are first developed and tested, and then fielded to the full spectrum of SOF operators. Future carbine programs (SCAR) will leverage and then drive the advancement of accessories within this program. All SOF weapons programs leverage M4MOD to increase operational effectiveness. Blocks include a program to develop a pocket

Scope mount, an enhanced M203 capability, family of muzzle brake suppressors, shot counter and numerous other components designed to enhance the capabilities of the weapon while at the same time combining an increasing capability.

- NVD. Development of next generation NVD. Program will use evolutionary acquisition approach.

- PLTD. The PLTD program will leverage an Army warfighter rapid acquisition program to develop a SOF version of a laser targeting device capable of providing geo-location of a target for the delivery of global positioning system guided munitions. This version is required to improve the accuracy of coordinate geo-location to eliminate the possibility of fratricide incidents.

- SCAR. The SCAR effort will use an evolutionary acquisition approach.

- SPEAR. The SPEAR program is an evolutionary acquisition program that utilizes a variety of acquisition methods, including COTS, Modified COTS (MCOTS), NDI and developmental acquisition strategies to accomplish program objectives. Many items will undergo spiral development to achieve continuous improvement and objective level requirements. Maximum use of Javits-Wagner-O'Day set asides (i.e., National Institute of the Severely Handicapped) will be used.

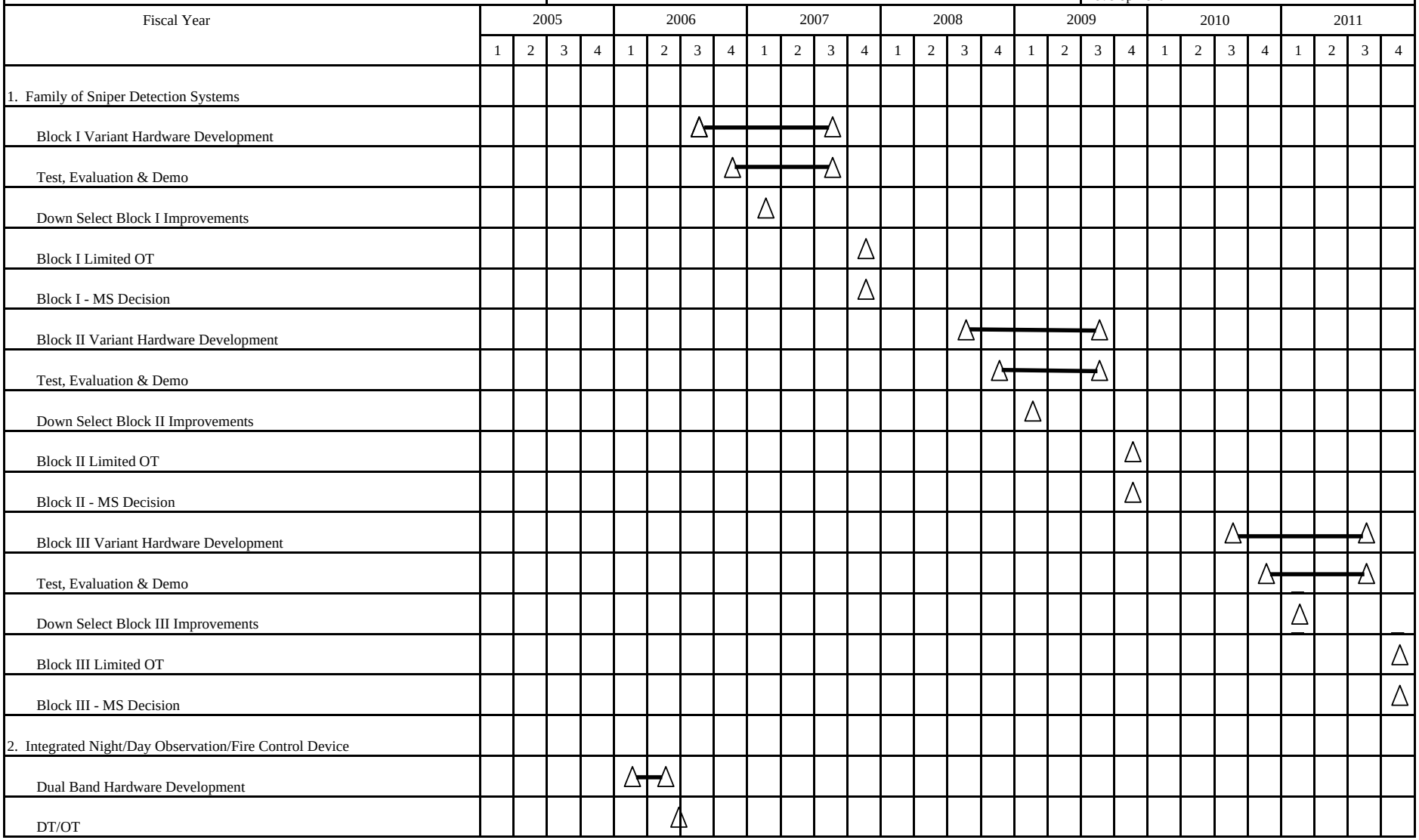
- CCCEKIT. The CCCEKIT will leverage Federal Drug Administration approved COTS equipment and devices to provide modernized, standardized SOF medical life saving capabilities for use in austere environments during extended delays in casualty evacuation.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Weapons Systems Advance Development/S375								
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
Hardware Dev											
FSDS	FFP/T&M	PM-CCS, Picatinny, NJ		0.303	Various	0.259	Various			Cont.	Cont.
INOD	CPFF	NSWC-Crane, Crane, IN		0.398	Feb-06					Cont.	Cont.
DUNS	CPFF	NSWC-Crane, Crane, IN		0.986	Various					Cont.	Cont.
LAW	Various	NSWC-Crane, Crane, IN		1.000	Various	2.009	Various			Cont.	Cont.
LCMR	TBD	PM LCMR, Ft. Monmouth, NJ	0.150	0.867	Various					Cont.	Cont.
M4MOD	Various	NSWC-Crane, Crane, IN	5.213							Cont.	Cont.
NVD	ALLOT	Various	2.791							Cont.	Cont.
PLTD	CPFF	PM Sensors & Lasers, Ft. Belvoir, VA	2.000							Cont.	Cont.
SPEAR	Various	PM Spear, Natick, MA	0.150	1.034	Various	1.441	Various			Cont.	Cont.
TECH TRANSFER: CCCEKIT	Various	Various		0.302	Various	0.511	Various			Cont.	Cont.
UV VT	Various	TBD		3.943	Various						
Subtotal Product Dev			10.304	8.833		4.220				Cont.	Cont.
Remarks:											
Development Spt											
LAW	Various	NSWC-Crane, Crane, IN		1.314	Various	2.597	Various			Cont.	Cont.
LCMR	TBD	PM LCMR, Ft. Monmouth, NJ	0.085	0.357	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.413							Cont.	Cont.
NVD	ALLOT	Various	1.205							Cont.	Cont.
PLTD	CPFF	PM Sensors & Lasers, Ft. Belvoir, VA	0.250							Cont.	Cont.
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.443							Cont.	Cont.
SPEAR	Various	PM Spear, Natick, MA	0.025	0.211	Various	0.370	Various			Cont.	Cont.
SOFTAPS	Various	Soldier Systems Center, Natick, MA	0.408							Cont.	Cont.
Integrated Logistics Spt											
LCMR	TBD	PM LCMR, Ft. Monmouth, NJ	0.550	0.255	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.214							Cont.	Cont.
SPEAR	ALLOT	PM Spear, Natick, MA	0.050	0.528	Various	0.380	Various			Cont.	Cont.
SOFTAPS	Various	TACOM, ILSC-SBC	0.011							Cont.	Cont.
Configuration Mgmt											
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.200	0.390	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.197			0.043	Various			Cont.	Cont.
NVD	ALLOT	Various	0.443							Cont.	Cont.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Weapons Systems Advance Development/S375								
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
SPEAR	ALLOT	PM Spear, Natick, MA	0.025	0.211	Various	0.369	Various			Cont.	Cont.
Subtotal Spt			4.519	3.266		3.759				Cont.	Cont.
Remarks:											
Developmental Test											
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.500	0.255	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.402	0.069	Various	0.200	Various			Cont.	Cont.
PLTD	CPFF	PM Sensors & Lasers, Ft. Belvoir, VA	0.487							Cont.	Cont.
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.654							Cont.	Cont.
SPEAR	TBD	PM Spear, Natick, MA		0.866	Various	0.665	Various			Cont.	Cont.
SOFTAPS	ALLOT	Yuma Proving Grounds, Yuma, AZ	1.110							Cont.	Cont.
Operational Test											
FSDS	ALLOT	PM-CCS, Picatinny, NJ		0.075	Various	0.245	Various			Cont.	Cont.
INOD	CPFF	NSWC-Crane, Crane, IN		0.105	Various					Cont.	Cont.
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.500	0.408	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.594							Cont.	Cont.
NVD	ALLOT	Various	0.899							Cont.	Cont.
SPEAR	ALLOT	PM Spear, Natick, MA	0.416	1.492	Various	0.538	Various			Cont.	Cont.
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.457							Cont.	Cont.
SOFTAPS	ALLOT	USA OTC, ABNSOTD, Ft. Bragg, NC	0.382							Cont.	Cont.
Subtotal T & E			6.401	3.270		1.648				Cont.	Cont.
Remarks:											
Government Eng Spt											
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.230	0.459	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.125							Cont.	Cont.
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.325							Cont.	Cont.
SPEAR	ALLOT	PM Spear, Natick, MA	0.050	1.056	Various	0.870	Various			Cont.	Cont.
Program Mgmt Spt											
LAW	ALLOT	NSWC-Crane, Crane, IN		0.200	Various	0.294	Various			Cont.	Cont.
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.412	0.357	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.980							Cont.	Cont.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Weapons Systems Advance Development/S375								
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
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.300							Cont.	Cont.
SPEAR	ALLOT	PM Spear, Natick, MA	0.060	0.476	Various	0.434	Various			Cont.	Cont.
Travel											
FSDS	ALLOT	PM-CCS, Picatinny, NJ		0.125	Various	0.080	Various			Cont.	Cont.
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.136	0.102	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.384							Cont.	Cont.
NVD	ALLOT	Various	0.282							Cont.	Cont.
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.070							Cont.	Cont.
SPEAR	ALLOT	PM Spear, Natick, MA	0.030	0.316	Various	0.242	Various			Cont.	Cont.
SOFTAPS	MIPR	Army T&E / USFS	0.017							Cont.	Cont.
Subtotal Management			3.401	3.091		1.920				Cont.	Cont.
Remarks: Other Prior Year			0.221								
Total Cost			24.846	18.460		11.547				Cont.	Cont.
Remarks:											

		Date: FEBRUARY 2006	
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical System Development		Project Number and Name Project S375/Weapons and Support Systems Advanced Development



																				Date: FEBRUARY 2006										
Appropriation/Budget Activity RDT&E/7									Program Element Number and Name PE1160404BB/Special Operations Tactical System Development										Project Number and Name Project S375/Weapons and Support Systems Advanced Development										
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
3. Lightweight Counter Mortar Radar																												
MS B		▲																										
LRIP							△																					
MS C										△																		
IOC											△																	
FOC														△														
4. M4MOD																												
MDNS DT/OT (Multiple)				▲			△																					
MDNS MS C (Multiple)				▲				△																				
Shot Counter DT/OT			▲																									
Shot Counter LRIP				▲																								
Shot Counter MS C								△																				
5. Night Vision Device (Precision Laser Targeting Device [PLTD])																												
MS A/B						△																						
Development/Test							△																					
MS C								△																				
6. PLTD																												
MS A/B						△																						
Development/Test							△																					

																	Date: FEBRUARY 2006													
Appropriation/Budget Activity RDT&E/7									Program Element Number and Name PE1160404BB/Special Operations Tactical System Development												Project Number and Name Project S375/Weapons and Support Systems Advanced Development							
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
7. SOF Combat Assault Rifle																												
DT/OT/LUA				▲	▲																							
MS-C LRIP							△																					
IOT&E										△																		
MS-C FRP											△																	
FUE											△																	
IOC													△															
8. SOF Tactical Advanced Parachute System																												
MS B																												
LIVE DT	▲																											
OT		▲																										
MS C			▲																									
FUE						△																						
9. SOF Personnel Eequipment Advanced Requirements (SPEAR)																												
Protective Combat Uniform																												
MS C						△																						
IOC						△																						
Extremity Protection System																												
IOC										△																		

																	Date: FEBRUARY 2006													
Appropriation/Budget Activity RDT&E/7									Program Element Number and Name PE1160404BB/Special Operations Tactical System Development								Project Number and Name Project S375/Weapons and Support Systems Advanced Development												
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
9. SPEAR (Cont.)																												
Tactical Boot Suite																												
MS A/B							△																					
DT								△—△																				
OT									△																			
MS C											△																	
IOC													△															
Tilting Titanium NOD Mount																												
IOC								△																				
Body Armor P3I																												
DT						△—	△																					
OT							△																					
MS C							△																					
IOC									△																			
Backpacks																												
DT							△																					
OT							△																					
MS C								△																				
IOC										△																		

		Date: FEBRUARY 2006	
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical System Development		Project Number and Name Project S375/Weapons and Support Systems Advanced Development

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
9. SPEAR (Cont.)																												
Eye Protection																												
MS A/B						△																						
DT							△	△																				
OT								△																				
MS C									△																			
IOC										△																		
Identification Friend or Foe																												
MS A/B							△																					
DT								△																				
OT								△																				
MS C									△																			
IOC											△																	
Survival Equipment																												
MS A/B							△																					
DT/OT								△																				
MS C									△																			
IOC											△																	

		Date: FEBRUARY 2006	
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical System Development		Project Number and Name Project S375/Weapons and Support Systems Advanced Development

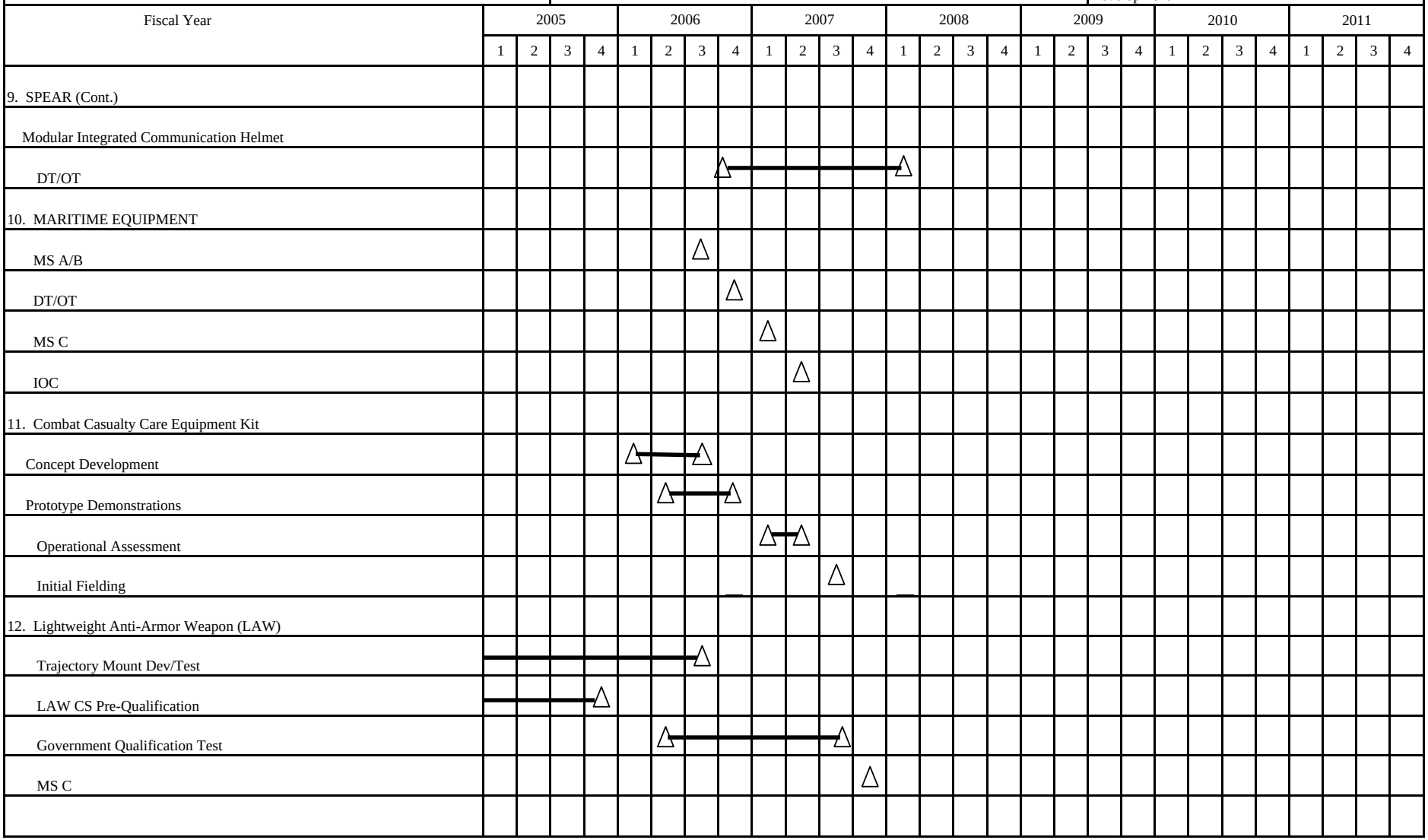


Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2006				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project 375/Weapons and Support Systems Advanced Development				
Schedule Profile	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
1. FSDS							
Block I Variant - Hardware Development & Fabrication		3 - 4Q	1 - 3Q				
Test, Evaluation & Demo		4Q	1 - 3Q				
Down Select Block I Improvements			1Q				
Block I - Limited OT			4Q				
Block I - MS C Decision			4Q				
Block II Variant - Hardware Development & Fabrication				3 - 4Q	1 - 3Q		
Test, Evaluation & Demo				4Q	1 - 3Q		
Down Select Block II Improvements					1Q		
Block II - Limited OT					4Q		
Block II - MS C Decision					4Q		
Block III Variant - Hardware Development & Fabrication						3 - 4Q	1 - 3Q
Test, Evaluation & Demo						4Q	1 - 3Q
Down Select Block III Improvements							1Q
Block III - Limited OT							4Q
Block III - MS C Decision							4Q
2. Integrated Night/Day Observation/Fire Control Device							
Dual Band Hardware Development		2 - 3Q					
DT/OT		3Q					
3. Lightweight Counter Mortar Radar							
Milestone B	2Q						
LRIP		3Q					
Milestone C			2Q				
IOC			3Q				
FOC				2Q			
4. M4MOD							
MDNS DT/OT	4Q	1Q - 3Q					
MDNS MS C (Multiple)	4Q	1Q - 4Q					
Shot Counter DT/OT	3Q						

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2006				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project 375/Weapons and Support Systems Advanced Development				
Schedule Profile	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
4. M4MOD (Cont.)							
Shot Counter LRIP	4Q						
Shot Counter MS C		4Q					
5. Night Vision Device (Precision Laser Targeting Device [PLTD])							
MS A/B		2Q					
Developmental Test		3Q					
MS C		4Q					
6. PLTD							
MS A/B		2Q					
Developmental Test		4Q					
7. SOF Combat Assault Rifle							
DT/OT/LUA#2	4Q	1Q					
MS-C LRIP		2Q					
IOT&E			2Q				
MS-C FRP			2Q				
FUE			3Q				
IOC				1Q			
8. SOF Tactical Advanced Parachute System							
MS B							
LIVE DT	1Q						
OT	2Q						
MS C	3Q						
FUE		2Q					
9. SOF Personnel Equipment Advanced Requirements (SPEAR)							
Protective Combat Uniform							
MS C		2Q					
IOC		2Q					

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2006				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project 375/Weapons and Support Systems Advanced Development				
Schedule Profile	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
9. SPEAR (Cont.)							
Extremity Protection System							
IOC			2Q				
Tactical Boot Suite							
MS A/B		3Q					
DT		4Q	1Q				
OT			1Q - 2Q				
MS C			3Q				
IOC				1Q			
Tilting Titanium NOD Mount							
IOC		4Q					
Body Armor P3I							
DT		2 - 3Q					
OT		2 - 3Q					
MS C		3Q					
IOC			1Q				
Backpacks							
DT		3Q					
OT		3Q					
MS C		4Q					
IOC			2Q				
Eye Protection		4Q					
MS A/B		2Q					
DT		3 - 4Q					
OT		4Q					
MS C			1Q				
IOC		4Q	2Q				
Identification Friend or Foe							
MS A/B		3Q					
DT		4Q					
OT		4Q					
MS C			1Q				

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2006				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project 375/Weapons and Support Systems Advanced Development				
Schedule Profile	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
9. SPEAR (Cont.)							
IOC			3Q				
Survival Equipment							
MS A/B		3Q					
DT/OT		4Q					
MS C			1Q				
IOC			3Q				
Modular Integrated Communication Helmet							
DT/OT			2-4Q	1-2Q			
10. Maritime Equipment							
MS A/B		3Q					
DT/OT		4Q					
MS C			1Q				
IOC			3Q				
11. Combat Casualty Care Equipment Kit							
Concept Development		1 - 3Q					
Prototype Demonstrations		2 - 4Q					
Operational Assessment			1 - 2Q				
Initial Fielding			3Q				
12. Lightweight Anti-Armor Weapon (LAW)							
Trajectory Mount Dev/Test	1-4Q	1.3Q					
LAW CS Pre-Qualification	1-3Q						
Government Qualification Test		2-4Q	1-3Q				
MS C			4Q				

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Forces (SOF) Training Systems /Project S625	

Cost ($ in millions)		FY05	FY06	FY07	FY08	FY09	FY10	FY11
SOF Training Systems		4.573						
RDT&E Articles Quantity								

A new program element was established for Mission Training and Preparations Systems (MTPS). FY 2007-2011 resources were moved from PE 1160404BB (SOF Training Systems) to PE 1160427BB (Mission Training and Preparation Systems).

A. Mission Description and Budget Item Justification: This project funded the development, integration, and test of Special Operations Forces (SOF) simulator systems to support training and mission rehearsal. This project also funded subsequent upgrades necessary to avoid obsolescence and keep the simulators current with the aircraft configurations. Sub-projects include:

- SOF Air to Ground Interface Simulator (SAGIS): Developed one transportable and one fixed-base prototype simulator to train Air Force Special Operations Command (AFSOC) and United States Army Special Operations Command (USASOC) Combat Controllers. This system will provide a training capability for ground unit personnel to interface with SOF aircrews to practice and rehearse Joint Close Air Support and Terminal Attack Control.

- AFSOC Simulator Block Upgrade: Developed an electronic warfare simulation environment for the SOF C-130 Electronic Warfare Officer (EWO) training station.

- A/MH-6 Combat Mission Simulator. Developed an integrated combat mission flight simulator into the existing high level architecture environment to conduct real-world mission rehearsal. This simulator enables initial, mission special qualification, continuation and upgrade flight training, including weapons training. Currently, no training device exists with this capability.

B. Accomplishments/Planned Program

	FY05	FY06	FY07	
SAGIS	.951			
RDT&E Articles Quantity				

FY05: Continued the development of one transportable and one fixed-base prototype simulator to train AFSOC and USASOC Special Forces Combat Controllers. These systems provide training capability for ground unit personnel to interface with SOF Aircrews to practice and rehearse Joint Close Air Support, Terminal Attack Control, and ordnance delivery.

AFSOC Simulator Block Upgrade	.931			
RDT&E Articles Quantity				

FY05: Funded the concept article development of an infrared and radar detection simulation environment for the Electronic Warfare Officer (EWO) training station.

	FY05	FY06	FY07	
A/MH-6 Simulator Program	3.191			
RDT&E Articles Quantity				

FY05: Integrated a Mission Rehearsal visual system into the MH-6 simulator capable of utilizing existing TopScene databases to support an improved level of mission training and rehearsal capability for pilots participating in GWOT.

C. Other Program Funding Summary:

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	To Complete	Total Cost
Proc, SOF Training Systems	51.030	13.897	12.659					Cont.	Cont.

D. Acquisition Strategy:
- Upgrade existing devices as necessary to maintain aircraft concurrency and correct supportability deficiencies associated with obsolescence. Use a spiral development approach.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 7	SOF Communications Advanced Development S700	

Cost ($ in million)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
SOF Communications Advance Development	4.415	24.795	14.204	4.363	0.112	0.427	0.535
RDT&E Articles Quantity							

A. MISSION AND DESCRIPTION: This project provides for communication systems to meet emergent requirements to support Special Operations Forces (SOF). The SOF mission mandates that SOF systems remain technologically superior to any threat to provide a maximum degree of survivability. SOF units require communications equipment that improves their warfighting capability without degrading their mobility. Therefore, SOF Communications Advanced Development is a continuing effort to develop lightweight and efficient SOF Command, Control, Communications, and Computer (C4) capabilities.

United States Special Operations Command (USSOCOM) has developed an overall strategy to ensure that Command, Control, Communications, Computer and Intelligence (C4I) systems continue to provide SOF with the required capabilities throughout the 21st century. USSOCOM's C4I systems comprise an integrated network of systems providing positive command and control and the timely exchange of intelligence and threat warning to all organizational echelons. The C4I systems that support this new architecture employ the latest standards and technology by transitioning from separate systems to full integration within the infosphere. The infosphere is a multitude of existing and projected national assets that allows SOF elements to operate with any force combination in multiple environments. The sub-projects funded in this project meet annual emergent requirements and are grouped by the level of organizational element they support: Operational Element (Team), Above Operational Element (Deployed) and Above Operational Element (Garrison).

OPERATIONAL ELEMENT (TEAM)

- Multi-Band Inter/Intra Team Radio (MBITR) provides lightweight, handheld, inter/intra team communications for Special Operations Forces (SOF). SOF teams conduct air, ground, and maritime missions across the entire operational spectrum. In the past, these missions required SOF teams to carry multiple handheld radios operating in several different frequency bands [Very High Frequency (VHF) FM, VHF AM, Ultra-High Frequency (UHF) AM and UHF FM] to ensure positive communications. The MBITR provides each of these frequency bands in a single handheld radio with embedded Type 1 Communications Security (COMSEC). It provides SOF teams with the ability to communicate on a user selected frequency (30-512 MHz) using a single tactical handheld radio. It is interoperable with various agencies of the U.S. Government, Air Traffic Control and allied foreign forces. The MBITR is the platform for the development of Cluster 2 Joint Tactical Radio System (JTRS), JTRS Enhanced MBITR (JEM). The JTRS Cluster 2 JEM is the interim JTRS handheld radio solution and will provide capabilities such as enhanced Information Security (INFOSEC), Blue Force Tracking (BFT), Global Positioning System (GPS), beacon

functions and waveform portability. The JEM is Software Communications Architecture compliant, which is one of the primary tenets of the JTRS program.

- MBITR BFT was an initiative added in FY05 by Congress. This initiative provided research, engineering, and development support to implement BFT capability in the JEM.

- Multi-Band/Multi-Mission Radio (MBMMR). MBMMR provides voice and data communication in either a manpack or fixed mount radio configuration. It is designed to operate on a user-selected frequency from a 30 to 512 MHz in VHF and UHF bands as well as Line-of-Sight, Demand Assigned Multiple Access Satellite Communications and Maritime modes. MBMMR features National Security Agency (NSA) endorsed type 1 embedded COMSEC. It operates in both military and public service bands and is compatible with the Electronic Counter-Counter Measure capabilities of the Single Channel Ground Airborne Radio System and HAVE QUICK II equipment. Other features include selectable power output up to 20 watts, night vision goggle compatible and saltwater immersible.

- Tactical Communications Systems Testbed was added in FY05 and FY06 by Congress. This initiative serves as a testbed to evaluate new technologies for SOF communications under a rapid prototyping concept. The focus is on four discrete efforts that have been recommended by SOF users as having a significant potential impact to enhancing current capabilities: Tactical Wireless Communications Across the Battlespace; High Bandwidth WiMax; Real-Time/Near Real-Time Video Compression; and Information Assurance & Commercial-Off-The-Shelf compatibility.

- Machine Based Language Translator (MBLT) provides a revolutionary capability for tactical, real-time, voice to voice multi-language capability. It supports SOF operations worldwide by maintaining highly perishable language translation proficiency, and provides immediate translation capability for SOF without general language training or training in rare dialects.

- Covert Wavelet Packet Modulation is an FY06 Congressional add. Develops a JTRS compliant Low Probability of Intercept/Low Probability of Detection (LPI/LPD) waveform generator and architecture for insertion into the JEM radio program.

- Covert Waveform III is an FY06 Congressional add. Develops new JTRS compliant covert communication capability with embedded positive threat identification.

- High Value Target Tracking Devices initiative is an FY06 Congressional add. This initiative accelerates the introduction of miniature high value target tracking and localization capabilities and provides SOF with the tools and ability to track and report position information of

these critical assets.

- SOCOM Imagery Dissemination System initiative is a FY06 Congressional plus-up. This initiative explores an end-to-end technology system that consists of a PC-based commercial-off-the-shelf software package for end user situation awareness clients, and a UNIX-based software package for the remote imagery dissemination server.

- Modular Computing Technology initiative is an FY06 Congressional add. This initiative researches computer module technology, for SOF application, that includes the uses of a full PC, but can have multiple uses in "shells", such as a hand-held, desktop, or automotive, eliminating the need for redundant operating systems and application software licenses.

- Warrior Reach is an FY06 Congressional add. This initiative is a joint initiative to integrate real-world intelligence, surveillance and reconnaissance (ISR) capabilities into USSOCOM mission preparation and operational architectures to improve current mission preparation, testing and operational capabilities.

B. Accomplishments/Planned Program

Cost ($ in million)	FY05	FY06	FY07	
MBITR	1.921	7.537	7.867	
RDT&E Articles Quantity				

FY05 This initiative was partially funded by a Congressional add. Continued development of replacement COMSEC chip for the JEM, implemented the JTRS Software Communications Architecture, and initiated development of BFT for MBITR.
FY06 Continue technology insertion for the JEM which will provide BFT, combat search and rescue functionality, improved data throughout networking, LPI/LPD, simultaneous noise and data operations, GPS, and enhanced SATCOM capabilities.
FY07 Continues technology insertion for the JEM.

Cost ($ in million)	FY05	FY06	FY07	
MBMMR		5.028	5.928	
RDT&E Articles Quantity				

FY06 Commence development of a reprogrammable COMSEC chip.
FY07 Continues development of a reprogrammable COMSEC chip.

Cost ($ in million)	FY05	FY06	FY07	
Tactical Communications System Testbed Initiative	2.494	1.676		
RDT&E Articles Quantity				

FY05 This initiative was a Congressional add that initiated a tactical communications system testbed. Evaluated new technologies for SOF communications under a rapid prototyping concept.
FY06 This initiative is a Congressional add. Continue tactical communications system testbed initiative to evaluate new technologies for SOF communications under a rapid prototyping concept. Evaluate enhancements to existing SOF deployable communications systems under both laboratory and operational conditions, while focusing on four discrete efforts to enhance current capabilities.

Cost ($ in million)	FY05	FY06	FY07	
MBLT		0.302	0.409	
RDT&E Articles Quantity				

FY06 Begin development and assessment of one-way automated language translation capability for SOF tactical applications.
FY07 Completes development and assessment of one-way automated language translation capability for SOF tactical applications.

Cost ($ in million)	FY05	FY06	FY07	
Covert Wavelet Packet Modulation		1.380		
RDT&E Articles Quantity				

FY06 This initiative is a Congressional add. Develops a JTRS compliant LPI/LPD waveform generator and architecture for insertion into the JEM radio program.

Cost ($ in million)	FY05	FY06	FY07	
Covert Waveform III		2.366		
RDT&E Articles Quantity				

FY06 This initiative is a Congressional add. Develop new JTRS compliant covert communication capability with embedded positive threat identification.

Cost ($ in million)	FY05	FY06	FY07	
High Value Target Tracking Devices		2.070		
RDT&E Articles Quantity				

FY06 This initiative is a Congressional add. Commence acceleration of introduction of miniature High Value Target Tracking and localization capabilities to provide SOF with the tools and ability to track and report position information of critical assets.

Cost ($ in million)	FY05	FY06	FY07	
SOCOM Imagery Dissemination System		1.971		
RDT&E Articles Quantity				

FY06 This initiative is a Congressional add. Explore end-to-end technology for PC-based end user situation awareness system for remote imagery dissemination.

Cost ($ in million)	FY05	FY06	FY07	
Modular Computing Technology		0.986		
RDT&E Articles Quantity				

FY06 This initiative is a Congressional add. Research computer module technology for SOF application to eliminate need for redundant operating systems and application software licenses.

Cost ($ in million)	FY05	FY06	FY07	
Warrior Reach		1.479		
RDT&E Articles Quantity				

FY06 This initiative is a Congressional add. Commence integration of real-world ISR capabilities into USSOCOM mission preparation and operational architectures to improve current mission preparation, testing and operational capabilities.

C. Other Program Funding Summary:

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	To Complete	Total Cost
PROC, Comm/Equip and Electronics	101.478	117.358	70.410	202.996	146.481	118.310	86.303	Cont.	Cont.

D. Acquisition Strategy:

- MBITR is a post-Milestone III fielded SOF communications system that is being upgraded to become software communications architecture compliant as directed by OSD.
- MBMMR is a post-Milestone III fielded SOF communications system which is being upgraded to alleviate the mission impact from obsolete parts and will provide flexibility with a reprogrammable COMSEC chip.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB SOF Communications Advanced Development/S700								
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											
Develop MBITR COMSEC Chip	MIPR	NSA, Ft Meade, MD	2.177								2.177
Develop MBMMR COMSEC Chip	CPFF	Raytheon's Network Centric Systems, Fort Wayne, IN	4.090	5.028	Apr-06	5.928	Dec-06			4.363	19.409
Material Improv & Corrosion Cntrl	SS - FFP	Concurrent Technologies Corp Largo, FL	2.454								2.454
Subtotal Product Dev			8.721	5.028		5.928				4.363	24.040
Remarks:											
Development Spt											
Initiate MBITR Tech Insertion	MIPR	Thales Comm Inc.; Clarksville, MD		7.537	Dec-05	7.867	Dec-06				15.404
Machine Based Language Translator	MIPR	DARPA		0.302	Jan-06	0.409	Dec-06			Cont.	Cont.
Subtotal Spt			0.000	7.839		8.276				Cont.	Cont.
Remarks:											

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB SOF Communications Advanced Development/S700								
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
Developmental Test & Eval											
Tactical Communication System Testbed	MIPR	SPAWAR-Charleston, SC	2.494	1.676	Mar-06						4.170
Covert Wavelet Packet Modulation	TBD	TBD		1.380	Mar-06						1.380
Covert Waveform III	TBD	TBD		2.366	Mar-06						2.366
High Value Target Tracking Devices	TBD	TBD		2.070	Mar-06						2.070
SOCOM Imagery Dissemination System	TBD	TBD		1.971	Mar-06						1.971
Warrior Reach	TBD	TBD		1.479	Mar-06						1.479
Modular Computing Technology	TBD	TBD		0.986	Mar-06						0.986
Subtotal T&E			2.494	11.928		0.000					14.422
Remarks:											
Contractor Engineering Spt											
Subtotal Management											
Remarks:											
Total Cost			11.215	24.795		14.204				Cont.	Cont.
Remarks:											

Exhibit R-4, Schedule Profile																															
																Date: FEBRUARY 2006															
Appropriation/Budget Activity RDT&E/7								Program Element Number and Name PE1160404BB/Special Operations Tactical System Development												Project Number and Name Project S700 SOF Communications Adv Dev							
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
1. Develop MBITR COMSEC Chip																												
2. MBITR BFT																												
3. MBITR Technology Insertions																												
4. Develop MBMMR COMSEC Chip																												
5. Develop Tactical Communications System Testbed																												
6. Material Improvement & Corrosion Control of Comm (SOFTACS):																												
Tactical Communication System Testbed Evaluations																												
Covert Wavelet Packet Modulation																												
Covert Waveform III																												
High Value Target Tracking Devices																												
SOCOM Imagery Dissemination System																												
Warrior Reach																												
Machine Based Language Translator																												
Modular Computing Technology																												

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2006				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project S700/SOF Communications Advance Development				
Schedule Profile	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	
Develop MBITR COMSEC Chip	1-3Q							
Develop MBITR BFT	1-4Q							
MBITR Technology Insertions		1-4Q	1-4Q					
Develop MBMMR COMSEC Chip	1-3Q	2-4Q	1-4Q	1-2Q				
Develop Tactical Communications System Testbed	2-4Q	1-2Q						
Material Improvement & Corrosion Control of Comm	1-2Q							
Tactical Communication System Testbed Evaluations		2-4Q	1Q					
Covert Wavelet Packet Modulation		2-4Q	1Q					
Covert Waveform III		2-4Q	1Q					
High Value Target Tracking Devices		2-4Q	1Q					
SOCOM Imagery Dissemination System		2-4Q	1Q					
Warrior Reach		2-4Q	1Q					
Machine Based Language Translator		2-4Q	1-3Q					
Modular Computing Technology		2-4Q	1Q					