UNITED STATES SPECIAL OPERATIONS COMMAND

FISCAL YEAR (FY) FY 2007

BIENNIAL BUDGET ESTIMATES

RDT&E, DEFENSE-WIDE

FEBRUARY 2006

FEBRUARY 2006

UNITED STATES SPECIAL OPERATIONS COMMAND
RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE

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RESEARCH, DEVELOPMENT, TEST AND EVALUATION, DEFENSE-WIDE

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ORGANIZATIONS

160th SOAR	160th Special Operations Aviation Regiment
AFSOC	Air Force Special Operations Command
ARSOA	Army Special Operations Aviation
CERDEC	Communications-Electronics Research, Development and Engineering Center
DARPA	Defense Advanced Research Projects Agency
DTRA	Defense Threat Reduction Agency
FDA	Federal Drug Administration
MARSOC	Marine Special Operations Command
NAVSPECWARCOM	Naval Special Warfare Command
PMA-275	V-22 Joint Program Office
SOFSA	Special Operations Forces Support Facility
TSOC	Theater Special Operations Command
USASOC	United States Army Special Operations Command
USSOCOM	United States Special Operations Command

ACRONYMS

A2C2S	Army Aviation Command & Control System
ACTD	Advanced Concepts Technology Demonstration
ADRAC	Altitude Decompression Sickness Risk Assessment Computer
ADP	Automated Data Processing
ADSS	Adaptive Deployable Sensor Suite
AFCS	Auto Flight Control System
AGE	Arterial Gas Embolism
AHRS	Attitude Heading Reference System
ALE	Automatic Link Establishment
ALGS	Autonomous Landing Guidance System
ALGL	Advanced Lightweight Grenade Launcher
ALLTV	All Light Level Television
AMP	Avionics Modernization Program
AS&C	Advanced Systems Concept
ARAP	ASDS Reliability Action Panel
ASD	Assistant Secretary of Defense
ASDS	Advanced Sea, Air, Land Delivery System
ASE	Aircraft Survivability Equipment
ATACMS	Army Tactical Missile System
ATD	Advanced Technology Demonstration
ATD/TB	AC-130U Gunship Aircrew Training Devices/Testbed
ATL	Advanced Tactical Laser
ATM	Asynchronous Transfer Mode
ATV	All Terrain Vehicle
AWE	Aircraft, Weapons, Electronics
BALCS	Body Armor Load Carriage System
BFT	Blue Force Tracking
BLOS	Beyond Line-of-Site
BLOSeM	Below Line-of-Site Electronic Support Measures
BMATT	Brief Multimission Advanced Tactical Terminal
BOIP	Basis of Issue Plan
BUD/S	Basic Underwater Demolition School
C2	Command and Control
C3I	Command, Control, Communications, and Intelligence
C4	Command, Control, Communications, and Computers

ACRONYMS

C4	Command, Control, Communications, and Computers
C4I	Command, Control, Communications, Computers, and Intelligence
C4IAS	Command, Control, Communications, Computers, and Intelligence Automation System
CAAP	Common Avionics Architecture for Penetration
CAAS	Common Avionics Architecture Systems
CAPS	Counter-Proliferation Analysis and Planning System
CBN	Chemical, Biological and Nuclear
CCD	Coherent Change Detection
CCCEKIT	Combat Casualty Care Equipment Kit
CDR	Critical Design Review
CERP	Capital Equipment Replacement Plan
CESE	Civil Engineering Support Equipment
CINC	Commander in Chief
CLR	Combat Loss Replacement
CMNS	Combat Mission Needs Statement
CMS	Combat Mission Simulator
COIL	Chemical Oxygen Iodine Laser
COMSEC	Communications Security
CONOPS	Concept of Operations
COTS	Commercial-Off-The-Shelf
COW	Cost of War
CP	Counter-Proliferation
CPAF	Cost Plus Award Fee
CS	Confined Space (LAW)
CS	Combat Swimmer
CSAR	Combat Survivor Evader Locator
CSEL	Combat Search and Rescue
CSOLO	Commando Solo
CW	Center Wing
DAMA	Demand Assured Multiple Access
DARPA	Defense Advanced Research Projects Agency
DAS	Distributed Aperture System
DCS	Decompression Sickness
DDS	Dry Deck Shelter

ACRONYMS

DERF	Defense Emergency Response Fund
DIRCM	Directional Infrared Countermeasures
DMCS	Deployable Multi-Channel SATCOM
DMS	Diminished Manufacturing Sources (ASDS)
DMS	Defense Message System
DMT/DMR	Distributed Mission Training/Distributed Mission Rehearsal
DTT	Desk Top Trainer
DUSD	Deputy Under Secretary of Defense
EA	Evolutionary Acquisition
ECM	Electronic Countermeasures
ECO	Engineering Change Order
ECP	Engineering Change Proposal
EDM	Engineering Development Model
EFP	Explosively Forced Penetrator
EGLM	Enhanced Grenade Launcher Module
EIR	Embedded Integrated Broadcast System Receiver
EIRS	Enhanced Infrared Suppression
EMD	Engineering and Manufacturing Development
ENTR	Embedded National Tactical Receiver
EOIR	Electro-Optical Infrared
ESA	Enhanced Situational Awareness
ETI	Evolutionary Technology Insertion
EW	Electronic Warfare
EWAISF	Electronic Warfare Avionics Integrated Systems Facility
EWO	Electronic Warfare Officer
FAA	Federal Aviation Administration
FABS	Fly-Away Broadcast System
FCD	Field Computing Devices
FCT	Foreign Comparative Testing
FLIR	Forward Looking Infrared Radar
FOL	Family of Loud Speakers
FPM	Flight Performance Model
FSOV	Family of SOF Vehicles
FW	Fixed Wing

ACRONYMS

FSDS	Family of Sniper Detection Systems
GBS	Global Broadcasting System
GDS	Gunfire Detection System
GEO	Geological
GFE	Government Furnishment Equipment
GMV	Ground Mobility Vehicles
GOTS	Government-Off-the-Shelf
GPS	Global Positioning System
GSK	Ground Signal Intelligence Kit
H-SUV	Hardened-Sport Utility Vehicle
HF	High Frequency
HFTTL	Hostile Forces Tagging, Tracking, and Locating
HLA	High Level Architecture
HMMWV	High Mobility Multi-purpose Wheeled Vehicle
HPFOTD	High Power Fiber Optic Towed Decoys
HPMMR	High Performance Multi-Mission Radio (PRC-117F)
HPS	Human Patient Simulator
HRLMD	Hydrographic Reconnaissance Littoral Mapping Device
HSB	High Speed Boat
HSR	Heavy Sniper Rifle
IAS/CMS	Integration Avionics System/Cockpit Management System
IBR	Intelligence Broadcast Receiver
IBS	Integrated Broadcast Service
ICAD	Integrated Control and Display
IDAP	Integrated Defensive Armed Penetrator
IDAS	Interactive Defensive Avionics Subsystem
IDS	Infrared Detection System
ILM	Improved Limpet Mine
IM	Insensitive Munitions
IMFP	Integrated Multi-Function Probe
INFOSEC	Information Security
INOD	Improved Night/Day Observation/Fire Control Device
INS	Inertial Navigation System
IPT	Integrated Product Team

ACRONYMS

IR	Infrared
IRCM	Infrared Countermeasures
ISR	Intelligence Surveillance and Reconnaissance
ISSMS	Improved SOF Manpack System
ISOCA	Improved Special Operations Communications Assemblage
ITMP	Integrated Technical Management Plan
JBS	Joint Base Station
JCS	Joint Chiefs of Staff
JDISS	Joint Deployable Intelligence Support System
JEM	Joint Enhanced Multi-Purpose Inter/Intra Team Radio
JMPS	Joint Mission Planning System
JOS	Joint Operational Stocks
JSOAC	Joint Special Operations Aviation Components
JSOTFS	Joint Special Operations Task Force
JSTAR	Joint Surveillance and Target Attack Radar System
JTRS	Joint Tactical Radio System
JTWS	Joint Threat Warning System
LASIK	Laser-Assisted IN-Situ Keratomileusis
LAN/WAN	Local Area Network/Wide Area Network
LASAR	Light Assault Attack Reconfigurable Simulator
LAW	Light Anti-Armored Weapons
LBJ	Low Band Jammer
LCMP	Life Cycle Management Plan
LCMR	Lightweight Counter Mortar Radar
LDS	Leaflet Delivery System
LEP	Lightweight Environmental Protection
LMG	Lightweight Machine Gun
LOS	Line of Sight
LPD	Low Probability of Detection
LPI	Low Probability of Intercept
LPI/D	Low Probability of Intercept/Detection
LPI/LPD	Low Probability of Intercept/Low Probably of Detection
LRBS	Long Range Broadcast System
LRV	Light Reconnaissance Vehicle

ACRONYMS

LTD	Laser Target Designator
LTDR	Laser Target Designator/Rangefinder
LTI	Lightweight Thermal Imager
LWC	Littoral Warfare Craft
LWCM	Lightweight Counter-Mortar
M4MOD	M4A1 SOF Carbine Accessory Kit
MAAWS	Multi-Purpose Anti-Armor/Anti-Personnel Weapons System
MATT	Multi-mission Advanced Tactical Terminal
MBITR	Multi-Band Inter/Intra Team Radio
MBLT	Machine Based Language Translator
MBMMR	Multi-Band/Multi-Mission Radio
MBSS	Maritime Ballistic Survival System
MCAR	MC-130 Air Refueling
MCADS	Maritime Craft Air Drop System
MCU	Multipoint Conferencing Unit
MELB	Mission Enhancement Little Bird
MET	Meteorological
MICH	Modular Integrated Communications Helmet
MMB	Miniature Multiband Beacon
MOA	Memorandum of Agreement
MONO-HUD	Monocular Head Up Display
MPARE	Mission Planning, Analysis, Rehearsal and Execution
MPC	Media Production Center
MPK	Mission Planning Kits
MRD	Mission Rehearsal Device
NAVSCIATTS	Naval Small Craft Instructor and Technical Training School
NBC	Nuclear, Biological, and Chemical
NBOE	Non-Gasoline Burning Outboard Engine
NDI	Non-Developmental Item
NM	Nautical Miles
NOSC	Network Operations Systems Center
NRE	Non-Recurring Engineering
NSCV	Non Standard Commercial Vehicle

ACRONYMS

NSSS	National Systems Support to SOF
NSW	Naval Special Warfare
NVD	Night Vision Devices
NVEO	Night Vision Electro-Optic
OA/CW	Obstacle Avoidance/Cable Warning
OBESA	On-Board Enhanced Situational Awareness
OEF	Operation Enduring Freedom
OIF	Operation Iraqi Freedom
OMB	Office of Management and Budget
OMMS	Organizational Maintenance Manual Sets
OPEVAL	Operational Evaluation
ORD	Operational Requirements Document
OT&E	Operational Test and Evaluation
QOT&E	Qualification Test and Evaluation/Qualification Operational Test and Evaluation
P3I	Pre-Planned Product Improvement
PAM	Penetration Augmented Munition
PARD	Passive Acoustic Reflection Device
PC	Personal Computer
PC	Patrol Coastal
PDR	Preliminary Design Review
PDS	Psychological Operations Distribution System
PDM	Program Decision Memorandum
PFPS	Portable Flight Planning System
PGCB	Precision Guided Canister Bomb
PGSE	Peculiar Ground Support Equipment
PLTD	Precision Laser Targeting Device
PM	Program Manager
PM-MCD	Project Manager for Mines, Countermeasures and Demolitions
POBS	PSYOP Broadcasting System
PPS	PSYOP Print System
PRK	Photo Refractive Keratectomy
PRTV	Production Representative Test Vehicle
PSYOP	Psychological Operations

ACRONYMS

PTLD	Precision Target Locator Designator
PTT	Part Task Trainer
RAA	Required Assets Available
RAMS	Remote Activated Munitions System
RF	Radio Frequency
RIB	Rigid Inflatable Boat
RIS	Radio Integration System
RMWS	Remote Miniature Weather System
RSTA	Reconnaissance Surveillance Target Acquisition
RW	Rotary Wing
RWR	Radar Warning Receivers
SAFC	Special Applications for Contingencies
SAHRV	Semi-Autonomous Hydrographic Reconnaissance Vehicle
SATCOM	Satellite Communication
SBIR	Small Business Innovative Research
SBR	System Baseline Review
SCAR	SOF Combat Assault Rifle
SCI	Sensititive Compartmented Information
SDD	System Design and Development
SDS	Sniper Detection System
SDV	Sea, Air, Land (SEAL) Delivery Vehicle
SEAL	Sea, Air, Land
SIGINT	Signals Intelligence
SIL	Systems Integration Lab
SIPE	Swimming Induced Pulmonary Edema
SIRFC	Suite of Integrated Radar Frequency Countermeasures
SIRCM	Suite of Infrared Countermeasures
SKOS	Sets, Kits and Outfits
SLAM	Selectable Lightweight Attack Munition
SLEP	Service Life Extension Program
SMAX	Special Operations Command Multipurpose Antenna, X-Band
SMG	SOF Machine Gun
SMRS	Special Mission Radio System

ACRONYMS

SO	Special Operations
SOC	Special Operations Craft
SOC	Special Operations Command
SOC-R	Special Operations Craft-Riverine
SOCRATES	Special Operations Command, Research, Analysis and Threat Evaluation System
SOF	Special Operations Forces
SOFDK	SOF Demolition Kit
SOFIV	SOF Intelligence Vehicle
SOFLAM	SOF Laser Marker
SOFPARS	SOF Planning and Rehearsal System
SOFTAPS	SOF Tactical Advanced Parachute System
SOFTACS	SOF Tactical Assured Connectivity System
SOIS	Special Operations Intelligence System
SOJICC	Special Operations Joint Interagency Collaboration Center
SOLL	Special Operations Low Level
SOMPE	Special Operations Mission Planning Environment
SOMROV	Special Operations Miniature Robotic Vehicle
SOMS-B	Special Operations Media Systems B
SOPMOD	SOF Peculiar Modification
SOPMODM-4	SOF Peculiar Modification-M4 Carbine
SOST	Special Operations Special Technology
SOTD	Special Operations Technology Development
SOTVS	Special Operations Tactical Video System
SPEAR	SOF Personal Equipment Advanced Requirements
SPIKE	Shoulder Fired Smart Round
SRC	Systems Readiness Center
SRC	Special Reconnaissance Capabilities
SSSAR	Solid State Synthetic Aperture Radar
START	Special Threat Awareness receiver/Transmitter
STD	Swimmer Transport Device
SW	Short Wave
SYDET	Sympathetic Detonator
TACLAN	Tactical Local Area Network
TCCC	Tactical Combat Casualty Care

ACRONYMS

TACTICOMP	Tactical Computer
TCV	Transit Case Variant
TDFD	Time Delay Firing Device
TEI	Technology Exploitation Initiative
TF/TA	Terrain Following/Terrain Avoidance
TRS	Tactical Radio System
TRR	Test Readiness Review
TT&L	Tagging, Tracking & Locating
TTHM	Titanium Tilting Helmet Mount
UARRSI	Universal Aerial Refueling Receptacle Slipaway
UAV	Unmanned Aerial Vehicle
UBA	Underwater Breathing Apparatus
UHF	Ultra High Frequency
UK	United Kingdom
US	United States
UTC	Unit Type Code
VESTA	Vibro-Electronic Signature Target Analysis
VHF	Very High Frequency
VSAT	Very Small Aperture Terminal
VSWMCM	Very Shallow Water Mine Countermeasures
VTC	Video Teleconferencing
WIRED	Wind Tunnel Intigrated Real Time In the Cockpit/Real Time Out of the Cockpit Experiments and Demonstrations
WMD	Weapons of Mass Destruction
WSADS	Wind Supported Air Delivery System

FEBRUARY 2006

SPECIAL OPERATIONS COMMAND RDT&E PROGRAM

Appropriation: 0400 Research Development Test & Evaluation Defense-Wide

TOA, $ in Millions

R-1	Program Element #	Item	Budget Activity	FY 2005	FY 2006	FY 2007
21	1160401BB	Spec Operations Technology Development	2	14.751	29.960	12.698
22	1160407BB	SOF Medical Technology Development	2	2.487	2.183	2.293
59	1160402BB	Spec Operations Advanced Technology Development	3	110.060	143.111	80.402
163	0301318BB	Humint [2]	7			
165	0301555BB	Classified Programs [2]	7			
166	0301556BB	Special Programs [2]	7			
183	0304210BB	Special Applications for Contingencies	7	21.526	20.815	11.302
211	1160279BB	Small Business Innovative Research	7	12.926		
212	1160403BB	Spec Operations Aviation Systems Advanced Development	7	89.951	102.840	83.704
213	1160404BB	Spec Operations Tactical Systems Development	7	59.917	105.238	45.241
214	1160405BB	Spec Operations Intelligence Systems Development	7	50.415	59.751	29.011
215	1160408BB	SOF Operational Enhancements [1]	7	76.317	74.484	99.010
216	1160421BB	Spec Operations CV-22 Development	7	53.059	29.526	
217	1160425BB	Spec Operations Defensive Systems	7	56.897	26.934	7.850
218	1160426BB	Advanced SEAL Delivery System (ASDS) Development	7	22.889	31.888	32.452
219	1160427BB	USSOCOM Mission Training and Preparation Systems	7			1.782
220	1160428BB	USSOCOM Unmanned Vehicles	7			1.521

[1] - Details are classified and will be provided under separate cover.

[2] - Funding levels and details are classified and will be provided under separate cover.

Total Special Operations Command:	**573.556**	**628.792**	**409.658**

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2006
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 2	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160401BB Special Operations Technology Development/S100

COST (Dollars in Millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11		Cost to Complete	Total Cost
PE1160401BB	14.751	29.960	12.698	11.382	11.635	11.895	12.169		Cont.	Cont.
S100, SO TECHNOLOGY BASE DEV	14.751	29,960	12.698	11.382	11.635	11.895	12.169		Cont.	Cont.

A. Mission Description and Budget Item Justification

This program element enables USSOCOM to conduct studies and develops laboratory prototypes for applied research and advanced technology development, as well as leverage other organizations' technology projects that may not otherwise be affordable within MFP-11. Applying small incremental amounts of investments to DOD, other government agencies, and commercial organizations allows the Commander, USSOCOM to influence the direction of technology development or the schedule against which it is being pursued, and to acquire emerging technology for Special Operations Forces. This project provides an investment strategy for USSOCOM to link technology opportunities with USSOCOM capability deficiencies, capability objectives, technology thrust areas, and technology development objectives.

B. Change Summary Explanation:

	FY05	FY06	FY07
Previous President's Budget	14.972	13.595	12.520
Current President's Budget	14.751	29.960	12.698
Total Adjustments	-0.221	16.365	0.178
Congressional Program Reductions		-0.435	
Congressional Increases		16.800	
Reprogrammings	-0.221		0.178
SBIR Transfer			

FY05:
Decrease reflects reprogramming to PE1160407BB for Casualty Care Management Initiatives (-$0.221 million)

FY06:
Congressional reductions include (-$0.303 million) for global 1% reduction and (-$0.132 million) for Section 8125 reduction.
Increase based on Congressional Plus-ups. (+16.800 million)

- AngelFire for FLAS $8.000 million
- Helios/Global Observer $6.800 million
- Navigational Technique Enhancements $1.000 million
- Technology Infusion Cells for SOF $1.000 million

FY07:
Increased funds (+$0.178 million) for inflation rate changes.

Schedule: None.

Technical: None.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 2	Special Operations Technology Development/Project S100

Cost ($ in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
SOF Technology Base Development	14.751	29.960	12.698	11.382	11.635	11.895	12.169
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: This project conducts studies and develops laboratory prototypes for applied research and advanced technology development, as well as leverages other organizations' technology projects that may not otherwise be affordable within MFP-11. Applying small incremental amounts of investments to DOD, other government agencies, and commercial organizations allows the Commander USSOCOM to influence the direction of technology development or the schedule against which it is being pursued, and to acquire emerging technology for Special Operations Forces (SOF). This project provides an investment strategy for USSOCOM to link technology opportunities with USSOCOM capability deficiencies, capability objectives, technology thrust areas, and technology objectives. Efforts include:

- SOF Command, Control, Communications, Computers, and Intelligence (C4I) Technologies. Exploit technologies that provide SOF with improved situational awareness and communications in all environments. Develop technologies to provide significant improvements to SOF's capability to accurately detect and track threats or targets. Exploit and demonstrate technologies that provide enhanced sensors and command and control. Develop technologies to provide new and improved capabilities in information operations and psychological operations.

- SOF Mobility Technologies. Exploit technologies to improve the performance and survivability, and reduce the detectability of SOF mobility assets. Exploit and develop technologies to provide SOF the capability to conduct ground, air, and sea mobility operations in denied areas. Exploit and develop technologies to enhance logistics support, reduce cost and improve the performance of SOF mobility platforms.

- SOF Weapons Technologies. Exploit technologies to provide SOF with standoff capabilities for targeting and locating personnel and equipment. Exploit technologies to discriminate targets and provide real-time active decision-making capabilities. Exploit technologies that enhance logistics, reduce cost and enhance performance of SOF weapons and munitions. Exploit technologies to provide multipurpose, adaptable weapons applicable to SOF platform and missions.

- SOF Sustainment/Warrior Technologies. Exploit technologies to increase SOF's survivability and performance. Exploit technologies to improve the human endurance and sensory performance without interfering with normal sensory functions. Exploit and develop technologies to counter the threat of electro-optical devices--devices that detect human presence and enhance individual operator capabilities.

- Concept Exploration Studies. Explore and validate concepts for projects being continued or initiated in support of USSOCOM desired operational capabilities.

- Technology Development Exploitation. Exploit technologies to meet critical SOF capability objectives. Requirements in these areas may be advertised to industry and government research and development agencies via broad area announcements and calls for white papers.

Additionally, these efforts were added by Congress:

- AngelFire for FCLAS. Investigate, develop and demonstrate prototype system for full spectrum, Close-in Active Protection (FCLAS) that will protect SOF assets from Rocket Propelled Grenades (RPGs) using counter munitions.

- Helios/Global Observer. Congressional add for persistent surveillance in denied areas.

- Navigational Technique Enhancements. Congressional add to research complementary navigational methods to perform in environments where existing navigation systems are denied.

- Technology Infusion Cell for SOF. Congressional add to research, develop, evaluate, validate and harness the latest emerging technological developments in support of rapid deployments forces.

B. Accomplishments/Planned Program

	FY05	FY06	FY07	
SOF Command, Control, Communications, Computers, and Intelligence (C4I) Technologies.	2.780	2.172	2.135	
RDT&E Articles Quantity				

FY05 Continued development of FY04 efforts. Transitioned Undersea Master Comms Node to Sea Eagle Advanced Concepts Technology Demonstration.
FY06 Continue development of FY05 efforts. Continue to exploit, develop and demonstrate technologies that provide SOF with improved situational awareness and communications in all environments, the capability to accurately detect and track threats or targets, provide enhanced sensors and command and control, and continue investigations of research and development focus areas.
FY07 Continue development of FY06 efforts. Continue to exploit, develop and demonstrate technologies that provide SOF with improved situational awareness and communications in all environments, the capability to accurately detect and track threats or targets, provide enhanced sensors and command and control, and continue investigations of technology thrust areas.

	FY05	FY06	FY07	
SOF Mobility Technologies	3.095	2.160	2.300	
RDT&E Articles Quantity				

FY05 Continued development of FY04 efforts. Initiated Enhanced Hostile Detection Capability for SOF Combatant Craft (river application).
FY06 Continue development of FY05 efforts. Continue to exploit technologies to improve the performance and survivability, and reduce the detection of SOF mobility assets. Continue to exploit and develop technologies to provide SOF the capability to conduct ground, air, and sea mobility operations in denied areas and continue investigations of research and development focus areas. Continue to exploit and develop technologies to enhance logistics support, reduce cost and improve the performance of SOF mobility platforms. Initiate alternative power systems and enhanced unmanned vehicles.
FY07 Continue development of FY06 efforts. Continue to exploit technologies to improve the performance and survivability, and reduce the detection of SOF mobility assets. Continue to exploit and develop technologies to provide SOF the capability to conduct ground, air, and sea mobility operations in denied areas and continue investigations of technology thrust areas. Continue to exploit and develop technologies to enhance logistics support, reduce cost, and improve the performance of SOF mobility platforms.

	FY05	FY06	FY07	
SOF Weapons Technologies	1.855	1.617	1.587	
RDT&E Articles Quantity				

FY05 Continued development of FY04 efforts. Initiated Hostile Fire Detection and Defeating Systems. Transitioned SOF Demolition Kit Enhancements to acquisition.
FY06 Continue development of FY05 efforts. Continue to exploit technologies to provide SOF with standoff capabilities for targeting and locating personnel and equipment. Exploit technologies to discriminate targets and provide real-time active decision-making capabilities. Exploit technologies that enhance logistics, reduce cost and enhance performance of SOF weapons and munitions. Exploit technologies to provide multipurpose, adaptable weapons applicable to SOF platforms and missions. Continue investigations of research and development focus areas.
FY07 Continue development of FY06 efforts. Continue to exploit technologies to provide SOF with standoff capabilities for targeting and locating personnel and equipment. Exploit technologies to discriminate targets and provide real-time active decision-making capabilities. Exploit technologies that enhance logistics, reduce cost and enhance performance of SOF weapons and munitions. Exploit technologies to provide multipurpose, adaptable weapons applicable to SOF platforms and missions. Continue investigations of research and development focus areas.

	FY05	FY06	FY07	
SOF Sustainment/Warrior Technologies	1.655	1.644	1.522	
RDT&E Articles Quantity				

FY05 Continued development of FY04 efforts.
FY06 Continue development of FY05 efforts. Continue to exploit technologies to increase SOF's survivability and performance. Continue to exploit technologies to improve the human endurance and sensory performance. Continue investigations of research and development focus areas.
FY07 Continue development of FY06 efforts. Continue to exploit technologies to increase SOF's survivability and performance. Continue to exploit technologies to improve the human endurance and sensory performance. Continue investigations of research and development focus areas.

	FY05	FY06	FY07	
Concept Exploration Studies	.814	.500	.839	
RDT&E Articles Quantity				

FY05 Continued to conduct concept studies to explore/validate projects that support USSOCOM desired operational capabilities. Completed the following studies: Combatant Craft Modularity Study and low cost autonomous attack system for AC-130 Gunship.
FY06 Continue to conduct concept studies to explore/validate projects that support USSOCOM desired operational capabilities.

FY07 Continue to conduct concept studies to explore/validate projects that support USSOCOM desired operational capabilities.

	FY05	FY06	FY07	
Technology Development Exploitation	.625	.500	.638	
RDT&E Articles Quantity				

FY05 Continued to exploit technologies to meet critical SOF capability objectives. Continue Technology Roadmaps for focus areas.
FY06 Continue to exploit technologies to meet critical SOF capability objectives. Continue Technology Roadmaps for focus areas.
FY07 Continue to exploit technologies to meet critical SOF capability objectives. Continue Technology Roadmaps for focus areas.

	FY05	FY06	FY07	
Classified	1.531	2.049	2.150	
RDT&E Articles Quantity				

FY05 Details provided under separate cover.
FY06 Details provided under separate cover.
FY07 Details provided under separate cover.

	FY05	FY06	FY07	
SPIKE Urban Warfare System	2.396			
RDT&E Articles Quantity				

FY05 Initiated precision guided missile tests. Full integration of flight-worthy tracker algorithms.

	FY05	FY06	FY07	
SOF Mobility Technologies		2.758	1.527	
RDT&E Articles Quantity				

FY06 Program funding provides for initial studies, analyses, market research and investigation of new and existing technologies needed to replace the MK V SOC.
FY07 Program funding provides for follow-on studies, analyses, market research and investigation of new and existing technologies needed to replace the MK V SOC.

	FY05	FY06	FY07	
Angel Fire for FCLAS		7.885		
RDT&E Articles Quantity				

FY06 This initiative is a Congressional add. Investigate, develop and demonstrate prototype system for full spectrum, Close-in Active Protection (FCLAS) that will protect SOF assets from RPGs using counter munitions.

	FY05	FY06	FY07	
Helios/Global Observer		6.703		
RDT&E Articles Quantity				

FY06 This initiative is a Congressional add. Continuous PSYOP Broadcast in denied areas.

	FY05	FY06	FY07	
Navigational Technique Enhancements		.986		
RDT&E Articles Quantity				

FY06 This initiative is a Congressional add. Research complementary navigational methods to perform in environments where existing navigation system are denied.

	FY05	FY06	FY07	
Technology Infusion Cell for SOF		.986		
RDT&E Articles Quantity				

FY06 This initiative is a Congressional add. Research, develop, evaluate, validate and harness the latest emerging technological developments in support of rapid deployment forces.

C. Other Program Funding Summary: None.

D. Acquisition Strategy: N/A.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2006
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 2	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160407BB Special Operations Forces (SOF) Medical Technology Development/S275

COST (Dollars in Millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11		Cost to Complete	Total Cost
PE1160407BB	2.487	2.183	2.293	2.388	2.464	2.541	2.623		Cont.	Cont.
S275, SOF MEDICAL TECHNOLOGY	2.487	2.183	2.293	2.388	2.464	2.541	2.623		Cont.	Cont.

A. Mission Description and Budget Item Justification:

This program element provides studies, non-system exploratory advanced technology development and evaluations. The focus is on medical technologies, centering on physiologic, psychologic, and ergonomic factors affecting the ability of Special Operations Forces (SOF) to perform their missions. Current equipment and technology does not meet force requirements. The unique nature of special operations requires unique approaches to combat casualty care, medical equipment and other life support capabilities including life support for high altitude parachuting, combat swimming and other SOF unique missions. This program provides guidelines for the development of selection and conditioning criteria, thermal protection, decompression procedures, combat casualty procedures and life support systems. The program supports the development and evaluation of biomedical enhancements for the unique requirements of all SOF in the conduct of their diverse missions.

B. Program Change Summary:

	FY05	FY06	FY07
Previous President's Budget	2.071	2.215	2.261
Current President's Budget	2.487	2.183	2.293
Total Adjustments	0.416	-0.032	0.032
Congressional Program Reductions		-0.032	
Congressional Increases			
Reprogrammings	0.416		0.032
SBIR Transfer			

Funding:

FY05
- Increase reflects reprogramming from PE1160401BB and PE1160402BB for Combat Casualty Care Management initiatives ($0.416M).

FY06
- Congressional reductions include (–$0.022M) for global 1% reduction and (-$0.010M) for Section 8125 reduction.

FY07
- Increased funds (+$0.032M) for inflation rate changes.

Schedule: N/A.

Technical: N/A.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 2	SOF Medical Technology/Project S275

Cost ($ in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
SOF Medical Technology	2.487	2.183	2.293	2.388	2.464	2.541	2.623
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: This project provides studies, non-system exploratory advanced technology development and evaluations. The focus is on medical technologies, centering on physiologic, psychologic, and ergonomic factors affecting the ability of Special Operations Forces (SOF) to perform their missions. Current equipment and technology does not meet force requirements. The unique nature of special operations requires unique approaches to combat casualty care, medical equipment and other life support capabilities including life support for high altitude parachuting, combat swimming and other SOF unique missions. This project provides guidelines for the development of selection and conditioning criteria, thermal protection, decompression procedures, combat casualty procedures and life support systems. The project supports the development and evaluation of biomedical enhancements for the unique requirements of all SOF in the conduct of their diverse missions. This effort is defined by the following seven areas of investigation:

- Combat casualty management will: (1) review the emergency medical equipment currently used in the SOF community and compare it to currently available civilian technology, and provide field testing of emergency medical equipment in the adverse environmental conditions encountered by SOF; (2) evaluate current tactical combat casualty care doctrine to ensure consideration of the wide variety of tactical scenarios encountered and apply the latest concepts in casualty care to these circumstances; (3) apply lessons learned from recent combat operations to enhance medical capabilities; and (4) develop CD-ROM and internet compatible automated programs to provide the capability to perform medical interviews in multiple foreign languages and support SOF medical personnel information needs while operating in austere locations.

- Decompression procedures for SOF diving operations will: (1) decrease the decompression obligation in SOF diving operations through the use of surface-interval oxygen breathing; (2) provide the basis for extended mission profiles; and (3) investigate pre-oxygenation requirements for high-altitude SOF parachute operations, as well as ground operations at extreme altitudes.

- Exercise-related injuries will evaluate the effectiveness of applying sports medicine diagnostic, therapeutic and rehabilitative techniques in management of the traumatic and overuse injuries commonly encountered among SOF.

- Inhaled gas toxicology will evaluate the feasibility of using pharmacologic intervention to reduce or eliminate the possibility of central nervous system toxicity.

- Medical sustainment training techniques will: (1) examine novel ways of providing and documenting medical sustainment training for SOF corpsmen and physicians; (2) provide capabilities to rapidly develop new protocol and equipment instructions; and (3) develop a

system for constantly upgrading the expertise of SOF medical personnel by incorporating new research reports and clinical information into a CD-ROM based computer system that can be used by medical personnel in isolated duty circumstances.

- Thermal protection research into various ensemble clothing and devices that may potentially enhance SOF operator performance.

- Mission-related physiology will: (1) develop accurate measures to evaluate SOF mission-related performance; (2) delineate nutritional strategies designed to help personnel apply known nutritional concepts to optimize performance in mission and training scenarios; (3) evaluate potential ergogenic agents as they apply to enhancing mission-related performance; (4) study the safety and efficacy of various substances to increase performance in sustained operations; (5) study interfaces of new vision devices with refractive vision enhancements; and (6) study pharmacologic measures to prevent acute mountain sickness in high altitude SOF air and ground operations.

B. Accomplishments/Planned Program

	FY05	FY06	FY07	
Ongoing Studies	.771	.883	.935	
RDT&E Articles Quantity				

FY05 Completed ongoing studies as follows: Evaluation of HydroTech Aqua Heat System during SDV operations, Medical Support of HSB Shock Mitigation, Computer-Assisted Thermal Protection Training in SOF, Decompression Computer Diving Surveillance and Configuration Management Program, Tympanic Membrane Injuries, Evaluation of Nasal Ketamine for Pain Control, Comparison of Wavefront-Guided RK and LASEK. Hypoxic Exposures to Improve Performance at Altitude. Continued ongoing studies as follows: SOF Performance Enhancing Drug Protocols, Cold Sterilization, Development of Algorithms for Remote Triage, and Tactical Combat Casualty Care Technology Transition Initiative.
FY06 Complete ongoing studies as follows: SOF Performance Enhancing Drug Protocols, Development of Algorithms for Remote Triage, Protocols and Techniques for New Equipment and Technologies within SOF, Prevention of Motion Sickness in SOF Operations, SOF Medical Training Presentations, and Evaluation of Surfactant® in the Treatment of Eustachian Tube Dysfunction and Middle Ear Squeezes. Continue ongoing studies as follows: Cold Sterilization, Visual Aberration in Post-Corneal Refractive Surgery Patients Using Panoramic Night Vision Goggles, Toxicity of Compounds Released During SOF Breaching Evolutions, and TCCC Technology Transition Initiative.
FY07 Complete ongoing studies as follows: Cold Sterilization, Visual Aberration in Post-Corneal Refractive Surgery Patients Using Panoramic Night Vision Goggles, Toxicity of Compounds Released during SOF Breaching Evolutions, and TCCC Technology Transition Initiative.

	FY05	FY06	FY07	
New Studies	1.716	1.300	1.358	

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 2	SOF Medical Technology/Project S275

RDT&E Articles Quantity				

FY05 Initiated new studies as follows: Protocols and Techniques for New Equipment and Technologies within SOF, Prevention of Motion Sickness in SOF Operations, SOF Medical Training Presentations, Visual Aberration in Post-Corneal Refractive Surgery Patients Using Panoramic Night Vision Goggles, Evaluation of Surfactant® in Treatment of Eustachian Tube Dysfunction and Middle Ear Squeezes, and Toxicity of Compounds Released During SOF Breaching Evolutions. Completed new studies as follows: Efficacy of Oxygen Administration in the CASEVAC Phase of TCCC.

FY06 Initiate new studies as follows: Efficacy of DHEA administration to protect soldiers against stress induced defects in memory and cognition, mechanisms of injury in Refractory Decompression Sickness (DCS) and Arterial Gas Embolism (AGE), classroom portion of TCCC short course, advanced distance learning for 18 D course of instruction, SOF nutrition training material for USSOCOM.

FY07 Initiate new studies as follows: Patient Recovery/Location, Mission/Load Performance Factors, Ergogenics and Ergonomics, Identification of Preventable Injuries and Diseases, Develop Mission Essential Elements for Enroute Care, Update SOF/Joint Medical Doctrine and Procedures, Patient Visibility, Medical Regulating and Evacuation, Operational/Performance in Adverse Environment Studies, Barrier Cream and Topical Protectants, Alternative Field Medications.

C. Other Program Funding Summary. None.

D. Acquisition Strategy. N/A.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2006
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 2	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160402BB Special Operations (SO) Advanced Technology Development/S200

COST (Dollars in Millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11		Cost to Complete	Total Cost
PE1160402BB	110.060	143.111	80.402	19.735	16.251	11.412	11.662		Cont.	Cont.
S200, SO SPECIAL TECHNOLOGY	110.060	143.111	80.402	19.735	16.251	11.412	11.662		Cont.	Cont.

A. Mission Description and Budget Item Justification:

This program element conducts rapid prototyping and Advanced Technology Demonstrations. It provides a means for demonstrating and evaluating emerging/advanced technologies in as realistic an operational environment as possible by Special Operations Forces (SOF) users. Evaluation results are included in a transition package, which assists in the initiation of or insertion into an acquisition program. The program element also addresses projects that are a result of unique joint special mission or area-specific needs for which a few-of-a-kind prototypes must be developed on a rapid response basis, or are of sufficient time sensitivity to accelerate the prototyping effort of a normal acquisition program in any phase.

B. Program Change Summary:

	FY05	FY06	FY07
Previous President's Budget	99.689	104.315	91.459
Current President's Budget	110.060	143.111	80.402
Total Adjustments	10.371	38.796	-11.057
Congressional Reductions		-21.574	
Congressional Increases	1.000	60.370	
Reprogrammings	9.371		0.032
SBIR Transfer			

Funding:

FY05 Net increase of $10.371M is a net result of $1.000M reprogrammed from U.S. Navy for the Tactical Radio Frequency Environmental Monitor (TREX) Congressional add; $0.959M reprogrammed from SOF Operational Enhancement for TREX; $9.200M reprogrammed from the MC-130H Combat Talon Program for the Special Operations Precision Guided Munitions (SOPGM) program; and a decrease of $0.788M that was reprogrammed to other command higher priority requirements.

FY06
Reflects $60.370 for Congressionally added programs as follows:

- Snapshot Synthetic Aperture Radar ($1.000M)
- Army Drama/Composer Integration and Development ($1.700M)
- Surveillance Augmentation Vehicle ($1.800M)
- Smart Site, Remote Video Weapon Site ($1.500M)
- Advanced Multi-Purpose Micro Display System ($5.100M)
- C-130 Advanced Tactical Airborne C4ISR System ($1.250M)
- Airborne Threat Detection Capability Expansion ($1.000M)
- Long Range Biometric Target ID System ($1.500M)
- Autonomous Navigation Sensor Suite ($2.380M)
- Satellite Synthetic Aperture Radar ($2.550M)
- Counter Sniper & Surveilance Detection System ($2.125M)
- MK V Patrol Replacement Craft ($1.500M)
- Digital Camera Rifle Scope ($0.500M)
- Field Experimentation Program for SOF ($1.000M)
- Foxhound Arabic Software Testing and Evaluation($1.350M)
- High Altitude Long Endurance Airships ($1.050M)

- Integrated Cyber Command and Control ($1.000M)
- Improved Special Operations Information Transfer ($3.400M)
- Improved Materials for Fireproof Protective Clothing ($1.275M)
- Improved Special Operations Fast Rope Kit ($1.700M)
- Improved Special Operations Reconnaissance Kits ($2.250M)
- Mobile Electrical Power Utilizing Energy Harvesting ($1.300M)
- Magnum Universal Night Sight ($1.000M)
- SF Personnel and Equipment Survivability Activity ($1.260M)
- SO Airborne Intelligence and Reconnaissance Program ($1.700M)
- SOCOM Tactical Systems Development ($1.700M)
- SOF Portable Power Source ($3.500M)
- SOF Unmanned Vehicle Targeting ($1.700M)
- Three Dimensional Imaging Technology Development ($3.230M)
- UAV Certification and Support ($1.700M)
- UAV Synthetic Aperture Radar ($2.550M)
- Urban Tactical Warfare Planning Tool ($1.000M)
- Voice Activated Handheld Translator ($1.100M)
- Waterway Threat Detection Sensor System($1.700M)

Congressional reductions include (-$1.446M) for global 1% reduction, (-$0.628M) for Section 8125 reduction, Advanced Tactical Laser ($12.000M), and SOST Program Growth ($7.500M).

FY07 Net decrease (-$11.057M) resulted in increased funds (+$1.126M) for inflation rate changes and decrease of (-$12.183M) reprogrammed to support higher command priorities.

Schedule: None.
Technical: None.

Exhibit R-2a, RDT&E Project Justification	Date: February 2006
Appropriation/Budget Activity RDT&E BA # 3	Special Operations Special Technology Project S200

Cost ($ in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Special Operations Special Technology	110.060	143.111	80.402	19.735	16.251	11.412	11.662
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: This project conducts rapid prototyping, Advanced Technology Demonstrations (ATDs), and Advanced Concept Technology Demonstrations (ACTDs). It provides a means for demonstrating and evaluating the utility of emerging/advanced technologies in as realistic an operational environment as possible by SOF (SOF) users. This project integrates efforts with each other and conducts technology demonstrations in conjunction with joint experiments and other assessment events. Evaluation results are included in a transition package, which assists in the initiation of or insertion into an acquisition program. The project also addresses unique, joint special mission or area-specific needs for which a few-of-a-kind prototypes must be developed on a rapid response basis, or are of sufficient time sensitivity to accelerate the prototyping effort of a normal acquisition program in any phase. Efforts include:

- SOF Command, Control, Communications, Computers, and Intelligence (C4I) ATDs. Exploit emerging technologies to conduct ATDs that provide SOF with a robust C4I capability to ensure uninterrupted information exchange, influence situations to support mission accomplishment, and reduce an adversary's ability to use information. Exploit emerging technologies to conduct ATDs that provide SOF with increased sensory performance. Exploit emerging technologies to locate and track targets or items of interest. Exploit emerging technologies to produce new and improved capabilities in information operations and psychological operations.

- SOF Mobility ATDs. Exploit emerging technologies to conduct ATDs that provide SOF with survivable mobility capabilities in high threat areas and with enhanced situational awareness. Exploit emerging technologies to conduct ATDs that provide SOF mobility assets with a reduction in logistic support requirements. Exploit emerging technologies to rapidly deploy and extract SOF personnel and craft. Exploit technologies to allow reconnaissance and conduct direct action in high threat areas using unmanned systems. Exploit technologies to reduce cost or enhance the performance of existing SOF platforms.

- SOF Weapons ATDs. Exploit emerging technologies to conduct ATDs that provide SOF with multi-role/multi-purpose weapons and demolitions with a broader range of potential effects and increased accuracy. Demonstrate capabilities of smart munitions and fire-and-forget capability. Exploit technologies to increase standoff from threat weapons systems. Decrease cost and logistic support requirements for SOF weapons systems.

- SOF Sustainment/Warrior ATDs. Exploit emerging technologies to conduct ATDs that provide SOF with increased survivability and performance. Exploit emerging technologies to counter the threat of electro-optical devices and devices that detect human presence, and to enhance individual operator capabilities.

- Technology Exploitation Initiative. Exploit emerging technologies to meet critical SOF requirements and encourage industry and government lab participation in identifying enhancements to SOF in critical areas.

- Advanced Tactical Laser (ATL) ACTD. The ATL ACTD was started in FY 02 through funding provided by DUSD (AS&C) and the Joint Non-Lethal Weapons Directorate. The intent of the ATL ACTD is to evaluate the military utility of a tactical directed energy weapon on the battlefield to provide direct support to the warfighter. A directed energy weapon has an inherent performance capability (i.e., extremely precise covert strike, selectable effects and lethality, and multi-axis engagement) that has the potential to enhance the effectiveness of SOF operators. The ATL ACTD will develop and employ a modular, high-energy laser weapon system on a C-130 platform, capable of conducting ultra-precision strike engagements to enhance mission accomplishment of the warfighter and conduct a military utility assessment of this weapon system.

The steps toward assessing the military utility of a high-energy laser weapon are:

a. Demonstrate weaponization of the sealed-exhaust Chemical Oxygen Iodine Laser in a modular system, capable of employment on a C-130.
b. Demonstrate the ability to acquire and engage tactical targets in an air-to-ground system test.
c. Utilize joint/service exercises to the fullest extent possible, focusing on matching the objectives of the ACTD with those of the desired exercises and demonstrations.

At the completion of the ACTD, leave behind one fully-operational laser system consisting of the laser and beam director, surveillance and acquisition sensors to support employment of the laser system, software, an operator workstation, and portable ground support equipment. The system will include documentation required to operate and maintain the ATL system.

- Psychological Operations (PSYOP) “Global Reach” ACTD. Seeks technologies that will transform current PSYOP capabilities through two major objectives: 1) extension of PSYOP product dissemination to reach target audiences in denied areas at a range up to 800 Nautical Miles (NM), and 2) automation (software and hardware) of the PSYOP planning and analysis process.

- PSYOP Modernization. This initiative will explore emergent technologies available in the marketplace to modernize the PSYOP Broadcast System (POBS), the PSYOP Print System (POPS), and Next Generation Loudspeaker System [formerly Family of Loudspeakers (FOL)].

- Standoff Precision Guided Munition (SOPGM) ACTD. The objective of the SOPGM ACTD is to evaluate the military utility of adding a precision guided munitions capability to the AC-130 Gunship. The SOPGM is based on a modified Army Viper Strike munition. The assessment will be based on ground and flight demonstrations of a SOPGM weapon system employed from an AC-130 against representative gunship targets. The ACTD will be executed in two Phases. The first phase will provide an Initial Proof-of-Concept (IPOC) of the SOPGM weapon system and an interim Military Utility Assessment (MUA). During the second Phase, the SOPGM weapon system capability will be expanded to facilitate Tactical Proof-of-Concept (TPOC) demonstrations to support generation of a final MUA. Phase 2 will culminate with the assembly and delivery of 20 TPOC configured Viper Strike munitions, 2 TPOC capable battle management systems, residual aircraft integration components, and associated training and technical data to facilitate a potential extended user evaluation .

itionally, the project executes the following efforts ed by Congress:

- Land and Sea Special Operations (LASSO) Mobility System. Design, integrate, build and evaluate advanced soldier mobility and rural terrain vehicle prototypes.

- Remote Sensor Power Source. Battery-free system to provide long-term, reliable power for a variety of remote sensors and other remote operations that support command and control.

- Foreign Language Translator. Enhance voice command function, integrate versatile headset capability, and develop an operator level capability, to build mission specific translations.

- Snapshot Synthetic Aperture Radar. Demonstrate a radar array processor fabricated from COTS micro-processors.

- ANGELFIRE Active Protection. Investigate, develop and demonstrate prototype system for Full-Spectrum, Close-in Active Protection (FCLAS) that will protect SOF assets from Rocket Propelled Grenades (RPGs) using counter-munitions.

- Surveillance Augmentation Vehicle. Integrate ultra-wide band intrusion detection sensors that can be deployed to provide an ad-hoc network for image/data/voice communications and the ability to cordon an area to protect and monitor any intrusions or device tampering.

- Remote Video Weapon Site. A Phase III SBIR contract will be awarded for the continued development of a Remote Video Weapon Site.

- Advanced Multi-Purpose Micro-Display System. Integrate highly efficient display component technology into several SOF applications.

- SOF Experimental Technology Integration. Develop and demonstrate a prototype integrated system to support SOF unique missions in low to moderate threat environments.

- Mark V Patrol Boat Replacement Craft Prototype. Develop composite combatant craft design/fabrication techniques.

- Tactical Computer (TACTICOMP). Integrate laser range-finding and precision inertial navigation into commercial PDAs.

- Foliage Penetrating Solid State Synthetic Aperture Radar. Develop and demonstrate on an RC-12M aircraft a purpose-built radar to detect and identify buried objects.

- Maritime Tagging, Tracking & Locating. Demonstrate and evaluate available technologies to support and enable SOF maritime tagging, tracking and locating capabilities.

- Autonomous Navigation Sensor Suite. Sensor development program coupled with laboratory evaluation of unique sensor types for robotic vehicles.

- Compact Three-Dimensional Imaging. Provide robust target identification capability, and develop technology for individual user to interpret and take advantage of 3D imaging.

- SOF Teletraining System (SOFTS). SOFTS is a means of delivering training using personal computers and broadband internet connections.

- Rotary Wing Unmanned Aerial Vehicle (UAV). Enhance intelligence gathering and dissemination capabilities for urban and complex terrain environments.

- Affordable Access to Night Vision Equipment (NVE). Calibrate, standardize and characterize night vision capabilities for the SOF Community.

- Dual Band Universal Night Sight (DUNS). Demonstrate integrated image and long-wave infrared fused system within the same aperture.

- Light Reconnaissance Vehicle. Develop and validate system concept for a family of SOF reconnaissance vehicles, incorporating integrated local and global networks linked to other manned/unmanned platforms and C4I architectures.

- SOF Unmanned Vehicle Technology Integration. Support unmanned vehicle development and integration efforts at the Prototype Maintenance Facility supporting USSOCOM projects.

- Special All Terrain Vehicle. Obtain and modify commercial personal mobility vehicles that incorporate commercially available diesel engines.

- Advanced Target Identification. Explore electronic signature target analysis and passive acoustic reflective device technologies for AC-130U Gunship.

- Dominant Vision. Explore advanced situational awareness and fusion technologies to enhance of various platforms' ability to navigate and identify targets through adverse weather and obscured visual situations.

- Naval Special Warfare (NSW) Craft. Explore technologies to support future combatant craft development.

- Synthetic Aperture Radar Millimeter Forward Looking Infrared Radar (FLIR). Provide a ground map plan position indicator view that can be changed to a high resolution image using synthetic aperture radar techniques.

- SOCOM Multipurpose Antenna, X-Band (SMAX). Provide a low profile, hybrid steered antenna for easy mounting on a C-130 or CV-22.

- Long Range Biometric Target Identification System. Provide a deployable system to positively identify personnel, in all light conditions, at ranges beyond 500 meters.

- Tactical Radio Frequency Environmental Monitor (TREX). TREX was used in conjunction with Small UAV, test and evaluate network centric electronic warfare systems and their support for SOF applications.

- Army DRAMA/COMPOSER Integration & Development. Evaluate advanced protocols to make more efficient use of network bandwidth and prioritization schemes.

- Autonomous Navigation Sensor Suite. Significantly reduce the size, weight, power and cost of sensors associated with unmanned systems through novel materials and manufacturing techniques.

- C-130 Advanced Tactical Airborne C4ISR System (ATACS). Demonstrate the ability to rapidly equip any C-130 aircraft with sophisticated sensors, processing, communications and self-defense capabilities through standardized hardware, software, and resource interfaces.

- Airborne Threat Detection Capability Expansion. Provide for time-critical protection of platforms and crews using new sensors and communication packages.

- Counter-Sniper & Surveillance Detection System. Research and develop tactical, mobile, and unmanned sniper detection systems that utilize optical detection and location techniques.

- Digital Camera Rifle Scope. Enhance unmanned ground system sensor optics for improved situational awareness.

- Field Experimentation Program for SOF (FEPSO). Prototype and evaluate manned-unmanned platform and sensor networks to articulate new concepts of operation and employment for SOF.

- Foxhound Arabic Software Testing & Evaluation. Evaluate automated transliteration and link-analysis software for SOF communication and intelligence applications.

- High Altitude Long Endurance Airships. Develop a fully-automated synthesis device for producing electronically and optically active nanostructures for high altitude airship electronics and sensors.

- Integrated Cyber Command & Control. Develop network security for SOF tactical networks using modified Commercial Off-the-Shelf (COTS) products.

- Improved Information Transfer. Apply real-time knowledge management tools using information technologies and cognitive science to meet urgent Special Operations intelligence requirements.

- Improved Materials for Fireproof Clothing. Develop new and revolutionary flameproof textile materials for SOF applications.

- Improved SOF Fast Rope Kit. Improve the safety of CV-22 fast rope operations using high performance materials and structures.

- Improved Special Operations Reconnaissance Kits. Prototype and evaluate new software, hardware, and sensors that significantly enhance present capabilities.

- Mobile Electric Power Utilizing Energy Harvesting. Rapidly prototype and field small, lightweight generators and other power concepts to power multiple voltages required by Special Operations electronics with little logistical support.

- Magnum Universal Night Sight (MUNS). Enhance the MUNS performance by reducing weight and power requirements.

- SOF Personnel and Equipment Survivability Activity. Design and evaluate approaches to minimize the detectability and maximize survivability and recoverability of SOF personnel and materiel.

- Special Operations Airborne Intelligence and Reconnaissance Program. Develop roll-on/off and plug-and-play system for C-130's that provide real-time command and control, micro-target detection, intelligence gathering and improvised explosive device detection.

- Special Operations Command Tactical Systems Development. Research and develop environmentally hardened tactical system components in support of SOF direct action and reconnaissance operations.

- Special Operations Portable Power Source. Research and develop Solid Oxide Fuel Cell (SOFC) technology for SOF power needs.

- Satellite Synthetic Aperture Radar. Design, develop, assemble, and test components for a synthetic aperture radar satellite in space

applications for SOF.

- Remote Video Weapon Smart Sight. Continue development of a Remote Video Weapon Smart Sight.

- SOF Unmanned Vehicle Targeting. Develop concepts and architectures for rapid unmanned vehicle SOF targeting.

- Three Dimensional Imaging Technology Development. Provides significantly enhanced level of detail to determine specific target discrimination data via 3-D imaging.

- UAV Certification and Support. Characterize the capability and develop operational employment concepts for a rotary-wing UAV.

- UAV Synthetic Aperture Radar. Develop on board processing so that only a low data rate bit map is transmitted via either low data rate satellite link or UHF digital radio to the dismounted war fighter.

- Urban Tactical Warfare Planning Tool. Design and develop a simulator tool that aids in the development of urban warfare training, tactics, and doctrine, and is compatible with the SOF Special Reconnaissance Simulator.

- Voice Activated Handheld Translator. 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.

- Waterway Threat Detection Sensor System. Research and develop a lightweight sonar system for the detection of swimmers, unmanned underwater vehicles, mines and ships.

B. Accomplishments/Planned Program

	FY05	FY06	FY07	
SOF C4I ATDs	1.224	2.683	2.763	
RDT&E Article Quantity				

FY05 Continued development and evaluation of FY04 efforts. Completed Enhanced Tactical Antenna Suite prototype and Conformal Load Bearing Antenna structures prototypes and evaluation. Conducted Tactical Networking experiment. Initiated Sea Eagle ACTD. Initiated transition of Pathfinder ACTD.

FY06 Continue development and evaluation of FY05 efforts. Continue to exploit emerging technologies to conduct ATD that provide SOF with a robust C4I capability to ensure uninterrupted information exchange, influence situations to support mission accomplishment, and reduce an adversary's ability to use information. Continue to exploit emerging technologies to conduct ATDs that provide SOF with increased sensory performance. Continue to exploit emerging technologies to locate and track targets or items of interest. Initiate Digital Direct Action Unmanned System C4I, Modular Reconnaissance and Surveillance Equipment, and Radio Frequency Tools.
FY07 Continue development and evaluation of FY06 efforts. Continue to exploit emerging technologies to conduct ATD that provide SOF with a robust C4I capability to ensure uninterrupted information exchange, influence situations to support mission accomplishment, and reduce an adversary's ability to use information. Continue to exploit emerging technologies to conduct ATDs that provide SOF with increased sensory performance. Continue to exploit emerging technologies to locate and track targets or items of interest.

	FY05	FY06	FY07	
SOF Mobility ATDs	1.267	2.697	2.766	
RDT&E Article Quantity				

FY05 Continued development and evaluation of FY04 efforts. Completed prototype and evaluation of the surface planning wet submersible. Continued testing of advanced technology small combatant craft. Designed and prototyped night vision compatible heads up display system for riverine craft.
FY06 Continue development and evaluation of FY05 efforts. Exploit emerging technologies to conduct ATDs that provide SOF mobility assets with a reduction in logistic support requirements. Exploit emerging technologies to rapidly deploy and extract SOF personnel and craft. Exploit technologies to allow reconnaissance and conduct direct action in high threat areas using unmanned systems. Exploit technologies to reduce cost or enhance the performance of existing SOF platforms. Initiate Miniature Inertial Navigation Underwater, Virtual Display for Combatant Craft.
FY07 Continue development and evaluation of FY06 efforts. Exploit emerging technologies to conduct ATDs that provide SOF mobility assets with a reduction in logistic support requirements. Exploit emerging technologies to rapidly deploy and extract SOF personnel and craft. Exploit technologies to allow reconnaissance and conduct direct action in high threat areas using unmanned systems. Exploit technologies to reduce cost or enhance the performance of existing SOF platforms.

	FY05	FY06	FY07	
SOF Weapons ATDs	1.355	2.307	2.465	
RDT&E Article Quantity				

FY05 Continued development and evaluation of FY04 efforts. Initiated Enhanced Performance Long Range Ammunition Project. Completed

Enhanced Small Arms technology project to define future weapons requirements.
FY06 Continue development and evaluation of FY05 efforts. Continue to exploit emerging technologies to conduct ATDs that provide SOF with multi-role/multi-purpose weapons and demolitions with a broader range of potential effects and increased accuracy. Exploit technologies to increase standoff from threat weapons systems. Decrease cost and logistic support requirements for SOF weapons systems. Initiate SOF Combat Assault Rifle Technology.
FY07 Continue development and evaluation of FY06 efforts. Continue to exploit emerging technologies to conduct ATDs that provide SOF with multi-role/multi-purpose weapons and demolitions with a broader range of potential effects and increased accuracy.

	FY05	FY06	FY07	
SOF Sustainment/Warrior ATDs	1.200	1.946	2.193	
RDT&E Article Quantity				

FY05 Continued development and evaluation of FY04 efforts. Completed prototype freefall navigation system and evaluation.
FY06 Continue development and evaluation of FY05 efforts. Continue to exploit emerging technologies to conduct ATD's that provide SOF with increased survivability, performance and countermeasures technologies. Continue evaluation of alternative power sources. Initiate Night Vision Electro-Optics Enhancement Project and Wide Field of View Goggles. Rebaseline Underwater Adhesives Project, and conduct mark survey of available technology. Transition Battery Recharging initiatives. Transition SOF Warrior Technology, and Improved Cratering Device.
FY07 Continue development and evaluation of FY06 efforts. Continue to exploit emerging technologies to conduct ATD's that provide SOF with increased survivability, performance and countermeasures technologies. Continue evaluation of alternative power sources.

	FY05	FY06	FY07	
Technology Exploitation Initiative (TEI)	.692	.750	.800	
RDT&E Article Quantity				

FY05 Continued to exploit emerging technology to meet critical SOF requirements and encourage industry and government lab participation in identifying enhancements to SOF in critical areas. Initiated emerging technology project in the areas of tagging, tracking and locating of view goggles.
FY06 Continue to exploit emerging technology to meet critical SOF requirements and encourage industry and government lab participation in identifying enhancements to SOF in critical areas.
FY07 Continue to exploit emerging technology to meet critical SOF requirements and encourage industry and government lab participation in identifying enhancements to SOF in critical areas.

	FY05	FY06	FY07	
ATL/ACTD	23.639	49.114	45.000	
RDT&E Article Quantity				

FY05 Continue to procure hardware and complete initial software development. Begin testing the ATL ACTD subsystems and continue the Military Utility Assessment. Begin component integration (e.g., optics module and laser generation module), component testing, and subsystem integration and testing. Begin ATL ACTD test aircraft modification. Begin Integrated Battle Management and Optical Control Systems ground tests. Begin the high-power flight test laser module ground assembly, integration and test. Continue integration and test facilities modifications .

FY06 Continue the Military Utility Assessment. Complete the low-power flight test configuration build-up, integration and ground test and integrate the low-power system on the C-130 test aircraft. Conduct low-power flight tests. Continue high-power laser assembly, integration and subsystem tests. Demonstrate high-power laser "first light." Complete integration and test facilities modifications.

FY07 Complete high-power flight test laser module build-up, integration and ground test and integrate the entire ATL ACTD system on the C-130 host aircraft. Complete integrated ATL system ground verification tests. Conduct high-power flight tests and demonstrate system performance in the Design Reference Missions. Complete the Military Utility Assessment and deliver the system residuals required for operational forces to operate and maintain the ATL system in a potential extended user evaluation.

	FY05	FY06	FY07	
PSYOP "Global Reach" ACTD	2.878	5.896	5.981	
RDT&E Article Quantity				

FY05 Continue management of the spiral design, engineering, technical integration and demonstrations of multiple technologies for UAV payloads, scatterable media (to include hardened/air-droppable satellite radios, miniaturized AM/FM broadcast transmitters, miniaturized loudspeakers, talking leaflets, and media such as internet broadcast and cellular telephones), and PSYOP Planning and Analysis System.

FY06 Continue management of the spiral design, engineering and technical integration of multiple technologies culminating with military utility assessments for UAV payloads, scatterable media, and a PSYOP Planning and Analysis System.

FY07 Continue management of the spiral design, engineering and technical integration of multiple technologies as the variants become more robust, culminating with further military utility assessments for UAV payloads, scatterable media, and a PSYOP Planning and Analysis System.

	FY05	FY06	FY07	
PSYOP Modernization	4.129	9.812	5.981	
RDT&E Article Quantity				

FY05 Explore emergent technologies to modernize and to extend the reach of USSOCOM PSYOP products and their distribution channels. Such technologies may include Long Range Broadcast Systems, Scatterable Media, Telephone and Internet Broadcast Media, space-based dissemination systems, and other technologies that will modernize PSYOP capability and give USSOCOM a stand-off capability to deliver multi-media PSYOP products to target audiences in denied areas or over long range distances (over 850 miles) in near-real-time.
FY06 Continue exploration of emergent technologies to modernize and extend USSOCOM PSYOP product reach.
FY07 Continue exploration of emergent technologies to modernize and extend USSOCOM PSYOP product reach.

	FY05	FY06	FY07	
Classified	2.661	2.907	6.695	
RDT&E Article Quantity				

FY05 Details provided under separate cover.
FY06 Details provided under separate cover.
FY07 Details provided under separate cover.

	FY05	FY06	FY07	
SOPGM	9.200	5.486	5.758	
RDT&E Article Quantity				

Phase 1 of the ACTD:
FY05 Initiated SOPGM Initial Proof-of-Concept (IPOC) weapon system design and development. Developed a baseline concept to carry and launch the SOPGM from a pylon station of the AC-130U. Initiated safety and seek eagle assessments to determine modifications required to adapt the Viper Strike for carriage and release from manned aircraft. Drafted Integrated Assessment Plan to guide the SOPGM demonstrations and began development of concept-of-operations.
FY06 Complete SOPGM IPOC weapon system development and ground integration and test, including the Viper Strike munition, battle management system (BMS), and the physical, functional, and communication interfaces to integrate the munition and BMS on an AC-130 to safely and effectively employ the munition. Complete development of the Integrated Assessment Plan for the IPOC demonstrations and begin IPOC flight demonstrations.
FY07 Complete IPOC flight demonstrations and compile an Interim Military Utility Assessment (MUA). This will complete Phase 1 of the

ACTD.

	FY05	FY06	FY07	
Rotary Wing UAV	21.086			
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Procured 7 prototype rotary wing aircraft for extensive test, analysis, fix/tactics, techniques, and procedures as per Congressional direction. Supported the SOF Long Endurance ACTD, developed payloads and concepts of operation for the A-160. Continued to support platform development and maturation program through ground and flight evaluation.

	FY05	FY06	FY07	
Long Range Biometric Target Identification System	1.918	1.479		
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Continued to investigate and evaluate biometric feature measurement techniques. Developed a prototype system to remotely validate identities of specified persons. Supported ongoing biometric efforts within the Department of Defense for SOF applications.
FY06 This initiative is a Congressional add. Continue FY05 efforts.

	FY05	FY06	FY07	
Advanced Target ID for AC-130U Gunship	1.247			
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Continued to explore Vibro Electronic Signature Target Analysis (VESTA) and Passive Acoustic Reflective Device (PARD) technologies for enhancement of the AC-130U Gunship target acquisition capability and SOF enhanced beacon systems. Conducted an analysis of VESTA with a more advanced Solid State Synthetic Aperture Radar (SSSAR) for next generation Gunship applications.

	FY05	FY06	FY07	
SMAX	1.631			
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Activity took the brass-board technology demonstration item and fabricated a flight-worthy test article. The test article is integrated with the SSSAR that was developed as an FY02 Congressional add. The new system performance was measured on an RC-12M aircraft for targeting radar risk reduction and radar system procurement option.

	FY05	FY06	FY07	
Land and Sea Special Operations (LASSO) Mobility System	1.631			
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Designed, integrated, built and evaluated advanced soldier mobility and rural terrain vehicle prototypes.

	FY05	FY06	FY07	
Remote Sensor Power Source	1.437			
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Developed a battery-free, self-replenishing, energy management platform that will power remote sensors and other remote operations for over 20 years under severe environmental conditions, such as temperature and pressure extremes. This proposed battery-free system will provide long-term, reliable power for a variety of remote sensors and other remote operations that support command and control.

	FY05	FY06	FY07	
Foreign Language Translator	1.342			
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Conducted improvements based on FY04 military utility assessment and user evaluation of the Voice Response Translator. Effort included enhancing voice command function, integrating versatile headset capability and developing an operator level capability to build mission specific translations. Five initial prototypes underwent lab and field evaluation followed by fifty units in an extended user evaluation in multiple situations.

	FY05	FY06	FY07	
Snapshot Synthetic Apperture Radar	.959	.986		
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Demonstrated a radar array processor fabricated from COTS micro-processors. Micro-processors have evolved to the point that expensive, one of a kind, special purpose array processors can be replaced with much lower cost COTS arrays to perform “typical” radar signal processing.

FY06 This initiative is a Congressional add. Continue FY05 efforts.

	FY05	FY06	FY07	
ANGELFIRE Active Protection	6.709			
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Investigated, developed and demonstrated prototype system, in concert with the U.S. Army Science and Technology Objective for Full-Spectrum, Close-in Active Protection (FCLAS) that will protect SOF and SOF assets from Rocket Propelled Grenades (RPGs) using counter-munitions.

	FY05	FY06	FY07	
Surveillance Augmentation Vehicle	.959	1.774		
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Purchased and integrated real time, tiled mosaic displays that have 10 million mega pixels providing the soldier with the capability of facial and scripted recognition at very long distances. Integrated Ultra wide band intrusion detection sensors that can be deployed to provide an ad-hoc network for image/data/voice communications and the ability to cordon an area to protect and monitor any intrusions or device tampering. Integrated all these cutting edge technologies into a standard military vehicle therefore taking the SOF warrior off the ground of a hostile environment and placing him in a safer and more technologically advanced war fighting vehicle.
FY06 This initiative is a Congressional add. Continue FY05 efforts.

	FY05	FY06	FY07	
Remote Video Weapon Site	1.631	1.479		
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Developed by USSOCOM under a FY03 SBIR Phase II contract. Matured the design of a remote video weapon site to a Technology Readiness Level 7.
FY06 This initiative is a Congressional add. Continue FY05 efforts.

	FY05	FY06	FY07	
Advanced Multi-Purpose Micro-Display System	1.437	5.027		
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Integrated highly efficient display component technology into several SOF applications to reduce power consumption while improving readability.

FY06 This initiative is a Congressional add. Contine FY05 efforts.

	FY05	FY06	FY07	
SOF Experimental Technology Integration	1.918			
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Developed and demonstrated a prototype integrated system incorporating unmanned systems, command and control, tactical networks, reconnaissance equipment and user interfaces to support SOF unique missions in low to moderate threat environments.

	FY05	FY06	FY07	
Mark V Patrol Boat Replacement Craft Prototype	2.396	1.479		
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Developed composite combatant craft design/fabrication techniques, using the aluminum-hulled MK V as a benchmark. Quantified through testing advantages in the areas of shock mitigation, sea-keeping, and life cycle cost reduction.
FY06 This initiative is a Congressional add. Continue FY05 efforts.

	FY05	FY06	FY07	
TACTICOMP	1.342			
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Integrated laser range-finding and precision inertial navigation into commercial PDAs providing a compact, wireless, and secure means to provide individual operator network stand-alone and networked communications, situation awareness, and command and control capabilities.

	FY05	FY06	FY07	

Foliage Penetrating Solid State Synthetic Aperture Radar	4.889			
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Developed and demonstrated a purpose-built radar that detects and identifies buried objects on an RC-12M aircraft. Radars pressed into service in Iraq were designed for drug interdiction in the jungle foliage of South America. These systems are not suitable for detecting objects buried in dry, sand environments as they employ very low power and very wide bandwidths. This system will utilize existing radar frequencies that permit very high radiated power to overcome ground losses and provide deeper penetration than existing systems.

	FY05	FY06	FY07	
Maritime Tagging, Tracking & Locating	.959			
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Demonstrated and evaluated available technologies to support and enable SOF maritime tagging, tracking and locating capabilities. The emphasis was on overall system architecture, connectivity with SOF, conventional and national resources, and innovative platforms, sensors and supporting infrastructure.

	FY05	FY06	FY07	
Autonomous Navigation Sensor Suite	1.247	2.346		
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Sensor development program coupled with laboratory evaluation of unique sensors types for robotic vehicles.
FY06 This initiative is a Congressional add. Effort will significantly reduce the size, weight, power and cost of sensors associated with unmanned systems through novel materials and manufacturing techniques.

	FY05	FY06	FY07	
Compact Three-Dimensional Imaging	.959			
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Provided robust target identification capability, developed technology for individual user to interpret and take advantage of 3D imaging.

	FY05	FY06	FY07	

SOF Teletraining	.959			
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. Developed a PC based scenario oriented product that provides the SOF operators a usable group of situational language cultural gestures. The SOF Teletraining System (SOFTS) is a means of delivering training using personal computers and broadband internet connections. This training solution is a PC-based teletraining technology that enables all students and instructors to see each other on screen and hear each other. There are other web-based and on-screen technologies that facilitate document sharing, testing. Additionally, provides pilot courses in target languages to determine the effectiveness of SOFTS as a training delivery means for initial acquisition foreign language training.

	FY05	FY06	FY07	
Tactical Radio Frequency Environmental Monitor (TREX)	1.959			
RDT&E Article Quantity				

FY05 This initiative was a Congressional add. TREX was used in conjunction with Small UAV to test and evaluate network centric electronic warfare systems and their support for SOF applications.

	FY05	FY06	FY07	
Army DRAMA/COMPOSER Integration & Development		1.676		
RDT&E Article Quantity				

FY06 This initiative is a Congressional add. Evaluate advanced protocols to make more efficient use of network bandwidth and prioritization schemes.

	FY05	FY06	FY07	
C-130 Advanced Tactical Airborne C4ISR System (ATACS)		1.233		
RDT&E Article Quantity				

FY06 This initiative is a Congressional add. Demonstrated the ability to rapidly equip any C-130 aircraft with sophisticated sensors, processors, communications and self-defense capabilities through standardized hardware, software, and resource interfaces.

	FY05	FY06	FY07	
Airborne Threat Detection Capability Expansion		.986		

RDT&E Article Quantity				
FY06 This initiative is a Congressional add. Provide for time-critical protection of platforms and crews using new sensors and communication packages.				
	FY05	FY06	FY07	
Counter-Sniper & Surveillance Detection System		2.095		
RDT&E Article Quantity				
FY06 This initiative is a Congressional add. Research and develop tactical, mobile, and unmanned sniper detection systems that utilize optical detection and location techniques.				
	FY05	FY06	FY07	
Digital Camera Rifle Scope.		.493		
RDT&E Article Quantity				
FY06 This initiative is a Congressional add. Enhance unmanned ground system sensor optics for improved situation awareness.				
	FY05	FY06	FY07	
Field Experimentation Program For SOF (FEPSO)		.986		
RDT&E Article Quantity				
FY06 This initiative is a Congressional add. Prototype and evaluate manned/unmanned platform and sensor networks to articulate new concepts of operation and employment for SOF.				
	FY05	FY06	FY07	
Foxhound Arabic Software Testing & Evaluation		1.331		
RDT&E Article Quantity				
FY06 This initiative is a Congressional add. Evaluate automated transliteration and link-analysis software for SOF communication and intelligence applications.				
	FY05	FY06	FY07	
High Altitude Long Endurance Airships		1.035		

RDT&E Article Quantity				
FY06 This initiative is a Congressional add. Develop a fully-automated synthesis device for producing electronically and optically active nanostructures for high altitude airship electronics and sensors.				
	FY05	FY06	FY07	
Integrated Cyber Command & Control.		.986		
RDT&E Article Quantity				
FY06 This initiative is a Congressional add. Develop network security for SOF tactical networks using modified COTS products.				
	FY05	FY06	FY07	
USSOCOM Improved Information Transfer		3.351		
RDT&E Article Quantity				
FY06 This initiative is a Congressional add. Apply real-time knowledge management tools using information technologies and cognitive science to meet urgent Special Operations intelligence requirements.				
	FY05	FY06	FY07	
Improved Materials for Fireproof Clothing		1.256		
RDT&E Article Quantity				
FY06 This initiative is a Congressional add. Develop new and revolutionary flameproof textile materials for SOF applications.				
	FY05	FY06	FY07	
Improved Special Operations Fast Rope Kit		1.676		
RDT&E Article Quantity				
FY06 This initiative is a Congressional add. Improve the safety of CV-22 fast rope operations using high performance materials and structures.				

	FY05	FY06	FY07	
Improved Special Operations Reconnaissance Kits.		2.218		
RDT&E Article Quantity				

FY06 This initiative is a Congressional add. Prototype and evaluate new software, hardware, and sensors that significantly enhance present capabilities.

	FY05	FY06	FY07	
Mobile Electric Power Utilizing Energy Harvesting.		1.281		
RDT&E Article Quantity				

This initiative is a Congressional add. Rapidly prototype and field small, lightweight generators and other power concepts to power multiple voltages required by Special Operations electronics with little logistical support.

	FY05	FY06	FY07	
Magnum Universal Night Sight		.986		
RDT&E Article Quantity				

FY06 This initiative is a Congressional add. Enhance the Magnum Universal Night Sight performance by reducing weight and power requirements.

	FY05	FY06	FY07	
Special Forces Personnel and Equipment Survivability Activity.		1.242		
RDT&E Article Quantity				

FY06 This initiative is a Congressional add. Design and evaluate approaches to minimize the detectability and maximize survivability and recoverability of SOF personnel and materiel.

	FY05	FY06	FY07	
Special Operations Airborne Intelligence and Reconnaissance Program		1.676		
RDT&E Article Quantity				

FY06 This initiative is a Congressional add Develop roll-on/off and plug-and-play system for C-130's that provide real-time command and control, micro-target detection, intelligence gathering and improvised explosive device detection.

	FY05	FY06	FY07	
SOCOM Tactical Systems Development		1.676		
RDT&E Article Quantity				

FY06 This initiative is a Congressional add. Research and develop environmentally hardened tactical system components in support of SOF direct action and reconnaissance operations.

	FY05	FY06	FY07	
SOF Portable Power Source		3.450		
RDT&E Article Quantity				

FY06 This initiative is a Congressional add. Research and develop Solid Oxide Fuel Cell technology for SOF power needs.

	FY05	FY06	FY07	
Satellite Synthetic Aperture Radar		2.514		
RDT&E Article Quantity				

FY06 This initiative is a Congressional add. Design, develop, assemble, and test components for a synthetic aperture radar satellite in space applications for SOF.

	FY05	FY06	FY07	
SOF Unmanned Vehicle Targeting		1.676		
RDT&E Article Quantity				

FY06 This initiative is a Congressional add. Develops concept and architectures for rapid unmanned vehicle SOF targeting.

	FY05	FY06	FY07	
Three Dimensional Imaging Technology Development		3.184		
RDT&E Article Quantity				

FY06 This initiative is a Congressional add. Provides significantly enhanced level of detail to determine specific target discrimination data via 3-D imaging.

	FY05	FY06	FY07	
UAV Certification and Support.		1.676		
RDT&E Article Quantity				

FY06 This initiative is a Congressional add. This project proposes to leverage the ongoing USSOCOM SOF SLED ACTD as the incubator for UAV flight certification.

	FY05	FY06	FY07	
UAV Synthetic Aperture Radar		2.514		
RDT&E Article Quantity				

FY06 This initiative is a Congressional add. Evaluate on board processing so that only a low data rate bit map is transmitted via either low data rate satellite link or UHF digital radio to the dismounted war fighter.

	FY05	FY06	FY07	
Urban Tactical Warfare Planning Tool		.986		
RDT&E Article Quantity				

FY06 This initiative is a Congressional add. Design and develop a simulator tool that aids in the development of urban warfare training, tactics, and doctrine, and is compatible with the SOF Special Reconnaissance Simulator.

	FY05	FY06	FY07	
Voice Activated Handheld Translator.		1.084		
RDT&E Article Quantity				

FY06 This initiative is a 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.

	FY05	FY06	FY07	
Waterway Threat Detection Sensor System.		1.676		
RDT&E Article Quantity				

FY06 This initiative is a Congressional add. Research and develop a lightweight sonar system for the detection of swimmers, unmanned

underwater vehicles, mines and ships.

C. Other Program Funding Summary: None.

D. Acquisition Strategy. N/A.

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2006
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 0304210BB Special Applications for Contingencies (SAFC)/9999

COST (Dollars in Millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11		Cost to Complete	Total Cost
PE0304210BB	21.526	20.815	11.302	15.687	16.247	16.747	16.794		Cont.	Cont.
9999.PR SAFC	21.526	20.815	11.302	15.687	16.247	16.747	16.794		Cont.	Cont.

A. Mission Description and Budget Item Justification: The Special Applications for Contingencies (SAFC) Program develops and deploys special capabilities to perform intelligence surveillance and reconnaissance (ISR) for deployed Special Operations Forces (SOF) using non-traditional means. It provides a mechanism for SOF user combat evaluation of emerging technologies capable of detecting and locating fleeting targets. SAFC applies focused R&D for relatively low cost solutions to provide remotely controlled system emplacement and data exfiltration from denied areas. This program also specifically addresses short lead-time contingency planning requirements where focused R&D will allow for test and evaluation of leading edge solutions to an emergent problem set based on requirements validated through a specific Joint Staff/OSD chartered approval process.

B. Program Change Summary:

	FY05	FY06	FY07
Previous President's Budget	21.527	21.116	21.144
Current President's Budget	21.526	20.815	11.302
Total Adjustments	-0.001	-0.301	-9.842
Congressional Program Reductions		-0.301	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	-0.001		-9.842
SBIR Transfer			

Funding:

FY05
- Funds decreased for adjustment in the Department of Energy Tax (-$0.001 million).

FY06
- Congressional reductions include (-$0.210 million) for global 1% reduction and (-$0.091million) for Section 8125 reduction.

FY07
- Increased funds (+$0.158 million) for inflation rate changes.
- Funds reprogrammed to higher Command priorities (-$10.000 million).

Schedule: None.

Technical: None.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 7	Special Applications for Contingencies/Project 9999

Cost ($ in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Special Applications for Contingencies	21.526	20.815	11.302	15.687	16.247	16.747	16.794
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: The Special Applications for Contingencies (SAFC) Program develops and deploys special capabilities to perform intelligence surveillance and reconnaissance (ISR) for deployed Special Operations Forces (SOF) using non-traditional means. It provides a mechanism for SOF user combat evaluation of emerging technologies capable of detecting and locating fleeting targets. SAFC applies focused R&D for relatively low cost solutions to provide remotely controlled system emplacement and data exfiltration from denied areas. This program also specifically addresses short lead-time contingency planning requirements where focused R&D will allow for test and evaluation of leading edge solutions to an emergent problem set based on requirements validated through a specific Joint Staff/OSD chartered approval process.

B. Accomplishments/Planned Program. Made significant improvements to expendable UAV capabilities to include maritime launch and recovery. Developed improvements to long range ground surveillance capabilities and conducted integration research for a networked ISR sensor system.

	FY05	FY06	FY07	
SAFC	21.526	20.815	11.302	
RDT&E Articles Quantity				

FY05 Initiative partially funded by a Congressional add to develop a tactical imagery communications device. Continued development and combat evaluation of selected unmanned delivery platforms and mounted or deliverable ISR sensor systems. Continued to develop, deploy and evaluate advanced auto-pilot technologies. Continued research and development of advanced mobile secure networking and detection technologies to create or enhance deployed, remotely emplaced surveillance architectures. Continued to enhance and evaluate a common ground station. Continued research and assessment of emerging ISR technologies. Continued to research, evaluate and integrate red force tagging, tracking and locating capabilities to enable remote and stand-off emplacement. Additional details are classified.

FY06 Continue development and combat evaluation of selected unmanned delivery platforms and mounted or deliverable ISR sensor systems. Continue to develop, deploy and evaluate advanced auto-pilot technologies. Continue research and development of advanced mobile secure networking and detection technologies to create or enhance deployed, remotely emplaced surveillance architectures. Continue to enhance and evaluate a common ground station. Continue research and assessment of emerging ISR technologies. Continue to research, evaluate and integrate red force tagging, tracking and locating capabilities to enable remote and stand-off emplacement. Additional details are classified.

FY07 Continues development and combat evaluation of selected unmanned delivery platforms and mounted or deliverable ISR sensor systems. Continues to develop, deploy and evaluate advanced auto-pilot technologies. Continues research and development of advanced mobile secure networking and detection technologies to create or enhance deployed, remotely emplaced surveillance architectures. Continues to enhance and evaluate a common ground station. Continues research and assessment of emerging ISR technologies. Additional details are classified.

C. Other Program Funding Summary:

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	To Complete	Total Cost
Proc, SAFC	15.111	16.289	9.608	12.047	12.505	12.527	12.555	Cont.	Cont.

D. Acquisition Strategy:

- SAFC acquisition strategy is evolutionary and spiral-based for technology insertion and low volume procurement. As a non-standard DOD acquisition program, it allows for maximum flexibility to respond to quickly emerging, short lead time, contingency based requirements that have been approved through an Executive Integrated Product Team chaired by the Joint Staff at national level.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			SPECIAL APPLICATIONS FOR CONTINGENCIES PE0304210BB								
Actual or Budget Value ($ in millions)											
Cost Categories	Contract		Total	Budget	Award	Budget	Award				
(Tailor to WBS, or System/Item Requirements)	Method & Type	Performing Activity & Location	PYs Cost	Cost FY06	Date FY06	Cost FY07	Date FY07			To Complete	Total Program
UAV Capability Development	MIPR	NAVAIR	22.550	10.166	Dec-05	10.200	Dec-06			Cont.	Cont.
ISR Sensor and Networking Development	MIPR	Various	27.437	9.750	Dec-05					Cont.	Cont.
TT&L R&D	MIPR	Various	4.491							Cont.	Cont.
Portable Radar	MIPR	DOE	2.500								2.500
FFRDC Support to SOJICC	MIPR	MITRE CECOM	1.001								1.001
FFRDC Support to SOJICC	MIPR	MITRE ESC	0.330								0.330
Technical Collection R&D	MIPR	ASD C3I	3.252								3.252
Special Comms Devices	MIPR	SAF FMB	1.000							Cont.	Cont.
Biometrics	MIPR	SAF FMB	0.500							Cont.	Cont.
NRT Contingency		Various	5.880	0.899	Various	1.102	Various			Cont.	Cont.
CP - Tactical Imagery Comm	MIPR	TBD	1.632								1.632
Subtotal Product Dev			70.573	20.815		11.302				Cont.	Cont.
Remarks:											
Subtotal Spt											
Remarks:											
Subtotal T&E											
Remarks:											
Subtotal Management											
Remarks:											
Total Cost			70.573	20.815		11.302				Cont.	Cont.
Remarks:											

Exhibit R-4, Schedule Profile	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E/7	Project Number and Name 9999.PR SAFC

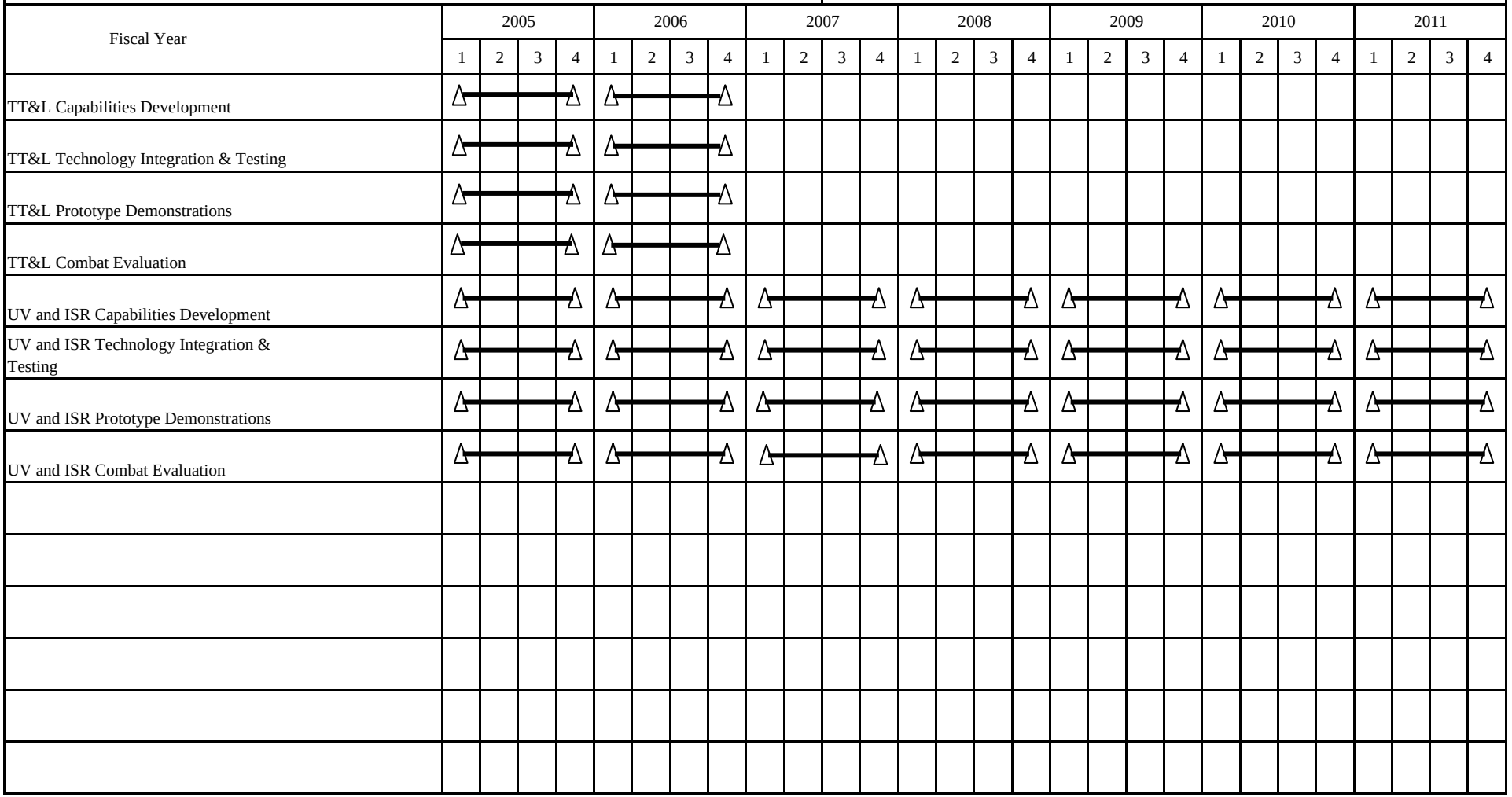


Exhibit R-4a, Schedule Profile			Date: FEBRUARY 2006				
Appropriation/Budget Activity	Program Element Number and Name		Project Number and Name				
RDT&E/7	PE0304210BB/C3I-SAFC		Project 9999/SAFC				
Schedule Profile	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
TT&L Capabilities Development	1-4Q	1-4Q					
TT&L Technology Integration & Testing	1-4Q	1-4Q					
TT&L Prototype Demonstrations	1-4Q	1-4Q					
TT&L Combat Evaluation	1-4Q	1-4Q					
UV and ISR Capabilities Development	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
UV and ISR Technology Integration & Testing	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
UV and ISR Prototype Demonstrations	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
UV and ISR Combat Evaluation	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2006
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160403BB Special Operations Aviation Systems Advanced Development/Project SF100

COST (Dollars in Millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11		Cost to Complete	Total Cost
PE1160403BB	89.951	102.840	83.704	59.900	41.597	35.483	30.653		Cont.	Cont.
SF100, Special Operations Aviation Systems Advanced Development	89.951	102.840	83.704	59.900	41.597	35.483	30.653		Cont.	Cont.

A. Mission Description and Budget Item Justification: This project provides for the investigation, evaluation, demonstration and integration of current and maturing technologies for Special Operations Forces (SOF)-unique aviation requirements. Timely application of SOF-unique technology is critical and necessary to meet requirements in such areas as: Low Probability of Intercept/Low Probability of Detection radar; digital terrain elevation data and electronic order of battle; digital maps; enhanced situational awareness; near-real-time intelligence to include data fusion; threat detection and avoidance; electronic support measures for threat geo location and specific emitter identification; navigation; target detection and identification technologies; aerial refueling; and studies for future SOF aircraft requirements.

B. Program Change Summary:

	FY2005	FY2006	FY2007
Previous President's Budget	82.398	104.330	85.032
Current President's Budget	89.951	102.840	83.704
Total Adjustments	7.553	-1.490	-1.328
Congressional Program Reductions		-1.490	
Congressional Rescissions			
Congressional Increases			
Reprogrammings	7.553		-1.328
SBIR Transfer			

Funding:

FY05

- Net increase of ($7.553M) is a result of reprogramming from PE1160421BB, Special Operations CV-22 Development (-$9.197M), from PE1160404BB, SO Tactical Systems Development (-$2.992M) to PE1160408BB SOF Operational Enhancements (+.819M), and PE 1160426BB, ASDS Advanced Development (+3.817M).

FY06

- Congressional reductions include (-$1.038M) for global 1% reduction and (-$0.452M) for Section 8125 reduction.

FY07

- Net decrease (-$1.328M) includes:
- Increased funds (+$1.172M) for inflation rate changes.
- Decreased funds (-$2.500M) reprogrammed to support Command's higher priorities.

Schedule: None.

Technical: None.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 7	Aviation Systems Advance Development/Project SF100	

Cost ($ in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
Aviation Sys Adv Dev	89.951	102.840	83.704	59.900	41.597	35.483	30.653
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: This project provides for the investigation, evaluation, demonstration and integration of current and maturing technologies for Special Operations Forces (SOF)-unique aviation requirements. Timely application of SOF-unique technology is critical and necessary to meet requirements in such areas as: Low Probability of Intercept/Low Probability of Detection (LPI/LPD) radar; digital terrain elevation data and electronic order of battle; digital maps; enhanced situational awareness; near-real-time intelligence to include data fusion, threat detection and avoidance; electronic support measures for threat geolocation and specific emitter identification; navigation, target detection and identification technologies; aerial refueling; and studies for future SOF aircraft requirements.

- Aviation Engineering Analysis. Provides a rapid response capability to support SOF fixed wing aircraft. The purpose is to correct system deficiencies, improve asset life, and enhance mission capability through the means of feasibility studies and engineering analyses. This sub-project provides the engineering required to improve the design and performance integrity of the aircraft support systems, sub-systems, equipment, and embedded computer software as they relate to the maintenance, overhaul, repair, quality assurance, modifications, materiel improvements and service life extensions.

- Common Avionics Architecture for Penetration (CAAP). This program is joined with the USAF C-130 Avionics Modernization Program (AMP). CAAP provides LPD navigation for MC-130 E/H/P and off-board enhanced situational awareness (ESA), large color displays and a SOF processor for AC-130H/U and MC-130 E/H/P.

- On-Board Enhanced Situational Awareness System (OBESA). This program continues development of OBESA, which consolidates threat data from on and off-board sensors into a single coherent image to the crew. OBESA includes the Below Line-Of-Sight Electronic Support Measures (BLOSEsM) processing software. BLOSEsM is an advanced receiver system which provides geo-location data on threats that are below the line of sight of the current SOF threat warning systems. OBESA will be integrated on SOF C-130s, CV-22s, MH-60s and MH-47s.

- SOF K-band Terrain Following/Terrain Avoidance (TF/TA) Radar. Initiates development of a SOF common K-band LPI/LPD radar to defeat advanced passive detection threat while maintaining ability to fly safe TF. This radar is targeted for use on all MC-130Hs, MH-47Gs, MH-60Ms & CV-22 aircraft.

- EC-130 Obsolescence. This program provides for development and design to resolve special mission equipment obsolescence and vanishing vendor issues.

- MC-130H Aerial Refueling (MCAR). Provides 20 MC-130H Combat Talon II aircraft with the capability to air refuel SOF rotary wing aircraft and CV-22. This capability will extend the range of rotary wing and CV-22 aircraft operating in politically sensitive/denied airspace. Elements of the air refueling system include non-developmental item aerial refueling pods and enlarged paratroop door windows.

B. Accomplishments/Planned Program

	FY05	FY06	FY07	
Aviation Engineering Analysis	9.352	8.081	4.348	
RDT&E Articles Quantity				

FY05 Continued the development to resolve ALLTV deficiencies for a Combat Mission Needs Statement.
FY06 Develop a replacement for sensor obsolescence issue.
FY07 Conduct engineering studies and ID replacement for SOF fixed wing avionics and sensors.

	FY05	FY06	FY07	
Common Avionics Architecture for Penetration (CAAP)	65.276	65.393	38.831	
RDT&E Articles Quantity				

FY05 Continued accelerated APN-241 and off-board ESA development. Specific activities: AMP/CAAP preliminary and critical design reviews; Gunship software specification review; and Test Readiness Review (TRR) for Combat Talon I preliminary TF Developmental Test & Evaluation (DT&E). Due to the $18.5M reduction in FY05, award of the SOF baseline configuration update contract modifications were delayed a total of six months.
FY06 The C-130 AMP/CAAP program tests the Block 2 hardware and software in the Systems Integration Laboratory (SIL) in preparation for first flight of the DT&E configuration for the MC-130E/H/P Combat Talon aircraft. Additionally, the CAAP ESA capability will complete its SIL evaluations to support a Test Readiness Review. CAAP ESA goes on all AC/MC-130 aircraft. In parallel, design and development for the baseline configuration update to reflect post-contract award avionic modifications (Block 10) progresses.
FY07 Flight testing continues for TF performance at low levels and against passive detection threats. The interaction between CAAP LPD TF and CAAP ESA threat response (in particular, route re-planning,) will be evaluated in flight.

	FY05	FY06	FY07	

On-Board ESA	13.300	8.045	11.181	
RDT&E Articles Quantity				

FY05 Continued development of BLOSEsM to include engineering and integration of system components. Initiated planning for technology demonstration flight test of BLOSEsM hardware and software.
FY06 Completes final laboratory integration and test of BLOSEsM components including Integrated Processor threat correlation, fusion, and display software; begin initial installation of BLOSEsM hardware/software components into test aircraft.
FY07: Perform aircraft integration of BLOSEsM on MC-130 flight test aircraft. Conduct MC-130 BLOSEsM system flight test. Provide BLOSEsM system transition documentation to USSOCOM to support OBESA legacy APR-46 system replacement on AC/MC-130s.

	FY05	FY06	FY07	
EC-130 Equipment Obsolescence	.642			
RDT&E Articles Quantity				

FY05 Developed and designed improvements to resolve special mission equipment obsolescence.

	FY05	FY06	FY07	
SOF K-band TF/TA Radar		21.321	29.344	
RDT&E Articles Quantity				

FY06 Radar technology demonstration development began in Project D615 and was transferred to this project beginning in FY06 to develop a SOF common TF/TA radar. Continue radar technology risk reduction activities in preparation for an FY07 System Design and Development (SDD) start. This is a SOF common K-band TF/TA radar to defeat advanced passive detection threat while maintaining ability to fly safe TF. This radar is targeted for use on all MC-130H , MH-47G, MH-60M and CV-22 aircraft.
FY07 Start development (SDD contract award) of SOF common K-band TF/TA radar. Specific activities include hardware and software development, aircraft integration design, and initiation of developmental test plans for MH-47G platform.

	FY05	FY06	FY07	
MC-130H Aerial Refueling	1.381			
RDT&E Articles Quantity				

FY05 Continued development activities

C. Other Program Funding Summary:

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	To Complete	Total Cost
Proc, C-130 Mods	52.281	63.838	49.763	81.993	64.213	96.974	108.832	Cont.	Cont.

D. Acquisition Strategy :

- Aviation Engineering Analysis. Continue engineering analysis activities to correct system deficiencies, improve asset life, and enhance mission capability of SOF fixed-wing aircraft avionics and sensors.

- CAAP. Develop a common technical solution satisfying fixed wing requirements for penetration missions. CAAP is being accomplished in conjuction with the USAF C-130 Avionics Modernization Program (AMP).

- OBESA. Leverage current technology developed and demonstrated in the Air Force Research Lab Special Threat Awareness Receiver Transmitter Advanced Technology Demonstration to provide enhanced threat awareness to SOF aircrews.

- SOF K-band TF/TA Radar. Conducted competition and selected two contractors to conduct radar technology demonstrations. At the conclusion of these risk reduction activities, a second full and open competition will be conducted to select a vendor for the SDD phase. An SDD acquisition strategy will be implemented using the MH-47G as the lead platform.

- EC-130 Obsolescence. Initiated a special mission equipment program via a pre-competed contract to identify obsolete and vanishing vendor parts replacements, maximizing use of commercial off-the-shelf and non-developmental items.

- MCAR. Integrated a non-developmental item aerial refueling system onto MC-130H Talon II aircraft. The first phase of this program was Foreign Comparative Testing of the MK 32B-902E Aerial Refueling pod. Phase II development of aircraft integration and production installations were awarded on a pre-competed contract with Boeing, Ft. Walton Beach, FL.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Aviation Systems Advanced Development/PE1160403BB Aviation Systems Advance Development/SF100								
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/ Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY06	Award Date FY06	Budget Cost FY07	Award Date FY07			To Complete	Total Program
Primary Hardware Development											
CAAP	C/CPAF	Boeing, Long Beach, CA	174.355	65.393	Various	38.831	Various			4.577	283.156
Award Fees			2.081								2.081
MC-130 Air Ref	CPAF	Boeing, Ft. Walton Beach, FL	36.369								36.369
Joint K-band TF/TA Radar	TBD	TBD		21.321	Various	29.344	Various			116.683	167.348
OBESA	CPIF	Northrop Grumman, Dayton, Ohio	43.292	8.045	Various	11.181	Various			23.928	86.446
Subtotal Product Dev			256.097	94.759		79.356				145.188	575.400
Remarks:											
Development Support Engineering/Studies											
Aviation Engineering Analysis	Various	Various	4.989	8.081	Various	4.348	Various			22.445	39.863
Subtotal Spt			4.989	8.081		4.348				22.445	39.863
Remarks:											
Total Cost			261.086	102.840		83.704				167.633	615.263
Remarks:											

Exhibit R-4, Schedule Profile		Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160403BB/Special Operations Aviation Systems Advanced Dev	Project Number and Name SF100/Aviation System Advance Development

Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Aviation Engineering Analysis - System Design Development																												
C-130 CAAP/USAF AMP Development/Test																												
MC-130H Aerial Refueling Dev/Integration/Test								△																				
OBESA																												
Joint K-band Terrain Following/Terrain Avoidance Radar Development/Test		△																										

Exhibit R-4a, Schedule Profile		Date: FEBRUARY 2006						
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160403BB/Special Operations Aviationl Systems Adv Dev	Project Number and Name Project SF100/Aviation Systems Advance Development						
Schedule Profile	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
Aviation Engineering Analysis - System Design Development	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
C-130 CAAP/USAF AMP Development/Test	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
MC-130H Aerial Refueling Dev/Integration/Test	1-4Q	1-4Q					
OBESA	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Joint Terrain Following/Terrain Avoidance Radar Development/Test	2-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2006
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations (SO) Tactical Systems Development

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

A. Mission Description and Budget Item Justification:

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

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

B. Program Change Summary:

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

Funding:

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

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2006
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations (SO) Tactical Systems Development

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

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

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

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

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2006
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160404BB Special Operations (SO) Tactical Systems Development

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

Schedule: N/A.

Technical: N/A.

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

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

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

B. Accomplishments/Planned Program

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

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

C. Other Program Funding Summary:

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

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

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

Exhibit R-3 COST ANALYSIS			DATE: FEBRUARY 2006								
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB MC-130H Combat Talon II /3129								
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY06	Award Date FY06	Budget Cost FY07	Award Date FY07			To Complete	Total Program
System Design Development	CPAF/FFP	Boeing, Ft Walton Beach, FL	6.747								6.747
Other (EO/IR Study)	CPAF	Lincoln Labs, Lexington, MA	0.808								0.808
Low Band Jammer Termination	CP	Boeing, Ft Walton Beach, FL		4.222	Mar-06						4.222
Subtotal Product Dev			7.555	4.222							11.777
Remarks:											
Development Spt Subtotal Spt											
Remarks:											
Developmental Test & Eval Subtotal T&E											
Remarks:											
Contractor Engineering Spt Subtotal Management											
Remarks:											
Total Cost			7.555	4.222							11.777
Remarks:											

Exhibit R-4, Schedule Profile																	Date: FEBRUARY 2006											
Appropriation/Budget Activity RDT&E/7					Program Element Number and Name PE1160404BB/Special Operations Tactical System Development												Project Number and Name Project 3129/MC-130H Combat Talon II											
Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
System Design Development Contract Award		▲																										
System Design Development Non-Recurring Engineering		▲	—	▲																								

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

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

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

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

B. Accomplishments/Planned Program

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

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

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

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

C. Other Program Funding Summary:

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

D. Acquisition Strategy.

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

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB							AC-130U Gunship /3326	
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY06	Award Date FY06	Budget Cost FY07	Award Date FY07			To Complete	Total Program
Post Production Support	Various	Various	3.596	2.548	Various	1.604	Various			Cont.	Cont.
AC-130U Plus Four	SS/CPFF & FFP	Boeing, Ft. Walton Beach, FL	35.943								35.943
AC-130U Sensor Upgrades	CPFF	TBD		16.088	Mar-06						16.088
Subtotal Product Dev			39.539	18.636		1.604				Cont.	Cont.
Dev Spt											
Subtotal Spt											
Subtotal T&E											
Management											
Subtotal Management											
Remarks:											
Total Cost			39.539	18.636		1.604				Cont.	Cont.
Remarks:											

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

Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Production Delivery Plus Four Aircraft							△	▬	△																			
Post Production Support																												
Sensor Upgrade Development						△	▬	△																				

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

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

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

A. Mission Description and Budget Item Justification:

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

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

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

B. Accomplishments/Planned Program

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

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

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

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

C. Other Program Funding Summary:

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

D. Acquisition Strategy.

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

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

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB							PSYOP Advanced Development /D476	
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY06	Award Date FY06	Budget Cost FY07	Award Date FY07			To Complete	Total Program
Primary Hardware Dev	MIPR	Natick Lab, Natick, MA	1.582								1.582
	MIPR	NAVAIR, St Inigoes, MD	0.132								0.132
	MIPR	NAVAIR, St Inigoes, MD	0.168								0.168
	ALLOT	Army-CECOM, Ft Monmouth, NJ	3.655								3.655
	MIPR	DOE, Nat'l Engr Lab, Idaho Falls, ID	3.240								3.240
	MIPR	SPAWAR, Charleston, SC		0.897	Mar-06					Cont.	Cont.
	TBD	Various				6.092	Various			Cont.	Cont.
Systems Engineering	ALLOT	Army-CECOM, Ft Monmouth, NJ	1.336								1.336
	REQN	Various	2.141								2.141
	MIPR	SPAWAR, Charleston, SC	0.060			0.306	Dec-06				0.366
	MIPR	NAVAIR, St. Inigoes, MD		3.500	Mar-06						3.500
Subtotal Product Dev			12.314	4.397		6.398				Cont.	Cont.
Remarks:											
Development Spt Subtotal Spt											
Remarks:											
Developmental Test & Eval	Various	Various	0.113			1.200	Jan-07			Cont.	Cont.
	MIPR	Army ATC, Aberdeen Prov Gd, MD	0.758							Cont.	Cont.
	MIPR	Soldier Biological Cmd, Natick, MA	0.546								0.546
	MIPR	JITC, Ft Huachuca, AZ	1.844							Cont.	Cont.
	MIPR	USASOC, Ft Bragg, NC	0.296								0.296
	MIPR	NAVAIR, St. Inigoes, MD		0.140	Sep-06						0.140
	MIPR	SPAWAR, Charleston, SC		0.446	Mar-06					Cont.	Cont.
Subtotal T&E			3.557	0.586		1.200				Cont.	Cont.
Remarks:											
Contractor Engineering Spt Subtotal Management											
Remarks:											
Total Cost			15.871	4.983		7.598				Cont	Cont
Remarks:											

Exhibit R-4, Schedule Profile																	Date: FEBRUARY 2006											
Appropriation/Budget Activity RDT&E/7									Program Element Number and Name PE1160404BB/Special Operations Tactical System Development												Project Number and Name Project D476/PSYOP Advanced Development							
Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
POBS FABS Testing (SW & AM)																												
POBS LRBS AOA Study																												
POBS SOMS B (V)2 Testing																												
POBS MPC Testing																												
POBS LRBS UAV-P HW Dev &Testing																												
POBS LRBS Scatterable Media Testing																												
POBS Modernization																												
POBS FABS Testing (FM & TV)																												
Psychological Planning Operations Analysis System (POPAS) Testing																												
Commando Solo Narrowband Transmitter Dev & Testing																												

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

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

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

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

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

B. Accomplishments/Planned Program

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

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

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

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

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

C. Other Program Funding Summary:

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

D. Acquisition Strategy: Acquisition Strategy.

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

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

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

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Special Operations Forces Aviation/D615								
			Actual or Budget Value ($ in millions)								
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY06	Award Date FY06	Budget Cost FY07	Award Date FY07			To Complete	Total Program
Primary Hardware Dev											
MH-47/60 Aircraft	Various	PM TAPO/Ft Eustis, VA	15.955	0.963	Various	3.037	Various			Cont.	Cont.
MH-47/60 Avionics/Sensors	Various	PM TAPO/Ft Eustis, VA	60.200							Cont.	Cont.
Joint K-Band TF/TA Radar	Various	USSOCOM, MacDill AFB, FL	17.782							Cont.	Cont.
A/MH-6M	Various	PM MELB, Ft. Eustis, VA	6.560	5.051	Various						11.611
MH-53	Cost Plus	PM DIRCM, MacDill AFB, FL	6.911								6.911
Subtotal Product Dev			107.408	6.014		3.037				Cont.	Cont.
Remarks:											
Management											0.000
Subtotal Spt											0.000
Remarks:											
Developmental Test & Eval											
MH-47/60 Aircraft	Various	PM TAPO/Ft Eustis, VA	4.000							Cont.	Cont.
MH-47/60 Avionics/Sensors	Various	PM TAPO/Ft Eustis, VA	8.294							Cont.	Cont.
A/MH-6M	Various	PM-MELB/Ft Eustis, VA	15.576	1.000	Various					Cont.	Cont.
Subtotal T&E			27.870	1.000						Cont.	Cont.
Remarks:											
Subtotal Management											
Remarks:											
Total Cost			135.278	7.014		3.037				Cont.	Cont.
Remarks:											

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

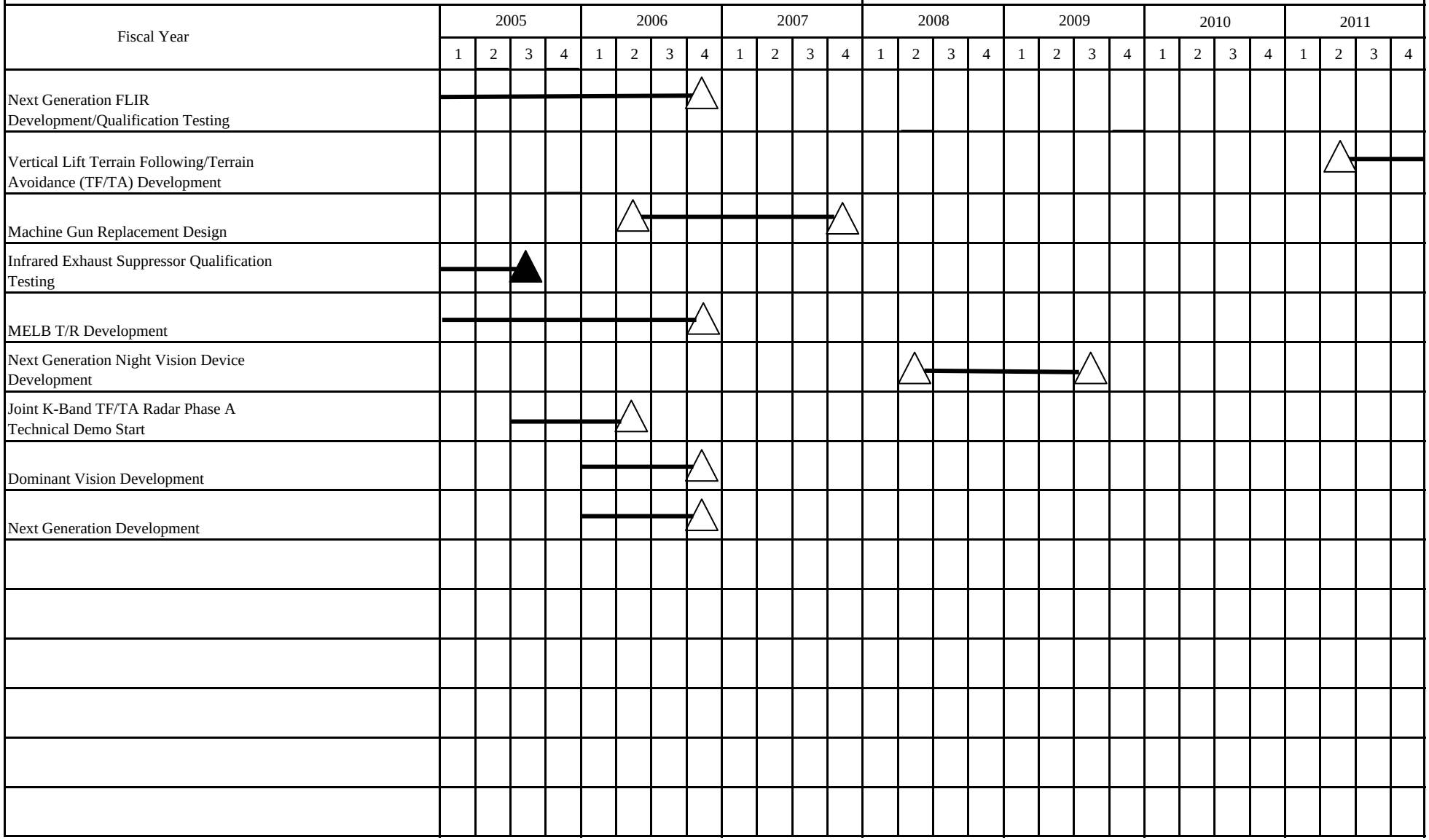


Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2006				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project D615/SOF Aviation				
Schedule Profile		FY2005	FY2006	FY2007	FY2008	FY2009	FY2010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

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

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

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

B. Accomplishments/Planned Program:

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

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

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

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

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

RDT&E Articles Quantity					

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

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

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

C. Other Program Funding Summary:

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

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

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Special Operations Mission Planning Environment (SOMPE) /S350								
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY06	Award Date FY06	Budget Cost FY07	Award Date FY07			To Complete	Total Program
Subtotal Product Dev											
Remarks:											
Development Support	C/CPFF	CAS, Huntsville, AL	3.743	1.228	Dec-05	1.004	Dec-06			Cont.	Cont.
	C/CPFF	LMFS, Owego, NY	7.629								7.629
	Various	Various	0.847								0.847
Software Dev/Integ	SS/CPFF	GTRI, Atlanta, GA	5.219							Cont.	Cont.
	T&M	Tybrin, Ft Walton Beach, FL	5.346								5.346
	Various	Various	3.847	1.360	Various	4.305	Various			Cont.	Cont.
	Various	Various	3.771	0.915	Various	0.912	Various			Cont.	Cont.
	CPFF	SAIC, Morgantown, WV		0.986	Feb-06						
Subtotal Spt			30.402	4.489		6.221				Cont.	Cont.
Remarks:											
Developmental Test & Eval	MIPR	46th FTS, Hurlburt Field, FL	1.450								1.450
	SS/CPFF	ARINC, Annapolis, MD	1.009								1.009
	SS/CPFF	Salinas Tech, FL	0.017								0.017
	C/CPFF	CAS, Huntsville AL	0.332	0.350	Dec-05	0.400	Dec-06			Cont.	Cont.
Operational Test & Eval	MIPR	18th FTS, Hurlburt Field, FL	0.663								0.663
GFE	MIPR	Integrated Aviation Systems 21 Working Group Ft Campbell, KY	0.279								0.279
Subtotal T&E			3.750	0.350		0.400				Cont.	Cont.
Remarks:											

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Special Operations Mission Planning Environment (SOMPE) /S350								
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY06	Award Date FY06	Budget Cost FY07	Award Date FY07			To Complete	Total Program
Contractor Engineering Spt	PO	CAS Inc, Huntsville, AL	4.206								4.206
Government Engineering Spt	ALLOT	AATD, Ft Eustis, VA	7.881								7.881
Travel	ALLOT	SOF PMO Ft Eustis, VA	0.070								0.070
Overhead	ALLOT	SOF PMO Ft Eustis, VA	0.092								0.092
Subtotal Management			12.249	0.000		0.000					12.249
Remarks:											
Total Cost			46.401	4.839		6.621				Cont.	Cont.
Remarks:											

Exhibit R-4, Schedule Profile																													
																	Date: FEBRUARY 2006												
Appropriation/Budget Activity RDT&E/7									Program Element Number and Name PE1160404BB/Special Operations Tactical System Development												Project Number and Name Project S350/SOMPE							
Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Portable Flight Planning System										△																		
Joint Mission Planning System (JMPS) Migration												△																△
Mission Planning Module		▲					△					△						△						△				△
Aircraft/Weapons Enhancements (AWE)		▲					△					△						△						△				△
AWE to UPC (JMPS Conversion)												△																△
Flight Performance Model Enhancements		▲					△					△						△						△				△
SOF-Wide Automation Tools		▲					△					△						△						△				△
System Interfaces for Interoperability																												△
TSOC C2 Planning Tools		▲					△					△						△						△				△
TSOC C2 Nodes	▲						△					△						△						△				△
Software Development Testing																												△
C2 Mission Manager Spiral 3 Development						△		△																				

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

B. Accomplishments/Planned Program

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

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

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

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

	FY05	FY06	FY07	
LAW		2.514	4.900	
RDT&E Articles Quantity				

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

LCMR	FY05	FY06	FY07	
RDT&E Articles Quantity		3.450		

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

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

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

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

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

	FY05	FY06	FY07	
PLTD	2.737			
RDT&E Articles Quantity	3			

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

	FY05	FY06	FY07	
SCAR	1.407			
RDT&E Articles Quantity				

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

	FY05	FY06	FY07	
SPEAR		6.190	5.309	
RDT&E Articles Quantity				

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

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

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

	FY05	FY06	FY07	
UVT		3.943		
RDT&E Articles Quantity				

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

C. Other Program Funding Summary:

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

D. Acquisition Strategy.

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

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

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

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

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

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

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

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

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

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

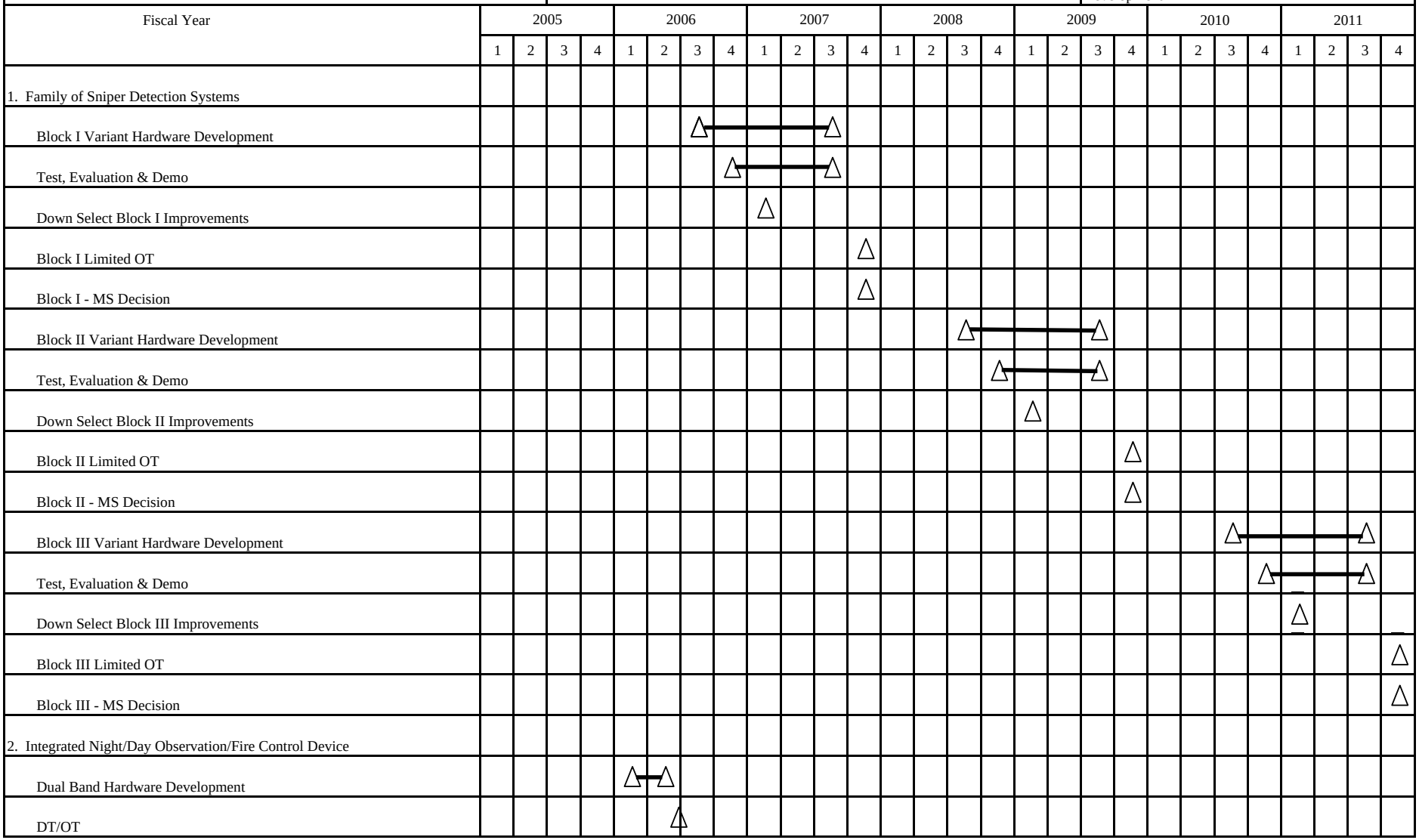
- CCCEKIT. The CCCEKIT will leverage Federal Drug Administration approved COTS equipment and devices to provide modernized, standardized SOF medical life saving capabilities for use in austere environments during extended delays in casualty evacuation.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Weapons Systems Advance Development/S375								
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY06	Award Date FY06	Budget Cost FY07	Award Date FY07			To Complete	Total Program
Hardware Dev											
FSDS	FFP/T&M	PM-CCS, Picatinny, NJ		0.303	Various	0.259	Various			Cont.	Cont.
INOD	CPFF	NSWC-Crane, Crane, IN		0.398	Feb-06					Cont.	Cont.
DUNS	CPFF	NSWC-Crane, Crane, IN		0.986	Various					Cont.	Cont.
LAW	Various	NSWC-Crane, Crane, IN		1.000	Various	2.009	Various			Cont.	Cont.
LCMR	TBD	PM LCMR, Ft. Monmouth, NJ	0.150	0.867	Various					Cont.	Cont.
M4MOD	Various	NSWC-Crane, Crane, IN	5.213							Cont.	Cont.
NVD	ALLOT	Various	2.791							Cont.	Cont.
PLTD	CPFF	PM Sensors & Lasers, Ft. Belvoir, VA	2.000							Cont.	Cont.
SPEAR	Various	PM Spear, Natick, MA	0.150	1.034	Various	1.441	Various			Cont.	Cont.
TECH TRANSFER: CCCEKIT	Various	Various		0.302	Various	0.511	Various			Cont.	Cont.
UV VT	Various	TBD		3.943	Various						
Subtotal Product Dev			10.304	8.833		4.220				Cont.	Cont.
Remarks:											
Development Spt											
LAW	Various	NSWC-Crane, Crane, IN		1.314	Various	2.597	Various			Cont.	Cont.
LCMR	TBD	PM LCMR, Ft. Monmouth, NJ	0.085	0.357	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.413							Cont.	Cont.
NVD	ALLOT	Various	1.205							Cont.	Cont.
PLTD	CPFF	PM Sensors & Lasers, Ft. Belvoir, VA	0.250							Cont.	Cont.
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.443							Cont.	Cont.
SPEAR	Various	PM Spear, Natick, MA	0.025	0.211	Various	0.370	Various			Cont.	Cont.
SOFTAPS	Various	Soldier Systems Center, Natick, MA	0.408							Cont.	Cont.
Integrated Logistics Spt											
LCMR	TBD	PM LCMR, Ft. Monmouth, NJ	0.550	0.255	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.214							Cont.	Cont.
SPEAR	ALLOT	PM Spear, Natick, MA	0.050	0.528	Various	0.380	Various			Cont.	Cont.
SOFTAPS	Various	TACOM, ILSC-SBC	0.011							Cont.	Cont.
Configuration Mgmt											
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.200	0.390	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.197			0.043	Various			Cont.	Cont.
NVD	ALLOT	Various	0.443							Cont.	Cont.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Weapons Systems Advance Development/S375								
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY06	Award Date FY06	Budget Cost FY07	Award Date FY07			To Complete	Total Program
SPEAR	ALLOT	PM Spear, Natick, MA	0.025	0.211	Various	0.369	Various			Cont.	Cont.
Subtotal Spt			4.519	3.266		3.759				Cont.	Cont.
Remarks:											
Developmental Test											
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.500	0.255	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.402	0.069	Various	0.200	Various			Cont.	Cont.
PLTD	CPFF	PM Sensors & Lasers, Ft. Belvoir, VA	0.487							Cont.	Cont.
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.654							Cont.	Cont.
SPEAR	TBD	PM Spear, Natick, MA		0.866	Various	0.665	Various			Cont.	Cont.
SOFTAPS	ALLOT	Yuma Proving Grounds, Yuma, AZ	1.110							Cont.	Cont.
Operational Test											
FSDS	ALLOT	PM-CCS, Picatinny, NJ		0.075	Various	0.245	Various			Cont.	Cont.
INOD	CPFF	NSWC-Crane, Crane, IN		0.105	Various					Cont.	Cont.
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.500	0.408	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.594							Cont.	Cont.
NVD	ALLOT	Various	0.899							Cont.	Cont.
SPEAR	ALLOT	PM Spear, Natick, MA	0.416	1.492	Various	0.538	Various			Cont.	Cont.
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.457							Cont.	Cont.
SOFTAPS	ALLOT	USA OTC, ABNSOTD, Ft. Bragg, NC	0.382							Cont.	Cont.
Subtotal T & E			6.401	3.270		1.648				Cont.	Cont.
Remarks:											
Government Eng Spt											
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.230	0.459	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.125							Cont.	Cont.
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.325							Cont.	Cont.
SPEAR	ALLOT	PM Spear, Natick, MA	0.050	1.056	Various	0.870	Various			Cont.	Cont.
Program Mgmt Spt											
LAW	ALLOT	NSWC-Crane, Crane, IN		0.200	Various	0.294	Various			Cont.	Cont.
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.412	0.357	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.980							Cont.	Cont.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB Weapons Systems Advance Development/S375								
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY06	Award Date FY06	Budget Cost FY07	Award Date FY07			To Complete	Total Program
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.300							Cont.	Cont.
SPEAR	ALLOT	PM Spear, Natick, MA	0.060	0.476	Various	0.434	Various			Cont.	Cont.
Travel											
FSDS	ALLOT	PM-CCS, Picatinny, NJ		0.125	Various	0.080	Various			Cont.	Cont.
LCMR	ALLOT	PM LCMR, Ft. Monmouth, NJ	0.136	0.102	Various					Cont.	Cont.
M4MOD	ALLOT	NSWC-Crane, Crane, IN	0.384							Cont.	Cont.
NVD	ALLOT	Various	0.282							Cont.	Cont.
SCAR	ALLOT	NSWC-Crane, Crane, IN	0.070							Cont.	Cont.
SPEAR	ALLOT	PM Spear, Natick, MA	0.030	0.316	Various	0.242	Various			Cont.	Cont.
SOFTAPS	MIPR	Army T&E / USFS	0.017							Cont.	Cont.
Subtotal Management			3.401	3.091		1.920				Cont.	Cont.
Remarks: Other Prior Year			0.221								
Total Cost			24.846	18.460		11.547				Cont.	Cont.
Remarks:											

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



																				Date: FEBRUARY 2006										
Appropriation/Budget Activity RDT&E/7									Program Element Number and Name PE1160404BB/Special Operations Tactical System Development										Project Number and Name Project S375/Weapons and Support Systems Advanced Development										
Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
3. Lightweight Counter Mortar Radar																												
MS B		▲																										
LRIP							△																					
MS C										△																		
IOC											△																	
FOC														△														
4. M4MOD																												
MDNS DT/OT (Multiple)				▲			△																					
MDNS MS C (Multiple)				▲				△																				
Shot Counter DT/OT			▲																									
Shot Counter LRIP				▲																								
Shot Counter MS C								△																				
5. Night Vision Device (Precision Laser Targeting Device [PLTD])																												
MS A/B						△																						
Development/Test							△																					
MS C								△																				
6. PLTD																												
MS A/B						△																						
Development/Test							△																					

																	Date: FEBRUARY 2006													
Appropriation/Budget Activity RDT&E/7									Program Element Number and Name PE1160404BB/Special Operations Tactical System Development												Project Number and Name Project S375/Weapons and Support Systems Advanced Development							
Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
7. SOF Combat Assault Rifle																												
DT/OT/LUA				▲	▲																							
MS-C LRIP							△																					
IOT&E										△																		
MS-C FRP											△																	
FUE											△																	
IOC													△															
8. SOF Tactical Advanced Parachute System																												
MS B																												
LIVE DT	▲																											
OT		▲																										
MS C			▲																									
FUE						△																						
9. SOF Personnel Eequipment Advanced Requirements (SPEAR)																												
Protective Combat Uniform																												
MS C						△																						
IOC						△																						
Extremity Protection System																												
IOC										△																		

																	Date: FEBRUARY 2006													
Appropriation/Budget Activity RDT&E/7									Program Element Number and Name PE1160404BB/Special Operations Tactical System Development								Project Number and Name Project S375/Weapons and Support Systems Advanced Development												
Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
9. SPEAR (Cont.)																												
Tactical Boot Suite																												
MS A/B							△																					
DT								△—△																				
OT									△																			
MS C											△																	
IOC													△															
Tilting Titanium NOD Mount																												
IOC								△																				
Body Armor P3I																												
DT						△—	△																					
OT							△																					
MS C							△																					
IOC									△																			
Backpacks																												
DT							△																					
OT							△																					
MS C								△																				
IOC										△																		

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

Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
9. SPEAR (Cont.)																												
Eye Protection																												
MS A/B						△																						
DT							△	△																				
OT								△																				
MS C									△																			
IOC										△																		
Identification Friend or Foe																												
MS A/B							△																					
DT								△																				
OT								△																				
MS C									△																			
IOC											△																	
Survival Equipment																												
MS A/B							△																					
DT/OT								△																				
MS C									△																			
IOC											△																	

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

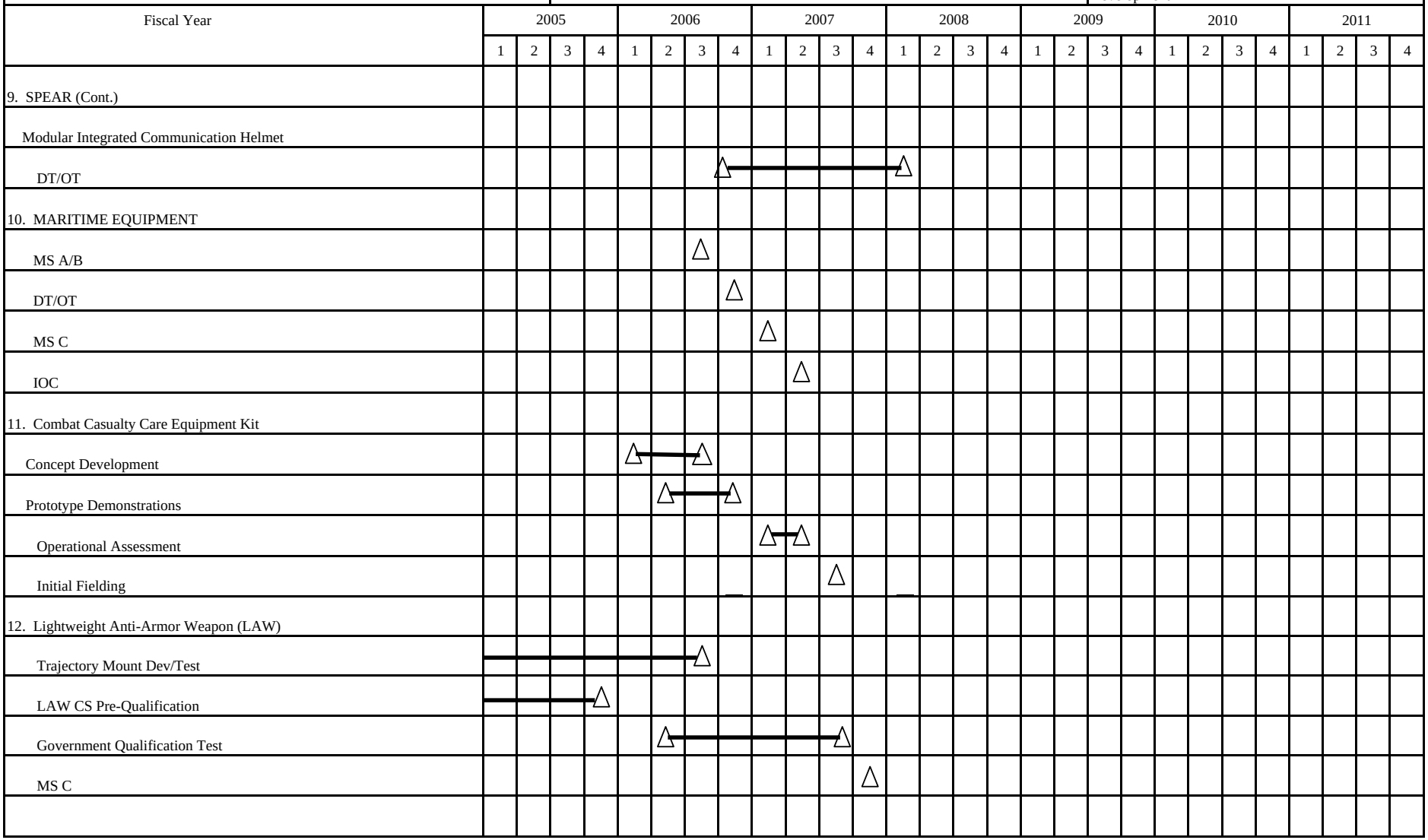


Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2006				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160404BB/Special Operations Tactical Systems Development			Project Number and Name Project 375/Weapons and Support Systems Advanced Development				
Schedule Profile	FY2005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

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

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

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

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

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

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

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

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

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

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

B. Accomplishments/Planned Program

	FY05	FY06	FY07	
SAGIS	.951			
RDT&E Articles Quantity				

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

AFSOC Simulator Block Upgrade	.931			
RDT&E Articles Quantity				

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

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

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

C. Other Program Funding Summary:

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

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

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

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

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

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

OPERATIONAL ELEMENT (TEAM)

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

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

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

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

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

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

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

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

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

these critical assets.

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

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

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

B. Accomplishments/Planned Program

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

C. Other Program Funding Summary:

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

D. Acquisition Strategy:

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

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB SOF Communications Advanced Development/S700								
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY06	Award Date FY06	Budget Cost FY07	Award Date FY07			To Complete	Total Program
Primary Hardware Dev											
Develop MBITR COMSEC Chip	MIPR	NSA, Ft Meade, MD	2.177								2.177
Develop MBMMR COMSEC Chip	CPFF	Raytheon's Network Centric Systems, Fort Wayne, IN	4.090	5.028	Apr-06	5.928	Dec-06			4.363	19.409
Material Improv & Corrosion Cntrl	SS - FFP	Concurrent Technologies Corp Largo, FL	2.454								2.454
Subtotal Product Dev			8.721	5.028		5.928				4.363	24.040
Remarks:											
Development Spt											
Initiate MBITR Tech Insertion	MIPR	Thales Comm Inc.; Clarksville, MD		7.537	Dec-05	7.867	Dec-06				15.404
Machine Based Language Translator	MIPR	DARPA		0.302	Jan-06	0.409	Dec-06			Cont.	Cont.
Subtotal Spt			0.000	7.839		8.276				Cont.	Cont.
Remarks:											

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160404BB SOF Communications Advanced Development/S700								
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY06	Award Date FY06	Budget Cost FY07	Award Date FY07			To Complete	Total Program
Developmental Test & Eval											
Tactical Communication System Testbed	MIPR	SPAWAR-Charleston, SC	2.494	1.676	Mar-06						4.170
Covert Wavelet Packet Modulation	TBD	TBD		1.380	Mar-06						1.380
Covert Waveform III	TBD	TBD		2.366	Mar-06						2.366
High Value Target Tracking Devices	TBD	TBD		2.070	Mar-06						2.070
SOCOM Imagery Dissemination System	TBD	TBD		1.971	Mar-06						1.971
Warrior Reach	TBD	TBD		1.479	Mar-06						1.479
Modular Computing Technology	TBD	TBD		0.986	Mar-06						0.986
Subtotal T&E			2.494	11.928		0.000					14.422
Remarks:											
Contractor Engineering Spt											
Subtotal Management											
Remarks:											
Total Cost			11.215	24.795		14.204				Cont.	Cont.
Remarks:											

Exhibit R-4, Schedule Profile																															
																Date: FEBRUARY 2006															
Appropriation/Budget Activity RDT&E/7								Program Element Number and Name PE1160404BB/Special Operations Tactical System Development												Project Number and Name Project S700 SOF Communications Adv Dev							
Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1. Develop MBITR COMSEC Chip																												
2. MBITR BFT																												
3. MBITR Technology Insertions																												
4. Develop MBMMR COMSEC Chip																												
5. Develop Tactical Communications System Testbed																												
6. Material Improvement & Corrosion Control of Comm (SOFTACS):																												
Tactical Communication System Testbed Evaluations																												
Covert Wavelet Packet Modulation																												
Covert Waveform III																												
High Value Target Tracking Devices																												
SOCOM Imagery Dissemination System																												
Warrior Reach																												
Machine Based Language Translator																												
Modular Computing Technology																												

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

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2006
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160405BB Special Operations (SO) Intelligence Systems Development/S400

COST (Dollars in Millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11		Cost to Complete	Total Cost
PE1160405BB	50.415	59.751	29.011	28.115	37.341	30.085	32.761		Cont.	Cont.
S400, SO INTELLIGENCE	50.415	59.751	29.011	28.115	37.341	30.085	32.761		Cont.	Cont.

A. Mission Description and Budget Item Justification:

This program element provides for the identification, development, and testing of Special Operations Forces (SOF) intelligence equipment to identify and eliminate deficiencies in providing timely intelligence to deployed forces. Sub-projects within this program element address the primary areas of intelligence dissemination, sensor systems, integrated threat warning to SOF mission platforms, and tactical exploitation of national system capabilities. USSOCOM has developed an overall strategy to ensure that Command, Control, Communications, Computers, and Intelligence (C4I) systems continue to provide SOF with the required capabilities into the 21st century. USSOCOM's C4I systems comprise an integrated network of systems providing positive command and control and timely exchange of intelligence and threat warning to all organizational echelons. The C4I systems that support this new architecture will employ the latest standards and technology by transitioning from separate systems to full integration with the infosphere. The infosphere will allow SOF elements to operate with any force combination in multiple environments.

B. Program Change Summary:

	FY05	FY06	FY07
Previous President's Budget	49.372	33.167	27.018
Current President's Budget	50.415	59.751	29.011
Total Adjustments	1.043	26.584	1.993
Congressional Program Reductions		-0.866	
Congressional Rescissions			
Congressional Increases		27.450	
Reprogrammings	1.043		1.993
SBIR Transfer			

Funding:

FY05:

- Reprogramming to National Systems Support to SOF ($1.043 million) from Program Element 1160402BB, Special Operations Advanced Technology Development (-$0.492 million) and Program Element 1160404BB, Special Operations Tactical Systems Development (-$0.551 million).

FY06:

- Congressional reductions include -$0.604 million for global 1% reduction and -$0.262 million for Section 8125 reduction.
- Congressional increases include:
  - Joint Threat Warning System Air and Unmanned Aerial Vehicle (UAV) ($3.000 million)
  - Optimal Placement of Sensors ($1.000 million)
  - Application Specific Integrated Circuit ($4.200 million)
  - Bio-Warfare Testing ($1.000 million)
  - SOF Individual Threat Warning Receiver ($7.700 million)
  - Nanotechnology Team ($2.300 million)
  - Night Vision Integrated Display System ($0.500 million)

SOCOM Power Sources Integration Team ($2.300 million)
Tactical Miniature Software Defined Radio Receiver ($2.700 million)
UAV Near Real Time Video Program ($1.000 million)
Wireless Management and Control Project ($1.750 million)

FY07:
- Increased funds (+$0.406 million) for inflation rate changes.
- Increased funds (+$1.587 million) for Special Operations Joint Interagency Collaboration Center.

Schedule: N/A

Technical: N/A

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 7	Special Operations Intelligence/Project S400

Cost ($ in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
SO Intelligence	50.415	59.751	29.011	28.115	37.341	30.085	32.761
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: This project provides for the identification, development, and testing of Special Operations Forces (SOF) intelligence equipment to identify and eliminate deficiencies in providing timely intelligence to deployed forces. Sub-projects below address the primary areas of intelligence dissemination, sensor systems, integrated threat warning to SOF mission platforms, and tactical exploitation of national system capabilities. USSOCOM has developed an overall strategy to ensure that Command, Control, Communications, Computers, 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 timely exchange of intelligence and threat warning to all organizational echelons. The C4I systems that support this new architecture will employ the latest standards and technology by transitioning from separate systems to full integration with the infosphere. The infosphere will allow SOF elements to operate with any force combination in multiple environments. The intelligence programs funded in this project will 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). Sub-projects include:

OPERATIONAL ELEMENT (TEAM)

- National Systems Support to SOF (NSSS). The NSSS is a research and development rapid prototyping program. NSSS improves the combat effectiveness of USSOCOM, its components, and the Theater Special Operations Commands by leveraging service and national agency development efforts on space-based intelligence and communications technologies and systems. This includes Imagery Intelligence, Signals Intelligence (SIGINT), and Measurement and Signature Intelligence processing and tactical display technologies and capabilities; evolving global information dominance technologies; and related meteorological, oceanographic, and space weather developments and architectures. NSSS coordinates and facilitates concepts and technologies for inclusion in Joint Chiefs of Staff Special Projects and selected Advanced Concept Technology Demonstrations (ACTDs) that use space systems to support tactical military operations.

- Joint Threat Warning System (JTWS). JTWS is an evolutionary acquisition (EA) program that provides threat warning, force protection, enhanced situational awareness, and target identification/acquisition information to SOF via signal intercept, direction finding and SIGINT. JTWS will employ continuing technology updates to address the changing threat environment. SOF SIGINT operators are globally deployed and fully embedded within Special Operations teams and aircrews in every operational environment. The JTWS state-of-the-art technology enables these operators to provide critical time sensitive targeting and actionable intelligence to the operational commander during mission execution. Intelligence derived from JTWS operations supports campaign objectives and National Military Strategy. JTWS provides variant systems utilizing common core software that allows operators to task, organize, and scale equipment

based on anticipated signal environments and areas of operation. Systems will be modular; lightweight with minimal power requirements; and configurable to support body worn, man-pack, team-transportable, remote unattended, air and maritime operations in support of all SOF missions. Each JTWS variant will be capable of operation by a single, trained operator. The four variants are Ground SIGINT Kit, Team Transportable, Air, and Maritime.

- Optimal Placement of Unattended Sensors (OPUS). OPUS provides for the research and integration of a commercial lightweight, modular handheld sensor interface device. This effort will provide the capability to identify the optimal placement of unattended ground sensors in support of SOF mission planning efforts.

ABOVE OPERATIONAL ELEMENT (DEPLOYED)

Special Operations Tactical Video System (SOTVS). SOTVS/Reconnaissance Surveillance Target Acquisition (RSTA) program employs an EA strategy to meet SOF reconnaissance and surveillance mission requirements. The program consists of a family of interoperable digital Commercial-Off- the-Shelf (COTS) systems to capture and transfer near-real-time day/night tactical ground imagery utilizing SOF organic radios and global C4I infrastructure. The program provides the capability to forward digital imagery in near-real-time via current or future communications systems [i.e., land line, High Frequency (HF), Very High Frequency (VHF), and Satellite Communications radios] in support of surveillance and reconnaissance mission. This man-packable tactical system consists of digital still cameras, ruggedized laptop computers with image manipulation software, and data controllers.

ABOVE OPERATIONAL ELEMENT (GARRISON)

- Special Operations Joint Interagency Collaboration Center (SOJICC) is an EA program providing a state-of-the-art capability designed to process, analyze, visualize and collaborate operations and intelligence data supporting SOF core missions, with an emphasis on counter-terrorism, counter-proliferation, information operations, and unconventional warfare. SOJICC applications fuse data from both open source and classified intelligence and operational data for use by SOF mission planners and intelligence personnel as directed by the Commander, USSOCOM. SOJICC will continue to employ technology updates to bridge the gap between operations and intelligence to support deliberate and crisis action planning while addressing the changing threat environment.

- Counter-Proliferation Analysis and Planning System (CAPS). DOD has a planning mission for Counter-Proliferation (CP) contingency operations. OSD has identified CAPS as the standard CP planning toolset for DOD, and the Assistant to the Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs has consolidated RDT&E funding at USSOCOM for overall program management. U.S. Strategic Command serves as the coordinator for CAPS production requirements and provides O&M funding. Defense Threat

Reduction Agency provides science and technology expertise and integration support to enhance CAPS capabilities. CAPS provides tools and assessments to DOD and SOF mission planners to aid in worldwide identification and analysis of suspected Weapons of Mass Destruction and potential targets; assesses the associated effectiveness, costs and risks of various CP options and their collateral effects; and develops alternative plans. CAPS is a primary source of CP mission planning information for Combatant Commanders who are the principal customers. CAPS requires ongoing development, integration and testing of "leading edge technology" for operational planning and processes in order to provide the best possible engineering analysis and support consequence engineering tools to meet changing threats.

- Special Operations Command Research Analysis & Threat Evaluation System (SOCRATES). SOCRATES is a garrison Sensitive Compartmented Information (SCI) intelligence automation architecture directly supporting the Command's global mission by providing a seamless and interoperable interface with SOF, DOD, national and service intelligence information systems. It provides the capabilities to exercise command and control, planning, collection, collaboration, data processing, video mapping, a wide range of automated intelligence analysis, direction, intelligence dissemination, imagery tools and applications (to include secondary imagery dissemination), as well as news and message traffic. The program ensures intelligence support to mission planning and the intelligence preparation of the battlespace by connecting numerous data repositories while maintaining information assurance. SOCRATES supports HQ USSOCOM, its component commands, TSOCs and forward based SOF units. Additionally, it provides the critical reachback for SOF tactically deployed Local Area Networks/Wide Area Networks. SOCRATES is composed of state-of-the-art networking devices (firewalls, routers, switches, hubs, and modems), servers, storage devices, workstations, associated peripherals and Government-Off-the-Shelf (GOTS)/COTS software.

- Sensor Integration with Lithium Polymer Batteries is an initiative to develop high density lithium polymer batteries for low power SOCOM sensors and tags.

- Unattended Aerial Vehicle (UAV) Near Real-Time Video Program is an initiative to develop a smart-pull, geospatial situational awareness information system providing SOF the ability to exploit, in near-real-time, specific segments of UAV electro-optic/infrared video.

- Wireless Management and Control Program is an initiative to establish a wireless center of excellence and follow-on tools and techniques that focus on Wireless Communication Intelligence capabilities to map, exploit and actively manipulate wireless signals of interest. Developed technologies against wireless communications must withstand the rigors of field deployment and be sustainable and upgradeable to remain relevant against emerging adversary technologies.

- Application Specific Integrated Circuit Development is an initiative to establish a SOCOM dedicated center for application specific

integrated circuits technology design and development.

- High Altitude Long Endurance is an initiative to develop Direction Finding antenna system for employment in high altitude airship, UAV, and JTWS–A platforms/systems.

- SOCOM Microelectromechanical Systems (MEMS) is an effort to recommend and evaluate candidate products for development at a state-of-the-art MEMS/nanotech facility.

- Covert Waveform program is an effort to develop a new Joint Tactical Radio System (JTRS)-compliant covert communication capability with embedded positive threat identification, using new Wavelet Packet Modulation technology.

- Bio-Warfare Testing is an effort to develop a light-weight portable system to detect and identify specific biological agents.

- SOF Individual Threat Warning Receiver is an effort to develop and integrate a threat warning system into the body worn manpack for SOF personnel.

- Nanotechnology Integration is an effort to develop and operationalize MEMS devices and systems with Nano technology for warfighter applications.

- Night Vision Integrated Display System is an effort to develop and integrate display devices with state-of-the-art night vision technology.

- SOCOM Power Sources Integration Team is an effort to evaluate alternative power sources instead of traditional batteries.

- Tactical Miniature Software Defined Radio (SDR) is an effort to develop a miniature SDR.

B. Accomplishments/Planned Program

	FY05	FY06	FY07	
NSSS SOF	2.327	0.804	0.934	
RDT&E Articles Quantity				

FY05 Continued to leverage space intelligence, surveillance, and reconnaissance technology developments with SOF utility from the National Community and Military Services. NSSS assessed the operational utility of leveraged and developed technology.
FY06 Continue to leverage space intelligence, surveillance, and reconnaissance technology developments with SOF utility from the National Community and Military Services. NSSS will assess the operational utility of leveraged and developed technology.
FY07 Continues to leverage space intelligence, surveillance, and reconnaissance technology developments with SOF utility from the National Community and Military Services. NSSS will assess the operational utility of leveraged and developed technology.

	FY05	FY06	FY07	
JTWS	7.588	14.456	6.761	
RDT&E Articles Quantity				

FY05 This initiative was partially funded by a Congressional add. Continued air variant development and initiated JTWS maritime development.
FY06 This initiative was partially funded by a Congressional add. Complete air variant test and evaluation. Commence development of the Team Transportable (TT) variant, GSK Increment 2 and UAV.
FY07 Completes TT development and test and evaluation of TT variant. Continues development of GSK Increment 2.

	FY05	FY06	FY07	
OPUS	0.959	0.986		
RDT&E Articles Quantity				

FY05 This initiative is a Congressional add. Continued development and demonstration of commercial technology used to identify the optimal placement of unattended ground sensors.
FY06 This initiative is a Congressional add. Continue development and demonstration of commercial technology used to identify the optimal placement of unattended ground sensors.

	FY05	FY06	FY07	
SOTVS	0.020			
RDT&E Articles Quantity				

FY05 Continued to conduct future system evaluation of digital imagery to SOF tactical communication systems in support of surveillance and reconnaissance missions.

	FY05	FY06	FY07	
SOJICC	4.279	1.464	3.174	
RDT&E Articles Quantity				

FY05 This initiative was partially funded by a Congressional add. Continued systems engineering and program management efforts to achieve data compatibility by integrating different COTS hardware and software applications for data mining and retrieval, link and nodal analysis, and data visualization. Developed a remote data repository.
FY06 Continue systems engineering and program management efforts to achieve data compatibility by integrating different COTS hardware and software applications for data mining and retrieval, link and nodal analysis, and data visualization.
FY07 Continues systems engineering and program management efforts to achieve data compatibility by integrating different COTS hardware and software applications for data mining and retrieval, link and nodal analysis, and data visualization.

	FY05	FY06	FY07	
CAPS	15.539	16.964	18.142	
RDT&E Articles Quantity				

FY05 Continued development of the CAPS database, intelligence support procedures, Information Technology systems planning, system integration and interface control, software development, and development of analytical tools and system interfaces.
FY06 Continue development of the CAPS database, intelligence support procedures, Information Technology systems planning, system integration and interface control, software development, and development of analytical tools and system interfaces.
FY07 Continues development of the CAPS database, intelligence support procedures, Information Technology systems planning, system integration and interface control, software development, and development of analytical tools and system interfaces.

	FY05	FY06	FY07	
SOCRATES	1.875	1.962		
RDT&E Articles Quantity				

FY05 Continued efforts to develop a Multi-Level Security (MLS) guard that provides the capability to automatically pass imagery and data classified SECRET and below from a TOP SECRET system to a SECRET system without manual intervention.
FY06 Complete efforts to develop a MLS guard that provides the capability to automatically pass imagery and data classified SECRET and below from a TOP SECRET system to a SECRET system without manual intervention.

	FY05	FY06	FY07	
Sensor Integration with Lithium Polymer Batteries	2.397			
RDT&E Articles Quantity				

FY05 This initiative is a Congressional add. Developed high density lithium polymer batteries for low power sensors and tags.

	FY05	FY06	FY07	
UAV Near Real-Time Video Program	1.342	0.986		
RDT&E Articles Quantity				

FY05 This initiative is a Congressional add. Developed a smart-pull, geospatial situational awareness information system providing SOF the ability to exploit, in near-real-time, specific segments of UAV electro-optic/infrared video.
FY06 This initiative is a Congressional Add. Continue to develop a smart-pull, geospatial situational awareness information system providing SOF the ability to exploit, in near-real-time, specific segments of UAV electro-optic/infrared video.

	FY05	FY06	FY07	
Wireless Management and Control Project	3.643	1.725		
RDT&E Articles Quantity				

FY05 This initiative is a Congressional add. Established a wireless center of excellence and follow-on tools and techniques that focus on Wireless Communication Intelligence.
FY06 This initiative is a Congressional Add. Completes the development of tools and techniques focusing on Wireless Communication Intelligence.

	FY05	FY06	FY07	
Application Specific Integrated Circuit Development	3.354	4.140		
RDT&E Articles Quantity				

FY05 This initiative is two Congressional adds. Established a dedicated center for application specific integrated circuits technology design and development.
FY06 This initiative is a Congressional add. Complete efforts for establishing a dedicated center for application specific integrated circuits technology design and development.

	FY05	FY06	FY07	

High Altitude Long Endurance	1.437			
RDT&E Articles Quantity				
FY05 This initiative is a Congressional add. Developed Direction Finding antenna system for employment in high altitude airship, UAV, and JTWS–A platforms/systems.				
	FY05	FY06	FY07	
SOCOM MEMS	2.491			
RDT&E Articles Quantity				
FY05 This initiative is a Congressional add. This effort recommended and evaluated candidate products for development at a state-of-the-art MEMS/nanotech facility.				
	FY05	FY06	FY07	
Covert Waveform	3.164			
RDT&E Articles Quantity				
FY05 This initiative is two Congressional adds. Continued development of covert communication capability with embedded positive threat identification, using new Wavelet Packet Modulation technology.				
	FY05	FY06	FY07	
Bio-Warfare Testing		0.986		
RDT&E Articles Quantity				
FY06 This initiative is a Congressional add. Begin development of a light-weight portable system to detect and identify specific biological agents.				
	FY05	FY06	FY07	
SOF Individual Threat Warning Receiver (ITWR)		7.590		
RDT&E Articles Quantity				
FY06 This initiative is a Congressional add. Begin development of a SOF ITWR.				
	FY05	FY06	FY07	
NANO Technology Integration		2.267		
RDT&E Articles Quantity				
FY06 This initiative is a Congressional add. Begin development of and operationalize MEMS devices and systems with Nano technology for warfighter applications.				
	FY05	FY06	FY07	

Night Vision Integrated Display System		0.493		
RDT&E Articles Quantity				

FY06 This initiative is a Congressional add. Begin development of and integrate display devices with state-of-the-art night vision technology.

	FY05	FY06	FY07	
SOCOM Power Sources Integration Team		2.267		
RDT&E Articles Quantity				

FY06 This initiative is a Congressional add. Begin to evaluate alternative power sources instead of traditional batteries.

	FY05	FY06	FY07	
Tactical Miniature SDR Receiver		2.661		
RDT&E Articles Quantity				

FY06 This initiative is a Congressional add. Begin development of a miniature SDR receiver.

C. Other Program Funding Summary:

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	To Complete	Total Cost
PROC, SOF Intelligence Sys	32.840	33.877	32.743	57.646	51.239	51.437	49.476	Cont.	Cont.

D. Acquisition Strategy:

- NSSS is a project to introduce and integrate national systems capabilities into the SOF force structure and operations. NSSS activities include increasing national and commercial systems awareness, demonstrating the tactical utility of national systems and commercial data, testing technologies and evaluating operational concepts in biennial Joint Staff Special Projects, and transitioning promising concepts and technologies to other SOF program offices for execution.

- JTWS is an EA program that provides threat warning, force protection, enhanced situational awareness, and target identification/ acquisition information to SOF via signals intercept, direction finding and SIGINT. JTWS will employ continuing technology updates to address the changing threat environment.

- OPUS. Systems Readiness Center will leverage existing OPUS COTS technology to provide a capability to plan, coordinate and identify the optimal placement of unattended sensors.

- SOJICC is an EA program providing a state-of-the-art capability designed to process, analyze, visualize and collaborate operations and intelligence data supporting SOF core missions, with an emphasis on counter-terrorism, counter-proliferation, information operations, and unconventional warfare. SOJICC applications fuse data from both open source and classified intelligence and operational data for use by SOF mission planners and intelligence personnel as directed by the Commander, USSOCOM. SOJICC will continue to employ technology updates to bridge the gap between operations and intelligence to support deliberate and crisis action planning while addressing the changing threat environment.

- CAPS is an on-going developmental initiative chartered by the Assistant to the Secretary of Defense for Nuclear, Chemical and Biological Defense Programs, which was transferred to USSOCOM from the Defense Threat Reduction Agency to develop, integrate and test "leading edge technology" for operational planning to provide engineering analysis and support consequence engineering tools to meet changing threats.

- SOCRATES will develop a SOF-peculiar cross-domain solution to support the seamless integration of intelligence data into mission planning and command and control capabilities in both a garrison and tactical environment. USSOCOM will leverage available funds against ongoing efforts by other government agencies to meet SOF-peculiar documented requirements.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Intelligence Systems Development/PE1160405BB Special Operations Intelligence/S400								
		Actual or Budget Value ($ in millions)									
Cost Categories	Contract		Total	Budget	Award	Budget	Award				
(Tailor to WBS, or System/Item Requirements)	Method & Type	Performing Activity & Location	PYs Cost	Cost FY06	Date FY06	Cost FY07	Date FY07			To Complete	Total Program
Product Development											
JTWS Air Development	MIPR	SPAWAR, Charleston, SC	7.349	1.917	Dec-05						9.266
JTWS Team Transpotable Dev	MIPR	SPAWAR, Charleston, SC		1.600	Jan-06	1.700	Nov-06			0.950	4.250
JTWS GSK Increment 2 Dev	MIPR	SPAWAR, Charleston, SC		6.100	Jan-06	3.523	Nov-06			2.682	12.305
JTWS GSK/UAV Plus-up	MIPR	SPAWAR-Charleston, SC & SRC, Charleston, SC		2.957	Mar-06						2.957
CAPS Development	MIPR	Lawrence Livermore National Labs, (LLNL), Livermore, CA	28.888	15.754	Jan-06	16.792	Nov-06			Cont.	Cont.
NSSS Development	MIPR	Various Government Agencies		0.386	Dec-05	0.523	Dec-06				0.909
SOCRATES MSL Development	MIPR	AFRL, Wright-Patterson AFB, OH		1.962	Jan-06						1.962
SOJICC ETI Development	TBD	Various Contractors & Gov't Agencies				2.144	Nov-06				2.144
Wireless Management & Control	FFP	EWA, Herndon, VA	3.643	1.725	Mar-06						5.368
Bio-Warfare Testing	TBD	Integrated Nano-Tech, Henrietta, NY		0.986	Mar-06						0.986
Individual Threat Warning Receiv	TBD	Trident, Germantown, MD		7.590	Mar-06						7.590
Power Source Integration	TBD	TBD		2.267	Mar-06						2.267
Tactical Miniature SDR Receiver	TBD	TBD		2.661	Mar-06						2.661
UAVNRTVP	MIPR	ITAC, Colorado Springs, CO	1.342	0.986	Mar-06						2.328
ASICD	MIPR	Networld Exchange, Inc, Carlsbad, CA	3.354	4.140	Mar-06						7.494
Nanotechnology Integration	TBD	TBD		2.267	Mar-06						2.267
OPUS	FFP	Prologic Incorporated, Fairmount, WV	0.959	0.986	Mar-06						1.945
Night Vision Integrated Display	TBD	TBD		0.493	Mar-06						0.493
Subtotal Product Dev			45.535	54.777		24.682				Cont.	Cont.
Remarks:											
Support Costs											
JTWS Support	MIPR	Various Government Agencies	0.637	1.382	Jan-06	1.038	Nov-06			Cont.	Cont.
CAPS Support	MIPR	Various Government Agencies	0.522	1.210	Jan-06	1.350	Nov-06			Cont.	Cont.
SOJICC Support	MIPR	Various Government Agencies		0.074	Jan-06	0.100	Nov-06			Cont.	Cont.
Subtotal Support Costs			1.159	2.666		2.488				Cont.	Cont.
Remarks:											
R-1 Shopping List Item No. 214											

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Intelligence Systems Development/PE1160405BB Special Operations Intelligence/S400								
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY06	Award Date FY06	Budget Cost FY07	Award Date FY07			To Complete	Total Program
Test & Evaluation											
SOJICC Inter Op Test	MIPR	JITC, Albequerque, NM		0.159		0.060				Cont.	Cont.
Subtotal T&E			0.000	0.159		0.060				Cont.	Cont.
Remarks:											
Management Services											
SOJICC Integration Support	MIPR	MITRE, Tampa, FL	2.615	1.231	Jan-06	0.870	Dec-06			Cont.	Cont.
NSSS Program Support	C-CPAF	Jacobs-Sverdrup, Tampa FL	1.579	0.418	Dec-05	0.411	Dec-06			Cont.	Cont.
JTWS Program Support	C-CPAF	Jacobs-Sverdrup, Tampa FL	0.329	0.500	Feb-06	0.500	Dec-06			Cont.	Cont.
Subtotal Management			4.523	2.149		1.781				Cont.	Cont.
Remarks:											
Total Cost			51.217	59.751		29.011				Cont.	Cont.
Remarks R-1 Shopping List Item No. 214											

Exhibit R-4, Schedule Profile	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E/7	Project Number and Name Project S400/SO Intelligence

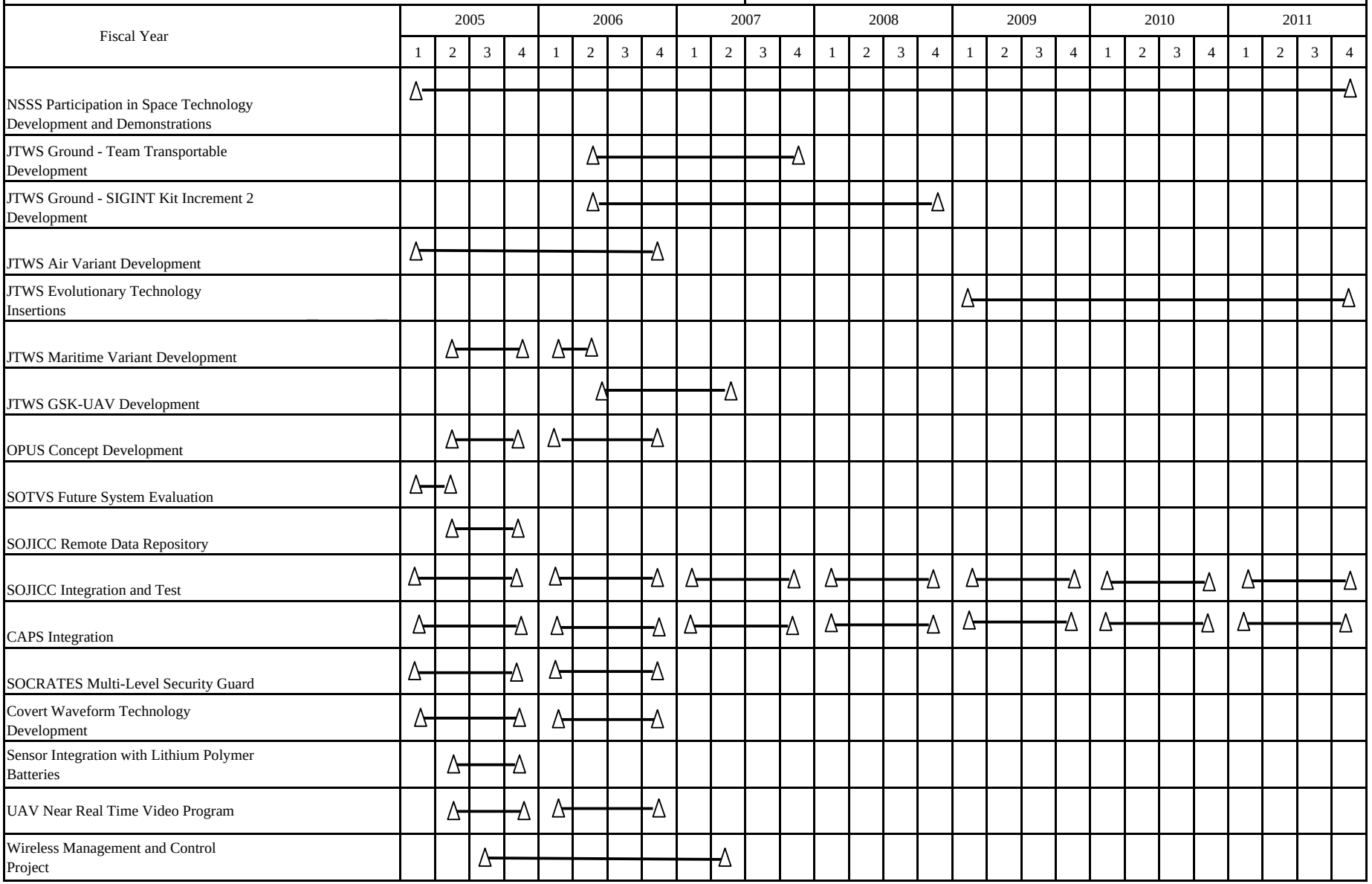


Exhibit R-4, Schedule Profile	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E/7	Project Number and Name Project S400/SO Intelligence

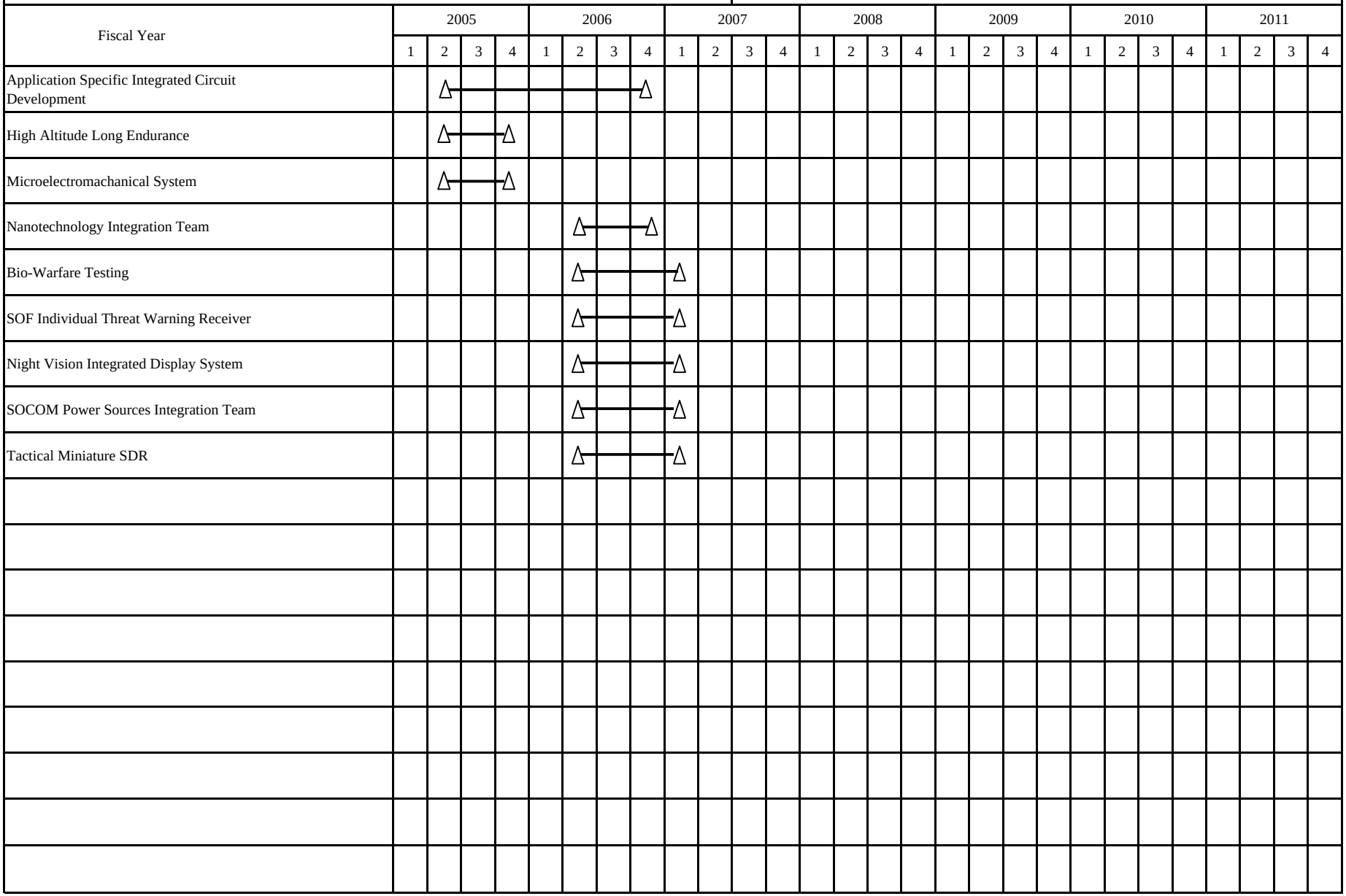


Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2006				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160405BB/Special Operations Intelligence Systems Development			Project Number and Name Project S400/SO Intelligence				
Schedule Profile		FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
NSSS Participation in Space Technology Development and Demonstrations		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
JTWS Ground - Team Transportable Development			2-4Q	1-4Q				
JTWS Ground - SIGINT Kit Increment 2 Development			2-4Q	1-4Q	1-4Q			
JTWS Air Variant Development		1-4Q	1-4Q					
JTWS Evolutionary Technology Insertions						1-4Q	1-4Q	1-4Q
JTWS Maritime Variant Development		2-4Q	1-2Q					
JTWS GSK-UAV Development			2-4Q	1-2Q				
Optimal Placement of Unattended Sensors Concept Development		2-4Q	1-4Q					
SOTVS Future System Evaluation		1-2Q						
SOJICC Remote Data Repository		2-4Q						
SOJICC Integration and Test		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
CAPS Integration		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
SOCRATES Multi-Level Security Guard		1-4Q	1-4Q					
Covert Waveform Technology Development		1-4Q	1-4Q					
Sensor Integration with Lithium Polymer Batteries		2-4Q						
UAV Near Real-Time Video Program		2-4Q	1-4Q					
Wireless Management and Control Project		3-4Q	1-4Q	1-2Q				
Application Specific Integrated Circuit Development		2-4Q	1-4Q					
High Altitude Long Endurance		2-4Q						
Microelectromechanical System		2-4Q						
Nanotechnology Integration Team			2-4Q					
Bio-Warfare Testing			2-4Q	1Q				
SOF Individual Threat Warning Receiver			2-4Q	1Q				
Night Vision Integrated Display System			2-4Q	1Q				
SOCOM Power Sources Integration Team			2-4Q	1Q				
Tactical Miniature SDR			2-4Q	1Q				

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2006
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160421BB Special Operations CV-22 Development/SF200

COST (Dollars in Millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11		Cost to Complete	Total Cost
PE1160421BB	53.059	29.526		31.660	28.551	37.635	69.028		Cont.	Cont.
SF200 CV-22	53.059	29.526		31.660	28.551	37.635	69.028		Cont.	Cont.

A. Mission Description and Budget Item Justification: The CV-22 is a Special Operations Forces (SOF) variant of the V-22 vertical lift, multi-mission aircraft. The CV-22 will provide long range, high speed infiltration, exfiltration, and resupply to Special Forces teams in hostile, denied, and politically sensitive areas. This is a capability not currently provided by existing aircraft. The CV-22 acquisition program delayed incorporation of some operational capabilities until the completion of a Block 10 (formerly Pre-Planned Product Improvement) CV-22 program. This strategy was agreed to by the Department of the Navy and the USSOCOM Acquisition Executive.

Block 10: Integrate and test the Directional Infrared Countermeasures (DIRCM), a system that protects against infrared guided missiles; design, integrate and validate of the Troop Commander Situational Awareness station to provide the embarked troop commander access to the CV-22's communication, navigation and mission management system; relocate the ALE-47 chaff and flare dispenser control head to allow any cockpit crew member to activate defensive countermeasures; add a second forward firing chaff and flare dispenser to provide an adequate quantity of consumable countermeasures for the extended duration of SOF infiltration/exfiltration/resupply missions; and incorporate a dual access feature to the Digital Map System to allow both the pilot and co-pilot to independently access and control the digital map display from the mission computer.

Block 20: Design, integrate, test, and validate enhancements required to meet SOF unique mission requirements and correction of deficiencies identified in previous testing. This block will provide more robust performance of the CV platform in navigation, maneuverability and mission deployment. Initial risk reduction and trade studies will be pursued prior to starting System Development and Demonstration.

Block 30: Design, integrate, test, and validate enhancements required to meet SOF unique mission requirements to maintain performance against the evolving threat environment. This block will enhance survivability and performance against potential threats through reduction in electronic

signature emissions and improved countermeasures. Initial risk reduction and trade studies will be pursued prior to starting System Development and Demonstration.

B. Program Change Summary:

	FY2005	FY2006	FY2007
Previous President's Budget	62.806	29.954	14.234
Current President's Budget	53.059	29.526	
Total Adjustments	-9.747	-0.428	-14.234
Congressional Program Reductions		-0.428	
Congressional Rescissions			
Congressional Increases			
Congressional Transfer			
Reprogrammings	-9.747		-14.234
SBIR Transfer			

Funding:

FY05: Decrease of (-$9.747M) reflects reprogrammings to PE 1160403BB, Aviation Systems Advanced Development (+$4.197M) to CAAP and (+$5.000M) to GMS-2.

FY06: Congressional reductions include (-$0.298M) for global 1% reduction and (-$0.130M) for Section 8125 reduction.

FY07

- RDT&E program was restructured to better align funds with execution.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 7	CV-22/Project SF200

Cost ($ in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
CV-22	53.059	29.526		31.660	28.551	37.635	69.038
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: The CV-22 is a Special Operations Forces (SOF) variant of the V-22 vertical lift, multi-mission aircraft. The CV-22 will provide long range, high speed infiltration, exfiltration, and resupply to Special Forces teams in hostile, denied, and politically sensitive areas. This is a capability not currently provided by existing aircraft. The CV-22 acquisition program delayed incorporation of some operational capabilities until the completion of a Block 10 (formerly Pre-Planned Product Improvement) CV-22 program. This strategy was agreed to by the Department of the Navy and the USSOCOM Acquisition Executive.

Block 10: Integrate and test the Directional Infrared Countermeasures (DIRCM), a system that protects against infrared guided missiles; design, integrate and validate of the Troop Commander Situational Awareness station to provide the embarked troop commander access to the CV-22's communication, navigation and mission management system; relocate the ALE-47 chaff and flare dispenser control head to allow any cockpit crew member to activate defensive countermeasures; add a second forward firing chaff and flare dispenser to provide an adequate quantity of consumable countermeasures for the extended duration of SOF infiltration/exfiltration/resupply missions; and incorporate a dual access feature to the Digital Map System to allow both the pilot and co-pilot to independently access and control the digital map display from the mission computer.

Block 20: Design, integrate, test, and validate enhancements required to meet SOF unique mission requirements and correction of deficiencies identified in previous testing. This block will provide more robust performance of the CV platform in navigation, maneuverability and mission deployment. Initial risk reduction and trade studies will be pursued prior to starting System Development and Demonstration.

Block 30: Design, integrate, test, and validate enhancements required to meet SOF unique mission requirements to maintain performance against the evolving threat environment. This block will enhance survivability and performance against potential threats through reduction in electronic signature emissions and improved countermeasures. Initial risk reduction and trade studies will be pursued prior to starting System Development and Demonstration.

Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 7	CV-22/Project SF200

B. Accomplishments/Planned Program

	FY05	FY06	FY07	
Block 10	44.943	22.776		
RDT&E Articles Quantity				

FY05 Continued development/integration/testing of Block 10 capabilities.
FY06 Continue development/integration/testing of Block 10 capabilities.

	FY05	FY06	FY07	
Block 20		1.127		
RDT&E Articles Quantity				

FY06 Risk reduction, trade studies, and system requirements definition for Block 20 capabilities. Start design and development of Block 20.

	FY05	FY06	FY07	
Program Office Support	0.816	.200		
RDT&E Articles Quantity				

FY05 Continued program office support for Block 10.
FY06 Complete program office support for Block 10 program and begin program office support for Block 20.

	FY05	FY06	FY07	
Engineering and Logistics Support	7.300	5.423		
RDT&E Articles Quantity				

FY05 Continued engineering and logistics support for Block 10.
FY06 Complete engineering and logistics support for Block 10 and begin engineering and logistics support for Block 20.

C. Other Program Funding Summary:

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	To Complete	Total Cost
Proc, CV-22 SOF Osprey	117.697	116.341	168.780	247.672	185.009	179.003	169.854	Cont.	Cont.

D. Acquisition Strategy.

The CV-22 program is managed by the Navy V-22 Joint Program Office (NAVAIR PMA-275). This ensures that the CV-22 changes are incorporated into the ongoing V-22 production line with minimum impact. Funding for the baseline CV-22 Engineering Manufacturing and Development, known as Block 0, is embedded in the Navy budget. Block 10 RDT&E funding is sent from USSOCOM to PMA-275 to be placed on contract with the V-22 prime contractor. Block 10 capability is required for full compliance with the Joint Operational Requirements Document. Future Block upgrades are planned to follow the same acquisition strategy, with the PMA-275 ensuring the integration of the SOF unique systems with the ongoing basic vehicle improvements supporting both the CV-22 and the Marine Corps MV-22.

Exhibit R-3 COST ANALYSIS			DATE: FEBRUARY 2006								
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations CV-22 Development/PE1160421BB CV-22/SF200								
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/ Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY06	Award Date FY06	Budget Cost FY07	Award Date FY07			To Complete	Total Program
Primary Hardware (H/W) Dev	SS/CPAF	NAVAIR/PMA-275 & Bell-Boeing, Patuxent River, MD	203.604	20.311	Feb-06					Cont.	Cont.
Additional Test Aircraft (ATA) Modification	SS/CPAF/IF	NAVAIR/PMA-275 & Bell-Boeing, Patuxent River, MD	62.595							0.000	62.595
Block 20 Risk Reduction and Development	TBD	TBD		1.127	Mar-06					Cont.	Cont.
Award/Incentive Fees											
Primary H/W Dev			10.667	2.465	Various					Cont.	Cont.
ATA			6.350							0.000	6.350
Prior Year Completed Efforts	Various	Various	100.521								
Subtotal Product Dev			383.737	23.903		0.000				Cont.	Cont.
Remarks:											
Contractor Engineering Spt	WR	Various	8.052	1.741	Dec-05					Cont.	Cont.
Government Engineering Spt	WR	Various	24.917	3.682	Dec-05					Cont.	Cont
Travel and Logistics			1.100	0.200	Various					Cont.	Cont
Subtotal Management			34.069	5.623		0.000				Cont.	Cont
Remarks:											
Total Cost			417.806	29.526		0.000				Cont.	Cont.
Remarks:											

Exhibit R-4, Schedule Profile		Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160421BB/Special Operations CV-22 Development	Project Number and Name Project SF200/CV-22

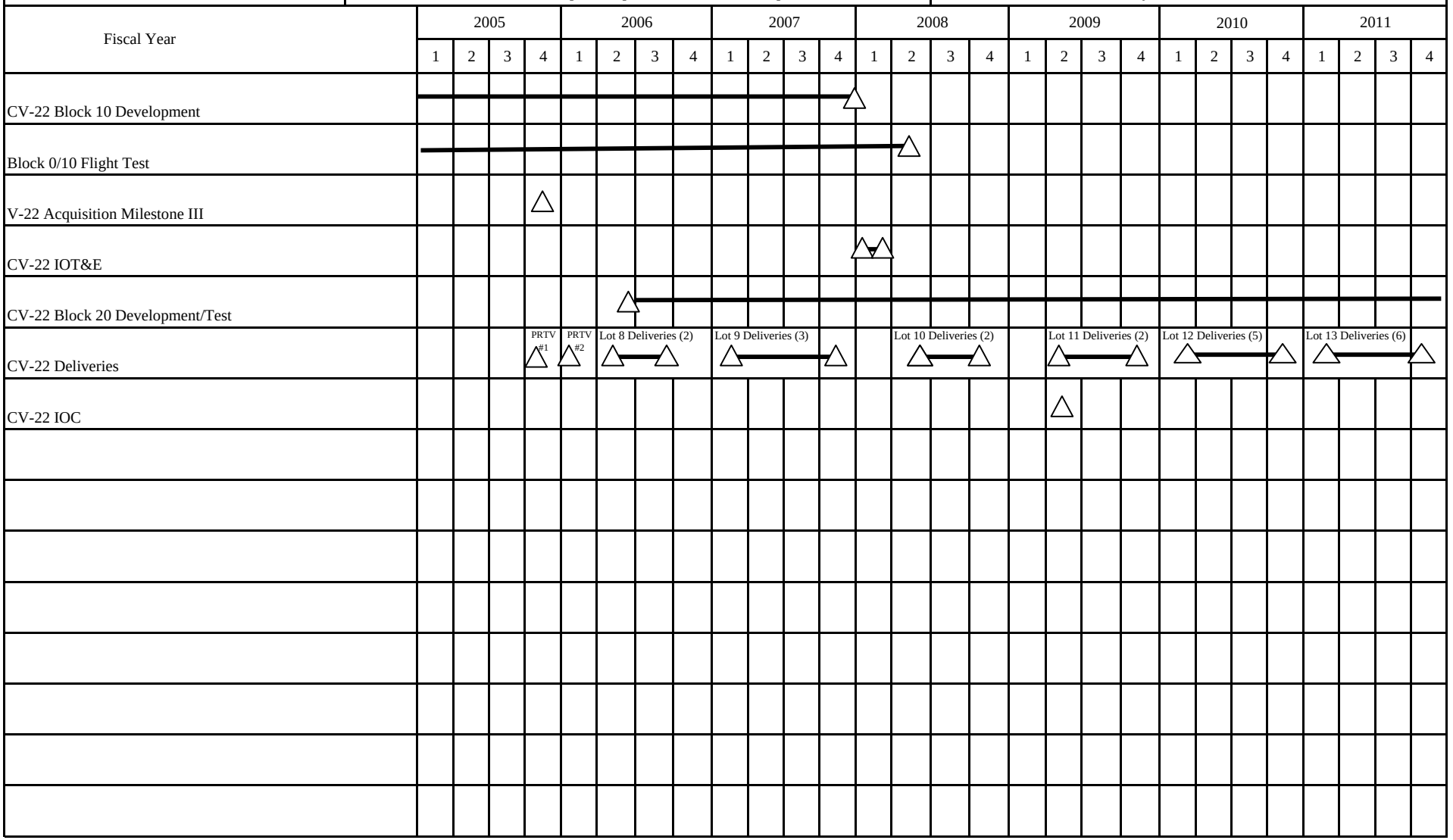


Exhibit R-4a, Schedule Profile		Date: FEBRUARY 2006					
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160421BB/Special Operations CV-22 Development	Project Number and Name Project SF200/CV-22					
Schedule Profile	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
CV-22 Block 10 Development	1-4Q	1-4Q	1-4Q				
Block 0/10 Flight Test	1-4Q	1-4Q	1-4Q	1-2Q			
V-22 Milestone III	4Q						
CV-22 IOT&E				1Q			
CV-22 Block 20 Development/Test		2-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
CV-22 Deliveries	4Q	1-3Q	1-4Q	2Q, 4Q	2Q, 4Q	1-4Q	1-4Q
CV-22 IOC					2Q		

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2006
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160425BB Special Operations Aircraft Defensive Systems / Project 3284

COST (Dollars in Millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11		Cost to Complete	Total Cost
PE1160425BB	56.897	26.934	7.850	6.836	4.235	8.757	6.822		Cont.	Cont.
3284, Special Operations Aircraft Defensive Systems	56.897	26.934	7.850	6.836	4.235	8.757	6.822		Cont.	Cont.

A. Mission Description and Budget Item Justification: This program element provides for the definition, development, prototyping and testing of aircraft defensive avionics systems. It includes the identification and development of hardware and software enhancements for each Special Operations Forces (SOF) aircraft to reduce detection, vulnerability, and threat engagement from threat radars and Infrared (IR) missiles, thereby increasing the overall survivability of SOF assets. This program element funds dispenser upgrade and improvement programs, threat and missile warning receiver enhancements, radio frequency jammer improvements, and enhanced IR jamming systems. It also provides systems for SOF-unique portions of the Electronic Warfare Avionics Integrated Systems Facility.

B. Program Change Summary:

	FY2005	FY2006	FY2007
Previous President's Budget	55.622	38.824	14.372
Current President's Budget	56.897	26.934	7.850
Total Adjustments	1.275	-11.890	-6.522
Congressional Program Reductions		-11.890	
Congressional Rescissions			
Congressional Increases			0.110
Congressional Transfer			
Reprogrammings	1.275		-6.522
SBIR Transfer			

Funding:

FY05

- Increase of (+$1.275M) is a result of a reprogramming from PE 1160404BB, Special Operations Tactical Systems Development for the DIRCM Advanced processor development.

FY06

- Congressional reductions include (-$0.272M) for global 1% reduction, (-$0.118M) for Section 8125 reduction and (-$11.500) mark against the Towed Decoy program.

FY07

- Increased funds (+$0.110M) for inflation rate changes.
- Towed Decoy requirement terminated to support higher command priorities.

Schedule: None.

Technical: None.

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

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

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

- Directional Infrared Countermeasures (DIRCM). The baseline program is a joint international cooperative United Kingdom/United States (UK/US) project to develop and procure an IR jammer for MC-130E/H and AC-130H/U aircraft capable of countering missile threats in the band one, two and four IR frequency spectrum.

- Next Generation Missile Warning System (NexGen MWS). Increment 3 in the spiral development of the AAQ-24 DIRCM System. Cooperative development program with Air Force to significantly extend DIRCM threat engagement range. Funds support two contracts through completion of System Design and Development (SDD) phase.

- EWAISF. The EWAISF directly supports software development and testing for EW systems. The EWAISF effort is a type of systems integration laboratory designed to support the incorporation of SOF aircraft defensive systems modifications into specific SOF platforms.

- High Power Fiber Optic Towed Decoy (HPFOTD) for MC-130 E/H Talon aircraft. Program funds the testing of the HPFOTD ALE-55 that uses the ALQ-172 as a techniques generator. The HPFOTD will be installed on all MC-130 E/H aircraft to provide protection against monopulse and other radar guided, surface to air, and air to air missile systems. AC-130U/H for the HPFOTD requirement was rescinded in FY04. The Command decided to terminate this effort in FY06 due to higher command priorities.

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

B. Accomplishments/Planned Program

Cost ($ in million)	FY05	FY06	FY07	
DIRCM	7.620	5.136	1.853	
DIRCM NexGen MWS	17.000	8.950		
RDT&E Articles Quantity				

FY05 Continued to support a cooperative UK/US development/production program for 57 SOF C-130 aircraft, contractor engineering support, and nonrecurring engineering costs. Continued development of a NexGen MWS as P3I for DIRCM. Exploited Tier II missiles for jam code development.
FY06 Continue to support a cooperative UK/US development/production program for 57 SOF C-130 aircraft, contractor engineering support, and nonrecurring engineering costs. Completes development of a NexGen MWS as P3I for DIRCM.
FY07 Continues to support a cooperative UK/US development/production program for 57 SOF C-130 aircraft, contractor engineering support, and nonrecurring engineering costs for SOCOM unique lamp based hardware.

Cost ($ in million)	FY05	FY06	FY07	
EWAISF	1.804	1.900	1.966	
RDT&E Articles Quantity				

FY05 Continued to support laboratory efforts to maintain SOF aircraft defensive systems.
FY06 Continue to support laboratory efforts to maintain SOF aircraft defensive systems.
FY07 Continues to support laboratory efforts to maintain SOF aircraft defensive systems.

Cost ($ in million)	FY05	FY06	FY07	
HPFOTD	15.378			
RDT&E Articles Quantity				

FY05 Conducted nonrecurring engineering and development, and began Developmental Test/Operational Test and Evaluation (DT/OT&E) efforts for MC-130E aircraft.

Cost ($ in million)	FY05	FY06	FY07	

LBJ	15.095	10.948	4.031	
RDT&E Articles Quantity				

FY05 Continued nonrecurring engineering and initiated testing for aircraft integration for MC-130H aircraft.
FY06 Completes nonrecurring engineering for MC-130E and starts termination activities.
FY07 Completes termination activities.

C. Other Program Funding Summary:

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

D. Acquisition Strategy:

- DIRCM. The memorandum of agreement between the UK/US established the cooperative international baseline DIRCM program. The UK Ministry of Defense is the lead for the program. UK law applies to all baseline acquisition actions. USSOCOM program manager is the US Deputy to the UK DIRCM program manager.

- NexGenMWS. Competitively award a contract to two contractors for the SDD phase of the program. A separate contract will be competitively awarded for the production phase.
- EWAISF. Award sole source contracts to the manufacturer of the prime mission equipment required for hardware and software integration into the EWAISF. Capability improvements are on-going system changes.

- LBJ. Program will capitalize on previous SOF aircraft modifications using the ALQ-196 system currently installed on MC-130E aircraft. The ALQ-196 system was selected as the best value decision. Program management will be provided through an Air Force System Program Office and a pre-competed contract will be used for integration, production, and installation.

HPFOTD. Performed a market survey of the existing Towed Decoy currently available in the U.S. market place. Conducted an assessment to determine which non-developmental item met operational requirements. The ALE-55 System was selected as the best value decision.

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

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

Exhibit R-4a, Schedule Profile			Date: FEBRUARY 2006				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160425BB/Special Operations Aircraft Defensive Systems		Project Number and Name Project 3284/SOF Aircraft Defensive Systems				
Schedule Profile	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
DIRCM							
Tech Integration	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
Missile Warning System Development (NexGen)	1-4Q	1-4Q					
EWAISF Laboratory Testing and Evaluation	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
HPFOTD Development	1-4Q						
LBJ Development							
MC-130E	1-4Q	1-4Q					

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2006
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160426BB Special Operations Advanced SEAL Delivery System Development/S0418

COST (Dollars in Millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11		Cost to Complete	Total Cost
PE1160426BB	22.889	31.888	32.452	20.292	7.100	5.072	5.076		Cont.	Cont.
S0418, Advanced SEAL Delivery System Development	22.889	31.888	32.452	20.292	7.100	5.072	5.076		Cont.	Cont.

A. Mission Description and Budget Item Justification:

This program element provides for development, testing, and integration of specialized equipment for the Advanced SEAL Delivery System (ASDS) to meet the unique requirements of Special Operations Forces (SOF). Specialized equipment will permit small, highly trained forces to conduct required operations across the entire spectrum of conflict. These operations are generally conducted in harsh environments, for unspecified periods and in locations requiring small unit autonomy. SOF must infiltrate by land, sea, and air to conduct unconventional warfare, direct action, or deep reconnaissance operations in denied areas against insurgent units, terrorists, or highly sophisticated threat forces. The requirement to operate in denied areas controlled by a sophisticated threat mandates that SOF systems remain technologically superior to threat forces to ensure mission success.

B. Program Change Summary:

	FY05	FY06	FY07
Previous President's Budget	19.072	2.040	2.096
Current President's Budget	22.889	31.888	32.452
Total Adjustments	3.817	29.848	30.356
Congressional Reductions		-0.462	
Congressional Rescissions			
Congressional Increases		30.310	
Reprogrammings	3.817		30.356

Funding:

FY05

Reflects a $3.817M increase in the program for Acoustics Engineering Change Proposals.

FY06

Congressional reductions include (-$0.322M) for global 1% reduction and (-$0.140M) for Section 8125 reduction.

Congressional increases include +$21.160M for program restructure in support of the Reliability Improvement Project; +$1.500M for High Speed Military Craft, and +$7.650M for High Speed Military Demo.

FY07

Increased funds +$0.452M for inflation rate changes and an increase of +$29.904M for program restructure in support of the Reliability Improvement Project.

Schedule/Technical: Milestone C was scheduled for first quarter FY06. In October 05, a propulsion system casualty occurred during follow-on test and evaluation. As a result, the ASDS program was restructured in November 05. The procurement of ASDS-2 and ASDS-3 was postponed in order to concentrate on reliability and technology improvements to ASDS-1. Funds were realigned to operate and sustain ASDS-1, improve reliability, address obsolescence through technology insertion, and conduct concept studies. Milestone C has been indefinitely postponed.

Technical: None.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 7	Advanced SEAL Delivery System Development(ASDS)/Project S0418	

Cost ($ in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
ASDS Development	22.889	31.888	32.452	20.292	7.100	5.072	5.076
RDT&E Articles Quantity							

As directed by Congress, a new program element was established beginning in FY 2005 for Special Operations Advanced SEAL Delivery Systems (ASDS) Development. FY 2005-2011 resources were moved from PE 1160404BB, project S0417, Underwater Systems Advanced Development.

A. Mission Description and Budget Item Justification: This project funds the development of the ASDS. The ASDS is a one atmosphere submersible that will provide Naval Special Operations Forces with a new clandestine long range insertion capability required to conduct traditional SEAL missions ranging from reconnaissance to direct action in denied maritime environments. ASDS advantages over the current SEAL Delivery Vehicle, a wet submersible, include greatly increased range, increased payload and passenger capacity, state of the art sensors and communications, the ability to loiter in a target area, and protection of personnel from complex dive profiles and exposure to long cold water transit.

B. Accomplishments/Planned Program

	FY05	FY06	FY07	
ASDS Development	22.889	22.868	32.432	
Congressional Adds		9.020		

FY05 Developed improvements to ASDS #1 to correct acoustic, reliability (included unexpected tail section redesign) and maintainability deficiencies.

FY06 The following efforts will be accomplished:

- Requirements Review/Concept Studies: Commence concept studies for future ASDS employment Concept of Operations.
- Critical System Review: Begin End-To-End Assessment, ASDS Reliability Action Panel Analyses, Detailed Critical System Review.
- Reliability Improvement Plan: Hydraulic Redesign (including Accumulator, Reservoir), Environmental Control Unit, Periscope, Battery Cables, Non Operation Compartment Cable Waterproofing.
- Obsolescence: Integrated Control and Display, Carbon Dioxide Sensor, Platform wide Diminished Manufacturing Sources review and correction.
- Technology Insertion: Acoustics Improvements, Syntactic Foam, Shock Upgrades, Thruster Motor, Hydro Analysis/Improvements.

Congressional adds for High Speed Military Craft and High Speed Military Demo included here will be moved to the appropriate RDT&E Program Element/Project upon approval of DD 1415.

FY07 Concept studies, critical system review and reliability improvements.

C. Other Program Funding Summary:

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	To Complete	Total Cost
ASDS	5.213	20.719	12.629	10.621	5.770	5.962	6.171		67.085

D. Acquisition Strategy

- ASDS is an Acquisition Category 1D. The Program is managed by the Navy Program Management Office. The Program Executive Officer for Naval Systems at USSOCOM provides oversight, and the Milestone Decision Authority is the Under Secretary of Defense for Acquisition, Technology and Logistics. One prototype has been built to date. The program has been restructured to focus on improving reliability of ASDS before pursuing Milestone C.

Exhibit R-3 COST ANALYSIS						DATE: FEBRUARY 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Special Operations Tactical Systems Development/PE1160426BB Advanced SEAL Delivery System Development/S0418								
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	Budget Cost FY06	Award Date FY06	Budget Cost FY07	Award Date FY07			To Complete	Total Program
Primary Hardware Dev											
ASDS	CPIF/C	Northrop-Grumman	310.026							Cont.	Cont.
ASDS	CPFF	Newport News Ship Yard, VA	8.605							Cont.	Cont.
ASDS P3I and Host Support	Various	Various	37.280							Cont.	Cont.
ASDS Reliability Improvements	CPFF/CPIF/CPAF			22.868	Various	32.452	Various			Cont.	Cont.
Subtotal Product Dev			355.911	22.868		32.452				Cont.	Cont.
Remarks											
Technical Data											
ASDS	Various	Northrop-Grumman	10.894								10.894
Subtotal Supt.			10.894								10.894
Remarks											
Test & Evaluation											
OT&E (ASDS)	Various	OPTEVFOR, Norfolk, VA	6.285								6.285
Host Testing (ASDS)	Various	NAVSEA, Washington Navy Yard	20.615								20.615
LFT&E (ASDS)	Various	NAVSEA, Washington Navy Yard	2.995								2.995
Subtotal T&E			29.895								29.895
Remarks											
Management											
Various (ASDS)	Various	Various	14.085								14.085
High Speed Military Craft				1.479							1.479
High Speed Military Demonstration				7.541							7.541
Subtotal Management			14.085	9.020							23.105
Remarks:											
Total Cost			410.785	31.888		32.452				Cont.	Cont.
Remarks:											

Exhibit R-4, Schedule Profile																															
																Date: FEBRUARY 2006															
Appropriation/Budget Activity RDT&E/7					Program Element Number and Name PE1160426BB/Special Operations Advanced SEAL Delivery System Development												Project Number and Name Project S0418/Advanced SEAL Delivery System Development															
Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
- Obsolescence Efforts*																												
- Technical Insertions*																												
- Critical Systems Reviews																												
- Reliability Improvements																												
-- Reliability Builds (1-4)																												
-- Testing																												

* Reliability Builds 1-4 incorporate system improvements output from the Critical Sytem Reviews. The reviews will address obsolescence and technical insertions.

Exhibit R-4a, Schedule Profile				Date: FEBRUARY 2006				
Appropriation/Budget Activity RDT&E/7	Program Element Number and Name PE1160426BB/Special Operations Advanced Sea, Air, Land (SEAL) Delivery System Development			Project Number and Name Project S0418/Advanced SEAL Delivery System				
Schedule Profile		FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
Advanced SEAL Delivery System								
- Obsolescence Efforts*		1-4Q	1-2Q					
- Technical Insertions*		1-4Q	1-2Q					
- Critical Systems Reviews			2-4Q	1-4Q				
- Reliability Improvements		1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q	1-4Q
-- Reliability Builds (1-4)			3-4Q	1-4Q	1-4Q	1Q		
-- Testing			4Q	3Q	2-3Q	1Q		

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2006
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160427BB Mission Training and Preparation Systems (MTPS)/S750

COST (Dollars in Millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11		Cost to Complete	Total Cost
PE1160427BB			1.782	1.636	2.673	2.730	1.267		Cont.	Cont.
S750, MTPS			1.782	1.636	2.673	2.730	1.267		Cont.	Cont.

A new program element (1160427BB) was established in FY 2007 for Mission Training and Preparations Systems (MTPS). FY 2007-2011 resources were moved from PE 1160404BB, Project S625.

A. Mission Description and Budget Item Justification: This program element funds the development, integration, and test of MTPS to support training, avoid obsolescence, and keep the simulators current with the weapon systems configurations. Funds are also used to upgrade mission planning and rehearsal systems, as well as add, enhance and upgrade mission rehearsal capabilities in current training devices. The MTPS initiative also includes a focus on systems engineering, configuration management, and architecture development, as well as interoperability and commonality between diverse SOF training devices.

B. Program Change Summary:

	FY2005	FY2006	FY2007
Previous President's Budget			
Current President's Budget			1.782
Total Adjustments			
Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases			
Reprogrammings			1.782
SBIR Transfer			

Funding: FY07 establishes a new program element and project for MTPS.

Schedule: N/A

Technical: N/A

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 7	Mission Training and Preparation Systems (MTPS)/Project S750	

Cost ($ in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
MTPS			1.782	1.636	2.673	2.730	1.267
RDT&E Articles Quantity							

A new program element (1160427BB) and Project (S750) was established beginning in FY 2007 to better capture the cost of Mission Training and Preparations Systems (MTPS). FY 2007-2011 resources were moved from PE 1160404BB, Project S625.

A. Mission Description and Budget Item Justification: This project funds the development, integration, and test of MTPS to support training, avoid obsolescence, and keep the simulators current with the weapon systems configurations. Funds are also used to upgrade mission planning and rehearsal systems, as well as add, enhance and upgrade mission rehearsal capabilities in current training devices. The MTPS initiative also includes a focus on systems engineering, configuration management, and architecture development, as well as interoperability and commonality between diverse SOF training devices. Sub-projects include:

- United States Special Operations Command (USASOC) Simulator Block Upgrade: Funds the necessary developmental upgrades to USASOC simulators to overcome obsolescence and concurrency issues and enhance mission rehearsal capabilities.

- Air Force Special Operations Command (AFSOC) Simulator Block Upgrade: Funds the necessary developmental upgrades to AFSOC simulators to overcome obsolescence and concurrency issues and enhance mission rehearsal capabilities.

B. Accomplishments/Planned Program

USASOC Simulator Block Upgrade	FY05	FY06	FY07	
CMS			1.782	
RDT&E Articles Quantity				

FY07: Funds the necessary developmental upgrades to USASOC simulators to overcome obsolescence and concurrency issues and enhance mission planning and rehearsal capabilities.

C. Other Program Funding Summary:

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	To Complete	Total Cost
Proc, MTPS			12.841	63.407	15.901	36.594	14.427	Cont.	Cont.

D. Acquisition Strategy:

- Simulation block updates address obsolescence and technology insertion for all AFSOC and USASOC simulators. Major obsolescence components are the image generator, computer host, projectors, display screen, instructor/operator station, input/output system, control loading and the motion system. These systems are replaced or upgraded on a rotating basis every 4-6 years. These upgrades are executed as part of the simulation Life Cycle Management Plan (LCMP) executed by the Program Office and directed by USSOCOM. Generally, the Program Manager responsible for production and fielding of the individual simulator maintains control of the LCMP in accordance with his charter. The Program Office is funded by USSOCOM to perform the simulation block updates as an element of the LCMP.

Exhibit R-3 COST ANALYSIS						DATE: February 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7						Program Element 1160427BB/Mission Training and Preparation Systems (MTPS) Project Name and Number MTPS/S750					
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY06 Budget Cost	FY06 Award Date	FY07 Budget 0	FY07 Award Date			To Complete	Total Program
USASOC Simulator Block Upgrade	Various	PEO STRI; Orlando, FL				1.782	Nov-06			Cont	Cont
Subtotal Product Dev						1.782				Cont	Cont
Remarks:											
Total Cost			0.000	0.000		1.782				Cont	Cont
Remarks:											

Exhibit R-4, Schedule Profile																												
																	Date: February 2006											
Appropriation/Budget Activity RDT&E/					Program Element Number and Name PE1160427BB/Mission Training and Preparation Systems (MTPS)																Project Number and Name Project S750/MTPS							
Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
USASOC Simulator Block Upgrade																												

Exhibit R-4a, Schedule Profile			Date: February 2006				
Appropriation/Budget Activity RDT&E/	Program Element Number and Name PE1160427BB/Mission Training and Preparation System (MTPS)		Project Number and Name Mission Training and Preparation Systems (MTPS)/Project S750				
Schedule Profile	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
USASOC Simulator Block Update			1-4Q				

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE FEBRUARY 2006
APPROPRIATION / BUDGET ACTIVITY RDT&E, DEFENSE-WIDE / 7	R-1 ITEM NOMENCLATURE / PROJECT NO. PE 1160428BB Unmanned Vehicles (UV)/S850

COST (Dollars in Millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11		Cost to Complete	Total Cost
PE1160428BB			1.521	18.254	17.632	18.501	19.532		Cont.	Cont.
S850, Unmanned Vehicles			1.521	18.254	17.632	18.501	19.532		Cont.	Cont.

A new program element was established beginning in FY 2007 to consolidate Unmanned Vehicles (UV) development. FY 2007-2011 resources were moved from PE 1160408BB, project S500A.

A. Mission Description and Budget Item Justification: This program element provides for development, integration, and testing of UVs. Develops evolutionary technology insertions and upgrades.

B. Program Change Summary:

	FY2005	FY2006	FY2007
Previous President's Budget			
Current President's Budget			1.521
Total Adjustments			1.521
Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases			
Reprogrammings			1.521
SBIR Transfer			

Funding: FY 2007 funds were reprogrammed from PE 1160408BB.
Schedule: None.
Technical: None.

	Exhibit R-2a, RDT&E Project Justification	Date: FEBRUARY 2006
Appropriation/Budget Activity RDT&E BA # 7	Unmanned Vehicles (U)/Project S850	

Cost ($ in millions)	FY05	FY06	FY07	FY08	FY09	FY10	FY11
UV			1.521	18.254	17.362	18.501	19.352
RDT&E Articles Quantity							

A. Mission Description and Budget Item Justification: This project provides for development, integration, and testing of UVs. Develops evolutionary technology insertions and upgrades.

B. Accomplishments/Planned Program

	FY05	FY06	FY07	
Rucksack Portable Unmanned Aerial System (RPUAS)			1.521	
RDT&E Articles Quantity				

FY07 Support Command, Control, and Communications (digital datalink, miniaturization), special operations unique payload, targeting, simulation and training tool, and platform optimization development efforts required to upgrade the baseline RPUAS.

C. Other Program Funding Summary:

	FY05	FY06	FY07	FY08	FY09	FY10	FY11	To Complete	Total Cost
Proc, UV			20.700	20.189	4.906	6.832	6.969	Cont.	Cont.

D. Acquisition Strategy: Preplanned product improvements to be implemented as evolutionary upgrades to the RPUAS.

Exhibit R-3 COST ANALYSIS						DATE: February 2006					
APPROPRIATION / BUDGET ACTIVITY RDT&E DEFENSE-WIDE / 7			Program Element 1160428BB/Unmanned Vehicles (UV) Project Name and Number UV/S850								
Actual or Budget Value ($ in millions)											
Cost Categories (Tailor to WBS, or System/Item Requirements)	Contract Method & Type	Performing Activity & Location	Total PYs Cost	FY06 Budget Cost	FY06 Award Date	FY07 Budget 0	FY07 Award Date			To Complete	Total Program
Primary Hardware Development	TBD	Natick Army Soldier Center, Natick, MA				0.750	TBD			Cont	Cont
Ancillary Hardware Development	TBD	Natick Army Soldier Center, Natick, MA				0.250	TBD			Cont	Cont
Subtotal Product Dev			0.000	0.000		1.000					
Remarks:											
Development Support Software Development	TBD	TBD				0.521	TBD			Cont	Cont
Subtotal Spt			0.000	0.000		0.521		0.000			
Remarks:											
Developmental Test & Evaluation											
Subtotal T&E			0.000	0.000		0.000		0.000			
Remarks:											
Contractor Engineering Support											
Subtotal Management			0.000	0.000		0.000		0.000			
Remarks:											
Total Cost			0.000	0.000		1.521		0.000		Cont	Cont
Remarks:											

Exhibit R-4, Schedule Profile																												
																	Date: February 2006											
Appropriation/Budget Activity RDT&E, Defense-Wide/7									Program Element Number and Name PE1160428BB/Unmanned Vehicles (UV)												Project Number and Name Project S850/UV							
Fiscal Year	2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Block II, Rucksack Portable Unmanned Aerial System (RPUAS) Design (BlockII)					△			△																				
Development									△			△																
Integration													△	△														
Testing															△	△												
Block III, RPUAS Design																	△			△								
Development																					△			△				
Integration																									△	△		
Testing																											△	△

Exhibit R-4a, Schedule Profile			Date: February 2006				
Appropriation/Budget Activity	Program Element Number and Name		Project Number and Name				
RDT&E, Defense-Wide/7	PE1160428BB/Unmanned Vehicles (UV)		Project S850/UV				
Schedule Profile	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
Block II, Rucksack Portable Unmanned Aerial System (RPUAS) Design (BlockII)		1-4Q					
Development			1-4Q				
Integration				1-2Q			
Testing				3-4Q			
Block III, RPUAS Design					1-4Q		
Development						1-4Q	
Integration							1-2Q
Testing							3-4Q