RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2007
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)	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	Cost to Complete	Total Cost
PE1160404BB	95.636	82.143	42.262	48.986	43.692	30.227	18.895	15.253	Cont.	Cont
3326 AC-130U GUNSHIP	11.453	1.563							Cont.	Cont.
D476 PSYOPS ADV DEV	4.873	7.402	6.931	17.000	12.750	.703			Cont.	Cont
D615 SOF AVIATION	6.760	3.933	5.368	3.827	15.422	12.537	3.524		Cont.	Cont
S0417 UNDERWATER SYSTEMS ADV DEV	.580	4.511	1.800	3.147	1.000	1.000	.500	.500	Cont.	Cont
S1684 SOF SURFACE CRAFT ADVANCE SYSTEMS	9.786	3.118	3.191	5.213	2.000				Cont.	Cont
S350 SO MISSION PLANNING ENVIRONMENT	5.143	6.451							0.0	85.492
S375 WEAPONS SYSTEMS ADV DEV	17.228	24.208	9.573	8.571	2.410	2.449	1.944	2.348	Cont.	Cont
S625 SOF TRAINING SYSTEMS	4.000								0.0	120.811
S700 SO COMMUNICATIONS ADV DEV	24.505	28.715	10.810	11.228	8.608	10.560	12.927	12.405	Cont.	Cont
S800 SO MUNITIONS ADV DEV	5.682		2.000						Cont.	Cont
S900 SO MISCELLANEOUS EQUIPMENT ADV DEV	5.626	2.242	2.589		1.502	2.978			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:

	FY06	FY07	FY08	FY09
Previous President's Budget	105.238	45.241	20.325	14.862
Current President's Budget	95.636	82.143	42.262	48.986
Total Adjustments	-9.602	36.902	21.937	34.124
Congressional Program Reductions		-6.246		
Congressional Rescissions				
Congressional Increases		45.000		
Reprogrammings	-7.229		21.937	34.124
Other Program Adjustments				
SBIR	-2.373	-1.852		

Funding:

FY06: Net decrease (-$9.602 million) by Project:

- Project 3129 (-$4.222 million): Decrease is due to Prior Approval Reprogramming (No. FY 06-17 PA) submitted to Congress in support of a critical O&M Global War on Terror (GWOT) shortfall (-$4.129 million) and Small Business Innovative Research (SBIR) transfer (-$0.93 million).
- Project 3326 (-$7.183 million): Decrease is due to reprogramming to Program Element (PE) 1160402BB, Special Operations Advanced Technology Development, to support the Gunship Viper development effort (-$2.548million); FY 2006 Omnibus Reprogramming No. FY 06-22 PA (-$1.562 million); realignments for higher command priorities (-$2.658 million); and SBIR transfer (-$0.415 million).
- Project D476 (-$0.110 million): Decrease is due to SBIR transfer (-$0.110 million).

- Project D615 (-$2.126 million): Decrease is due to two Congressional adds internally reprogrammed by OSD to the correct PE for execution (-$1.964 million) and SBIR transfer (-$0.162 million).

- Project S0417 (-$2.773 million): Decrease is due to a Congressional add that was internally reprogrammed by OSD to the correct PE for execution (-$1.774 million), a Congressional add that was realigned to Project S1684 for execution (-$0.964 million), and SBIR transfer (-$0.035 million).

- Project S1684 ($9.786 million): Net increase is due to two Congressional adds that were internally reprogrammed by OSD into this PE/project for proper execution ($9.023 million), a Congressional add that was realigned from Project SO417 for proper execution ($0.964 million), and SBIR transfer (-$0.201 million).

- Project S350 ($0.304 million): Net increase is due to reprogramming from PE 1160425BB, Special Operations Aircraft Defensive Systems, to support interface and testing of mission planning software ($1.657 million); realignment for higher command priorities (-$1.245 million); and for SBIR transfer (-$0.108 million).

- Project S375 (-$1.232 million): Net decrease is due to a Congressional add that was internally reprogrammed by OSD to another PE for proper execution (-$0.986 million), FY 2006 OMNIBUS Reprogramming No. FY 06-22 PA (-$0.720 million), realignments for higher command priorities ($0.163 million), SBIR transfer (-$0.389 million), and a Congressional add that was internally reprogrammed by OSD into this PE/project for proper execution ($0.700 million).

- Project S625 ($4.000 million): Net increase is due to reprogramming from PE 1160425BB, Special Operations Aircraft Defensive Systems, to support the Air-Ground Interactive Simulator software development testing ($1.255 million), realignment from Project 3326 in support of the AC-130U Gunship Multi-Spectral System (GMS-2) modification ($3.000 million), and realignment for higher command priorities (-$0.255 million).

- Project S700 (-$0.290 million): Net decrease is a Prior Approval Reprogramming (No. FY 06-17 PA) submitted to Congress in support of a critical O&M GWOT shortfall (-$2.516 million), FY 2006 Omnibus Reprogramming No. FY 06-22 PA (-$2.718 million), Congressional adds that were internally reprogrammed by OSD into this PE/project for proper execution ($8.484 million), Congressional adds that were internally reprogrammed/realigned to the correct PE/project for execution (-$3.056 million), realignments for higher command priorities ($0.136 million) and SBIR transfer (-$0.620 million).

- Project S800 ($0.999 million): Net increase is realignment into this project for Precision Sniper Rifle ammunition ($1.103 million) and SBIR transfer (-$0.104 million).

- Project S900 (-$6.755 million): Net decrease is a Congressional add internally reprogrammed by OSD to the correct PE for execution (-$6.900 million); an internal reprogramming into this PE/project to properly execute a congressional add for Lightweight All Terrain Vehicles ($1.200 million); a Prior Approval Reprogramming (No. FY 06-17 PA) submitted to Congress in support of a critical O&M GWOT shortfall (-$0.333 million); a reprogramming from PE 1160403BB, Aviation Advanced Development, to support administrative costs associated with the SBIR program ($0.500 million); a reprogramming from PE 1160408BB, SOF Operational Enhancements, to support the development and testing of the Digital Data Link on the Rucksack Portable Unmanned Aerial System ($1.514 million); an internal realignment of a Congressional add to project S700 for proper execution (-$2.506 million); realignments for higher command priorities (-$0.108 million) and SBIR transfer (-$0.122 million).

FY07: Net increase of $36.902 million is a result of Section 8106 reduction (-$0.318 million), a Congressional mark against the Multi-Band/Multi-Mission Radio upgrade program (-$5.928 million), SBIR transfer (-$1.852 million) and the following Congressional adds ($45.000 million):

- Project D615: Next Generation Navigation Computer System ($1.000 million).
- Project S0417: Advanced Mark V Craft Prototype Development ($4.000 million)
- Project S375: Combat Assault Rifle ($1.800 million), Artic Warfare Boot ($1.000 million), Nickel Boron Coating ($1.000 million), Combat Boot – Polyurethane ($1.000 million), Gunfire Detection System ($1.200 million), Integrated Warfighter ($2.100 million), Tactical Boot Suite ($1.000 million), Weapons Shot Counter ($1.000 million), MARSOC BRITE M22 ($2.200 million), and Holographic Imager ($1.000 million).
- Project S700: Covert Wavelet ($2.000 million), SOCOM Imagery Dissemination System ($1.500 million), Strategic Communications ($2.800 million), Tactical Communication Testbed ($1.500 million), C2 Mission Manager ($1.000 million), Warrior Reach ($1.000 million), Multi-Band Inter/Intra Team Radio ($9.000 million), and STAR-TEC Partnership Program ($2.400 million).
- Project S900: Closed-Circuit Rebreather ($1.000 million) and Over-the-Horizon Augmented Reconnaissance ($1.300 million).
- Project S1684: Integrated Bridge System ($1.000 million) and Small Boat Family ICS ($2.200 million).

FY08: Net increase of $21.937 million by project:

- Project 3326 (-$2.788 million): Funds were realigned to support higher command priorities.
- Project D476 ($5.529 million): Funds were added to continue the primary hardware development, system engineering, and developmental test & evaluation (DT&E) on Psychological Operations Broadcast Systems (POBS) and Psychological Operations Media Displays (POMD), and to begin primary hardware and software development for the Next Generation Loud Speaker (NGLS) variants.
- Project D615 ($2.978 million): Funds were added to begin development of the Infrared Exhaust Suppressor (IES) for the A/MH-6 Little Bird fleet to provide a passive countermeasure capability that is compatible with the A/MH-6's higher performance engine ($4.433 million) and improved lightweight armor for the MH-47/MH-60 Aircraft Occupant Ballistic Protection System (AOBPS) in order to reduce weight and permit additional critical payloads on these mission aircraft ($0.935 million); funds were realigned to support higher command priorities (-$2.390 million).
- Project S0417 ($1.800 million): Funds were added for concept and technology development/demonstration of a potential SEAL Delivery Vehicle (SDV) follow-on platform and to continue to develop upgrades/replacements for obsolete and/or unsupportable equipment.
- Project S1684 ($3.191 million): Added funds to begin development of an improved Rigid Inflatable Boat (RIB) ($2.000 million) and to develop performance improvements to the current Combatant Craft Forward Looking Infrared (CCFLIR) System ($1.191 million).
- Project S350 (-$4.018 million): The Special Operations Mission Planning Environment (SOMPE) funds were reprogrammed to PE 1160427BB, Mission Training and Preparation Systems, in order to properly capture mission planning resources.
- Project S375 ($6.738 million): Funds were added to develop an advanced Night Vision Goggle system, to develop the next generation laser range finder and designator to support the delivery of laser and GPS-guided missiles and munitions, and to begin development of the next generation SOF communications headset for the Modular Integrated Communications Helmet (MICH).
- Project S700 ($6.447 million): Added funds to begin development and test of software applications for the Special Operations Resource Business Information System (SORBIS) ($8.728 million) and to begin technology insertions for the Tactical Local Area Network (TACLAN) ($2.082 million). Realigned funds to support higher command priorities (-$4.373 million).
- Project S800 ($1.500 million): Added funds to begin the effort to redesign, test and qualify munitions in the Multi-Purpose Anti-armor Anti-Personnel Weapon System program in order to comply with the USSOCOM Insensitive Munitions Plan.
- Project S900 ($0.560 million): Added funds for additional improvements and tests to the various SOF Ground Mobility Vehicle variants.

FY09: Net increase of $34.124 million by project:

- Project 3326 (-$1.663 million): Funds were realigned to support higher command priorities.
- Project D476 ($14.540 million): Added funds to continue the primary hardware development, systems engineering, and DT&E on POBS and POMD, and to continue primary hardware and software development for NGLS variants.
- Project D615 ($1.019 million): Added funds to complete the qualification and testing of the A/MH-6 Little Bird IES ($2.169 million) and to continue the MH-47/MH-60 AOBPS development effort ($1.658 million). Realigned funds to support higher command priorities (-$2.808 million).
- Project S0417 ($2.000 million): Added funds to continue the SDV follow-on effort.
- Project S1684 ($5.213 million): Added funds to initiate developmental testing/operational testing (DT/OT) of the improved RIB ($4.000 million) and to complete DT/OT of the improved CCFLIR ($1.213 million).
- Project S350 (-$4.125 million): The Special Operations Mission Planning Environment (SOMPE) funds were reprogrammed to PE 1160427BB, Mission Training and Preparation Systems, in order to properly capture mission planning resources.
- Project S375 ($6.024 million): Added funds to continue development of the advanced NVG, the next generation laser range finder and designator, and the next generation headset for the MICH.
- Project S700 ($11.116 million): Added funds to continue JEM technology insertions ($6.380 million), to continue SORBIS development and software applications testing ($2.610 million), and to continue TACLAN technology insertions ($2.126 million).

Schedule: N/A.

Technical: N/A.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2007
Appropriation/Budget Activity RDT&E BA # 7	PSYOP Advanced Development/Project D476

Cost ($ in millions)	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
	4.873	7.402	6.931	17.000	12.750	0.703		
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.

- Family of Loudspeakers (FOL). FOL permits loudspeaker missions to be conducted over larger areas than previous equipment and provides a greater standoff distance for U.S. Forces/assets. The replacement for FOL is the Next Generation Loudspeaker System (NGLS) consisting of 7 variants: Manpack System variant; Vehicle/Watercraft System variant; Unmanned Air Vehicle (UAV) System variant; Unmanned Ground Vehicle (UGV) System variant; Scatterable Media Long Duration (SMLD) System variant; Scatterable Media Short Duration (SMSD) System variant; and Sonic Projection System variant.

B. Accomplishments/Planned Program

	FY06	FY07	FY08	FY09
POBS	1.432	7.402	6.181	16.500
RDT&E Articles Quantity				

FY06 Commenced primary hardware development, systems engineering, and Developmental Test and Evaluation (DT&E) on the LRBS and POBS modernization. Completed test and evaluation on the FM and TV FABS.
FY07 Continue primary hardware development, system engineering, and DT&E on the LRBS, POBS modernization efforts, and PSYOP planning and analysis system.
FY08 Continues primary hardware development, system engineering, and DT&E on the LRBS, POBS modernization efforts, and PSYOP planning and analysis system. Commences primary hardware and software development, systems engineering and DT&E on PSYOP Media Displays (POMD).
FY09 Continues primary hardware development, system engineering, and DT&E on the LRBS, POBS modernization efforts, and POMD.

	FY06	FY07	FY08	FY09
Commando Solo	3.441			
RDT&E Articles Quantity				

FY06 Developed and tested a replacement narrowband transmitter for the hard-wired Commando Solos.

	FY06	FY07	FY08	FY09
FOL			0.750	0.500
RDT&E Articles Quantity				

FY08 Commences primary hardware and software development, systems engineering, and DT&E and Operational Test and Evaluation (OT&E) on NGLS variants.
FY09 Continues primary hardware and software development, systems engineering, DT&E and OT&E on NGLS variants.

C. Other Program Funding Summary:

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	To Complete	Total Cost
Proc, PSYOP Equipment	28.927	87.915	103.104	95.731	73.719	44.266	11.070		.	444.732

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. These various sub-programs are in a post-Milestone III or various stages of milestone decisions.

- 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.

- The FOL replacement is the NGLS that consists of 7 variants: Manpack System variant; Vehicle/Watercraft System variant; UAV System variant; UGV System variant; SMLD System variant; SMSD System variant; and Sonic Projection System variant. The program acquires and modifies, as necessary, COTS/GOTS systems and equipment to replace or enhance current system capabilities.

Exhibit R-3 RDT&E Project Cost Analysis										DATE: FEBRUARY 2007	
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 FY07	Award Date FY07	Budget Cost FY08	Award Date FY08	Budget Cost FY09	Award Date FY09	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								0.897
Systems Engineering	ALLOT	Army-CECOM, Ft Monmouth, NJ	1.336								1.336
	REQN	Various	2.141								2.141
	MIPR	SPAWAR, Charleston, SC	0.060								0.060
	MIPR	NAVAIR, St. Inigoes, MD	3.500								3.500
Subtotal Product Dev			16.711	0.000		0.000		0.000			16.711
Remarks:											
Development Spt											
POBS	TBD	TBD		7.402	Jan-07	6.181	Dec-07	16.500	Dec-08	12.953	43.036
FOL	TBD	TBD				0.750	Dec-07	0.500	Dec-08	0.500	1.750
Subtotal Spt			0.000	7.402		6.931		17.000		13.453	44.786
Remarks:											
Developmental Test & Eval	Various	Various	0.113								Cont.
	MIPR	Army ATC, Aberdeen Prov Gd, MD	0.758								Cont.
	MIPR	Soldier Biological Cmd, Natick, MA	0.546								0.546
	MIPR	JITC, Ft Huachuca, AZ	1.844								Cont.
	MIPR	USASOC, Ft Bragg, NC	0.296								0.296
	MIPR	NAVAIR, St. Inigoes, MD	0.140								0.140
	MIPR	SPAWAR, Charleston, SC	0.446								Cont.
Subtotal T&E			4.143	0.000		0.000		0.000			Cont.
Remarks:											
Contractor Engineering Spt											
Subtotal Management											
Remarks:											
Total Cost			20.854	7.402		6.931		17.000		13.453	Cont
Remarks:											

Exhibit R-4, RDT&E Program Schedule Profile	Date: FEBRUARY 2007

Appropriation/Budget Activity	Program Element Number and Name	Project Number and Name
RDT&E/7	PE1160404BB/Special Operations Tactical System Development	Project D476/PSYOP Advanced Development

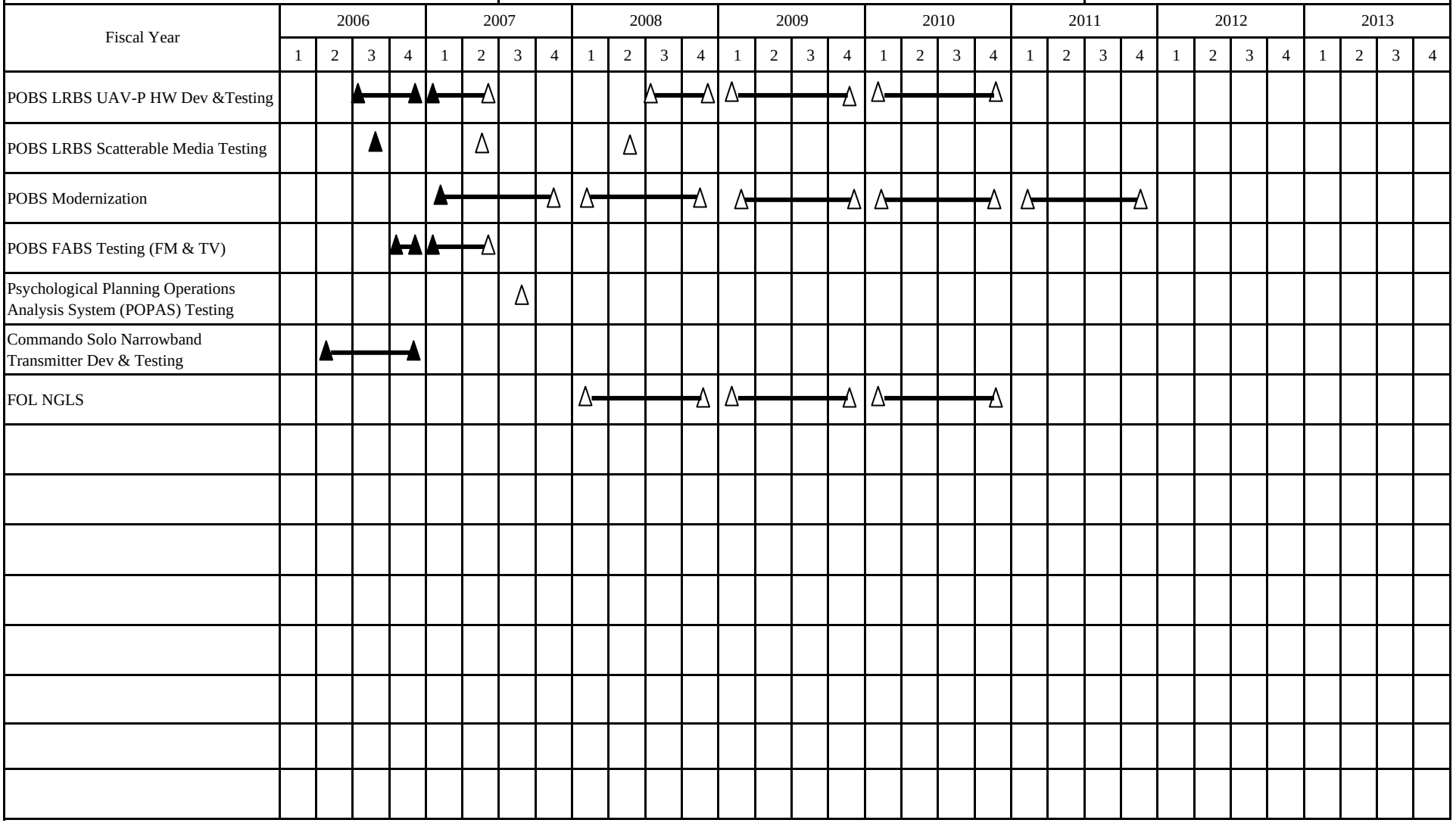

Exhibit R-4a, RDT&E Program Schedule Detail				Date: FEBRUARY 2007				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project D476/PSYOP Advanced Development				
Schedule Profile	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
POBS LRBS UAV-P HW Dev & Testing	3-4Q	1-2Q	3-4Q	1-4Q	1-4Q			
POBS LRBS Scatterable Media Testing	3Q	2Q	2Q					
POBS Modernization		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q		
POBS FABS Testing (FM & TV)	4Q	1-2Q						
POPAS Testing		3Q						
Commando Solo Narrowband Transmitter Dev & Testing	2-4Q							
FOL NGLS			1-4Q	1-4Q	1-4Q			

Exhibit R2-a, RDT&E Project Justification	Date: FEBRUARY 2007
Appropriation/Budget Activity RDT&E.A BA # 7	Special Operations Forces (SOF) Aviation /Project D615

Cost ($ in millions)	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
SOF Aviation	6.760	3.933	5.368	3.827	15.422	12.537	3.524	
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 A/MH-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. The modernized weapon system will provide a lighter and more reliable/maintainable system 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. (3) Begins development of an infrared (IR) exhaust suppressor for A/MH-6M aircraft to provide a passive countermeasure capability that is compatible with A/MH-6M's higher performance engine.

- MH-47/MH-60 Avionics/Sensors. Begins development of the Aircraft Occupant Ballistic Protection System (AOBPS) to reduce weight to permit additional critical payloads on mission aircraft while maintaining or improving armor effectiveness.

B. Accomplishments/Planned Program

	FY06	FY07	FY08	FY09
MH-47/MH-60/A/MH-6M - Aircraft	6.760	2.959	4.433	2.169
RDT&E Articles Quantity				

FY06 Began development of the weapons modernization program to include replacement for the M-134 Mini Gun. Continued development of A/MH-6M tail rotor drive train improvement.
FY07 Continues development of the weapons modernization program.
FY08 Begins development of the infrared exhaust suppressor for the A/MH-6M. Completes qualification and testing for the A/MH-6M tail rotor drive train improvement and the weapons modernization program.
FY09 Completes the qualification and testing of the infrared exhaust suppressor for the A/MH-6M.

	FY06	FY07	FY08	FY09
MH-47/MH-60 – Avionics/Sensors			.935	1.658
RDT&E Articles Quantity				

FY08 Begins development of improved lightweight armor for the AOBPS.
FY09 Continues development of the AOBPS.

C. Other Program Funding Summary:

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	To Complete	Total Cost
Rotary Wing Upgs & Sust PROC	167.043	113.084	79.214	61.439	61.610	57.451	76.100	79.152	Cont.	Cont.

D. Acquisition Strategy: Acquisition Strategy.

- A/MH-6M - This effort provides necessary drive train analyses, a passive IR countermeasure capability, component development and testing, and test support/data analysis efforts required to improve operational safety margins of the A/MH-6M aircraft. 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 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, active 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 RDT&E Project Cost Analysis						DATE: FEBRUARY 2007					
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 FY07	Award Date FY07	Budget Cost FY08	Award Date FY08	Budget Cost FY09	Award Date FY09	To Complete	Total Program
Primary Hardware Dev											
MH-47/60 Aircraft	Various	PM TAPO/Ft Eustis, VA	16.918	2.959	Various						19.877
MH-47/60 Avionics/Sensors	Various	PM TAPO/Ft Eustis, VA	60.200			0.935	Various	1.658	Various	5.033	67.826
A/MH-6M	Various	PM MELB, Ft. Eustis, VA	11.611			4.433	Various	2.169	Various		18.213
MH-53	Cost Plus	PM DIRCM, MacDill AFB, FL	6.911								6.911
Subtotal Product Dev			95.640	2.959		5.368		3.827		5.033	112.827
Remarks:											
Management											0.000
Subtotal Spt											0.000
Remarks:											
Developmental Test & Eval											
MH-47/60 Aircraft	Various	PM TAPO/Ft Eustis, VA	4.000								4.000
MH-47/60 Avionics/Sensors	Various	PM TAPO/Ft Eustis, VA	8.294								8.294
A/MH-6M	Various	PM-MELB/Ft Eustis, VA	16.576								16.576
Subtotal T&E			28.870	0.000		0.000		0.000			28.870
Remarks:											
Subtotal Management											
Remarks:											
Total Cost			124.510	2.959		5.368		3.827		5.033	141.697
Remarks:											

Exhibit R-4, RDT&E Program Schedule Profile	Date: FEBRUARY 2007
Appropriation/Budget Activity RDT&E/7	Project Number and Name Project D615/Special Operations Forces Aviation

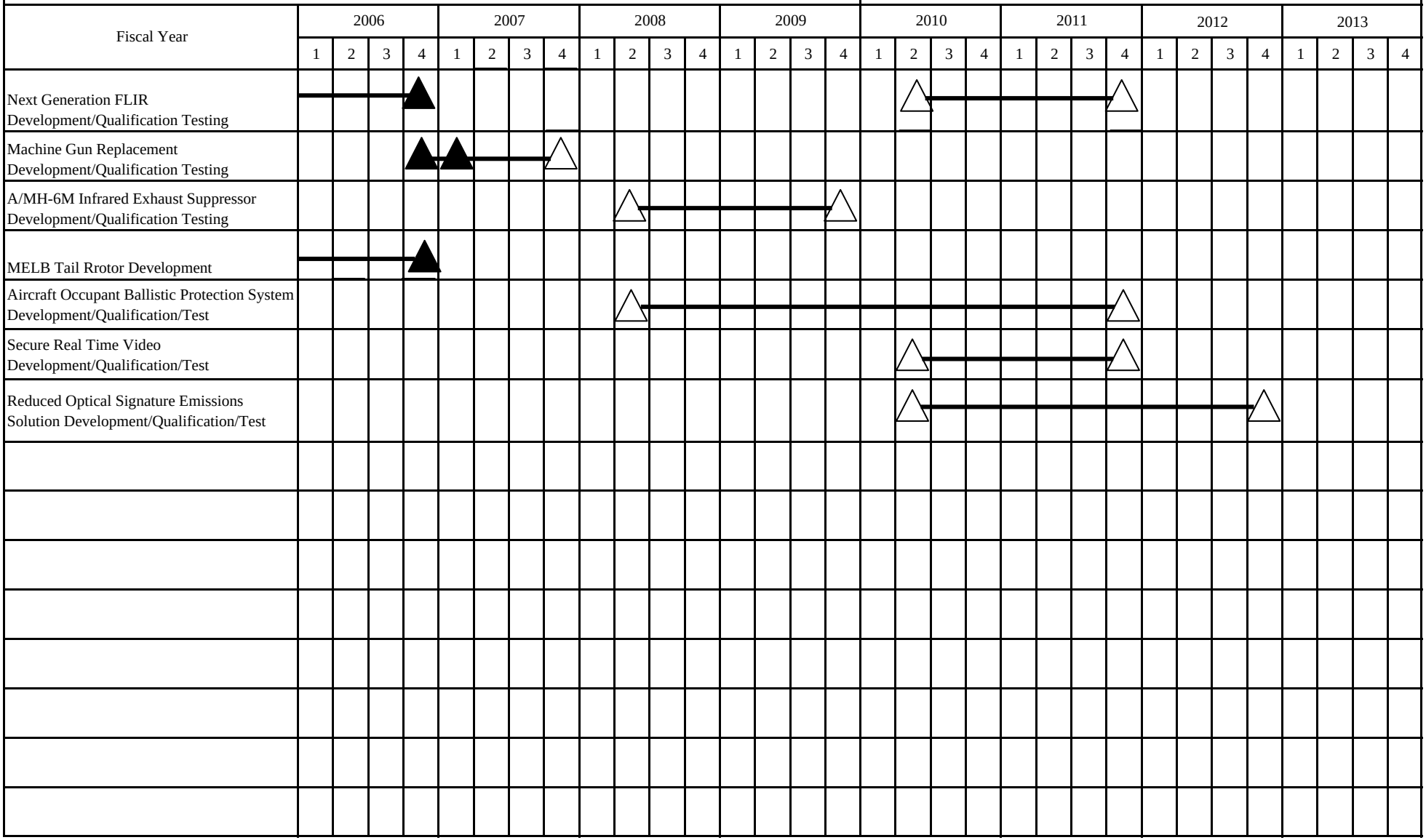

Exhibit R-4a, RDT&E Program Schedule Detail				Date: FEBRUARY 2007				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project D615/SOF Aviation				
Schedule Profile	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
Next Generation FLIR Development/Qualification Testing	1-4Q				2-4Q	1-4Q		
Machine Gun Replacement Development/Qualification Testing	4Q	1-4Q						
A/MH-6M Infrared Exhaust Suppressor Development/Qualification Testing			2-4Q	1-4Q				
MELB Tail Rotor Development	1-4Q							
Aircraft Occupant Ballistic Protection System Development/Qualification/Test			2-4Q	1-4Q	1-4Q	1-4Q		
Secure Real Time Video Development/Qualification/Test					2-4Q	1-4Q		
Reduced Optical Signature Emissions Solution Development/Qualification/Test					2-4Q	1-4Q	1-4Q	

	Exhibit R-2a, RDT&E Project Justification	Date: JANUARY 2007
Appropriation/Budget Activity RDT&E BA # 7	Underwater Systems Advanced Development/Project S0417	

Cost ($ in millions)	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
Underwater Systems Advanced Dev	.580	4.511	1.800	3.147	1.000	1.000	.500	.500
RDT&E Articles Quantity		1						

A. Mission Description and Budget Item Justification: This project funds the development of Naval Special Warfare (NSW) support items used during hydrographic/inland reconnaissance, beach obstacle clearance, underwater ship attack, and other direct action missions. Sub-projects include:

- Non-Gasoline Burning Outboard Engine (NBOE). Evaluation of a submersible alternative fuel outboard engine for use on Special Operations Forces (SOF) Combat Rubber Raiding Craft.

- Advanced MK V prototype. Congressional add to develop a prototype for possible replacement of MK V craft.

- Undersea Systems. Development of undersea systems, which provide SOF combat swimmers with the necessary diving and diving related equipment to fulfill assigned underwater combat missions. Includes the following:

  - SEAL Delivery Vehicle (SDV). Develop replacements for obsolete and/or unsupportable electronics with current technology to improve safety, reliability and performance. Conduct concept and technology development for potential replacement platform.

B. Accomplishments/Planned Program

	FY06	FY07	FY08	FY09
NBOE		.614		
RDT&E Articles Quantity				
FY07 Evaluated submersible alternative outboard engines.				

	FY06	FY07	FY08	FY09
MK V: Advanced MKV Prototype.		3.897		
RDT&E Articles Quantity		1		
FY07 MK V Prototype Development and Testing. This initiative was a Congressional add.				

	FY06	FY07	FY08	FY09
SDV	.580		1.800	3.147
RDT&E Articles Quantity				

FY06 Continued to develop and upgrade/replace obsolete and/or unsupportable electronic equipment. Evaluated mobility improvements.
FY08 Concept and technology development/demonstration for potential follow-on platform. Continues to develop and upgrade/replace obsolete and/or unsupportable electronic equipment.
FY09 Continues concept and technology development for potential follow-on platform.

C. Other Program Funding Summary:

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	To Complete	Total Cost
PROC, SOF Maritime Equip			1.245	.200	.100	.100	.100	.100	TBD	TBD
PROC, MK MO D1 SDV	2.123	2.463	8.080	7.073	1.500	2.850	10.000	3.000	TBD	TBD

D. Acquisition Strategy:

- NBOE. Develop/conduct market survey for existing commercial off the shelf engines that meet revised requirements. Conduct performance testing on candidate engines with follow-on suitability tests. Evaluate potential technical modifications as required.

- SDV. This effort replaces obsolete and/or unsupportable electronics equipment with current equipment. Identification and development of equipment for installing, upgrading and/or replacing systems on the SDV will be accomplished through either Best-Value acquisition or, where appropriate, original equipment manufacturer replacement efforts. Conduct concept studies and technology development for a potential next generation platform following completion of an analysis of alternatives in FY07.

Exhibit R-3 RDT&E Project Cost Analysis						DATE: FEBRUARY 2007					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Underwater Systems Advance Development/S0417								
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 FY07	Award Date FY07	Budget Cost FY08	Award Date FY08	Budget Cost FY09	Award Date FY09	To Complete	Total Program
Electronic Obsolescence											
SEAL Delivery Vehicle (SDV)	WR	CSS, Panama City, FL	0.201			0.500	Jan-08				0.701
Subtotal Product Dev			0.201	0.000		0.500		0.000			0.701
Remarks											
Concept and Technology Development											
SDV	WR	CSS, Panama City, FL				1.300	Dec-07	3.147	Dec-08	Cont.	Cont.
Subtotal T&E			0.000	0.000		1.300		3.147		Cont.	Cont.
Remarks											
Primary Hardware											
*MK V Advanced Prototype	TBD	Revenge Advanced Composites, Inc., St. Petersburg, FL.		3.497	Feb-07						3.497
Subtotal Performance Testing				3.497							3.497
Performance Testing											
Non-Gasoline Burning Outboard Engine	TBD	TBD		0.614	Jan-07						0.614
MK V Prototype Testing	Various	Various		0.400	Mar-07						0.400
Subtotal Performance Testing				1.014						Cont.	1.014
Total Cost			0.201	4.511		1.800		3.147		Cont.	Cont.

Remarks:

* This was a FY07 Congressional Add for Advanced MK Craft Prototype Development. Will be moved to PE 1160402BB - Special Operations Advanced Technology Development. Project S200 - Special Operations Technology Project.

Exhibit R-4, RDT&E Program Schedule Profile																																
																	Date: FEBRUARY 2007																
Appropriation/Budget Activity RDT&E/7									Program Element Number and Name PE1160404BB/Special Operations Tactical System Development												Project Number and Name Project S0417/Underwater System Advanced Development												
Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	2	3	4
1. SEAL Delivery Vehicle																																
Develop and Test Improved Electronics	▲												△																			
Concept Development									△							△																
Technology Development											△												△									
ECP Development														△																		△
2. Non-Gasoline Burning Outboard Engine						△																										
3. MK V Prototype Development						△		△																								
4. MK V Prototype Testing								△	△																							

Exhibit R-4a, Schedule Profile			Date: FEBRUARY 2007					
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development		Project Number and Name Project S0417/Underwater Systems Advanced Development					
Schedule Profile	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
1. SEAL Delivery Vehicle								
Develop and Test Improved Electronics	1Q-4Q	1Q-4Q	1Q-4Q	1Q				
Concept Development			1Q-4Q	1Q-4Q				
Technology Development			3Q-4Q	1Q-4Q	1Q-4Q	1Q-3Q		
ECP Development				2Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q	1Q-4Q
2. Non-Gasoline Burning Outboard Engine		2Q						
3. MK V Prototype Development		2Q-4Q						
MK V Protoype Testing		4Q	1Q					

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2007
Appropriation/Budget Activity RDT&E BA # 7	SOF Surface Craft Advance Systems S1684	

Cost ($ in million)	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
SOF Surface Craft Advance Systems	9.786	3,118	3.191	5.213	2.000			
RDT&E Articles Quantity	1	2	1	2				

A. Mission Description and Budget Item Justification**:** This project provides for development and testing of surface craft and selected items of specialized equipment to meet the unique requirements of Special Operations Forces (SOF). The craft capabilities and unique equipment provides small, highly trained forces the ability to successfully engage the enemy and conduct clandestine operations associated with SOF Maritime Missions. Project also includes Congressional Add funding for Advanced Composite Materials, High Speed Military Craft, Integrated Bridge System (IBS), and Integrated Combat System (ICS).

- NSW RIB Program: This program provides for engineering support, program support for design and specification development for an improved Naval Special Warfare (NSW) Rigid Inflatable Boat (RIB) capability. The resulting capability will be a multi-mission craft with improved sea keeping and maneuverability, reduced detectability with enhanced shock mitigation, and human systems integration. Additionally, the new system is envisioned being air transportable, air droppable, and increased reliability and maintainability.

- Combatant Craft Forwarding Looking Infrared (CCFLIR) Program: This program provides for engineering and development of performance improvements to the current FLIR system on the Special Operations Craft Riverine (SOCR), Mark V Special Operations Craft (MK V SOC), NSW RIB and the next generation RIB.

B. Accomplishments/Planned Program

Cost ($ in million)	FY06	FY07	FY08	FY09
NSW RIB Program			2.000	4.000
RDT&E Articles Quantity				1

FY08 Establishes Program Office, conducts a market survey, releases the request for proposal, and awards development contract.
FY09 Initiates Developmental Testing/Operational Testing (DT/OT).

Cost ($ in million)	FY06	FY07	FY08	FY09
CCFLIR Program			1.191	1.213
RDT&E Articles Quantity				1

FY08 Conducts engineering and development efforts, integration, and begins DT.
FY09 Complete DT/OT

Cost ($ in million)	FY06	FY07	FY08	FY09
High Speed Military Craft	1.446			
RDT&E Articles Quantity				

FY06 This initiative was a Congressional Add. Program Management, studies, and engineering effort for High Speed Military Craft.

Cost ($ in million)	FY06	FY07	FY08	FY09
Advanced Composite Materials	7.376			
RDT&E Articles Quantity				

FY06 This initiative was a Congressional Add. Program Management, studies, and engineering efforts associated with Advanced Composite Materials.

Cost ($ in million)	FY06	FY07	FY08	FY09
IBS	.964	.974		
RDT&E Articles Quantity		1		

FY06 This initiative was a Congressional Add. Engineering and development of IBS.
FY07 This initiative was a Congressional Add. Integration and testing of IBS test article.

Cost ($ in million)	FY06	FY07	FY08	FY09
ICS		2.144		
RDT&E Articles Quantity		1		

FY07 This initiative was a Congressional Add. Development, integration and testing of ICS Prototype.

C. Other Program Funding Summary:

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	To Complete	Total Cost
PROC, NSW RIB	14.754	19.007	10.426	12.112	9.700	12.648	12.926	13.209	Cont.	Cont.
PROC, CCFLIR			2.481	2.494	2.508	2.521	2.656	2.704	Cont.	Cont.
PROC, ICS		.996								

D. Acquisition Strategy:

- Next Generation NSW RIB Capability – Competitive Award
- CCFLIR – Spiral development improvements thru existing contract with FLIR Systems, Inc.

Exhibit R-3 RDT&E Project Cost Analysis						DATE: FEBRUARY 2007					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB SOF Surface Craft Advanced Systems/S1684								
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 FY07	Award Date FY07	Budget Cost FY08	Award Date FY08	Budget Cost FY09	Award Date FY09	To Complete	Total Program
Primary Hardware Dev											
RIB Next Gen	CPFF	Various						2.200	Nov-08	Cont.	Cont.
IBS	CPFF	Asimuth Inc., Morgantown, W. Va	0.964	0.996	Feb-07						1.960
CCFLIR	CPFF	FSI, Boston, MA				0.700	Jan-08	0.500	Nov-08	Cont.	Cont.
High Speed Military Craft	CPFF	Seemann, Composites, Inc, LA	1.446								1.446
Adv Composites	CPFF	Seemann, Composites, Inc, LA	4.367								4.367
ICS	TBD	Trident Inc., Fairfax, VA		2.122	Mar-07						2.122
Subtotal Product Dev			6.777	3.118		0.700		2.700		Cont.	Cont.
Remarks:											
Support and Management Organizations											
RIB Next Gen	Various	Various				0.800	Oct-07	1.100	Oct-08	Cont.	Cont.
CCFLIR	Various	Various				0.191	Oct-07	0.300	Oct-08	Cont.	Cont.
Adv Composites	Various	Various	1.560								1.560
Subtotal Spt			1.560			0.991		1.400		Cont.	Cont.
Remarks:											
Developmental Test & Eval											
RIB Next Gen	Various	Various						0.400	Apr-09	Cont.	Cont.
CCFLIR	Various	Various				0.100	Apr-08	0.200	Oct-08	Cont.	Cont.
Subtotal T&E						0.100		0.600		Cont.	Cont.
Remarks:											
Contractor Engineering Spt											
RIB Next Gen	CPFF	Various				1.200	Jan-08	0.300	Oct-08	Cont.	Cont.
CCFLIR	CPFF	FSI, Boston, MA				0.200	Nov-07	0.213	Apr-09	Cont.	Cont.
Adv Composites	CPFF	Seemann Composites, Inc, LA	1.449								1.449
Subtotal Engineering Spt			1.449			1.400		0.513		Cont.	Cont.
Remarks:											
Total Cost			9.786	3.118		3.191		5.213		Cont.	Cont.
Remarks:											

Exhibit R-4, RDT&E Program Schedule Profile																																
																Date: FEBRUARY 2007																	
Appropriation/Budget Activity									Program Element Number and Name														Project Number and Name									
RDT&E/7									PE1160404BB/Special Operations Tactical System Development														Project S1684 SOF Surface Craft Adv Dev									
Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	2	3	4
Next Gen RIB																																
IBS																																
MS B																																
Release RFP																																
Design Contract Award																																
Prototype Delivery																																
Combined DT/OT																																
MS C																																
LRIP Contract Award																																
OPEVAL Complete																																
IOC																																
CCFLIR																																
P3I Development Program																																
Engineering & Development																																
ECP Testing																																
Production Verification																																
Advanced Composite Materials																																
High Speed Military Craft																																
SOCR ICS																																

Exhibit R-4a, RDT&E Program Schedule Detail				Date: FEBRUARY 2007				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project S1684/SOF Surface Craft Advance Development				
Schedule Profile	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2012
Next Generation NSW RIB								
IBS	4Q	2Q						
MS B			2Q					
Release RFP			3Q					
Design Contract Award			4Q					
Prototype Delivery				3Q				
Combined DT/OT				3Q-4Q	1Q			
MS C					2Q			
LRIP Contract Award					2Q			
OPEVAL Complete					4Q			
IOC						1Q		
CCFLIR								
P3I Development Program			1Q-4Q	1Q-4Q	1Q-4Q			
Engineering & Development			2Q-4Q	1Q				
ECP Testing				2Q-3Q				
Production Verification					1-Q			
Advanced Composite Materials	3Q-4Q							
High Speed Military Craft	3Q-4Q							
ICS		2Q						

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2007
Appropriation/Budget Activity RDT&E.A BA # 7	Weapons and Support Systems Advanced Development /Project S375

Cost ($ in millions)	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
Weapons and Support Sys Adv Dev	17.228	24.208	9.573	8.571	2.410	2.449	1.994	2.348
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. This system also provides passive area surveillance at day or night and can be configured for urban or rural environments. This program was increased by an FY 2007 Congressional add.

- Heavy Sniper Rifle (HSR). Precision Sniper Rifle (PSR) will characterize .338 ammunition and upgrade existing MK13 sniper weapons (300 WinMag) to a new caliber. The .338 round provides SOF with a highly accurate round for target engagements with ranges up to 1500 meters or more. The Anti-Materiel Rifle (AMR) will pursue technology that will provide SOF with accurate engagement capabilities on hard target, critical nodes, and other materiel.

- 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. This program was increased by FY 2005 and FY 2006 Congressional adds.

- Lightweight Attack Weapon (LAW). The M72 66mm Lightweight Attack Weapon is a shoulder-fired, man-portable, self-contained, single use, lightweight rocket. The LAW has two warhead variants--the Anti Armor (AA) and Anti Structural Munitions (ASM) warheads. The LAW has two propulsion variants--the current rocket motor and the Fire From Enclosure (FFE) propulsion system that is under development. This program was increased by an FY 2006 Congressional add.

- M4A1 SOF Carbine Accessory Kit (M4MOD). The M4MOD Kit enhances all SOF weapons 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. This program was increased by FY 2004, FY 2005, and 2006 Congressional adds.

- Weapons Shot Counter. This was a Congressional add to develop a device to improve the reliability and maintainability of weapons used by the SOF operator. These devices will provide the Unit Armorer a means to track the number of rounds fired and anticipate the need for maintenance and repair prior to the firearms failure, ultimately minimizing or eliminating parts failures and malfunctions in combat.

- Night Vision Devices (NVD). The SOF NVD system includes advanced field of view goggles, improved sensors, multi-spectral imaging, sensor fusion, SOF Laser Range Finder and Designator [SOFLRD Precision Target Locator Designator (PTLD)], and micro-laser integration and improved displays. The SOFLRD will be a combined laser range finder, geological locator, and laser designator for directing both Global Positioning System (GPS) and laser guided munitions.

- Precision Laser Targeting Device (PLTD). The PLTD will be a hand-held laser range finder and targeting device with an embedded 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. SCAR includes the 40mm Enhanced Grenade Launcher Module (EGLM), which replaces the M203 grenade launcher. EGLM includes a fire control unit (FCU) that provides precision ballistic solution. Enhanced 40mm ammunition will also be developed. This program was increased by an FY 2007 Congressional add.

- SOF Advanced Tactical Parachute System (SOFTAPS). Provides SOF unique steerable static line parachute capable of operating from high performance Special Operations fixed and rotary wing aircraft on high and low elevation drop zones. Operates at a slower descent rate, faster turn rate and reduced opening shock transfer than current MC1-1D and MC1-1B/E family of parachutes, which allows safer delivery of heavier personnel/equipment loads at higher elevations.

- Combat Boot-Polyurethane. This was a Congressional add to conduct market surveys for COTS products to conduct combat evaluations or develop a Polyurethane Combat Boot that can provide the SOF operator footwear flexibility and protection in harsh warfare environments.

- SOF Personal Equipment Advanced Requirements (SPEAR). SPEAR develops and acquires items that provide SOF Personnel required protection from natural threats (environmental, terrain, etc.), enemy (ballistics, laser, blunt trauma) threats, and survival items that allow them to perform at the required level to meet SOF Missions. SPEAR Kit includes; 1), ballistic armor, helmets, and eye wear, 2) cold weather, maritime and other protective clothing, 3) communication headsets and equipment, 4) load carriage and backpack systems, and other systems that address SOF operator deficiencies with regard to survival and mission execution in all terrains, climates and environments world wide.

- Artic/Mountain Climbing Warfare Boot. This was a Congressional add to conduct market surveys for COTS products to conduct combat evaluations or develop a warfare boot that can provide the SOF operator footwear flexibility and protection in harsh warfare environments.

- SOF Tactical Boot Suite Development. This was a Congressional add to develop a family of boots for use by the SOF operator in various mission sets and environments.

- 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 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.

- MARSOC BRITE M22 Imagery. Supports development of enhancements for near real-time high resolution BRITE satellite imagery using M22 SATCOM dissemination broadcasts. This was an FY 2007 Congressional add.

- Nickle Boron Coating. This initiative was funded by Congressional adds in FY 2006 and FY 2007. Nickel Boron Coatings technology has the potential to provide a lubrication-free operation and corrosion protection to pistols, semi-automatic rifles and machine guns.

- 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.

- Holographic Close Combat Optic. This initiative was funded by a Congressional add. Holographic sights provide operators with a rapid target acquisition display to engage in close quarters as well as distant targets with increased identification and accuracy.

- Integrated Warfare Info System (IWIS). Develops a single Intelligence, Surveillance and Reconnaissance (ISR) tool to provide SOF with an integrated sighting system.

B. Accomplishments/Planned Program

	FY06	FY07	FY08	FY09
FSDS	.217	.569		
RDT&E Articles Quantity				

FY06 Conducted test and evaluated 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 Commence testing and evaluation of enhanced Data Interface Acquisition Module (DIAM) for radio frequency communication.

	FY06	FY07	FY08	FY09
FSDS		1.170		
RDT&E Articles Quantity				

FY07 Congressional add to develop a version of the FSDS that will integrate onto combatant craft.

	FY06	FY07	FY08	FY09
HSR			.500	.500
RDT&E Articles Quantity				

FY08 Pursues an Anti-Materiel Rifle (AMR) capability. Conducts market research, industry conferences, and developmental testing of an anti-materiel solution.
FY09 Tests and evaluates AMR.

	FY06	FY07	FY08	FY09
INOD	.492			
RDT&E Articles Quantity	1			

FY06 Developed a dual band INOD system that will allow the sensor fusion of both image intensification and thermal infrared into one camera for the weapons sight.

	FY06	FY07	FY08	FY09
LAW	2.458	4.772		
RDT&E Articles Quantity				

FY06 Congressional add to develop the LAW M72 variants including the AA and ASM warheads and the Fire From Enclosure (FFE) propulsion system. Completed development of the M72A9 version with the ASM and rocket motor.
FY07 Complete development of the LAW M72 variants. Complete development of the M72E8 with the AA warhead and the FFE propulsion, and the M72E10 with the ASM warhead and the FFE propulsion. The M72A9 with the ASM warhead and the rocket motor propulsion will have a Fielding & Deployment Release (F&DR) in FY07.

	FY06	FY07	FY08	FY09
M4MOD	.070	.237	.255	.262
RDT&E Articles Quantity				

FY06 Tested advances to weapon accessories.
FY07 Test and evaluate Mini Day/Night Sight (MDNS) project improvements.
FY08 Pursues fused clip-on imaging device through market research, industry conference, and solicitation to replace two systems: CVND-I2 and CNVD-T.
FY09 Conducts user assessments, test and evaluation and source selection of CNVD-F (Fused).

	FY06	FY07	FY08	FY09
Weapons Shot Counter		.974		
RDT&E Articles Quantity				

FY07 Congressional add to develop a shot counter capability for machine guns and heavy weapons.

	FY06	FY07	FY08	FY09
NVD			5.000	3.000
RDT&E Articles Quantity				

FY08 Develops an advanced Night Vision Goggle system (i.e., sensor fusion, color, wide field of view), increasing the capabilities of the existing goggles. Develops the next generation laser range finder and designator to support the delivery of laser guided and GPS guided

missiles and munitions.

FY09 Continues to develop advanced NVG (sensor fusion, color, wide field of view). Continues the development and miniaturization of the next generation laser range finder and designator.

	FY06	FY07	FY08	FY09
PLTD	.870		1.000	1.000
RDT&E Articles Quantity	1			

FY06 Completed the prototype development and testing of the initial PLTD system. Completed DT/OT and laser safety review.

FY08 Continues weight reduction and miniaturization of the inertial navigation system.

FY09 Continues weight reduction and miniaturization of the inertial navigation system.

	FY06	FY07	FY08	FY09
SCAR	3.384	1.754		
RDT&E Articles Quantity				

FY06 Completed the prototype development and testing of the SCAR family of weapons.

FY07 This initiative is a congressional add to conduct initial Operational Test and Evaluation of SCAR.

	FY06	FY07	FY08	FY09
SOFTAPS				.512
RDT&E Articles Quantity				

FY09 Participates in Army pre-planned product improvement (P3I) for Advanced Tactical Parachute System (ATPS).

	FY06	FY07	FY08	FY09
Polyurethane Combat Boot		.974		
RDT&E Articles Quantity				

FY07 Congressional add to develop US manufacturing capability for polyurethane direct injection.

	FY06	FY07	FY08	FY09
SPEAR	4.218	5.173	2.101	2.558
RDT&E Articles Quantity				

FY06 Conducted market surveys for 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 (IFF), Modular Integrated Communications Helmet (MICH), and survival equipment.

FY07 Complete development of ballistic eyewear. Continue development of the next generation body armor, environmental protection,

ballistic eyewear, IFF, MICH, and survival equipment. Initiate 3 market surveys for maritime equipment.
FY08 Continues development of the next generation body armor and environmental protection. Initiates development of the next generation headset for the MICH and release competitive contract for maritime equipment.
FY09 Continues development of the next generation body armor and environmental protection. Completes development of the next generation headset for the MICH.

	FY06	FY07	FY08	FY09
Artic/Mountain Climbing Warfare Boot	.964	.974		
RDT&E Articles Quantity				

FY06 Congressional add to conduct market surveys for commercial off the shelf (COTS) product combat evaluations and/or conduct competitive source selections to initiate development of mountain climbing warfare boot for SOF operators.
FY07 Congressional add to continue research, development, test and evaluation of an extreme cold weather boot for SOF operators.

	FY06	FY07	FY08	FY09
SOF Tactical Boot Suite Development		.974		
RDT&E Articles Quantity				

FY07 Congressional add to research, develop, test and evaluate a SOF peculiar boot suite.

	FY06	FY07	FY08	FY09
CCCEKIT		.499	.717	.739
RDT&E Articles Quantity				

FY07 Entered concept development for modernization of SOF medical capabilities for operating in austere environments. Initiated prototype demonstrations of lighter, more efficient medical Sets, Kits and Outfits (SKOs) and far-forward surgical capabilities.
FY08 Conducts operational assessment of SKOs in preparation for procurement and fielding.
FY09 Initiates evaluation and qualification of SOF Surgeon and Casualty Evacuation (CASEVAC) kits.

	FY06	FY07	FY08	FY09
MARSOC BRITE M221		2.144		
RDT&E Articles Quantity				

FY07 Congressional add to develop enhancements to the BRITE M22 Imagery system.

	FY06	FY07	FY08	FY09

Nickel Boron Coating	.700	.974		
RDT&E Articles Quantity				

FY06 Congressional add to test/evaluate a nickel boron coating to create a lubricant-free M4A1 carbine.
FY07 Congressional add to continue the effort to test and evaluate a nickel boron coating on SOF machine guns.

	FY06	FY07	FY08	FY09
UVT	3.855			

FY06 Congressional add. Entered concept development and demonstrated application of integrated unmanned vehicle technologies to identify and track targets.

	FY06	FY07	FY08	FY09
Holographic Close Combat Optic		.974		
RDT&E Articles Quantity				

FY07 Congressional add to develop a Holographic Close Combat Optic application to be utilized on low velocity 40mm weapons and heavy machine guns.

	FY06	FY07	FY08	FY09
IWIS		2.046		
RDT&E Articles Quantity				

FY07 Congressional add to develop a single ISR tool to provide SOF with an integrated sighting system.

C. Other Program Funding Summary:

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	To Complete	Total Cost
PROC, Small Arms and Weapons	140.736	136.665	160.087	73.657	112.045	58.906	33.715	58.338	Cont.	Cont.

D. Acquisition Strategy.

- HSR. Precision Sniper Rifle will pursue a .338 round to meet range capability gap from 1000-1500m. Anti-Materiel Rifle will pursue technology that will provide SOF with accurate engagement on hard targets, critical nodes, and other materiel.

- 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 family of muzzle brake suppressors, shot counter mini day/night sight (MDNS), and numerous other components designed to enhance the capabilities of the weapon while at the same time combining capabilities into single, smaller devices.

- 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.

- SOFTAPS. Sole Source award to Irvin Aerospace for Test Articles, Low Rate Initial Production and SF-10A Data Rights. Sole Source to Para-Flite, Inc., for Harness and Subassembly Development with Production Options. Full and Open Competition for Full Rate Production with Multiple Award Indefinite Delivery/Indefinite Quantity Contracts with minimum and maximum quantities.

- 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 lifesaving capabilities for use in austere environments during extended delays in casualty evacuation.

Exhibit R-3 RDT&E Project Cost Analysis						DATE: FEBRUARY 2007					
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 FY07	Award Date FY07	Budget Cost FY08	Award Date FY08	Budget Cost FY09	Award Date FY09	To Complete	Total Program
Hardware Dev											
FSDS	FFP/T&M	PM-CCS, Picatinny, NJ	1.687	1.414	Dec-06						3.101
INOD	CPFF	Various	5.492								5.492
DUNS	CPFF	NSWC-Crane, Crane, IN	1.700								1.700
LAW	Various	NSWC-Crane, Crane, IN	1.664	1.881	Dec-06						3.545
LCMR	CPFF	PM LCMR, Ft. Monmouth, NJ	0.432								0.432
M4MOD	Various	NSWC-Crane, Crane, IN	5.213	1.287	Jan-07						6.500
NVD	ALLOT	Various	2.791			4.000	Feb-08	2.000	Feb-09		8.791
PLTD	CPFF	PM Sensors & Lasers, Ft. Belvoir, VA	2.870			0.500	Jan-08	0.500	Jan-09		3.870
SCAR	ALLOT	NSWC-Crane, Crane, IN		0.294	Jan-07					Cont.	Cont.
SPEAR	Various	PM Spear, Natick, MA	5.814	3.867	Various	0.912	Various	1.156	Various	Cont.	Cont.
TECH TRANSFER: CCCEKIT	Various	Various		0.499	Mar-07	0.717	Mar-08	0.739	Mar-09	Cont.	Cont.
MARSOC BRITE M22 Imagery	TBD	TBD		2.144	Jan-07						2.144
IWIS	TBD	TBD		2.046	Various						2.046
UV VT	Various	TBD	3.855								3.855
Subtotal Product Dev			31.518	13.432		6.129		4.395		Cont.	Cont.
Remarks:											
Development Spt											
HSR	Various	NSWC-Crane, Crane, IN	0.290					0.100	Dec-08		0.390
LAW	Various	NSWC-Crane, Crane, IN	1.314	2.597	Dec-06						3.911
LCMR	CPFF	PM LCMR, Ft. Monmouth, NJ	0.342								0.342
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.413	0.150	Various						0.563
NVD	ALLOT	Various	1.205			0.500	Feb-08	0.500	Feb-09		2.205
PLTD	CPFF	PM Sensors & Lasers, Ft. Belvoir, VA	0.250			0.250	Feb-08	0.250	Feb-09		0.750
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.443	0.040	Jan-07						0.483
SPEAR	Various	PM Spear, Natick, MA	2.414	1.187	Various	0.316	Various	0.384	Various	Cont.	Cont.
SOFTAPS	Various	Soldier Systems Center, Natick, MA	0.391								0.391
Integrated Logistics Spt											
LCMR	CPFF	PM LCMR, Ft. Monmouth, NJ	0.208								0.208
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.214	0.014	Various						0.228
SOFTAPS	Various	TACOM, ILSC-SBC, Warren, MI	0.011					0.256	Jan-09	0.536	0.803
INOD	CPFF	Various	0.125								0.125

Exhibit R-3 RDT&E Project Cost Analysis						DATE: FEBRUARY 2007					
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 FY07	Award Date FY07	Budget Cost FY08	Award Date FY08	Budget Cost FY09	Award Date FY09	To Complete	Total Program
SCAR	ALLOT	NSWC-Crane, Crane, IN		0.012	Jan-07					Cont.	Cont.
Configuration Mgmt											
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.390								0.390
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.197	0.043	Jan-07					Cont.	Cont.
NVD	ALLOT	Various	0.443			0.100	Mar-08	0.100	Mar-09		0.643
SPEAR	ALLOT	PM Spear, Natick, MA	0.000			0.054	Various	0.054	Various	Cont.	Cont.
Subtotal Spt			8.650	4.043		1.220		1.644		Cont.	Cont.
Remarks:											
Developmental Test											
HSR	ALLOT	NSWC-Crane, Crane, IN	0.000			0.500	Feb-08	0.350	Feb-09		0.850
INOD	CPFF	Various	0.135								0.135
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.355								0.355
M4MOD	ALLOT	NSWC-Crane, Crane, IN	2.264	0.648	Jan-07	0.255	Jan-08	0.262	Jan-09	Cont.	Cont.
PLTD	CPFF	PM Sensors & Lasers, Ft. Belvoir, VA	0.487			0.100	Jan-08	0.100	Jan-09		0.687
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.654	0.010	Jan-07					Cont.	Cont.
SPEAR	ALLOT	PM Spear, Natick, MA	1.719	0.706	Various	0.233	Various	0.265	Various	Cont.	Cont.
SOFTAPS	ALLOT	Yuma Proving Grounds, Yuma, AZ	1.110								1.110
Operational Test											
FSDS	ALLOT	PM-CCS, Picatinny, NJ	0.075	0.245	Dec-06						0.320
INOD	CPFF	NSWC-Crane, Crane, IN	0.250								0.250
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.340								0.340
M4MOD	ALLOT	NSWC-Crane, Crane, IN	2.982	0.775	Various					Cont.	Cont.
NVD	ALLOT	Various	0.899			0.150	Feb-08	0.150	Feb-09		1.199
PLTD	ALLOT	Various	0.000			0.150	Mar-08	0.150	Mar-09		0.300
SPEAR	ALLOT	PM Spear, Natick, MA	1.033	0.571	Various	0.322	Various	0.465	Various	Cont.	Cont.
SCAR	ALLOT	NSWC-Crane, Crane, IN	1.592	1.194	Jan-07					Cont.	Cont.
SOFTAPS	ALLOT	USA OTC, ABNSOTD, Ft. Bragg, NC	0.382					0.256	Feb-09	0.536	1.174
Subtotal T & E			14.277	4.149		1.710		1.998		Cont.	Cont.
Remarks:											

Exhibit R-3 RDT&E Project Cost Analysis						DATE: FEBRUARY 2007					
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 FY07	Award Date FY07	Budget Cost FY08	Award Date FY08	Budget Cost FY09	Award Date FY09	To Complete	Total Program
Government Eng Spt											
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.289								0.289
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.139	0.050	Various						0.189
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.325							Cont.	Cont.
SPEAR	ALLOT	PM Spear, Natick, MA	0.447	0.923	Various	0.189	Various	0.139	Various	Cont.	Cont.
Engineering Support											
HSR	ALLOT	NSWC-Crane, Crane, IN						0.050	Jan-09		0.050
LAW	ALLOT	NSWC-Crane, Crane, IN	0.200	0.294	Dec-06						0.494
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.269								0.269
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.980	0.160	Jan-07						0.980
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.300	0.044	Jan-07					Cont.	Cont.
SPEAR	ALLOT	PM Spear, Natick, MA	0.000	0.434	Various					Cont.	Cont.
Travel											
FSDS	ALLOT	PM-CCS, Picatinny, NJ	0.125	0.080	Dec-06						0.205
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.138								0.138
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.384	0.032	Various						0.414
NVD	ALLOT	Various	0.282			0.250	Various	0.250	Various		0.782
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.070	0.160	Various					Cont.	Cont.
SPEAR	ALLOT	PM Spear, Natick, MA	0.323	0.407	Various	0.075	Various	0.095	Various	Cont.	Cont.
SOFTAPS	MIPR	Army T&E / USFS	0.017								0.017
Subtotal Management			4.288	2.584		0.514		0.534		Cont.	Cont.
Remarks: Other Prior Year			3.227								
Total Cost			61.960	24.208		9.573		8.571		Cont.	Cont.
Remarks:											

Exhibit R-4, RDT&E Program Schedule Profile			Date: FEBRUARY 2007
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical System Development		Project Number and Name Project S375/Weapons Systems Advanced Development

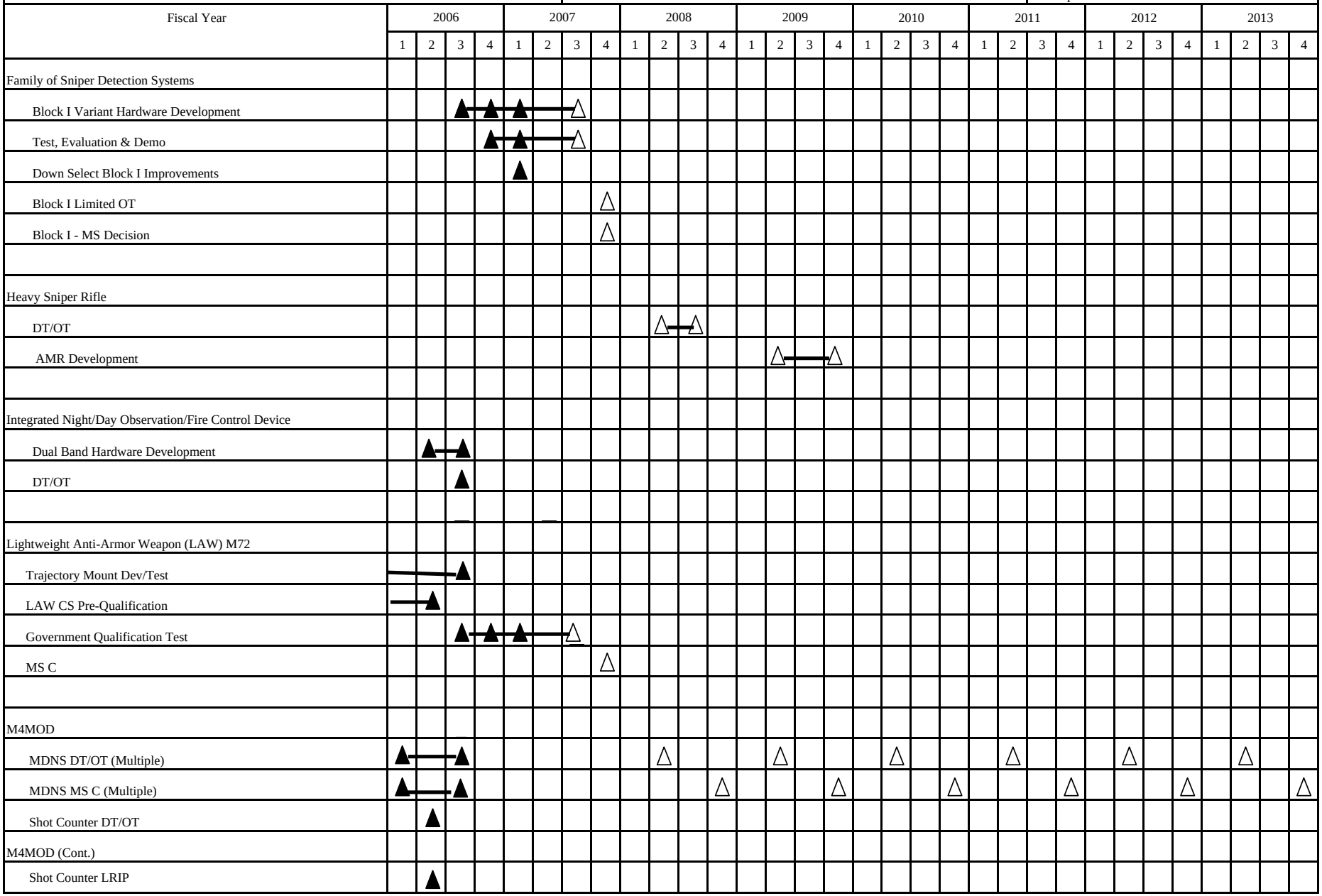

Exhibit R-4, RDT&E Program Schedule Profile			Date: FEBRUARY 2007
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical System Development		Project Number and Name Project S375/Weapons Systems Advanced Development

Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	2	3	4
Shot Counter MS C				▲																												
Shot Counter SMG Development						△	—	△																								
Nickel Boron Coating Lube-free M-4				▲	▲	—	△																									
Nickel Boron Coating Development SOF Machine Guns						△	—	—	△																							
Holographic Sight Development						△	—	△																								
Night Vision Device (SOF Laser Rangefinder and Designator (SOFLRD))																																
Prototype Development										△	—	—	—	△																		
Development/Test															△																	
MS C																△																
PLTD																																
MS C								△																								
INS Minaturization, P3I									△							△																
SOF Combat Assault Rifle																																
DT/OT/LUA	▲																															
UA #3			▲																													
MS-C LRIP		▲																														
Prototype Development	▲	—	—	▲																												
IOT&E						△	—	△																								
MS-C FRP								△																								
FUE							△																									
SOF Tactical Advanced Parachute System																																
OPEVAL - Leverage ATPS P3I													▲	—	—	—	—	—	—	—	—	—	—	△								

Exhibit R-4, RDT&E Program Schedule Profile			Date: FEBRUARY 2007
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical System Development		Project Number and Name Project S375/Weapons Systems Advanced Development

Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	2	3	4
SOF Personnel Eequipment Advanced Requirements (SPEAR)																																
Protective Combat Uniform																																
MS C		▲																														
IOC		▲																														
Body Armor P3I																																
DT		▲	—	▲	▲			△																								
OT			▲	▲	▲			△																								
MS C							△																									
IOC					▲																											
Body Armor P3I (MSAP) Emerging Requirement																																
DT/OT				▲	▲																											
MS C						△																										
IOC								△																								
Backpacks																																
DT						△																										
OT						△	—	△																								
MS C									△																							
IOC													△																			
Eye Protection																																
MS A/B					▲																											
DT						△	—	△																								
OT						△	—	△																								
MS C									△																							
IOC			—	—	—		—				△																					
Modular Integrated Communication Helmet																																
MS A/B						△																										

Exhibit R-4, RDT&E Program Schedule Profile	Date: FEBRUARY 2007	
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical System Development	Project Number and Name Project S375/Weapons Systems Advanced Development

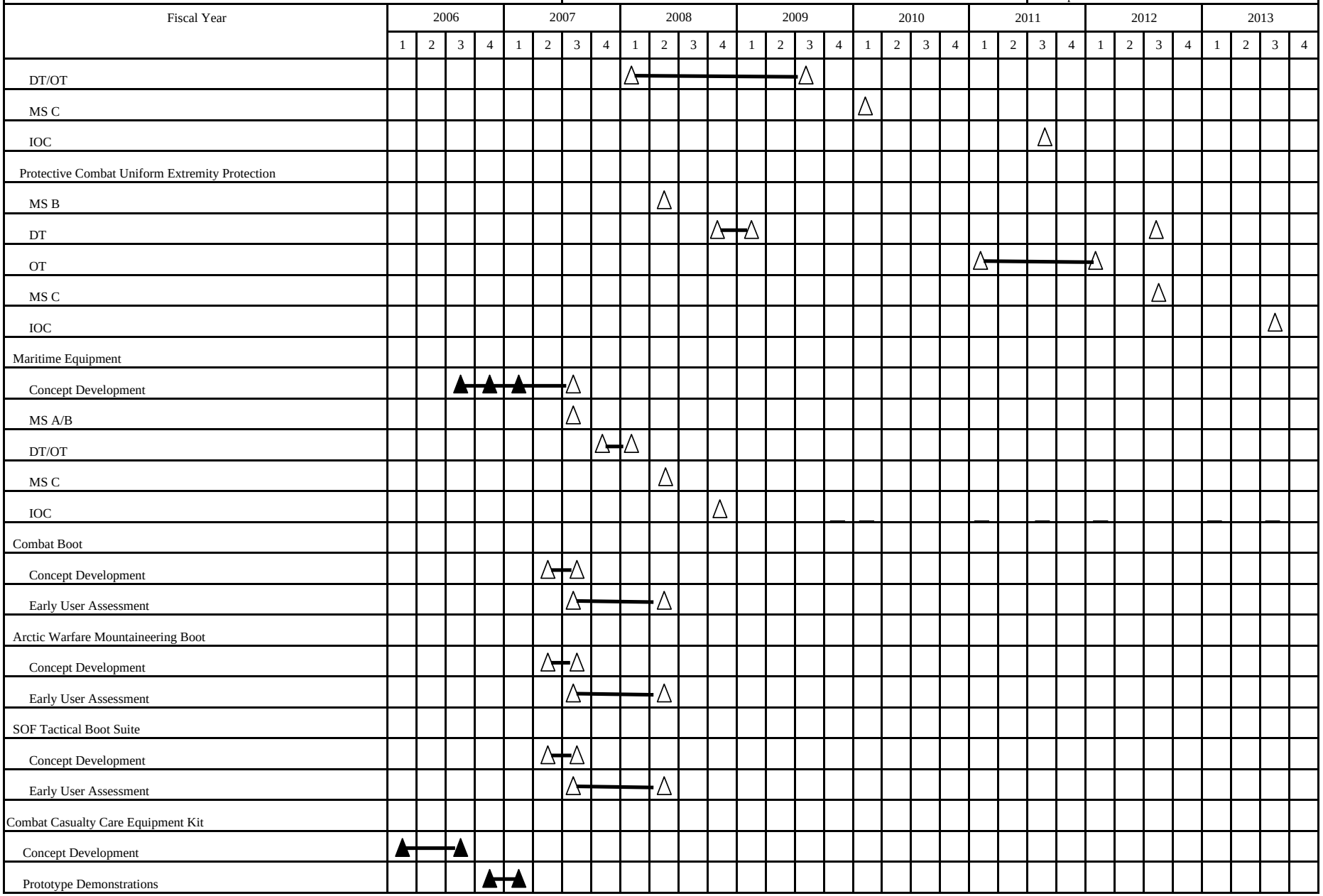

Exhibit R-4, RDT&E Program Schedule Profile																																
																	Date: FEBRUARY 2007																
Appropriation/Budget Activity RDT&E/7									Program Element Number and Name PE1160404BB/Special Operations Tactical System Development																Project Number and Name Project S375/Weapons Systems Advanced Development										
Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	2	3	4
Operational Assessment					▲	△																										
Initial Fielding							△																									
CASEVAC																																
Concept Development				▲	▲	△			△																							
Prototype Demonstrations										△		△																				
Operational Assessment													△	△																		
Initial Fielding															△																	
Surgeon Kits																																
Concept Development																				△				△								
Prototype Demonstrations																										△		△				
Operational Assessment																													△	△		
Initial Fielding																															△	
MARSOC BRITE M22 Imagery						△		△																								

Exhibit R-4a, RDT&E Program Schedule Detail				Date: FEBRUARY 2007				
Appropriation/Budget Activity	Program Element Number and Name			Project Number and Name				
RDT&E/7	PE1160404BB/Special Operations Tactical Systems Development			Project 375/Weapons Systems Advanced Development				
Schedule Profile	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
Family of Sniper Detection Systems								
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 Decision		4Q						
Heavy Sniper Rifle								
DT/OT			2 - 3Q					
Anti-Materiel Rifle Development				2 - 4Q				
Integrated Night/Day Observation/Fire Control Device								
Dual Band Hardware Development	2 - 3Q							
DT/OT	3Q							
Lightweight Anti-Armor Weapon (LAW) M72								
Trajectory Mount Dev/Test	1 - 3Q							
LAW CS Pre-Qualification	1 - 2Q							
Government Qualification Test	3 - 4Q	1 - 3Q						
MS C		4Q						
M4MOD								
MDNS DT/OT (Multiple)	1 - 3Q		2Q	2Q	2Q	2Q	2Q	2Q
MDNS MS C (Multiple)	1 - 3Q		4Q	4Q	4Q	4Q	4Q	4Q
Shot Counter DT/OT	2Q							
Shot Counter LRIP	2Q							
Shot Counter MS C	4Q							
Shot Counter SMG Development		2 - 4Q						
Nickel Boron Coating Lube-free M-4	4Q	1 - 3Q						
Nickel Boron Coating Development SOF Machine Guns		2 - 4Q	1Q					
Holographic Sight Development		2 - 4Q						
Night Vision Device (SOF Laser Rangefinder and Designator [SOFLRD])								
Prototype Development			2 - 4Q	1 - 2Q				
Developmental Test				3Q				
MS C				4Q				

Exhibit R-4a, RDT&E Program Schedule Detail				Date: FEBRUARY 2007				
Appropriation/Budget Activity	Program Element Number and Name			Project Number and Name				
RDT&E/7	PE1160404BB/Special Operations Tactical Systems Development			Project 375/Weapons Systems Advanced Development				
Schedule Profile	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
PLTD								
MS C		4Q						
INS Minaturization, P3I			1Q	4Q				
SOF Combat Assault Rifle								
DT/OT/LUA	1Q							
UA#3	3Q							
MS-C LRIP	2Q							
Prototype Development	1 - 4Q							
IOT&E		2 - 3Q						
MS C FRP		4Q						
FUE		3Q						
SOF Tactical Advanced Parachute System								
OPEVAL - Leverage ATPS P3I				1 - 4Q	1 - 4Q	1 - 4Q		
SOF Personnel Equipment Advanced Requirements (SPEAR)								
Protective Combat Uniform								
MS C	2Q							
IOC	2Q							
Body Armor P3I								
DT	2 - 4Q	1 - 4Q						
OT	3 - 4Q	1 - 4Q						
MS C		3Q						
IOC		1Q						
Body Armor P3I (MSAP) Emerging Requirement		1Q						
DT/OT	4Q	1Q						
MS C		2Q						
IOC		4Q						
Backpacks								
DT		2Q						
OT		2 - 3Q						
MS C			1Q					
IOC				1Q				
Eye Protection								
MS A/B		1Q						
DT		2 - 3Q						

Exhibit R-4a, RDT&E Program Schedule Detail				Date: FEBRUARY 2007				
Appropriation/Budget Activity	Program Element Number and Name			Project Number and Name				
RDT&E/7	PE1160404BB/Special Operations Tactical Systems Development			Project 375/Weapons Systems Advanced Development				
Schedule Profile	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
SPEAR (Cont)								
OT		2 - 3Q						
MS C			1Q					
IOC			3Q					
Modular Integrated Communication Helmet								
MS A/B		2Q						
DT/OT			1 - 4Q	1 - 3Q				
MS C					1Q			
IOC						3Q		
Protective Combat Uniform Extremity Protection								
MS B			2Q					
DT			4Q	1Q			3Q	
OT						1 - 4Q	1Q	
MS C							3Q	
IOC								3Q
Maritime Equipment								
Concept Development	3 - 4Q	1 - 3Q						
MS A/B		3Q						
DT/OT		4Q	1Q					
MS B/C			2Q					
IOC			4Q					
Combat Boot								
Concept Development		2 - 3Q						
Early User Assessment		3 - 4Q	1 - 2Q					
Arctic Warfare Mountaineering Boot								
Concept Development		2 - 3Q						
Early User Assessment		3 - 4Q	1 - 2Q					
SOF Tactical Boot Suite Development								
Concept Development		2 - 3Q						
Early User Assessment		3 - 4Q	1 - 2Q					
Combat Casualty Care Equipment Kit								
Concept Development	1 - 3Q							
Prototype Demonstrations	4Q	1Q						
Operational Assessment		1 - 2Q						
Initial Fielding		3Q						
CASEVAC								
Concept Development	4Q	1-4Q	1Q					

Exhibit R-4a, RDT&E Program Schedule Detail				Date: FEBRUARY 2007				
Appropriation/Budget Activity	Program Element Number and Name			Project Number and Name				
RDT&E/7	PE1160404BB/Special Operations Tactical Systems Development			Project 375/Weapons Systems Advanced Development				
Schedule Profile	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
SPEAR (Cont)								
Prototype Demonstrations			2 - 4Q					
Operational Assessment				1 - 2Q				
Initial Fielding				3Q				
Surgeon Kit								
Concept Development					4Q	1 - 4Q		
Prototype Demonstrations							2 - 4Q	
Operational Assessment								1 - 2Q
Initial Fielding								3Q
MARSOC BRITE M22 Imagery		2-4Q	1Q					

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2007
Appropriation/Budget Activity RDT&E BA # 7	SOF Communications Advanced Development S700	

Cost ($ in million)	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
SOF Communications Advance Development	24.505	28.715	10.810	11.228	8.608	10.560	12.927	12.405
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 Global Information Grid (GIG). The GIG 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)

- Command, Control, Communications, Computers, and Intelligence Automation System (C4IAS) Distributed Common Ground System (DCGS) provides SOF leadership with the situational awareness for planning and executing SOF missions. DCGS integrates Tactical Processing, Exploitation, and Dissemination (TPED) data into the SOF information enterprise. Through development and integration efforts SOF networks will provide SOF leadership with unique decision-making capabilities to include measurement and signature data, sensor exploitation, data compressions and man-portable workstations.

- 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.

- 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 Local Area Network (TACLAN). The TACLAN program provides SOF operational commanders and forward deployed forces advanced automated data processing and display capabilities to support situational awareness, mission planning and execution, and command and control of forces. The TACLAN program consists of TACLAN Suites, Mission Planning Kits (MPK) and Field Computing Devices (FCD). Each TACLAN Suite consists of three easily transportable, multiple integrated networks, 60 general use laptops and 10 intelligence laptops. A TACLAN network contains commercial servers, routers, and hubs which can operate at user selectable classification levels, [e.g., unclassified, collateral, coalition or Sensitive Compartmented Information (SCI) networks.] An MPK consists of computers and ancillary equipment used by SOF teams for detailed mission planning. FCDs are small hand-held computing devices used by the most forward deployed SOF to automatically interface with the TACLAN suite via tactical communications.

- Tactical Communications Systems Testbed was a Congressional add in FY05, FY06, and FY07. This initiative serves as a testbed to evaluate new technologies for SOF communications under a rapid prototyping concept. The focus is on the following 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; Broadband Global Area Network, Network Modeling Tools, Migration to IP V6, and Information Assurance & Commercial-Off-the-Shelf (COTS) 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 was an FY06 and FY07 Congressional add. Developed a Low Probability of Intercept/Low Probability of Detection (LPI/LPD) waveform generator and architecture for insertion into the JEM radio program.

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

- SOCOM Imagery Dissemination System initiative was an FY06 and FY07 Congressional add. This initiative explores an end-to-end technology system that consists of a PC-based COTS software package for end user situation awareness clients, and a UNIX-based software package for the remote imagery dissemination server.

- Improved USSOCOM Information Transfer was an FY06 Congressional add. Apply real-time knowledge management tools using information technologies and cognitive science to meet urgent Special Operations requirements.

- SOCOM Tactical Systems Development was an FY06 Congressional add. Research and develop environmentally hardened tactical system components in support of SOF direct action and reconnaissance operations.

- Voice Activated Handheld Translator was an FY06 Congressional add. Prototype a one-way language translation device, and research possibilities of achieving true two-field, expedient two-way real-time translation capability for SOF applications.

- Warrior Reach was 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.

- Strategic Communications Support is an FY07 Congressional add. Develops culturally relevant media campaigns through management and execution of media approach planning, product development and prototyping, and commercial quality multi-media product development to support dissemination and distribution of multi-media products.

• STAR-TEC was an FY06 and FY07 Congressional add. The Science Technology and Research – Technology Enterprise Center (STAR-TEC) is a partnership program to facilitate business relationships with early stage manufacturing and technology businesses interested in producing critical products, technologies, and/or specialized services for SOF.

• C2 Mission Manager is an FY07 Congressional add. Develops software to manage, filter and display Air Support Requests. This funding will also add functionality to produce Mission Summary Reports.

ABOVE OPERATIONAL ELEMENT

• Special Operations Resource Business Information System (SORBIS) This initiative is to provide an enterprise-wide solution which will bring together resource and acquisition management data from disparate systems and databases (both internal and external) used throughout USSOCOM into an integrated business system that can provide a common user interface and common source and view of the data. It will enable users to complete acquisition management, planning, programming, and budgeting collaborative decision processes and retain information necessary to satisfy mission requirements, generate standard and ad hoc reports, graphically display performance metrics and data, and conduct in depth data analysis and reporting.

B. ACCOMPLISHMENTS/PLANNED PROGRAM

Cost ($ in million)	FY06	FY07	FY08	FY09
C4IAS DCGS				0.112
RDT&E Articles Quantity				

FY09 Begins development of a SOF network that provides SOF with unique decision-making capabilities.

Cost ($ in million)	FY06	FY07	FY08	FY09
MBITR	5.132	15.953		6.380
RDT&E Articles Quantity				

FY06 Continued technology insertions 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 Satellite Communications (SATCOM) capabilities.
FY07 Continue technology insertions for the JEM with emphasis on BFT, with emphasis on SATCOM and Demand Assigned Multiple Access (DAMA) research, engineering, and development which provides MBITR users with SATCOM capability.
FY09 Continues technology insertions for the JEM, with emphasis on SATCOM and DAMA research, engineering, and development.

Cost ($ in million)	FY06	FY07	FY08	FY09
MBMMR	1.920	.480		
RDT&E Articles Quantity				

FY06 Commenced development of a reprogrammable COMSEC chip.
FY07 Complete development of a reprogrammable COMSEC chip.

Cost ($ in million)	FY06	FY07	FY08	FY09
TACLAN			2.082	2.126
RDT&E Articles Quantity				

FY08 Begins development and integration of BFT secure wireless biometrics embedded national tactical receiver (ENTR) and DCGS data sharing capabilities.
FY09 Continues development and integration of BFT secure wireless biometrics ENTR and DCGS data sharing capabilities.

Cost ($ in million)	FY06	FY07	FY08	FY09
Tactical Communications System Testbed Initiative	1.639	1.461		
RDT&E Articles Quantity				

FY06 This initiative was a Congressional add. Continued tactical communications system testbed initiative to evaluate new technologies for SOF communications under a rapid prototyping concept. Evaluated enhancements to existing SOF deployable communications systems under both laboratory and operational conditions, while focusing on four discrete efforts to enhance current capabilities.
FY07 This initiative was 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)	FY06	FY07	FY08	FY09
MBLT	0.295	0.398		
RDT&E Articles Quantity				

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

Cost ($ in million)	FY06	FY07	FY08	FY09
Covert Wavelet Packet Modulation	1.349	1.948		
RDT&E Articles Quantity				

FY06 This initiative was a Congressional add. Developed a JTRS compliant LPI/LPD waveform generator and architecture for insertion into the JEM radio program.
FY07 This initiative was a Congressional add. Continue development of a JTRS compliant LPI/LPD waveform generator and architecture for insertion into the JEM radio program.

Cost ($ in million)	FY06	FY07	FY08	FY09
Covert Waveform III	2.313			
RDT&E Articles Quantity				

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

Cost ($ in million)	FY06	FY07	FY08	FY09
SOCOM Imagery Dissemination System	1.927	1.461		
RDT&E Articles Quantity				

FY06 This initiative was a Congressional add. Explored end-to-end technology for PC-based end user situation awareness system for remote imagery dissemination.
FY07 This initiative was a Congressional add. Continue exploration of an end-to-end technology for PC-based end user situation awareness system for remote imagery dissemination.

Cost ($ in million)	FY06	FY07	FY08	FY09
USSOCOM Improved Information Transfer	3.278			
RDT&E Articles Quantity				

FY06 This initiative was a Congressional add. Applied real-time knowledge management tools using information technologies and cognitive science to meet urgent Special Operations requirements.

Cost ($ in million)	FY06	FY07	FY08	FY09
SOC Tactical Systems Development	1.639			
RDT&E Articles Quantity				

FY06 This initiative was a Congressional add. Researched and developed environmentally hardened tactical system components in support of SOF direct action and reconnaissance operations.

Cost ($ in million)	FY06	FY07	FY08	FY09
Voice Activated Handheld Translator	1.061			

FY06 This initiative was a Congressional add. Prototyped a one-way language translation device, and researched possibilities of achieving true two-field, expedient two-way real-time translation capability for SOF applications.

	FY06	FY07	FY08	FY09
Cost ($ in million)				
Warrior Reach	1.446	.974		

FY06 This initiative was a Congressional add. Commenced integration of real-world ISR capabilities into USSOCOM mission preparation and operational architectures to improve current mission preparation, testing and operational capabilities.
FY07 Continue integration of real-world ISR capabilities into USSOCOM mission preparation and operational architectures to improve current mission preparation, testing and operational capabilities.

	FY06	FY07	FY08	FY09
Cost ($ in million)				
Strategic Communications Support		2.727		

FY07 Develop and prototype products useful in providing dissemination and distribution of culturally relevant multi-media campaigns.

	FY06	FY07	FY08	FY09
Cost ($ in million)				
STARTEC	2.506	2.339		

FY06 Initiated partnership program with early stage manufacturing and technology businesses that will produce critical technologies for SOF.
FY07 Continue partnership program with early stage manufacturing and technology businesses that will produce critical technologies for SOF.

	FY06	FY07	FY08	FY09
Cost ($ in million)				
C2 Mission Manager		.974		

FY07 Develop software to manage, filter and display Air Support request and Mission Summary Reports.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2007
Appropriation/Budget Activity RDT&E BA # 7	SOF Communications Advanced Development S700	

Cost ($ in million)	FY06	FY07	FY08	FY09
SORBIS			8.728	2.610
RDT&E Articles Quantity				

FY08 Commences development and test for resource planning, programming and budgeting, and acquisition management capabilities software applications.
FY09 Completes software application development and test for resource and acquisition management execution capabilities.

C. Other Program Funding Summary:

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	To Complete	Total Cost
PROC, Comm/Equip and Electronics	151.373	65.960	175.073	140.681	148.399	151.703	173.459	165.184	Cont.	Cont.

D. Acquisition Strategy:

- C4IAS DCGS is a post Milestone C fielded SOF communication infrastructure that will evaluate and develop infrastructure technologies adaptors that support the seamless transmission of critical DCGS Intelligence, Surveillance, and Reconnaissance products.

- MBITR is a post-Milestone III fielded SOF communications system that is being upgraded to become software communications architecture compliant as directed by OSD.

- SORBIS acquisition strategy seeks to optimize a cost, schedule, and performance mix, by pursuing a commercial-off-the-shelf (COTS) materiel solution through full and open competition. Commercial and Government agency sources will be leveraged for required certifications, functional and operational test and acceptance support.

- TACLAN is a post-Milestone C fielded program that is being upgraded to reduce the footprint of deployable networks and related equipment.

Exhibit R-3 RDT&E Project Cost Analysis						DATE: FEBRUARY 2007					
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 FY07	Award Date FY07	Budget Cost FY08	Award Date FY08	Budget Cost FY09	Award Date FY09	To Complete	Total Program
Primary Hardware Dev											
Develop MBITR COMSEC Chip	MIPR	NSA, Ft Meade, MD	2.177								2.177
Develop MBMMR 2007 Operating Sys S/W	T&M	Raytheon Network Centric Sys, Fort Wayne, IN	9.118	0.480	Nov-06						9.598
Material Improv & Corrosion Control	SS - FFP	Concurrent Technologies Corp, Largo, FL	2.454								2.454
Subtotal Product Dev			13.749	0.480		0.000	0.000	0.000		0.000	14.229
Remarks:											
Development Spt											
Machine Based Language Translator	MIPR	DARPA	0.302	0.398	Dec-06					0.719	1.419
DCGS Design	TBD	TBD						0.112	Dec-08	Cont.	Cont.
SORBIS Design	TBD	TBD				8.728	Dec-07	2.610	Dec-08		11.338
TACLAN	TBD	TBD				2.082	Dec-07	2.126	Dec-08	Cont.	Cont.
Subtotal Spt			0.302	0.398		10.810		4.848		Cont.	Cont.
Remarks:											

Exhibit R-3 RDT&E Project Cost Analysis						DATE: FEBRUARY 2007					
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 FY07	Award Date FY07	Budget Cost FY08	Award Date FY08	Budget Cost FY09	Award Date FY09	To Complete	Total Program
Developmental Test & Eval											
Tactical Communication System Testbed	MIPR	SPAWAR-Charleston, SC	4.170	1.461	Jan-07						5.631
Covert Wavelet Packet Modulation	MIPR	AFRL, Rome, NY	1.349	1.948	Jan-07						3.297
Covert Waveform III	MIPR	AFRL, Rome, NY	2.313								2.313
SOCOM Imagery Dissemination System	TBD	TBD	1.927	1.461	Jan-07						3.388
USSOCOM Improved Information Transfer	MIPR	NSMA, Arlington, VA	3.278								3.278
SOF Tactical Systems Development	TBD	TBD	1.639								1.639
Voice Activated Handheld Translator	MIPR	,	1.061								1.061
Warrior Reach	MIPR	NAWC, Orlando, FL	1.446	0.974	Jan-07						2.420
C2 Mission Manager	MIPR	MacDill AFB, FL		0.974	Jan-07						0.974
Strategic Communications Support	MIPR	MacDill AFB, FL		2.727	Jan-07						2.727
STAR-TEC Partnership	MIPR	MacDill AFB, FL	2.506	2.339	Jan-07						4.845
Subtotal T&E			19.689	11.884		0.000		0.000			31.573
Remarks:											
Contractor Engineering Spt											
Subtotal Management											
Remarks:											
Total Cost			33.740	12.762		10.810		4.848		Cont.	Cont.
Remarks:											

Exhibit R-4, RDT&E Program Schedule Profile																																
																Date: FEBRUARY 2007																	
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	2006				2007				2008				2009				2010				2011				2012				2013			
	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	2	3	4
C4IAS DCGS														▲	—	△	▲	—	—	△	▲	—	—	△	▲	—	—	△	▲	—	—	△
MBITR Technology Insertions	▲	—	—	△	▲	—	—	△	▲	—	—	△	▲	—	—	△	▲	—	—	△	▲	—	—	△	▲	—	—	△	▲	—	—	△
Develop MBMMR COMSEC Chip		▲	—	△	▲	—	—	△																								
Special Operations Resource Business Information System									▲	—	—	△	▲	—	△																	
Tactical LAN										▲	—	△	▲	—	—	△	▲	—	—	△	▲	—	—	△	▲	—	—	△	▲	—	—	△
Tactical Communication System Testbed Initiative		▲	—	△	▲	—	—	△																								
Machine Based Language Translator		▲	—	△	▲	—	△											▲	—	△		▲	—	△								
Covert Wavelet Packet Modulation		▲	—	△	▲	—	—	△																								
Covert Waveform III		▲	—	△																												
SOCOM Imagery Dissemination System		▲	—	△	▲	—	—	△																								
SOCOM Improved Information Transfer		▲	—	△																												
SOC Tactical Systems Development		▲	—	△																												
Voice Activated Handheld Translator		▲	—	△																												
Warrior Reach		▲	—	△																												
C2 Mission Manager					▲	—	—	△																								
Strategic Communications Support					▲	—	—	△																								
STAR-TEC Partnership		▲	—	△	▲	—	—	△																								

Exhibit R-4a, RDT&E Program Schedule Detail				Date: FEBRUARY 2007				
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	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
C4IAS DCGS				2-4Q	1-4Q	1-4Q	1-4Q	1-4Q
MBITR Technology Insertions	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Develop MBMMR COMSEC Chip	2-4Q	1-4Q						
Special Operations Resource Business Info System			1-4Q	1-2Q				
Tactical LAN			2-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Tactical Communication System Testbed Initiative	2-4Q	1-4Q						
Machine Based Language Translator	2-4Q	1-3Q			2-4Q	1-3Q		
Covert Wavelet Packet Modulation	2-4Q	1-4Q						
Covert Waveform III	2-4Q							
SOCOM Imagery Dissemination System	2-4Q	1-4Q						
SOCOM Improved Information Transfer	2-4Q							
SOC Tactical Systems Development	2-4Q							
Voice Activated Handheld Translator	2-4Q							
Warrior Reach	2-4Q	1-4Q						
C2 Mission Manager		1-4Q						
Strategic Communication Support		1-4Q						
STAR-TEC Partnership	2-4Q	1-4Q						

	Exhibit R-2a, RDT&E Project Justification			Date: FEBRUARY 2007
Appropriation/Budget Activity RDT&E BA # 7				SO Munitions Advanced Development/Project S800

Cost ($ in millions)	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
SO Munitions Adv Dev	5.682		2.000					
RDT&E Articles Quantity								

A. Mission Description and Budget Item Justification**:** This project provides for the development and qualification of selected, specialized munitions and equipment to meet unique Special Operations Forces (SOF) requirements. Sub-projects include:

- Foreign & Nonstandard Materiel (FNM). Program provides for development of all non-standard munitions.
- Heavy Sniper Rifle (HSR). Provides MK11 Sniper Support Rifle (SSR), MK12 Special Purpose Rifle (SPR), MK13 300 WinMag, and MK15 .50 Caliber sniper weapons systems to SOF.
- Multi-purpose Anti-armor Anti-personnel Weapon System (MAAWS). MAAWS is a multi-purpose, man-portable, line-of-sight, reloadable salt water submersible, jumpable, and recoilless, day/night, anti-armor and anti-personnel weapon system with a family of ten (10) ammunition rounds and a sub caliber training system.
- Remote Activation Munition System (RAMS). Magneto-Inductive RAMS (MI-RAMS) provides SOF the capability to remotely control detonation of demolition charges. MI-RAMS transmits through earth, rock, buildings, caves, and fresh and salt water.

B. Accomplishments/Planned Program

	FY 2006	FY 2007	FY 2008	FY 2009
FNM	.130			
RDT&E Articles Quantity				

FY06 Developed a diversionary device (flash bang hand grenade) to replace the MK141 diversionary device. The MK141 flash proved to be unsafe during operations. To avoid future injuries, USSOCOM qualified and purchased a new diversionary device using a Commercial-Off The Shelf strategy.

	Exhibit R-2a, RDT&E Project Justification			Date: FEBRUARY 2007
Appropriation/Budget Activity RDT&E BA # 7				SO Munitions Advanced Development/Project S800

	FY 2006	FY 2007	FY 2008	FY 2009
HSR	.973			
RDT&E Articles Quantity				

FY06 Ammunition characterization of .338 ammunition.

	FY 2006	FY 2007	FY 2008	FY 2009
MAAWS	.482		2.000	
RDT&E Articles Quantity				

FY06 A Congressional add funded this effort. The Multi Target (MT) warhead defeats triple brick or 8 inches reinforced concrete, and puts a lethal follow-through charge behind the wall.
FY08 Provides insensitive munition improvements to munitions fielded from MAAWS family of ten (10) ammunition rounds. Funds effort to develop, test and qualify packaging to contain explosion in the event of an unplanned stimulus in accordance with the USSOCOM Insensitive Munitions (IM) Plan as required by Chapter 141, Title 10 USC, Sections 2388 & 2389.

	FY 2006	FY 2007	FY 2008	FY 2009
RAMS	4.097			
RDT&E Articles Quantity				

FY06 This effort was funded by a Congressional add. Developed and applied Magneto Inductive (MI) technology for the initiation of explosives. MI technology will enable SOF operators to remotely initiate underground or underwater demolition charges to attack well protected targets.

C. Other Program Funding Summary**:**

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	To Complete	Total Cost
PROC, SOF Munitions	69.046	21.342	26.509	23.715	36.869	36.824	36.899	37.904	Cont.	Cont.

D. Acquisition Strategy:
MAAWS: Leverage existing IM technology and develop novel solutions to make the MAAWS family of ammunition IM safe. Redesign the MAAWS ammunition packaging to enhance IM safety.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2007					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Special Operations Munitions Advanced Development/S800								
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 FY07	Award Date FY07	Budget Cost FY08	Award Date FY08	Budget Cost FY09	Award Date FY09	To Complete	Total Program
Primary Hardware Dev											
MAAWS Dev IM Packaging	FFP	ARDEC, Picatinny, NJ				0.385	Dec-08				0.385
MAAWS Dev	FFP	ARDEC, Picatinny, NJ	17.913								17.913
Subtotal Product Dev			17.913	0.000		0.385		0.000			18.298
Remarks:											
Developmental Test & Eval											
MAAWS IM Testing/Qual		ARDEC, Picatinny, NJ				1.615	Mar-08				1.615
Subtotal T&E			0.000	0.000		1.615		0.000			1.615
Remarks:											
Contractor Engineering Spt											
Government Engineering Spt											
Program Management Spt											
Subtotal Management			0.000	0.000		0.000	0.000	0.000		0.000	0.000
Remarks:											
Total Cost			17.913	0.000		2.000		0.000		0.000	19.913
Remarks:											

Exhibit R-4, Schedule Profile																																
																		Date: FEBRUARY 2007														
Appropriation/Budget Activity RDT&E/7									Program Element Number and Name PE1160404BB/Special Operations Tactical System Development														Project Number and Name Project S800 SO Munitions Adv Dev								
Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	2	3	4
Foreign & Nonstandard Materiel BTV-1 Bottom Top Vent Single Flash Bang Grenade Development	◀	—	—	▶																												
Heavy Sniper Rifle Ammo Characterization			◀	—	—	△																										
M3 MAAWS Multi Target 756 Develop, Test & Qualify	◀	—	—	▶																												
XM156 MI-RAMS Magneto Inductive Remote Activation Munition System Development	◀	—	—	▶																												
Insenstive Munition Development									△	—	—	△																				

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2007				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project S800/SO Munitions Advance Development				
Schedule Profile	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
Foreign & Nonstandard Materiel BTV-1 Bottom								
Top Vent Single Flash Bang Grenade Development	1-4Q							
Heavy Sniper Rifle Ammo Characterization	3-4Q	1-2Q						
M3 Multi-Purpose Anti-Armor Anti-Personnel Weapon System (MAAWS) Multi Target 756 Develop, Test & Qualify	1-4Q							
XM156 Magneto Inductive Remote Activation Munition System Development	1-4Q							
MAAWS Insensitive Munitions Development			1-4Q					

	Exhibit R-2a, RDT&E Project Justification			Date FEBRUARY 2007
Appropriation/Budget Activity RDT&E BA # 7				SO Miscellaneous Equipment Advanced Development/Project S900

Cost ($ in millions)	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
SO Miscellaneous Equipment Advanced Development	5.626	2.242	2.589		1.502	2.978		
RDT&E Articles Quantity								

A. Mission Description and Budget Item Justification**:** This project funds the development and testing of Family of Special Operations Vehicles (FSOV). The Special Operations Forces (SOF) mission mandates that SOF vehicles remain technologically superior, operate in multiple environments and be able to meet any threat to provide a maximum degree of survivability. Sub-projects funded in this project include:

- Alternative Mobility Vehicle (AMV) is an FY 2006 Congressional add. Funding for this effort will test and evaluate a prototype diesel hybrid powered light-duty off-road vehicle for potential use by SOF.

- Lightweight Tactical All Terrain Vehicle (LTATV) is an FY 2006 Congressional add. This initiative will develop a multi-fuel engine that primarily runs on JP8 fuel using the current ATV engine.

- Non-Standard Commercial Vehicle (NSCV). Funds will develop a roll on /roll off kit for NSCVs. Modification kits will include but are not limited to infrared lights, communication mounts, winches and weapon mounts that can be deployed and installed on NSCVs operating in all theaters.

- Ground Mobility Vehicles (GMV). Funding provides for product improvements in the areas of suspension, power management, armor protection, and overall SOF unique vehicle design for all SOF tactical vehicle configurations. The various modifications make it essential to keep up with the increased weight and the impact that it has on the basic vehicle.

- Rucksack Portable Unmanned Aircraft System. Project provides for spiral development for the Rucksack Portable Unmanned Aircraft System (RPUAS) related to payload and Digital Data Link.

- Small Business Innovative Research (SBIR). Provides administrative support to manage the SBIR program.

- Closed Circuit Rebreather. Congress add to evaluate emerging rebreather technology for SOF applications.

- ROVER Over-the-horizon Augmented Reconnaissance (ROAR) is a Congressional add that complements the SOF Remote Operations Video Enhanced Receiver (ROVER) by providing near real-time dissemination from Unmanned Aircraft Systems (UAS) video feeds down to multiple users. ROAR allows the ground force operator with situational awareness to see where the UAS in his mission area are looking; the user is then able to make a 'smart' request for video or frame data to his area of interest. ROAR improves collections and analyses within the constraints of existing communications operations. A single ROAR system can support multiple ROVER feeds, as long as the data can be delivered to the ROAR system.

B. Accomplishments/Planned Program

	FY 2006	FY 2007	FY 2008	FY 2009
AMV	2.361			
RDT&E Articles Quantity				

FY06 Congressional add began development of a prototype hybrid electric power train.

	FY 2006	FY 2007	FY 2008	FY 2009
LTATV	1.200			
RDT&E Articles Quantity				

FY06 Congressional add began development to convert existing LTATV gasoline engines.

	FY 2006	FY 2007	FY 2008	FY 2009
NSCV	.384			
RDT&E Articles Quantity				

FY06 Modified and tested the NSCV used by SOF.

	FY 2006	FY 2007	FY 2008	FY 2009
GMV			2.589	
RDT&E Articles Quantity				

FY08 Modifies and tests the various GMV configurations with the add-on armor as well as other modifications.

	Exhibit R-2a, RDT&E Project Justification			Date FEBRUARY 2007
Appropriation/Budget Activity RDT&E BA # 7			SO Miscellaneous Equipment Advanced Development/Project S900	

	FY 2006	FY 2007	FY 2008	FY 2009
SBIR	.500			
RDT&E Articles Quantity				
FY06 Funded administrative costs associated with executing the congressionally mandated SBIR Program.				
	FY 2006	FY 2007	FY 2008	FY 2009
Closed Circuit Rebreather		.974		
RDT&E Articles Quantity				
FY07 Congressional add to evaluate emerging rebreather technology for SOF applications.				
	FY 2006	FY 2007	FY 2008	FY 2009
ROAR		1.268		
RDT&E Articles Quantity				
FY07 Congressional add to develop ROVER Over The Horizon Augmented Reconnaissance.				
	FY 2006	FY 2007	FY 2008	FY 2009
RPUAS	1.181			
RDT&E Articles Quantity				
FY06 Completed testing of the RPUAS and began Digital Data Link design and development.				

C. Other Program Funding Summary:

	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	To Complete	Total Cost
PROC, Tactical Vehicle	19.046	13.143	10.612	3.783	.285	.293	.300	.310	Cont.	Cont.

D. Acquisition Strategy:

- AMV is an evolutionary acquisition program that integrates emerging technology into current vehicle propulsion systems. The strategy supports the development of a hybrid electric propulsion system for vehicles.

- NSCV maximizes the use of commercial vehicles and Non-Developmental Items (NDI) technology to develop SOF deployable modification kits for the NSCV's.

- GMV improvements integrate emerging technology or COTS/NDI to correct problems with the current suspension, electrical, and armor of the existing GMV's.

- LTATV conversion is an evolutionary acquisition program that integrates emerging and COTS technology to convert a current gasoline engine into a JP8 optimized/multi-fuel engine.

Exhibit R-3 RDT&E Project Cost Analysis						DATE: FEBRUARY 2007					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Special Operations Miscellaneous Equipment Advance Development S900								
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 FY07	Award Date FY07	Budget Cost FY08	Award Date FY08	Budget Cost FY09	Award Date FY09	To Complete	Total Program
Primary Hardware Dev											
ROVER Over The Horizon Augmented Reconnaissance	TBD	TBD		1.268	TBD						1.268
Alternative Mobility Vehicle (AMV)	MIPR	TACOM, Warren, MI	0.861								0.861
Non Standard Commercial Vehicle (NSCV)	PO	SOFSA, Lexington, KY	0.384								0.384
Ground Mobility Vehicle (GMV)	TBD	Various				2.000	Various			Cont.	Cont.
Unmanned Vehicle (UV)	MIPR		1.097								1.097
Closed Circuit Rebreather	TBD	NSWC, Norfolk, VA		0.974							0.974
Unmanned Vehicle Targeting (UVT)	MIPR	Natick Soldier Center, Natick, MA	2.000								2.000
Subtotal Product Dev			4.342	2.242		2.000		0.000		Cont.	Cont.
Remarks:											
Development Spt											
AMV	TACOM		1.000								1.000
UV	TBD		0.506								0.506
Subtotal Spt			1.506	0.000		0.000		0.000			1.506
Remarks:											
Developmental Test & Eval											
GMV	TBD	Various				0.589	Various			Cont.	Cont.
LTATV	FFP	Polaris, Medina, MN	1.200								1.200
UV	MIPR	Army PEO, Natick, MA	0.084								0.084
Subtotal T&E			1.284	0.000		0.589		0.000		Cont.	Cont.
Remarks:											
Governemnt Engineering Spt											
AMV	MIPR	TACOM, Warren, MI	0.500								0.500
SBIR	PBAS	NSMA, Arlington, VA	0.500								0.500
Subtotal Management			1.000	0.000		0.000		0.000			1.000
Remarks:											
Total Cost			8.132	2.242		2.589		0.000		Cont.	Cont.
Remarks:											

Exhibit R-4, RDT&E Program Schedule Profile																																
																	Date: FEBRUARY 2007																
Appropriation/Budget Activity									Program Element Number and Name																Project Number and Name							
RDT&E/7									PE1160404BB/Special Operations Tactical System Development																Project S900 SO Misc Equip Adv Dev							
Fiscal Year	2006				2007				2008				2009				2010				2011				2012				2013			
	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	2	3	4
Alternative Mobility Vehicle (AMV)																																
Concept Development																																
Government Prototype Demonstrations																																
LTATV Engine conversion to JP8																																
Concept Development																																
Government Prototype Demonstrations																																
NSCV System Upgrade																																
Design Development																																
RPUAS																																
--RPUAS Data Link Design/Development																																
GMV System Upgrade																																
Design Development																																
ROAR																																
Development																																
Integration																																
Testing																																
Closed Circuit Rebreather																																
Development																																

Exhibit R-4a, RDT&E Program Schedule Detail				Date: FEBRUARY 2007				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project S900/SO Miscellaneous Equipment Advance Development				
Schedule Profile	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
Alternative Mobility Vehicle (AMV)								
Concept Development	4Q	1Q - 2Q						
Government Prototype Demonstrations		2Q - 4Q						
LTATV engine conversion to JP8								
Concept Development		1Q - 2Q						
Government Prototype Demonstrations		2Q - 4Q						
.								
NSCV System Upgrade								
Design Development	4Q	1Q - 2Q						
Rucksack Portable Unmanned Aircraft System								
Data Link Design and Development	2Q - 4Q							
GMV System Upgrade								
Design Development			1Q-4Q					
ROAR								
Development		2Q-4Q						
Integration		3Q-4Q	1Q					
Testing			1Q					
Closed Circuit Rebreather								
Development		3Q-4Q	1Q-2Q					